

MOWER

SETTING UP AND OPERATING INSTRUCTIONS

EARTHMASTER MOUNTED FARM TYPE MOWER - MODELS #246 & #247
FOR EARTHMASTER MODEL "C" OR "CH" TRACTOR

Model 246 6 foot Cutterbar
Model 247 7 foot Cutterbar

Before assembling mower, check the following list to see if all bundles are accounted for:

- 1 - Main Frame and Drive Assembly
- 1 - Hydraulic or Hand and Foot Lift Linkage
- 1 - Support Tube and Stay Rod
- 1 - Grassboard and Automatic Pitman
- 1 - Cutterbar Assembly - Regular Guard
- 1 - Set of Knives - Smooth
- 1 - Drive Shield
- 1 - Short Lift Link - for "C" Tractor only

Study all plates carefully to insure correct assembling of mower to tractor.

Adjust rear wheels to 64 inch tread and front wheels to fourth notch in front axle. Front wheels may be turned out if desired.

For Tractors Serial #101 through #364 equipped with hydraulic lift, the Master Lift Shaft, which is attached to the rear of the transmission case, must be removed before the mower can be installed on the tractor. Remove cylinder from the Lift Shaft Frame.

For Tractors Serial #365 and over equipped with hydraulic lift, the Universal Master Lift Shaft need not be removed from the tractor.

Remove all parts wired to each bundle. Small parts and loose standard hardware items such as bolts, nuts, etc., are in bags wired to their respective bundles.

Tractor must be equipped with a power take-off unit.

Other mower equipment available -- See your dealer:

- Cutterbars with rock guards
- Cutterbars with special pressed steel guard
- Underserrated knives
- Rock guard change kit
- Special pressed steel guard change kit

SETTING UP INSTRUCTIONS

1. Attach support tube to tractor frame - "1", Plates 1 & 2.
2. Slide main frame and drive assembly under tractor. Raise and attach to tractor as shown in Plate 2. Four cap screws attach rear hanger to transmission case. Four bolts attach front hanger to support tube. Note "2", Plate 1, for position of stay rod anchor clip which is held by longest of four bolts provided.

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3. Attach tilt adjustment lever to main frame yoke - "3", Plate 1
4. Attach lift linkage

(a) Hydraulic Lift - Plate 3

To bolt assembly to tractor, attach first to support tube "1". Flat plate at rear of assembly is attached to inner surface of tractor drop plate at hole position "B", figure 1.

Remove hydraulic cylinder "2" from Master Lift Shaft Frame and set in position as shown. It is not necessary to disconnect the hoses from the valve to make this change. However, if it is desired to have the up and down movement of the cutterbar coordinated with the up and down position of the valve control lever, it will be necessary to interchange the hose connections at the valve.

For tractors Serial #365 and over equipped with hydraulic lift, when the cylinder is removed from the Master Lift Shaft Frame to be used with mower hydraulic lift linkage, replace the cylinder with fixed link supplied with Hydraulic Lift Linkage bundle.

(b) Hand and Foot Lift - Plate 1

Before installing hand and foot lift, it is necessary to move fenders outward to permit operation of foot lever. This is accomplished by interchanging right and left hand fender supports. Do not interchange fenders.

To bolt assembly to tractor, attach first to support tube "1". Flat plate at rear of assembly is attached to inner surface of tractor drop plate at hole position "A", Figure 1.

To install hand lift lever "4", remove lift arm assembly "5", set lift lever "4" on quadrant as shown, and replace lift arm assembly "5", Bolt connecting lift link to lift lever at "6".

5. Attach cutterbar to yoke of main frame - Plate 1. Be certain that all cotter pins are installed and spread.
6. Attach cutterbar lift linkage "7", Plate 1, to inner shoe.
7. Attach fender rod "8", Plate 1, to inner shoe.
8. Connect lift link "9", Plate 1, or "3", Plate 3, to main frame as shown. If mower is mounted on Model "C" Tractor, then replace regular lift link with short lift link bundle #55828. This applies to either hydraulic or hand and foot lift.
9. Attach grassboard and grass stick to outer shoe. Plate 4.

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10. Remove wrist pin nut and protective tape from Pitman bearing shaft. Install automatic pitman and replace wrist pin nut.
11. Place knife in cutterbar and attach outer end of pitman to knife head.
12. Slide drive sheave "1", Plate 5, onto P.T.O. shaft. Align with driven sheave and clamp securely to shaft. Before installing note instructions accompanying sheave for method of locking or loosening sheave bushings.
13. Place drive V-bolts over sheaves and adjust so that bolts do not exceed 1 inch of whip - Plate 5.
To adjust drive - Plate 2:- Loosen bolts "2" holding bearing plates to hangers. Adjust set screws "3" forcing bearing plates down until proper bolt tension is obtained. It is important that front and rear bearing plates be adjusted equally. Tighten bolts "2" and set screw jam nuts.
CAUTION: Belts must not be adjusted too tightly - allow 1" whip.
14. To install drive guard "2", Plate 5, loosen lower carriage bolts attaching seat support to vertical standards so that upper guard clip will slide under carriage bolt head. Attach lower clips to hanger and tighten carriage bolts.
15. Hook stay rod "10", Plate 1, thru anchor clip "2". During operation of mower stay rod is stowed as shown.

NOTE: Do not operate mower until it has been checked for correct assembly. Be certain that all bolts, pins and other parts are secure. Apply light weight motor oil to all working parts and surfaces, especially along back edge of knife, under knife clips, at inner shoe caps and plates, and knife head ball. Use pressure gun on grease fitting in pitman bearing housing. See paragraph on lubrication.

Start motor and while idling slowly engage power take-off. Release clutch slowly allowing mower to operate. Operate mower slowly and observe knife, pitman and other moving parts to see that they are operating freely and normally. Raise and lower cutterbar several times with hydraulic or hand and foot lift to see that it works satisfactorily. Adjust lift spring.

Check hydraulic hose connections for leakage and drive belts for tension.

ADJUSTMENTS

Cutterbar Levelling - When lifting the cutterbar, the inner shoe should leave the ground before the outer shoe. If not, remove rod and pin and adjust rod end "1", Plate 1, until the inner shoe raises approximately 1 inch off the ground before the outer shoe. This adjustment should be made on level ground.

Cutterbar Alignment - Lead - For best results when operating, it is essential that the center of the pitman bearing, the knife head and the outer end of the knife bar be in a straight line. When not in operation, the outer end of the cutterbar should be ahead of the inner end to offset the backward strain produced by the pressure of cutting. This setting is called lead.

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Cutterbar Alignment- Lead (Cont'd)

To measure "lead", hold a string parallel to back edge of pitman and measure distance between string and back edge of knife at extreme outer end. This distance should be $1\frac{1}{2}$ inches for 6 foot bar and $1\frac{3}{4}$ inches for 7 foot bar.

To adjust, loosen bolts holding the lead adjustment arm "12", plate 1. Adjust set screw moving bar to correct position and re-tighten bolts.

Knife Register - To assure clean cutting, the knife stroke is slightly longer than distance between center of guards. At the end of each stroke, the center of the section should be past the center of the guard.

To adjust, the entire cutterbar is moved in or out. Remove pin "13", Plate 1, and drive out pivot tube. Reposition 4 register washers "14", Plate 1, replace pivot tube and pin.

Inner & Outer Shoe Soles - Removable soles are placed under each shoe to regulate height of cut. Adjust soles equally so cutterbar will remain level.

V-Belt Drive - See Paragraph 13 under Setting Up Instructions.

Drive Shaft Bearings - It is important to keep drive shaft bearings adjusted to a snug but free rolling fit. Do not allow end play in drive shaft. To check, push or pull on drive shaft sheave. If movement is noticeable, tighten nut "3", Plate 5.

Lift- Adjust lift spring "15", Plate 1, until cutter bar lifts easily but still rides on ground.

OPERATING INSTRUCTIONS

For average mowing, operate tractor in 2nd gear. Best results will be obtained by operating tractor at the most desirable speed that will meet the prevalent field condition or where the smoothest mower action results. The furnished sheaves develop approximately 790 knife strokes per minute with tractor power take-off shaft turning 490 R.P.M.

Keep knife sharp for best results.

Replace guard ledger plates when they become worn and dull.

When knife clips become worn and allow knife to play up and down, making poor contact with the ledger plates, they should be hammered down. Knife clip must not bind knife.

Lubricate regularly. Pitman box is equipped with a grease gun fitting and should be lubricated at least twice a day. The drive shaft bearings should be lubricated with a pressure gun once a week. All other wearing parts such as knife head, wearing plates, knife clips, etc., should be oiled with light motor oil regularly - every hour if in heavy conditions.

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OPERATING INSTRUCTIONS (Cont'd.)

To transport. Disengage P.T.O. drive, raise cutterbar and attach stay rod "10", Plate 1. If it is desired to transport mower with windrower attachment remaining on cutterbar, place stay rod in clip "16", Plate 1, before raising cutterbar. In this position cutterbar is approximately 60° from horizontal.

To remove mower from tractor. Set cutterbar down into cutting position. Disconnect lift link "9", plate 1. Remove V-belt drive guard and V-belts, plate 5. Remove 4 bolts supporting front hanger to support tube and 4 cap screws supporting rear hanger to transmission case. Drop mower to ground and slide from under tractor. Remove hydraulic or hand and foot lift if necessary.