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MANUAL PREVIEW

Massey Harris
Massey Ferguson
Operator's Manual

50

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Operator's Manual

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MH-O-50

Massey Harris 50 Serial Number

1955: 500001

1956: 500473

1957: 510764

Color Application:	MFG Color Name:
TRIM	SILVER MIST
ENGINE	FLINT GREY
BODY OF TRACTOR	MASSEY FERGUSON RED

Make: Massey-Ferguson	Model: MH-50	Years Made: 1956-1957
HP-PTO: 31.36	HP-Engine:	HP-Drawbar: 30.5
HP-Range: 31	Engine-Make: CONTINENTAL	Engine-Fuel: GAS
Engine-Cyl(s)-CID: 4/134	Transmission-STD: GEAR	Optional:
Fwd/Rev Standard: 6/2	Fwd/Rev Optional:	Mfwd-Std/Opt:
Tires-Std Front: 6.00-16	Tires-Std Rear: 11-28	Wheelbase-Inch:
Pto Type: LIVE	Pto Speed:	CAT I-3pt Hitch: True
CAT II-3pt Hitch: False	CAT III-3pt Hitch: False	Hitch Lift:
Hydraulics-Type: OPEN	Hyd-Cap:	Hyd-Flow:
Hyd Std Outlets:	Cooling Capacity:	Fuel Tank Capacity:
Cab-Std A/C; Rops:	Weight: 3432	New Price: 2577

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DATA

Engine:

Cylinders	4
Bore	3-5/16"
Stroke	3-7/8"
Displacement	134 cu. in.
Compression Ratio, Normal altitude engine	6.6:1
Compression Ratio, Hi altitude engine	8.1:1
Firing Order	1,3,4,2
Intake Valve Clearance	Hot .013"
	Cold .015"
Exhaust Valve Clearance	Hot .013"
	Cold .015"

Lbs. Compression Cranking Speed

Normal Altitude Engine	145 P.S.I.
Hi-Altitude Model Engine	190 P.S.I.
at 0° elevation, see Page 28	

Ignition:

Distributor Point Gap	.018" to .024"
Distributor Cam Dwell Angle	25° to 34°
Distributor Point Spring Tension	.17 to .21 oz.
Timing Flywheel Degrees	
Normal Altitude Model	6° BTDC
Hi-Altitude Model	TDC

Spark Plug

Champion	Auto-Lite	A.C.
Std. 8 comm.	Std. BT 8	85S - comm.
Cold 7 comm.	Cold BT 4	83S - comm.
Hot DT21 comm.	Hot BT 10	87S - comm.
Spark Plug Gap	.025"	.027"

Torque Wrench Tensions:

Cylinder Head Bolts	70 to 75 ft. lbs.
Manifold	25 to 30 ft. lbs.
Connecting Rod	40 to 45 ft. lbs.
Main Bearings	85 to 95 ft. lbs.

Speed (At Crankshaft):

Full Throttle No. Load	2175 to 2225 R.P.M.
Full Throttle Full Load	2000 R.P.M.
Idle	400 to 450 R.P.M.

Clutch - Foot Operated Single Dry Plate

Foot Operated Double Dry Plate

Belt Pulley:

Diameter	9"
Face	6-1/2"
Ft. Per Min. Full Throttle Full Load	3100 F.P.M.

Power Take Off:

Constant Running with proportional ground speed, or standard.	
Spline Size	1-3/8"
Height from Ground:	
RT, RR, RC	21"
RS	18"

Footbrakes:

Expanding shoe - Individual action or pedals interlocked.

Wheel and Tread (Rubber Tires):

	RR - RC	RT	RS
*Front Tire Size	550-16	750-10	400-19
	600-16		600-16
*Rear Tire Size	10-38	10-38	11-28

General Dimensions:

Wheel Base:

RS	RC	RR	RT
81.18	81.80	84.55	85.56

Overall Length

Row Crop Utility	120.01 in.
Row Crop - High Arch	124.55 in.
Row Crop Twin front	127.30 in.
Row Crop Single Front	127.06 in.

Normal Tread (rear)

Overall Width (52 in. rear tread)

RS	65.3
RC	63.8

HEIGHT OVER STEERING WHEEL

RC	RR	RT
5.50 - 16 Front)	63-1/4" Approx.	
10 x 38 Rear)		

RS	RT
5.50 - 16 Front)	56-3/4" Approx.
11 x 28 Rear)	

Weight Approx. (Gas, Oil and Water)

RT	3175 lbs.
RC	3280 lbs.
RS	3100 lbs.
RR	3165 lbs.

Drawbar:

	Height from Ground	
RS	8-1/2"	25-25/32"
RT, RR, RC	7-11/16"	28-5/32"
	Lateral Adjustment	

All Models 17"

Ground Clearance Under front axle Turning Radius

RR	12-5/8"	RS	8'
RC, RR, RT	18-7/8"		with wheels set at 52" tread

Under Center

RS	12.6
RC	18.8

Capacities:

Fuel Tank	
U.S. Measure (includes 2 gal. reserve)	17. gal.
Litres	64.26

Cooling System

U.S. Measure	10 qts.
Imperial Measure	8.3 qts.

Engine

U.S. Measure	5 qts.
Imperial Measure	4.15 qts.
Litres	4.75

Oil Filter

U.S. Measure	1 qt.
Imperial Measure	.83 qts.
Litres	.95

Transmission

U.S. Measure	8 gal.
Imperial Measure	7.6 gal.
Litres	30.2

Steering Housing

U.S. Measure	2 pt.
Imperial Measure	1.66 pt.
Litres	.473

Power Steering

Belt Pulley Housing	2/3 qt.
	1-1/2 pts.

*4.00-19 Front tire used some RC Models.
* 13-24 Rear tire used some RS Models.

	RC	RS
Front Tread Width	50-82	48-80
Rear Tread Width	48-76	48-76

Wheel Torque Wrench Tension:

Rear Wheel to Axle	80-90 ft. lbs.
Front Wheel	65-75 ft. lbs.

RS - Row Crop Utility
RR - Row Crop Twin Front Wheel
RT - Row Crop Single Front Wheel
RC - Row Crop High Arch
*F - Single Clutch
*M - Duo-Clutch

locking of both brakes when parking on a hill. This latch can be readily pre-set to engage or release either by hand or foot. When pre-set it is operative on the next application of the pedal.

HYDRAMIC CONTROL

Located at the right of the tractor seat. The two levers provide the operator with manual control of the hydraulic system. The lever on the outer quadrant (draft, control lever) is used for draft control adjustment, enabling the operator to establish a desired working depth for an implement. The lever on the inner quadrant (Master Lever) is used to control the position of the links as well as to select the desired response of the system. The upper range of the quadrant provides the system with position control, enabling the operator to select an infinite number of stopping points for the lower links. In the lower range the Master Lever provides a response selection by limiting the rate of implement fall.

POWER TAKE-OFF SHIFT LEVER

Located on the left side of the tractor center housing. The lever shifts to three positions (1) proportional engine speed; (2) neutral, and; (3) proportional ground speed.



FIG. 5 - POWER TAKE-OFF SHIFT LEVER POSITIONS

FUEL SHUT-OFF VALVE

Located on the bottom left rear of the fuel tank. The valve is turned to the right to shut off the fuel flow. The valve opened two full turns to the left will allow gasoline to flow from the main supply. Opening the valve completely permits the use of the reserve two gallons of fuel. Operate on reserve position one hour each day to keep reserve passage clean.



FIG. 6 - FUEL VALVE AND SEDIMENT BOWL

HOOD

The hood is hinged and held securely by two latches on the left side of the tractor. Turning these latches up to the left will unlock the hood. The hood can then be raised providing accessibility to the air cleaner, pre-cleaner, radiator cap, gas tank cap, and battery filler caps.

SERVICE DOOR

The service door is located in the left front of the radiator grill. To open, raise hood and lift up on service door. This provides accessibility to the air cleaner, steering pedestal and cleaning of the radiator core.



FIG. 7 - HOOD



FIG. 18 - ADJUSTING DRAFT CONTROL

DRAFT CONTROL ADJUSTMENT:

The draft control lever is composed of two levers, Draft Control Lever and Draft Variation Lever, Fig. 15. The draft control lever is used to set the draft and is secured in place by lock screw, Fig. 18. The draft variation lever, Fig. 17, is used to vary the depth in operation. Moving the draft control lever ahead increases the draft and consequently the depth. Moving the draft control lever to the rear decreases the draft and consequently the depth.

If the soil texture changes, resulting in a variation in draft, the implement will raise or lower accordingly. This variation can be compensated for by moving the draft variation lever, Fig. 17, slightly lower in heavier soils or slightly higher in lighter soils to maintain uniform depth. Sufficient range for field adjustments is provided within the draft variation lever. Initially the draft variation lever is to be positioned in line with the draft control lever setting for the purpose of relocating the original setting following such field adjustment. The draft control lever should be locked in the selected position by tightening the lock screw, Fig. 18.

The draft control lever should not be used to raise the implement at the end of a furrow but should be left at the desired depth setting,

and the master lever, Fig. 15, used to override this draft control and raise the implement to transport position. If the draft control lever is fully raised, and the tension load on the top link is less than 1000 pounds, the implement will be lifted beyond transport shut-off position and the safety valve will open so long as the draft control lever remains in this position.

RESPONSE CONTROL (OPERATION):

When lowering an implement. If the control valve were opened wide open, the speed that the implement would lower would depend on the weight of the implement and its position to the lower links. In other words a heavy implement would lower fast, a light implement slow, and a heavy overhanging implement very fast. Also the speed of response with draft control would vary with the implement, soil texture, soil conditions and draft. Response control is a feature that enables the operator to adjust this speed to the best suited for the implement in use. Response control may be adjusted by limiting the discharge opening of the control valve. This in turn limits the rate the oil is released from the ram cylinder and thus limits the rate of implement fall.

RESPONSE CONTROL (ADJUSTMENT):

In selecting the correct response setting, the draft lever should be first set to give the desired depth or draft, and then the master lever moved to the proper spot in the response sector, Fig. 19, to suit the particular implement and soil condition.

The final response selection is dependent upon the operators "feel" of the tractor and implements and should be adjusted until a smooth operation is obtained. The master limit stop, which is provided with a knurled nut, should then be locked at this position, Fig. 19. The same response selection can be maintained, after raising and lowering the implement, by returning the master lever to the limit stop.

As a general rule, start making a response selection for a given soil-engaging implement at or slightly below the halfway position on the

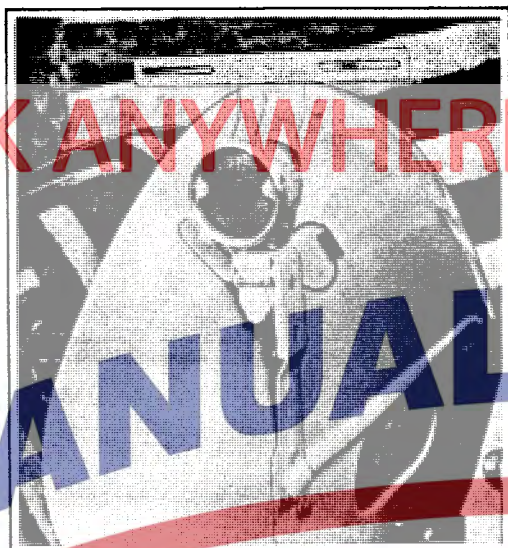


FIG. 81 - TAIL LIGHT AND LICENSE BRACKET

two segments as shown in Fig. 79. For the 4.00-19 wheel the weight is one piece, therefore, the wheel will have to be removed before the weight can be installed. Each wheel kit weighs approx. 96 pounds.

CAUTION: Inspect regularly to see if wheel weights are bolted tight to the wheel discs.

REAR WHEEL WEIGHTS.

In some cases where drawbar work is being done the implement weight is not transferred to the rear of the tractor. In this case to provide additional traction rear wheel weights



FIG. 83 - VERTICAL EXHAUST

are available. Their weight would be approximately 125 pounds per kit per wheel.

LIGHTS

12 volt lights are available for the MH-50 tractor. These lights come in two different kit forms.

1. Lighting Kit - Fender Mounted.
2. Lighting Kit - Hood Mounted.

Normally the hood mounted lights would be used, however, with some tools such as front end loaders, the Fender Mounted lights should be used. A plug-in socket is available for attaching remote safety lights.

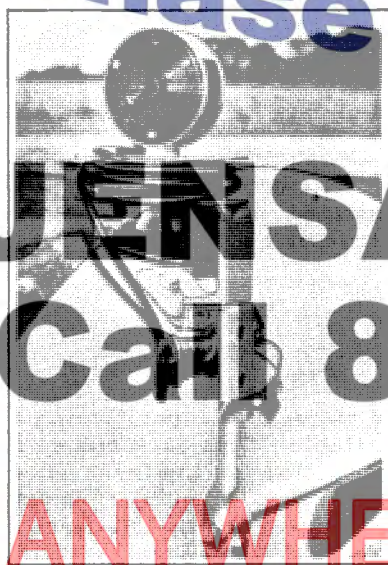


FIG. 82 - SAFETY LAMP



FIG. 84 - LIFT HITCH

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