

MF 1040 STANDARD TRACTOR

ENGINE

Make: Toyosha (HINOMOTO) to MF specification.
Type and Model: Four-stroke, indirect injection diesel 3S200.

Numbers of Cylinders: Three.

Bore: 92 mm (3.622").

Stroke: 100 mm (3.937").

Capacity: 1994 cc (121.7 cu.in.).

Compression Ratio: 23:1.

Firing Order: 1-3-2.

Horsepower: 32 ps (23.9 kw) at 2500 rpm. 27 PTO (20 kw) estimate.

Maximum Torque (at 1600 rpm): 102.0 N.m (75.2 ft.-lbs.).

Lubrication: Throwaway, canister type full flow external filter.

Valves: Overhead, push rod operated.

Valve Tip Clearance:

Inlet — 0.30 mm (0.012") cold, 0.25 mm (0.010") hot.

Exhaust — 0.35 mm (0.014") cold, 0.30 mm (0.012") hot.

FUEL SYSTEM & AIR CLEANER

Fuel Filter: Tokyo Rika filter.

Injection Pump: Diesel kiki.

Engine Speeds (no load): Idling 850 to 900 rpm. Maximum 2650 to 2700 rpm.

Injection Timing: BTDC 22°.

Injectors: Diesel kiki.

Easy Starting Aid: NGK glow plugs.

Air Cleaner: Nippon Donaldson, cyclone type, dual stage, dry element, removable for cleaning.

ELECTRICAL SYSTEM

Voltage: 12 volt negative ground.

Battery: Kobe 70 Ah or MF 470 CCA.

Starter Motor: Hitachi S13.

Alternator: Hitachi LR135 — 35 amp.

Light Bulb Sizes:

Headlights — 35W.

Flashing warning lights — 18.4W.

Red tail light — 23W.

Hour meter light — 3.4W.

Fuel gauge light — 1.7W.

Temperature gauge light — 1.7W.

Indicator lights — 3.4W.

Fuses:

Headlights and illumination (gauge) — 10 amp.

Flashing warning lights and red tail lights — 10 amp.

Horn and indicator lights and fuel gauge water temp. gauge — 10 amp.

Auxiliary working light — 5 amp.

COOLING SYSTEM

Type: Water cooled. Radiator with pumped circulation. Six bladed fan driven by a belt from the crankshaft.

Fan Belt Deflection: 8-10 mm (0.3"-0.4") midway between fan and alternator pulley.

TRANSMISSION

Clutch: Dual, two stage twin clutch, 240 mm (9.4") driven discs, diaphragm spring operated (live PTO).

Transmission: Twelve forward and three reverse speeds with high, medium and low ranges.

Final Drive Ratio:

Ring gear (crown wheel) and pinion reduction ratio — 4.38:1.

Final gear and pinion reduction ratio — 5.09:1.

REAR POWER TAKE-OFF (SINGLE SPEED)

Reduction Ratio: 4.32:1.

Speed: 540 rpm at 2332 engine rpm.

Power Take-Off Shaft: Six splines 35 mm (1.38") diameter.

HYDRAULIC SYSTEM

Function: Draft control.

Pump Maximum Output: 25 litre/min. (6.6 gpm) at 2500 engine rpm.

Pump Maximum Pressure: Recommended operating maximum pressure 13.7 N/mm² (1987 psi).

Linkage: Three-point linkage, Category I.

Maximum Lift Capacity: 785 kg (1731 lbs.). Measured 610 mm (24") behind link ends (SAE J-283) with top link positioned in top hole and vertical lift rods attached in forward holes on lower links.

Relief Valve Pressure: 13.7 N/mm² (1987 psi).

BRAKES

Type: Wet disc brakes 200 x 164 mm (7.9" x 6.5"), 3 discs, mechanical operated, either together or independently to assist steering.

Parking Brake: Operation on both rear brake discs.

STEERING

Type: Integral type power assisted.

Toe-In:

2-WD — 0-10 mm (0"-0.4").

4-WD — ±5 mm (±0.2").

Turns Lock to Lock:

2-WD — 4.1.

4-WD — 3.8.

Ratio: 19.8:1.