



Massey Harris Massey Ferguson

Service Manual

MF30E

Tractor, Loader & Backhoe

Service Manual

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MH-S-MF30E TLB

WORKSHOP SERVICE MANUAL

1472 232 M1

MF 30E TRACTOR

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USING THE SERVICE MANUAL

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MANUAL PREVIEW

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CONVERSION TABLES

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SPECIFICATIONS

WEIGHTS AND CAPACITIES

	Kgf	(lbf)
MF 30E bare tractor	1968	(4336)
MF 30E with loader and counterweight	4158	(9160)
MF 30E with loader and digger	4800	(10,574)

Add the following weights to the appropriate machine configuration.

Multi purpose loader bucket	208	(459)
-----------------------------	-----	-------

If tyres are 75% filled with water/calcium chloride solution each wheel will be increased by the weight shown.

Front

6.50 × 16 tyre	32	(71)
7.50 × 16 tyre	46	(101)
11L × 15 tyre	64	(142)

Rear

14.9 × 24 tyre	215	(474)
16.9 × 24	280	(616)
17.5 × 24 tyre	253	(557)

Capacities

	litres	(USgals/pints)
Fuel tank	48	(12.7 US gals)
Engine sump including filter	6.8	(1.8 US gals)
Engine coolant system	10.2	(2.7 US gals)
Transmission	32.5	(8.6 US gals)
Loader hydraulic system	49.0	(13 US gals)
Loader/digger hydraulic system	64.5	(17 US gals)
Power steering (manual shuttle model)	0.5	(1 US pint)

MACHINE SPECIFICATIONS

Engine

Model	Perkins A3 152 to Massey Ferguson specification.
Type	Direct injection, four stroke diesel with replaceable dry cylinder liners.
No. of cylinders	3
Bore	91.44mm (3.6 inch)
Stroke	127mm (5 inch)
Capacity	2500cm ³ (152 in ³)
Compression ratio	18.5:1
Firing order	1, 2, 3
Nett power	36.6Kw (49 bhp) B.S. at 2250 rpm
Nett torque	174Nm (128 lbf ft) at 1350 rpm
Lubrication	System pressure 2.1-4.1 bar (30-60 lbf/in ²) at 2000 rpm engine speed. Disposable cannister type paper element full flow oil filter, externally mounted.
Valves	Overhead, rockers operated directly by cam-followers.
Valve clearance (inlet and exhaust)	0.3mm (0.012 in) cold 0.25mm (0.01 in) hot

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MAJOR ASSEMBLIES

JOINT 1

Separate and Refit

2E • 02 — 04

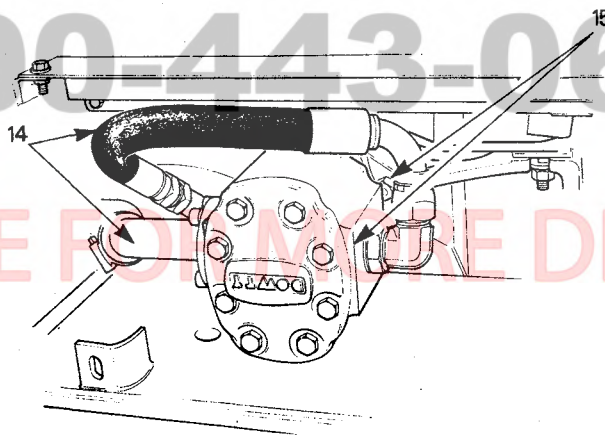
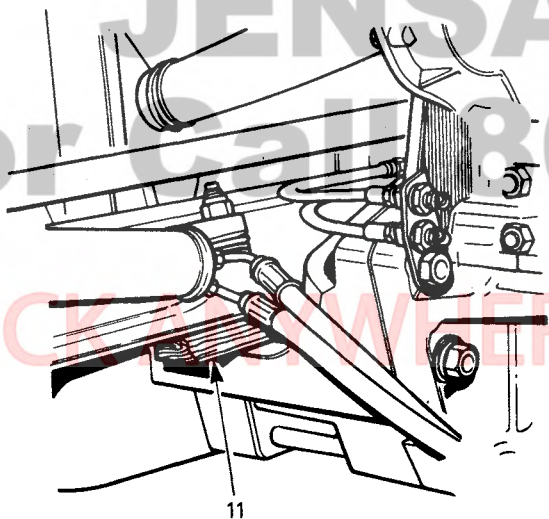
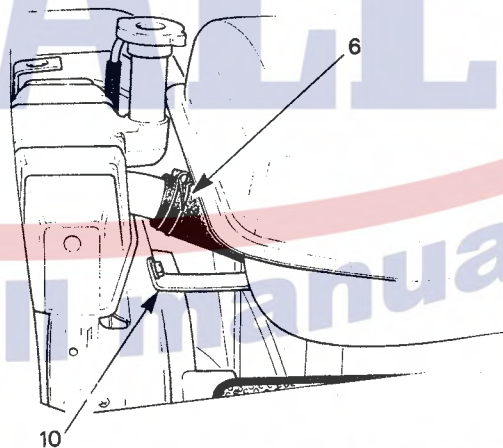
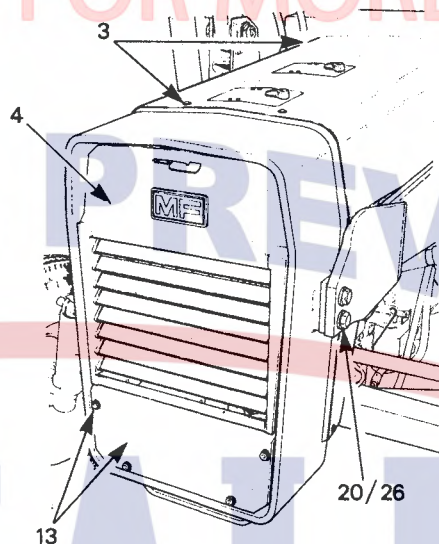
Separation of the tractor at this point removes hardnose, radiator and front axle as an assembly.

Special Tools:

MF297 Pump drive shaft remover/replacer.

Separate

1. Apply handbrake and chock rear wheels.
2. Drain cooling system by opening radiator tap and remove engine block drain plug.
3. Remove six screws and lift off hood.
4. Remove front grille.
5. Remove negative cable from battery.
6. Disconnect top and bottom hoses from radiator.
7. Disconnect horn and headlight wires (when fitted) and route wires out of hardnose.
8. Label and remove hoses from steering rams.
9. Disconnect hoses from transmission oil cooler (when fitted).
10. Disconnect radiator strut.
11.  Fit hardwood wedges between front axle and support casting both sides.
12. Remove radiator grille.
13. Tractors fitted with loader: Remove lower grille panel.
14. Tractors fitted with loader: Disconnect intake and pressure pipes from hydraulic pump.
15. Tractors fitted with loader: Remove both bolts and remove hydraulic pump.



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AD3. 152 ENGINE

ROCKER COVER

Remove and refit

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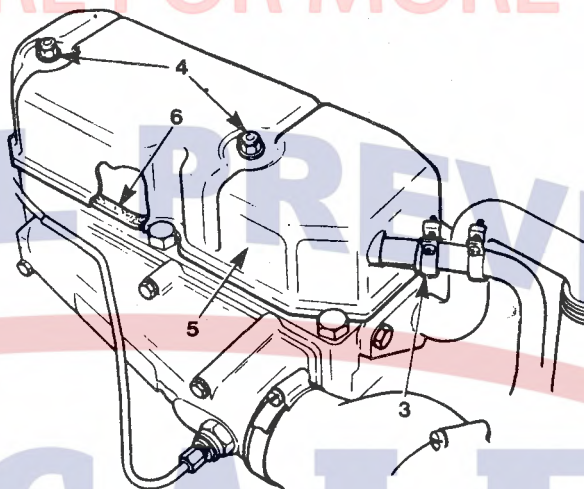
Remove

1. Remove hood.
2. Remove fuel tank.
3. Disconnect breather pipe.
4. Remove two rocker cover securing nuts.
5. Lift off rocker cover.
6. Remove gasket.

Refit

Reverse instruction 1 to 6 except:

7. Thoroughly clean rocker cover and cylinder head mating faces.
8. Coat gasket in Powerpart Hylomar before fitting.



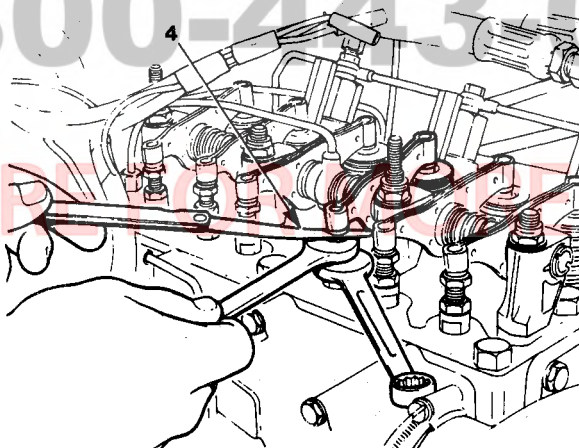
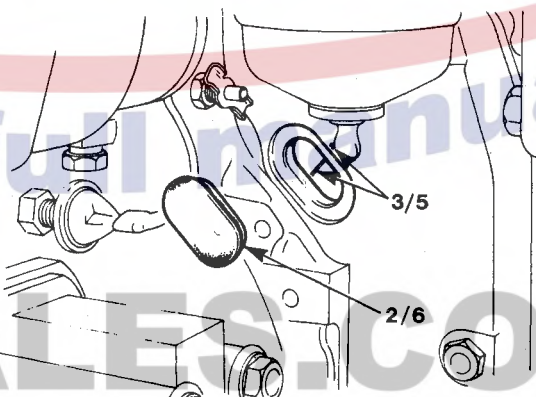
VALVE TIP CLEARANCE

Adjustment

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These clearances are checked by measuring the clearance between the top of the tappet and the rocker arm and this should be 0.30mm (0.012 in) with the engine cold.

1. Remove rocker cover, operation 4B•01.
2. Remove rubber plug.
3. Rotate crankshaft until the TDC line on flywheel is in line with punch mark in centre of inspection hole and No. 1 piston is at the end of compression stroke (both valves fully closed).
4. Check and adjust clearances on valves No. 1, 2, 3 and 5.
5. Turn crankshaft exactly one revolution (360°) clockwise and TDC mark is again in line. Adjust clearance on Nos. 4 and 6 valves.
6. Refit rubber plug.
7. Refit rocker cover.



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POWER STEERING SYSTEM

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POWER STEERING SYSTEM

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LOADER AND DIGGER CONTROL VALVES

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Group 8 Section B

LOADER AND DIGGER
CONTROL VALVES

Issue Two

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HYDRAULIC CYLINDERS

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Group 8 Section D

HYDRAULIC CYLINDERS

Issue Two

Op. No.	Operation	page
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Group 8 Section E

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Group 10 Section B

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Group 11 Section A
INTERNAL HYDRAULICS

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