O.E.C.D. Report No. 1288

Bundesanstalt für Landtechnik

A-3250 Wieselburg, Austria

Dieseltractor

MASSEY FERGUSON MF 340



Date of approval: 9.10.1990

This report has been approved by the O.E.C.D. Coordinating Centre (CEMAGREF, France) as being in accordance with the O.E.C.D. Test Code

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Tractor manufacturer's name and address:	Massey Ferguson Manufacturing Limited Banner Lane, Coventry, England CV4 9GF
Location of tractor assembly:	Banner Lane, Coventry CV4 9GF
Submitted for test by:	Fa. Austro-Diesel
Selected for test by:	Fa. Austro-Diesel
Place of running-in:	Schwechat, Austria
Duration of running-in:	100 hours
Location of test:	Wieselburg, Austria

SPECIFICATION OF TRACTOR

TRACTOR:

Make:	Massey Ferguson Ltd.
Trade name:	Massey Ferguson
Model:	MF 340
Type:	Wheel-tractor, unit construction
Number of driving wheels:	4
Serial no.:	5747P*36033*
1st serial no.:	5747P 36033

ENGINE:

Make:	Perkins
Model:	AD 3-152
Type:	4 stroke diesel engine
Serial no.:	CE 31215U 849 772 T

Cylinder:

Number/disposition:	3, vertical in line
Bore/stroke:	91,6/127 mm
Capacity:	2505 cm^3
Compression ratio:	16 : 1
Arrangement of valves:	Overhead valves
Cylinder liners:	Dry liners
Supercharging:	None, naturally aspirated

Fuel system:

Fuel feed system:	AC DELCO mechanical feed pump
Make, model and type of fuel filter:	CAV paper element with transparent bowl
Capacity of fuel tank:	68 l
Make, model and type of injection pump:	CAV distributor injection pump DPA 32 30 F 350
Serial no.:	33075 LGG
Manufacturer's production setting of injection pump, flow rate and timing:	$47{,}7^{\pm 3\%}$ mm^3/stroke at 1125 rev/min and full load 24° before TDC at 1 mm pump stroke
Make, model and type of injectors:	CAV 4-hole injectors
Injection pressure:	$17{,}7^{\pm 5}$ MPa ($177^{\pm 5}$ bar)

Governor:

Make:	CAV
Type:	Variable speed governor, mechanically acting, incorporated in injection pump
Governed range of engine speed:	From 750 to 2410 rev/min engine speed
Rated engine speed:	2250 rev/min

Air cleaner:

Location of air intake:	Inside the bonnet, above the radiator
Pre-cleaner:	Incorporated in main-cleaner
Main-cleaner:	
Make:	DONALDSON
Model:	DONALDSON FLG 06-5331
Type:	Dry type with integrated cyclonic pre-cleaner, with dust-drain valve and changeable paper filter insert and additional safety cartridge
Service intervals:	
Main-cleaner paper insert:	Cleaning interval: when control lamp indication Changing interval: 1000 hours or 1 year
Safety element:	Changing interval: after 6 main-cleaner paper insert cleanings or 1 year
Maintenance indication:	Electric lamp indication, -62 mbar for indication DONALDSON LEX 77-0062

Lubrication system:

Type of feed pump:	Forced feed from eccentric rotor pump
Type of filter:	Full flow replaceable element cannister PERKINS Powerpart 265 4408

Cooling system:

Type of coolant:	Water cooling; water or water with anti freeze solution
Type of pump:	Centrifugal pump with double circuit water cooling
Specification of fan:	Puller, 1 driving belt
Number of fan blades:	2
Fan diameter:	394 mm
Coolant capacity:	9,8 l
Type of temperature control:	Thermostat control with electrical cooling thermometer
Superpressure system:	75 kPa (0,75 bar)

Starting system:

Make:	LUCAS
Model:	2 M 113/36-89
Type:	Solenoid engaged screw push starter motor
Starter motor power rating:	12 V, 1,8 kW
Cold starting aid:	LUCAS CAV Thermostart
Safety device:	Operates only when Hi/Lo gear and p.t.o.selectors are in neutral position

Electrical system:

Voltage:	12 V, negative earth
Generator:	Make: POWERPART or Alternator Lucas A 127 Type: Belt driven Power: 0,54 kW
Battery:	1 with 12 V, lead acid type Rating: 75 Ah at 20 hours rating

Exhaust system:

Make:	NELSON BURGESS
Model:	DGM SA 1385
Type:	Silencer
Location:	External vertical silencer, 320 mm left of the engine, height above ground 2350 mm

TRANSMISSION TO WHEELS:

Clutch:

Main clutch and p.t.o. clutch:	For travel and p.t.o.
Make:	LAYCOCK
Type:	Dry double clutch with 2 plates
Number of plates:	2
Diameter of plates:	305 mm and 254 mm
Method of operation:	Main clutch operated by pedal (mechanical,1st step) p.t.o. clutch opereted with the same pedal (mechanical, 2nd step)

Gearbox:

Make:	Own make
Model:	-
Type:	Mechanically acting gear box
Normal model:	(as tested) 2 forward groups (Low/High) combined with 4 speed change gear and one reverse gear for each group (Low/High)
Arrangement:	1 lever for group gear (Low/High) 1 lever for the 4 speed gear (1 - 4) and reverse gear Total: 8 forward and 2 reverse gears
Available options:	None

Rear axle and final drives:

Make:	Own make
Model:	-
Type:	Central axle, pinion and bevel gear, lockable bevel gear differential, acting by planetary gears on rear wheels
Differential lock:	Type: mechanically acting Method of engagement: foot lever operated and pre-selectable Method of disengagement: selfdisengaging

Front axle and final drives:

Make:	GKN
Model:	COMO
Type:	Steering and driving axle, central type Driving shaft, pinion and bevel gear, bevel gear differential, half shafts, universal joints, planetary gears in wheel hubs Front wheel drive: mechanically engaged, hand lever operated
Differential lock:	None

Total ratios and travelling speeds:

Gear no.	Group or range	Number of engine revolutions for one revolution of the driving wheels	Nominal travelling speed at rated engine speed of 2250 rev/min *) km/h
1	Low	198,00	2,53
2		135,00	3,70
3		98,80	5,00
4		73,60	6,80
5	High	49,50	10,10
6		33,75	14,80
7		24,70	20,20
8		18,40	27,20
R	Low	145,41	3,44
R	High	36,35	13,76

*) Calculated with a tyre dynamic radius index of 590 mm - ISO recommendation (ISO 4251/1-1984)
Test tyre equipment: rear: 14,9 - 24, 6 PR
front: 10,5 - 18, 10 PR

Number of revolutions of front wheels for one revolution of rear wheels: 1,355

POWER TAKE-OFF:

Main power take-off:

Type:	Independent, mechanically operated, dual clutch
Method of engagement:	Hand lever operated
Number of shafts:	1

Power take-off proportional to engine speed:

540 rev/min

Location:	At rear of tractor
Diameter of power take-off shaft end:	34,9 mm
Number of splines:	6, in conformity with ISO R 500 - 1979, type 1
Height above ground:	455 mm with tyre dynamic radius index of 590 mm
Distance from the median plane of the tractor:	0
Distance behind rear wheel axis:	296 mm
P.t.o. speed at rated engine speed:	679 rev/min
Engine speed at standard power take-off speeds:	1778 rev/min
Ratio of rotation speeds (engine speed/ p.t.o. speed):	3,312
Power restriction and max. torque:	48 kW
Direction of rotation (viewed from behind tractor):	Clockwise

Power take-off proportional to ground speed:

Speed of shaft:	540 rev/min
Travelling distance for one revolution of p.t.o. shaft:	0,268 m with 590 mm tyre dynamic radius index
Number of p.t.o. shaft revolutions for one revolution of rear wheels:	13,8

Direction of rotation with forward gear engaged (viewed from behind tractor):	Clockwise

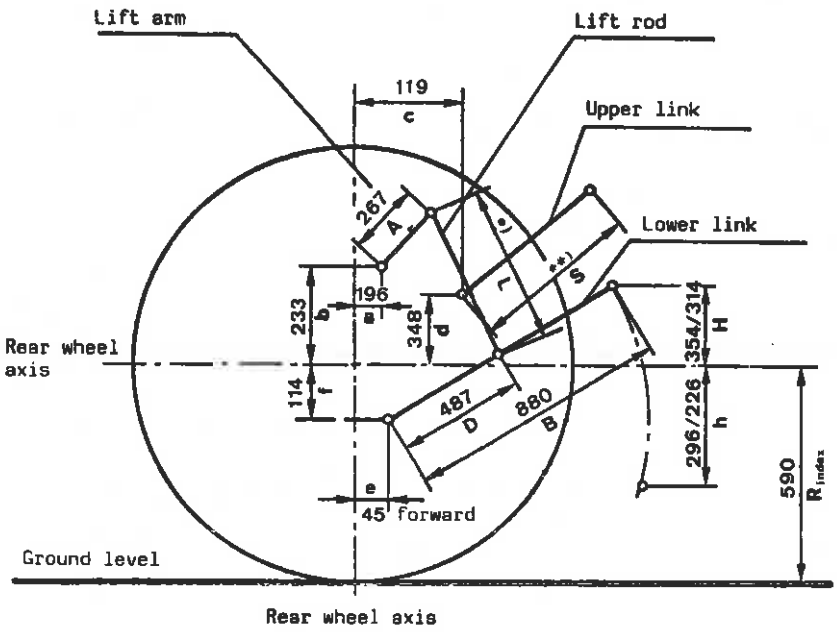
POWER LIFT:

In the rear:	
Make:	Own make
Type:	Hydraulic top link sensing with draft and position controll
Type of hydraulic system:	Open center type Common oil supply from gear box with separate control unit
Type and number of cylinder:	One single acting cylinder
Type of linkage lock for transport:	Hydraulically by throttle valve
Relief valve pressure setting:	20,5 - 24,0 MPa (205 - 240 bar)
Opening pressure of cylinder safety valve:	None fitted
Lift pump type:	4-cylinder piston type pump
Transmission between pump and engine:	Driven from p.t.o. shaft
Type and number of filter:	Own make metal mesh strainer
Site of oil reservoir:	Gear box
Type, number and location of tapping points:	3 tapping points in accordance to ISO DIS 5675 - 1979 200 mm behind rear axle, 305 - 365 mm above rear axle, 2 tapping points 160 mm right of median plane, 1 tapping point 170 mm left of median plane
Maximum volume of oil available to external cylinders:	18 l

Three-point-linkage:

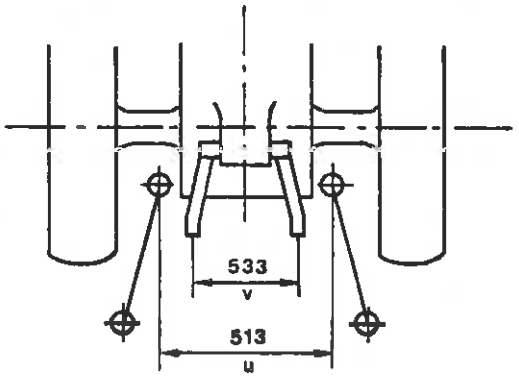
	Category I/II, in conformity with ISO standard 730/1 - 1977
Category adapter:	Replacement ball ends

Figures of power lift:



*) Left lift rod adjustable from 555 mm - 645 mm length by a thread, right lift rod adjustable from 515 mm - 640 mm by gear and thread.

**) Upper link adjustable from 600 mm to 800 mm



Dimensions of linkage geometry:

			Dimension of range mm	Settings used in test mm
Length of lift arms:		(A)	267	267
Length of lower links:		(B)	880	880
Distance of lift arm pivot points from rear wheel axis:	horizontally vertically	(a) (b)	196 233	196 233
Horizontal distance between the 2 lower link points:		(u)	513	513
Horizontal distance between the 2 lift arm end points:		(v)	533	533
Length of upper link:		(S)		710 Cat. I
Distance of upper link pivot point from rear wheel axis:	horizontally vertically	(c) (d)	119 348	119 348
Distance of lower link pivot point from rear wheel axis:	horizontally vertically	(e) (f)	45 forward 114	45 forward 114
Distance of lower link pivot points to lift rod pivot points on lower links:		(D)	460/510/585	460/585
Height of lower hitch points when locked in transport position*):			Any hight within lift range	

		Min. lift rod length	During test	Max. lift rod length
Length of lift arms	(A) mm	267	267	267
Linkage distance of lift rod **)	(D) mm	460/585	460/585	460/585
Length of lift rods **)	(L) mm	555	555/640	640
Lowest position **)	(h) mm	296/0	296/226	551/226
Highest position **)	(H) mm	354/445	354/314	179/314

**) min.mech. advantage/max.mech. advantage

*) With dynamic radius index 590 mm - ISO recommendation (ISO 4251/1-1984)

TRAILER HITCH:

Type:	JSV 87 Scharmüller
Hole diameter:	33 mm
Height above ground:	300/400/475/510/580/615/690/795 mm
Distance of hitch point from rear wheel axis, horizontally:	455 mm
Distance of hitch point from power take-off shaft end, vertically:	above 20/55/125/160/235/340 mm; below 55/155 mm
horizontally:	150 mm
Maximum vertical permissible load:	15 kN

HOLED DRAWBAR:

Lenght:	794 mm
Number of holes (with central hole):	9
Distance between holes:	54 mm
Hole diameter:	22 mm
Thickness/width of the drawbar:	29/62 mm
Height above ground, min.:	-75 mm
max.:	920 mm
Horizontal distance to power take-off shaft end (rear):	670 mm

STEERING:

Make:	DANFOSS
Model:	DANFOSS ORBITROL OSPC 100
Type:	Hydrostatic steering
Method of operation:	Steering wheel acting on front wheels
Pump:	Gear pump
Rams:	One double acting, fitted on the front axle
Working pressure:	17,0 MPa (170 bar)

BRAKES:

Service brake:

Make:	India brakes
Type:	Dry drum brakes 355,6 mm diameter, 50,8 mm width
Method of operation:	Pedal operated, independent on combined pedal, mechanically transmission
Trailer braking take-off:	None (manufacturer's deceleration)

Parking brake:

Type:	Mechanically acting on the same drum brakes as service brake (cable connection to service brake)
Method of operation:	Hand lever with ratched

WHEELS:

Number:	Front: 2, steering and driving function Rear: 2, driving function
Wheelbase:	2167 mm

Track width adjustment:

	Minimum mm	Maximum mm	Adjustment method
front	1400	1400	None
rear	1425	1930	Reversing wheels offset lugs

STRUCTURE:

Make:	Walter Mauser
Model:	KK 34
Manufacturers' name and address:	Walter Mauser GmbH. & Co.KG. Fabriksstr. 20 a A-2624 Breitenau
Protective device:	Cab
OECD-approval no.:	None
National regulation no.:	Prot.Nr. 009/90

DRIVER'S SEAT:

Make:	Grammer
Type:	DS 44/1 H; tested on tractor according to national regulation (Prot.Nr. 006/90)
Type of suspension:	2 springs tension claimed
Type of damping:	Hydraulically damping
Range of adjustment, longitudinal:	150 mm
vertical:	60 mm

MISCELLANEOUS:

Additional seat:	
Location:	-
Number of places:	-

LIGHTING:

	*) Height above ground of centre mm	Size mm	Distance from outside edge of lights to median plane of tractor mm
Head lights	1030	160 x 100	222
Side lights	1365	110 x 33	565
Rear lights	1255	85 x 70	630
Brake lights			
Direction indicators front	1395	110 x 35	565
Direction indicators rear	1255	85 x 70	720
Reflectors	1255	50 x 45	650

*) Measured with tyre dyn. radius index at rear 590 mm and 420 mm at front.

TEST CONDITIONS

Overall dimensions:

	Length	Width *)	Height at top of	
			exhaust silencer	protective structure
	mm	mm	mm	
Ballasted	3740	1795	2350	2140
Unballasted	3485	1795	2350	2140

*) Measured on the outside edges of the rear wheels

Ground clearance:
(unballasted tractor)

Clearance-limiting part:

295 mm under the front axle (four wheel drive)
250 mm under the trailer hitch mounting console

Tractor mass: With tanks full and cab

		Without	With driver
		kg	kg
Unballasted	Front	1130	1145
	Rear	1300	1360
	Total	2430	2505
Ballasted	Front	1595	1610
	Rear	1520	1580
	Total	3115	3190

Ballast:

	Number of weights	Mass total kg	Water kg
Front	9	385	-
Rear	-	-	2 x 150
Optional	-	-	-

Tyres and track width specifications:

Tyres:

	Front	Rear
Dimensions	10,5/80 - 18 rim: W 9 x 18	14,9/13 - 24 rim: W 13 x 24
Ply rating	10	6
Type	diagonal carcass	diagonal carcass
Max. load (tyre manufacturer's)	14,30 kN	15,10 kN
Max. load (tractor manufacturer's)	22,50 kN	22,50 kN
Inflation pressure (tyre manufacturer's)	1,6 bar	1,4 bar
Dynamic radius index	420 mm	590 mm
Chosen track width	1400 mm	1425 mm

Oil and lubrication:

Capacity and change intervall:

	Capacity (dm^3)	Oil change (h)	Filter change (h)
Engine	5,7	250	250
Gear box	49,8	1000	-
Front axle	5,0	-	-
Rear axle	common with transmission		
Final drive front	common with gear box	-	-
Final drive rear	common with transmission	-	-
Hydraulic system	common with transmission	-	250
Steering	Top up only	-	-

Specifications:

	Recommended:	Used during test:
Engine oil:		
Type:	SAE 15 W/30	
Viscosity:	54 cSt at 50°C	As recommended
Classification:	MIL-L-2104 C	
Transmission oils:		
Type:	SAE 15 W/30	
Viscosity:	54 cSt at 50°C	As recommended
Classification:	MIL-L-2104 C	
Hydraulic fluid:	Common oil circuits with transmission	As recommended
Steering oil:		
Type:	SAE 10 W	
Viscosity:	18,5 cSt at 50°C	As recommended
Classification:	M-F-CMS 1151 A	
Grease:	Consistency 2 lithium	As recommended
Number of lubrication points:	13	
Fuel:		
Type:	In conformity with national standard according to DIN 51601	
Density at 15°C:	0,842 g/cm^3	

TEST RESULTS

COMPULSORY TEST:

Main power take-off performance

Date and location of tests: 20.2.1990, Wieselburg, Austria
Type of dynamometer: SCHENCK eddy-current brake W 780

Main test on: ISO R 500, type I (DIN 9611) - 540 rev/min

Power	Speed		Fuel consumption		Specific energy
	engine	p.t.o.	hourly	specific	
kW	rev/min	rev/min	kg/h l/h	g/kWh	kWh/l
MAXIMUM POWER					
Maximum power - 2 hours test					
32,10	2300	695	8,47 10,06	264,0	3,18
Power at rated engine speed					
31,82	2250	680	8,34 9,90	262,0	3,21
Standard power take-off speed					
27,97	1780	540	7,18 8,53	257,0	3,51
PART LOADS					
(i) the torque corresponding to maximum power at rated engine speed					
31,82	2250	680	8,34 9,90	262,0	3,21
(ii) 85 % of torque obtained in (i)					
28,20	2346	709	7,60 9,03	269,5	3,12
(iii) 75 % of torque defined in (ii)					
21,27	2360	713	6,15 7,30	289,0	2,91
(iv) 50 % of torque defined in (ii)					
14,22	2367	715	4,79 5,69	337,0	2,50
(v) 25 % of torque defined in (ii)					
7,14	2380	719	3,53 4,19	494,5	1,70
(vi) unloaded					
0	2400	725	2,42 2,87	-	-

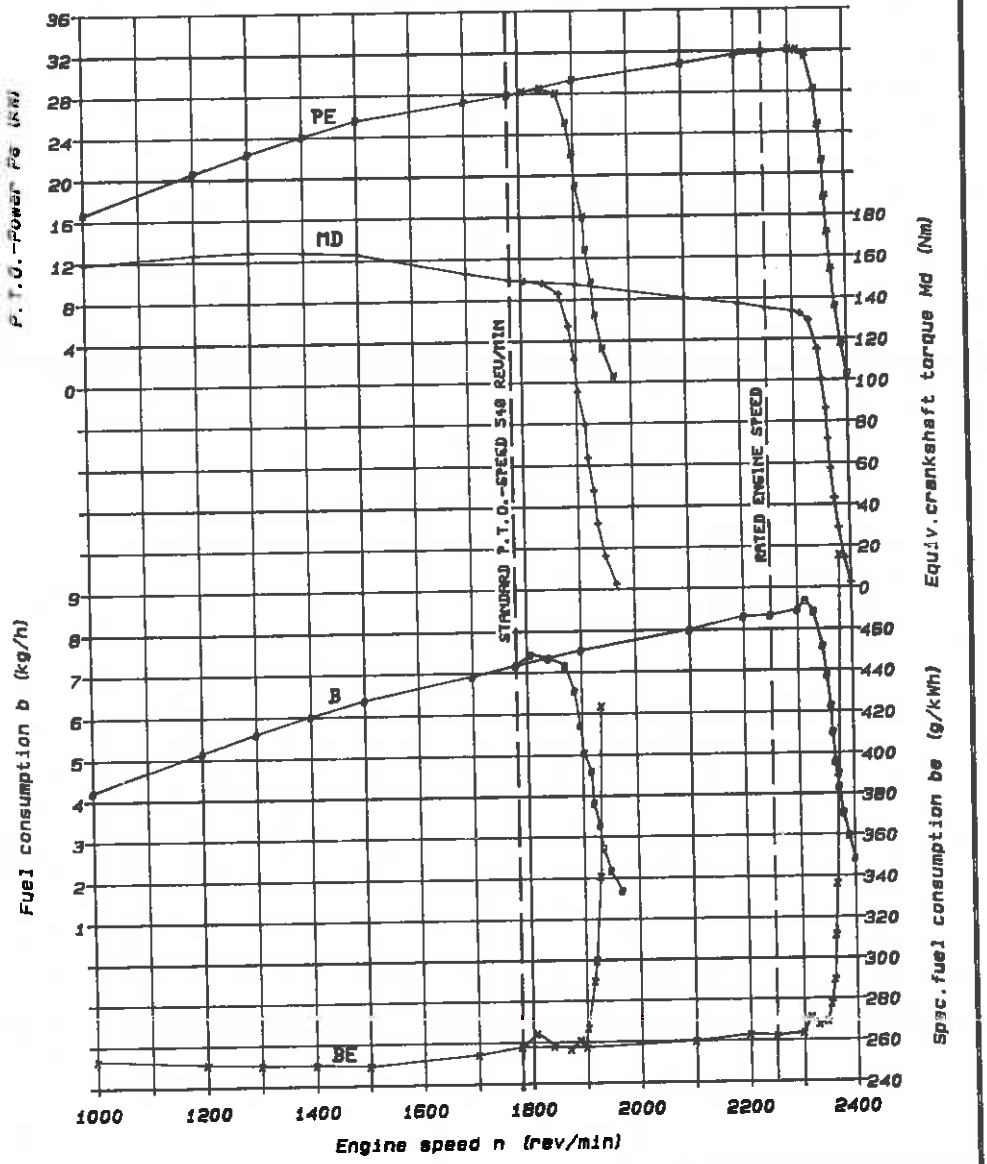
Power	Speed		Fuel consumption		Specific energy
	engine	p.t.o.	hourly	specific	
kW	rev/min	rev/min	kg/h l/h	g/kWh	kWh/l
PART LOADS AT STANDARD POWER TAKE-OFF SPEED					
(i) The torque corresponding to maximum power available					
27,97	1780	540	7,18 8,53	257,0	3,28
(ii) 85 % of torque obtained at maximum power					
25,09	1887	570	6,55 7,78	261,0	3,22
(iii) 75 % of torque defined in (ii)					
18,98	1903	575	5,07 6,02	267,0	3,15
(iv) 50 % of torque defined in (ii)					
12,76	1920	580	3,83 4,55	300,0	2,80
(v) 25 % of torque defined in (ii)					
6,43	1936	585	2,72 3,24	424,5	1,98
(vi) unloaded					
0	1969	595	1,69 2,01	-	-

No load maximum engine speed: 2400 rev/min
Equivalent crankshaft torque
at maximum power: 135 Nm at rated engine speed
Maximum equivalent crankshaft torque: 164,6 Nm at 1300 - 1400 rev/min of the engine

Mean atmospheric conditions
temperature: 16°C
pressure: 1004 mbar
rel. humidity: 70 %

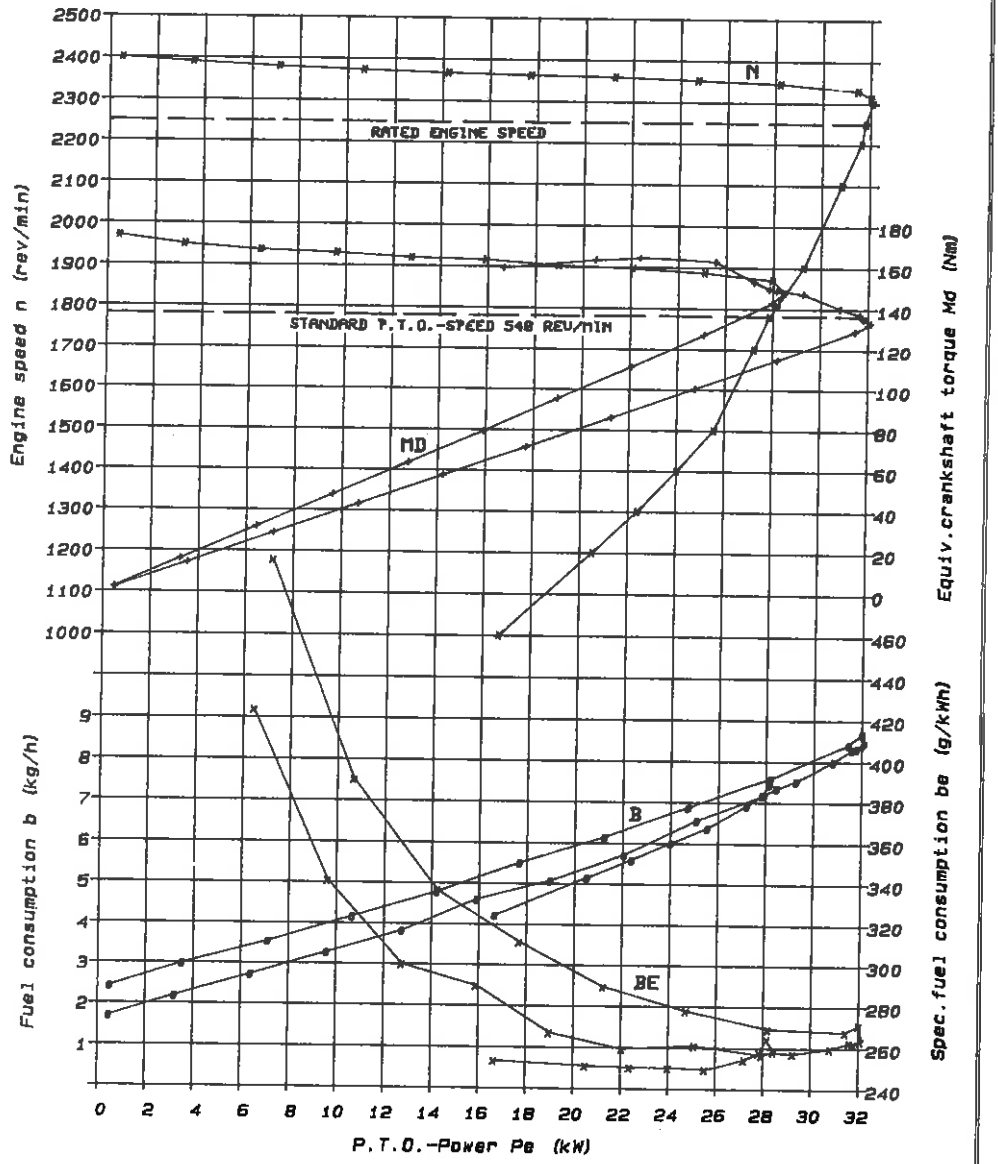
Maximum temperatures
coolant: 74°C
engine oil: 109°C
fuel: 55°C
engine air intake: 21°C

Bundesanstalt für Landtechnik elburg/Erlauf, Austria rot.Nr.:	P.T.O.-test	MASSEY FERGUSON Typ MF340 5747 Mot.Typ PERKINS AD3-152



gine ser.nr. : CE 31215U 8497721	atm. pressure: 1004 MBAR	fuel temp. : 55 C		signature
actor ser.nr.: 5747 P 36033	air temper. : 16 C	d.of tests : 1990-02-21		
el : 0.842/15 C	coolant temp.: 74 C	test no. : 790-514-90		
gine oil : SAE 15 W/30	oil temp. : 109 C	curves no. : 1		LUSER

Bundesanstalt für Landtechnik Wieselburg/Erlauf, Austria Prot.Nr.:	P.T.O.-test	MASSEY FERGUSON Typ MF340 5747 Mot.Typ PERKINS AD3-152



engine ser.nr. : CE 31215U849772T	atm. pressure: 1004 MBAR	fuel temp. : 55 C	signature
tractor ser.nr.: 5747 P 36033	air temper. : 16 C	d.of tests : 1990-02-21	
fuel : 0.842/15 C	coolant temp.: 74 C	test no. : 780-514-90	
engine oil : SAE 15 W/30	oil temp. : 109 C	curves no. : 2	LUBER

HYDRAULIC POWER AND LIFTING FORCE:

Date of tests: 8.6.1990

Hydraulic power test:

Sustained pressure with relief valve open: 18,0 MPa (180 bar)

Pump delivery rate at minimum pressure (at rated engine speed): 19,5 l/min

	Flow rate	Pressure	Power
	l/min	MPa	kW
Flow rate corresponding to a hydraulic pressure equivalent to 90 % of the actual relief valve pressure setting and corresponding hydraulic power	9,6	16,2	2,6
Flow rate and hydraulic pressure corresponding to maximum hydraulic power	18,4	13,0	4,0

Tapping point used for test: At rear of tractor

Temperature of hydraulic fluid, if different from 65° ± 5°C: 65°C

Opening pressure of the unloading valve: Not applicable

Closing pressure of the unloading valve: Not applicable

Power lift test:

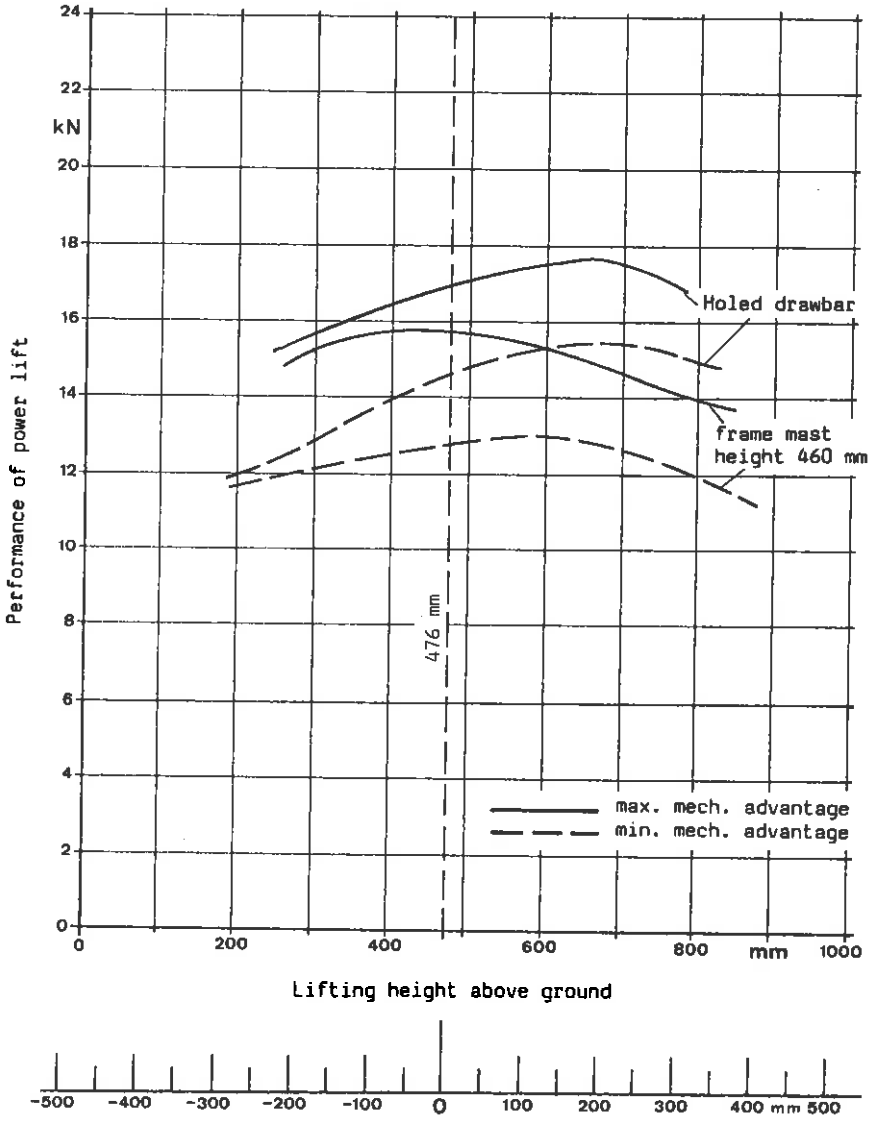
	at the hitch point	on the frame
Height of lower hitch points above ground in down position *)	180/250 mm	180/250 mm
Vertical movement *)	650/540 mm	650/540 mm
Maximum corrected force exerted through full range *)	11,9/15,3 kN	11,3/13,9 kN
Corresponding pressure of hydraulic fluid	162 bar	162 bar
Moment about rear wheel axis *)	11,0/14,2 kNm	17,3/21,3 kNm
Maximum tilt angle of mast from vertical 	-	from +3° to 0° and to +5°

*) Min.mech./max.mech. advantage
Lift rod length min.mech. advantage: 555 mm
Lift rod length max.mech. advantage: 640 mm

Linkage settings for test: See table and figure in specifications.

Lifting heights relative to the horizontal plane including the lower link pivot points														
mm		-290	-210	-175	-100	-50	0	50	100	150	200	250	300	345	400
Lifting forces (the values measured are corrected to correspond to a hydraulic pressure equivalent to 90 % of the actual relief valve pressure setting or to maximum power delivered by the hydraulic system, which is lower)															
Corresponding pressure:															
at the hitch point kN	max.mech. advantage		15,3	15,6	16,3	16,6	16,9	17,2	17,4	17,6	17,6	17,4	17,1		
	min.mech. advantage	11,9	12,5	12,8	13,7	14,2	14,6	15,0	15,2	15,4	15,5	15,4	15,2	14,9	
at the frame kN (460 mm mast height)	max.mech. advantage		14,9	15,2	15,6	15,7	15,7	15,6	15,4	15,2	14,9	14,5	14,2	13,9	
	min.mech. advantage	11,6	11,9	12,1	12,4	12,6	12,7	12,8	13,0	12,9	12,8	12,5	12,2	11,8	11,3

Performance of power lift:



Height relative to the horizontal plane including the lower link pivot points (dyn. radius index 590 mm)

Drawbar performance:

Date of tests: 4.4.1990
18.4.1990

Height of drawbar above ground: unballasted 300 mm, ballasted 300 mm

Tyre inflation pressure: front: unballasted 110 kPa, ballasted 120 kPa
rear: unballasted 100 kPa, ballasted 110 kPa

Type of track: Concrete

Tyre sizes: front 10,5 - 18 AS; rear 14,9 - 24 AS

Gear	Power	Drawbar pull	Speed	Engine speed	Slip of wheels	Specific fuel consumption	Specific energy	Temperature			Atmosph. conditions		
								Fuel	Coolant	Engine oil	Temperature	Rel.humidity	Pressure
	kW	kN	km/h	rev/min	%	g/kWh	kWh/l	°C	°C	°C	°C	%	kPa
(i) Maximum power in tested gears (unballasted tractor)													
L 1	15,00	23,76	2,27	2350	15,0	458,5	1,84	34	56	98	9	70	99,0
L 2	21,86	23,76	3,31	2325	15,0	391,5	2,15	36	56	100	7	71	99,0
L 3	26,02	20,18	4,64	2250	10,0	320,5	2,63	41	60	103	9	68	99,0
L 4	26,26	14,63	6.44	2250	6,7	317,5	2,65	42	59	104	9	70	99,0
H 5	26,11	9,55	9,83	2250	4,4	319,5	2,64	42	60	103	8	70	99,0
H 6	24,55	6,04	14,62	2250	3,1	339,5	2,48	43	60	103	8	70	99,0

Gear	Power	Drawbar pull	Speed	Engine speed	Slip of wheels	Specific fuel consumption	Specific energy	Temperature			Atmosph. conditions		
								Fuel	Coolant	Engine oil	Temperature	Rel.humidity	Pressure
	kW	kN	km/h	rev/min	%	g/kWh	kWh/l	°C	°C	°C	°C	%	kPa
(ii) Maximum power in tested gears (ballasted tractor)													
L 1	17,17	27,74	2,23	2286	15,0	492,0	1,71	37	65	89	8	62	99,5
L 2	24,79	27,34	3,49	2250	13,6	336,5	2,50	39	67	92	9	62	99,5
L 3	25,97	19,62	4,75	2250	7,7	321,0	2,62	42	67	98	9	62	99,5
L 4	26,13	14,34	6,56	2250	5,4	319,0	2,64	44	68	101	9	60	99,5
H 5	25,55	9,29	9,90	2250	3,8	326,5	2,58	44	66	101	9	60	99,5
H 6	23,99	5,88	14,69	2250	2,8	347,5	2,42	42	67	100	10	60	99,5
(iii) Five-hour-test at 75 % of pull at maximum power													
L 4	20,00	10,70	6,73	2270	4,2	427,0	1,97	42	67	99	9	62	99,8
(iv) Five-hour-test at pull corresponding to 15 % wheelslip in test (ii)													
L 1	17,34	27,75	2,25	2290	15,0	487,0	1,72	43	65	105	10	62	100,5

Oil consumption during 10 hours duration of tests (iii) and (iv): 83 g/h

TURNING AREA AND TURNING CIRCLE:

Wheel equipment: front: 10.5/80 - 18 AS front, PR 10
rear: 14,9/13 - 24 AS, PR 6

Track of wheel: front: 1400 mm
rear: 1425 mm

Results *)	With brakes		Without brakes	
	right-hand	left-hand	right-hand	left-hand
	m	m	m	m
Radius of turning area	3,34/3,72	3,42/3,72	4,44/4,02	4,42/4,02
Radius of turning circle	3,20/3,58	3,28/3,58	4,30/3,88	4,28/3,00

*) Four-wheel drive switched: ON/OFF

LOCATION OF CENTRE OF GRAVITY:

	mm
Height above ground	590
Distance forward from the vertical plane containing the axis of the rear wheels	990
Distance from the median plane of the tractor, left-side	7

BRAKING:

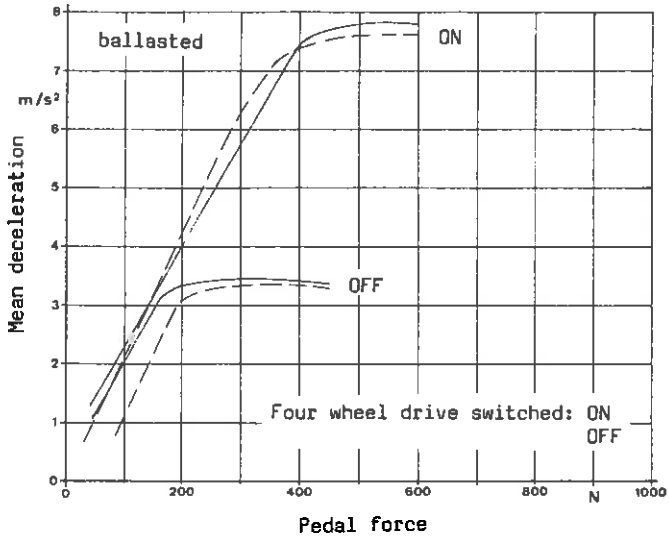
Date of tests: 3.4.1990; 17.4.1990
Type of track: Concrete
Type of decelerometer: Moto-Meter Nr. 03382 (Kombi-Schreiber)

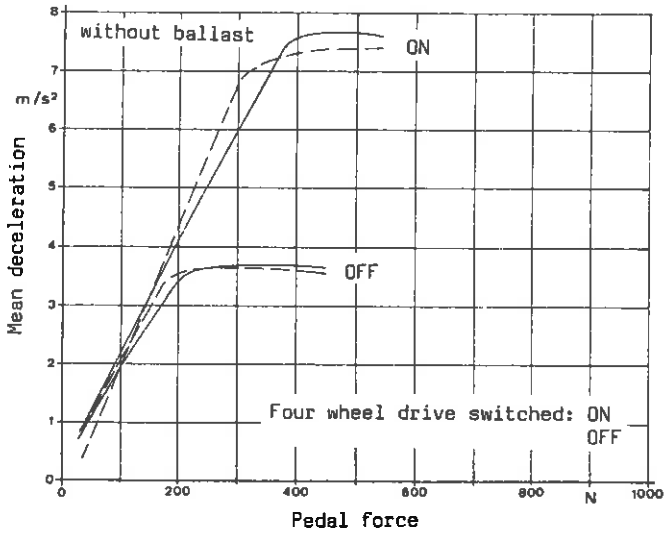
Tractor mass during brake tests (with driver):

	Front kg	Rear kg	Total kg
Ballasted	1610	1580	3190
Unballasted	1145	1360	2505

Service brake:

Four-wheel-drive switched ON and OFF
Type-0-test (cold brakes) ——————, Type-I-(fade test) — — — — — —





Speed before application of brakes: 28,8 km/h
The tractor brakes were heated by towing of the tractor for 1 km.

Maximum deviation of tractor from its original course: None

Abnormale vibration: None

Parking brake device test:

	Ballasted tractor on 18 % slop	
	up	down
Braking device control force	190/200 *)	180/190 N *)

*) Four wheel drive switched: ON/OFF

MEASUREMENT OF EXTERNAL NOISE LEVEL:

Date of tests:	15.5.1990
Type of sound level meter:	BRÜEL & KJAER 2209 and 2308
Type of track:	Concrete
Gear number:	H 4
Travelling speed before acceleration:	21,6 km/h
Sound level:	84,5 dB(A)

ANNEX

NOISE RATING

Four-wheel-drive switched ON

Gear	Drawbar pull at which the tractor develops the maximum sound level kN	Measured travelling speed km/h	Sound level dB(A)	
			*)	**)
Unloaded test in the gear giving the speed nearest to 7,5 km/h				
L 4	-	7,21	80,0	82,5
Unloaded test in the gear giving the maximum speed				
H 4	-	27,36	83,5	84,5
Tests with the drawbar pull for which the tractor gives the maximum sound level (combination of gear giving the nearest nominal speed to 7,5 km/h and also in any gear with a sound level increase of at least 1 dB(A)				
L 1	14,24	2,71	84,0	84,5
L 2	23,27	3,31	83,5	85,5
L 3	19,36	4,67	85,0	85,5
L 4	13,98	6,60	85,0	86,0
H 1	9,51	9,78	84,0	85,0
H 2	5,97	14,68	86,0	86,0
H 3	3,79	20,22	85,5	86,0
H 4	-	27,36	83,5	84,5

*) Cab full closed
**) Rear window of the cab open

our-wheel-drive switched OFF

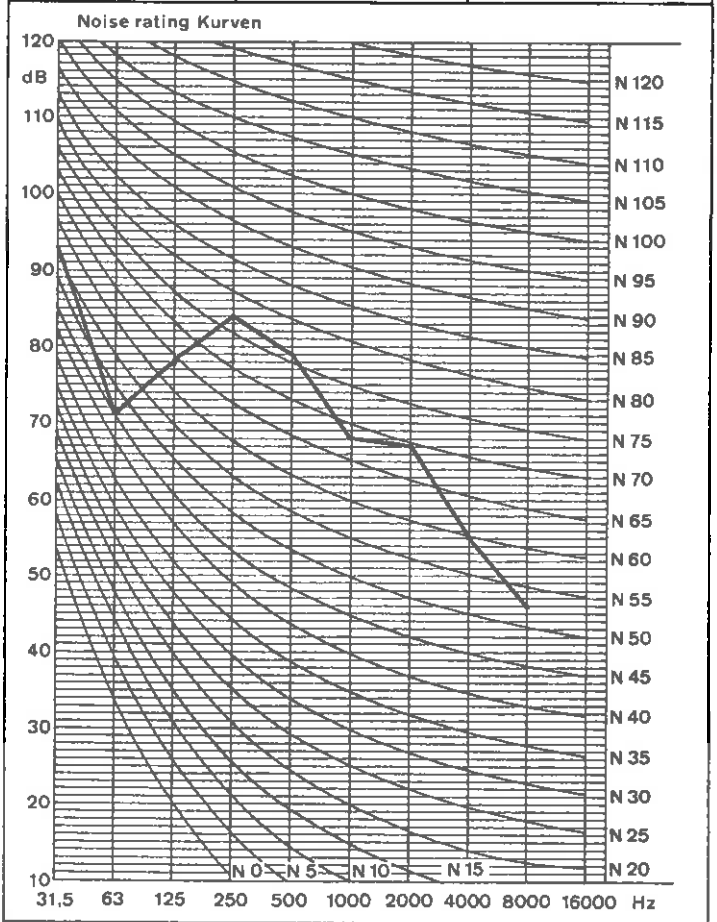
Gear	Drawbar pull at which the tractor develops the maximum sound level kN	Measured travelling speed km/h	Sound level dB(A)	
			*)	**)
Unloaded test in the gear giving the speed nearest to 7,5 km/h				
L 4	-	7,06	80,0	82,5
Unloaded test in the gear giving the maximum speed				
H 4		27,48	81,5	82,0
Tests with the drawbar pull for which the tractor gives the maximum sound level (combination of gear giving the nearest nominal speed to 7,5 km/h and also in any gear with a sound level increase of at least 1 dB(A)				
L 1	16,81	2,22	83,5	85,0
L 2	16,04	3,34	82,5	84,5
L 3	15,49	4,58	83,0	85,5
L 4	14,81	6,11	84,0	86,0
H 1	9,99	9,21	82,5	84,5
H 2	5,77	14,48	83,0	85,5
H 3	3,88	19,91	83,5	85,0
H 4	-	27,48	81,5	82,0

*) Cab full closed
**) Rear window of the cab open

REPAIRS: -

REMARKS: -

Bundesanstalt für Landtechnik Wieselburg/Austria	Octave analysis of noise at the drivers ear level	MASSEY FERGUSON MF 340



Gear: 4
Travelling speed: 6,6 km/h

The director of testing station:

(Dipl.Ing.Dr. J. Schrottmaier)
Oberrat

Bundesanstalt für Landtechnik Wieselburg a. d. Erlauf

Test and report carried out by:

(Ing. Hermann Schaufler)