

**Test in accordance with the OECD standard code for
the official testing of agricultural tractors**

Report on test of Massey-Ferguson 575 Tractor.



Manufactured by Massey-Ferguson Manufacturing Co.,
Banner Lane,
Coventry,
Warwickshire.

Test No. R78/2/7023/O.E.C.D.

Date May 1978.

THE BRITISH SOCIETY FOR RESEARCH IN AGRICULTURAL ENGINEERING

National Institute of Agricultural Engineering
Wrest Park Silsoe Bedford MK45 4HS

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SPECIFICATION OF TRACTOR

Manufacturer: Massey-Ferguson Manufacturing Company,
Banner Lane,
Coventry, Warwickshire.

Submitted for test by: The manufacturer

Selected for test by: The manufacturer with the agreement
of the testing station

Place of running-in: Coventry

Duration of running-in: 60 hours

Tractor

Make: Massey-Ferguson

Model: M.F. 575

Type: Four wheel, rear wheel driven, unit
construction.

Serial No.: 266167

Engine

Make: Perkins

Model: A4 236

Type: Four stroke, direct injection diesel

Serial No.: 236 UA 139297L

Cylinders: 4 cylinders, vertical, in-line, 98.4 mm
(3.9 in) dia bore x 127 mm (5.0 in)
stroke, capacity 3863 cm³ (236 in³),
compression ratio 16:1 (nominal),
replaceable dry cylinder liners,
overhead valves

Fuel system: A.C. Delco mechanical fuel feed pump
with hand primer, C.A.V. paper element
filter with sediment bowl between feed
and injection pumps; fuel tank
capacity 98.2 l (21.6 U.K.gal); C.A.V.
distributor type D.P.A. 3241 F350
injection pump, Serial No. R175 11 ZT,
manufacturer's production setting
13.8 - 14.5 l/h (24.3 - 25.5 pt/h) at
2000 rev/min engine speed and 63 °C
(145 °F) cambox temperature: C.A.V.

Fuel system continued

type BDLL 150S 6705 FY injector nozzles, injection pressure 17.73 MPa (175 atm), pump delivery starts 23° before T.D.C.

Governor:

C.A.V. mechanical, incorporated in fuel injection pump, governed range of engine speed 700 to 2200 rev/min, rated engine speed 2000 rev/min

Air cleaner:

Lautrette 3-stage paper element filter situated forward of radiator, centrifugal pre-cleaner above bonnet

Lubrication system:

Forced feed from gear pump with metal strainer in sump; full-flow replaceable element filter; total oil capacity 7.1 l (12.5 pt), recommended oil S.A.E. 20W/30, viscosity 54 cSt at 50 °C (122 °F), change period 250 hours

Cooling system:

Water cooled, pressurised at 50 kPa (7 lb/in²), centrifugal pump, 413 mm (16.3 in) dia 4-blade belt driven fan, thermostat for temperature control, cooling water capacity 14.2 l (25.0 pt)

Starting system:

Lucas M 45 G solenoid-engaged starter motor, operable only when high-low gear selector lever is in neutral position, C.A.V. Thermostart Mk IIIC manifold flame-type cold starting aid

Electrical system

Voltage:

12, negative earth

Generator:

Lucas 23 ACR alternator

Battery:

Lucas AV17T-8, lead-acid, 90 Ah at 20-hour rating

Transmission

Clutch:

Auburn Laycock, single plate, dry, pedal operated, 305 mm (12 in) dia

Gearbox:

Own make, sliding gear, 8 forward and 2 reverse speeds, comprising 4 forward and 1 reverse speed gearbox with high-low range epicyclic gear

Rear axle and final drives:

Own make, crown wheel and pinion with differential and epicyclic reduction gear final drives; pedal operated differential lock

Oil capacities:

Transmission: 32.4 l (57.0 pt) recommended oil S.A.E. 20W/30, viscosity 54 cSt at 50 °C (122 °F); final drives: 1.7 l (3.0 pt) each, recommended oil S.A.E. 90, viscosity 115 cSt at 50 °C (122 °F), change period 500 hours

Gear	Number of engine revolutions for one revolution of driving wheel	Nominal travelling speed for 2000 rev/min rated engine speed,* km/h (mile/h)	
Forward			
Low 1	244.29	2.30	(1.43)
2	166.56	3.37	(2.10)
3	121.95	4.61	(2.87)
4	90.85	6.18	(3.84)
High 1	59.72	9.41	(5.85)
2	40.72	13.79	(8.57)
3	29.81	18.84	(11.71)
4	22.21	25.29	(15.72)
Reverse			
1	179.39	3.13	(1.95)
2	43.85	12.82	(7.97)

* Calculated with a tyre rolling radius of 745 mm (29.3 in)

Power take-off

At rear of tractor in vertical centre plane, height above ground 644 mm (25.4 in), optional 6 or 21 spline shafts, 34.9 mm (1.37 in) dia to I.F.O. Standard, engaged by hand lever, hydraulic clutch, independent of main clutch, 6-spline shaft: proportional engine speed giving 640 rev/min at 2000 rev/min rated engine speed, 540 rev/min (standard p.t.o. speed) at 1686 rev/min engine speed, 21-spline shaft: proportional engine speed giving 1182 rev/min at 2000 rev/min rated engine speed, 1000 rev/min (standard p.t.o. speed) at 1692 rev/min engine speed, direction of rotation clockwise viewed facing driving end

Belt pulley

Available as an optional extra, not fitted for test

Power lift

Own make, live hydraulic, 4-cylinder piston pump driven from forward end of p.t.o. shaft, oil supplied from rear axle housing to ram cylinder and external tapping; Category 1 or 2 implement linkage with interchangeable ball ends; top link sensing, draught, position and pressure control, selective response on drop

Drawbar

Swinging drawbar, vertical height to centre of clevis 425 mm (16.7 in) to 571 mm (22.5 in), changed by inverting drawbar and clevis, distance behind rear axle centre 537 mm (21.1 in) and 651 mm (25.6 in), distance behind p.t.o. 241 mm (9.5 in) and 355 mm (14.0 in) lateral adjustment 220 mm (8.7 in) and 394 mm (15.5 in), pivot position 130 mm (5.1 in) forward or rear wheel centre, drawbar pin hole 26 mm (1.0 in) dia

Steering

Danfoss hydrostatic, incorporating manual control for emergency, oil supplied from engine driven D.B.A. gear pump and integral reservoir

Brakes

Girling. oil-immersed, multi-disc on high speed axle shafts, independent or combined pedal-operated, hand lever with ratchet operating both brakes for parking

Wheels

Steering wheels:

Two at front, Goodyear Super Rib Tractor 7.50-16 cross-ply tyres, 6-ply rating, maximum permissible mass on each tyre 745 kg (1640 lb) at 280 kPa (41 lb/in²), track width 1372 mm (54.0 in) by 102 mm (4.0 in) steps to 1780 mm (70.1 in) changed by extending axle

Driving wheels:

Two at rear, Goodyear Super Traction 16.9/14-34 cross-ply tyres. 6-ply rating, maximum permissible mass on each tyre 2015 kg (4440 lb) at 130 kPa (19 lb/in²), track width 1422 mm (56.0 in) by 102 mm (4.0 in) steps to 2136 mm (84.0 in), changed by reversing wheels and offset lug rims

Wheelbase:

2222 mm (87.5 in)

Seat

Bostrom Argus XH, upholstered pan, spring and parallel linkage with hydraulic damper, suspension adjustable for driver's weight, range of adjustment 200 mm (7.9 in) forwards and backwards

Safety cab (CS 1010c):

Massey-Ferguson, welded pressed plate and sheet steel, anti-vibration mounts, door and mounting step on left-hand side, heating, ventilating and demisting system in roof.

Lighting

Unrestricted beam angle of headlight in plan view 131°

	Height above ground of centre, mm (in)	Size, mm (in)	Distance from outside edge of tractor at 1422 mm (56.0 in) wheel track, to centre, mm (in)
Headlights	908 (35.7)	124 (4.9) dia	759 (29.9)
Side lights	1582 (62.3)	100 (3.9) x 35 (1.4)	360 (14.2)
Rear lights	1670 (65.7)	80 (3.1) x 65 (2.6)	365 (14.4)
Reflectors	1610 (63.4)	70 (2.8) x 32 (1.3)	322 (12.7)

Number of grease points

Whole tractor: 10

CONDITIONS DURING TEST

Masses

Tractor (without driver but with tanks full)

	Front, kg (lb)	Rear, kg (lb)	Total, kg (lb)
Without ballast	1111 (2449)	1790 (3946)	2901 (6396)
With ballast	1481 (3265)	3955 (8719)	5436 (11984)

Ballast

	Number of weights	Total weight, kg (lb)	Water, kg (lb)
Front wheels	Nil	Nil	Nil
Rear wheels	28	1504 (3316)	738 (1627)
Additional	8	293 (646)	Front frame and weights

Track setting during tests

Front - 1474 mm (58.0 in)
Rear - 1422 mm (56.0 in)

Overall dimensions

	Length, m (in)	Width, m (in)	Height, m (in)	
			To top of exhaust pipe	To top of cab
Without ballast	3.72 (146.5)	1.85 (72.8)	2.51 (98.8)	2.56 (100.8)
With ballast	4.13 (162.6)	3.11 (122.4)	2.51 (98.8)	2.56 (100.8)

FUEL AND LUBRICANTS USED IN TESTS

Fuel:

Diesel oil to Class A2 British Standard 2869:1970, specific gravity 0.837 at 15.6 °C (60 °F), viscosity 2.34 cSt at 50 °C (122 °F), Cetane No. 52.7

Oil

Engine:

Agricastrol M.P. S.A.E. 20W/30, viscosity 54 cSt at 50 °C (122 °F)

Transmission:

Agricastrol M.P. S.A.E. 20W/30 viscosity 54 cSt at 50 °C (122 °F)

Final drives:

Mobilube S.A.E. 90, viscosity 115 cSt at 50 °C (122 °F)

COMPULSORY TESTS

1. MAIN POWER TAKE-OFF PERFORMANCE

Date and location of tests: 19th July 1977, N.I.A.E., Silsoe, Bedford, U.K.

Type of dynamometer: Water brake, Heenan and Froude

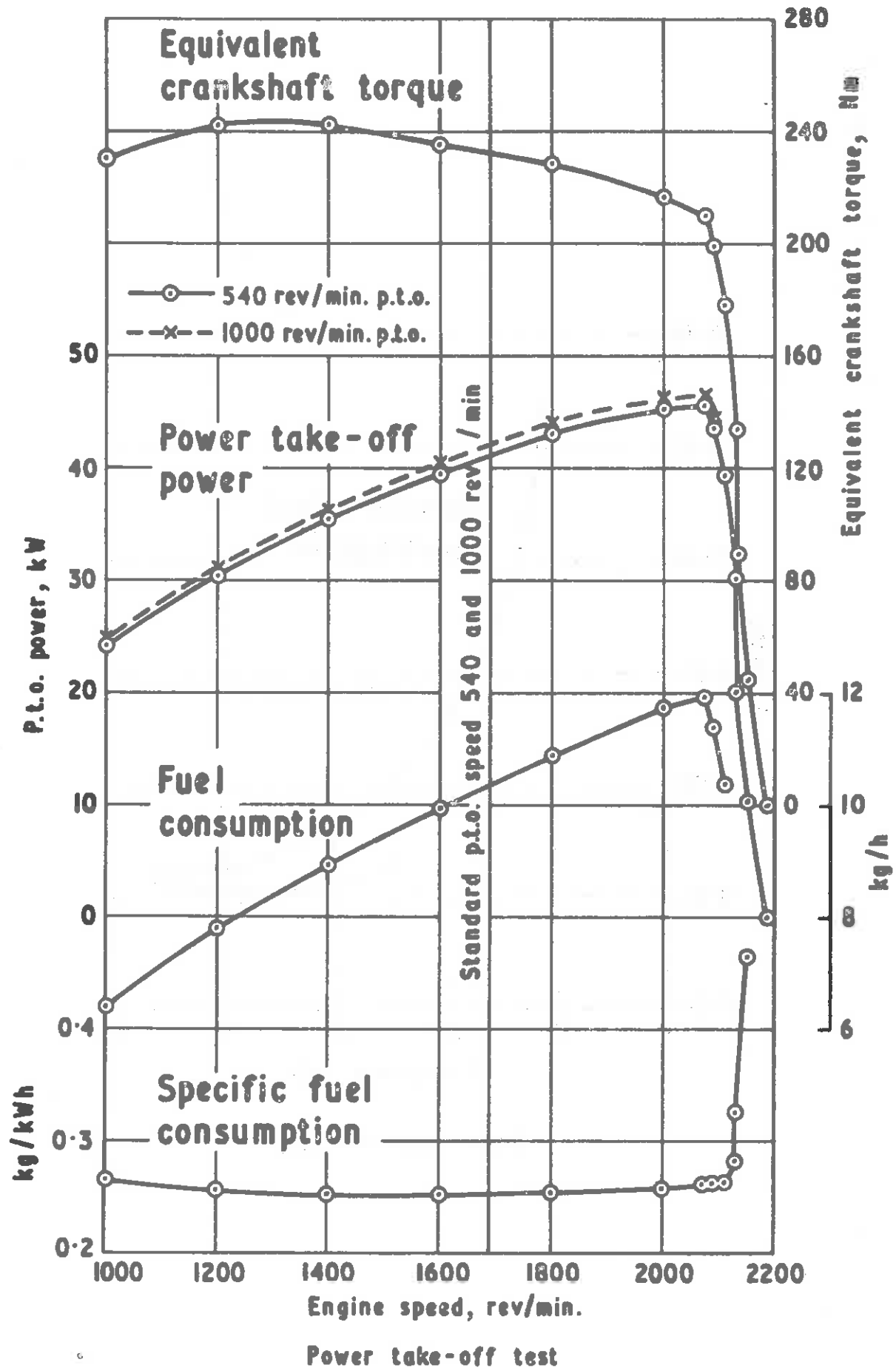
Power, kW (hp)	Speed, rev/min		Fuel consumption,			
	Engine	P.t.o.	l/h (UKgal/h)	kg/h (lb/h)	kg/kWh (lb/hph)	kWh/l (hph/UKgal)
Maximum power - 2 hour test						
45.8 (61.4)	2075	664	14.28 (3.14)	11.95 (26.34)	0.261 (0.429)	3.21 (19.6)
Standard p.t.o. speed (540 rev/min)						
41.0 (55.0)	1686	540	12.35 (2.72)	10.33 (22.77)	0.252 (0.414)	3.32 (20.2)
The speed recommended by the manufacturer for drawbar work						
45.3 (60.7)	2000	640	14.02 (3.08)	11.73 (25.86)	0.259 (0.426)	3.23 (19.7)
Part loads						
(1) 85% of the torque obtained at maximum power						
39.6 (53.1)	2109	675	12.44 (2.74)	10.41 (22.95)	0.263 (0.432)	3.18 (19.4)
(2) Unloaded						
0	2186	700	3.93 (0.86)	3.29 (7.25)	-	-
(3) 50% of the load defined in (1)						
20.0 (26.8)	2133	683	7.82 (1.72)	6.54 (14.42)	0.327 (0.538)	2.56 (15.6)
(4) Maximum power						
45.8 (61.4)	2075	664	14.28 (3.14)	11.95 (26.34)	0.261 (0.429)	3.21 (19.6)
(5) 25% of the load defined in (1)						
10.1 (13.5)	2153	689	5.64 (1.24)	4.82 (10.41)	0.467 (0.768)	1.79 (10.9)
(6) 75% of the load defined in (1)						
30.0 (40.2)	2132	683	10.08 (2.22)	8.43 (18.58)	0.281 (0.462)	2.98 (18.2)

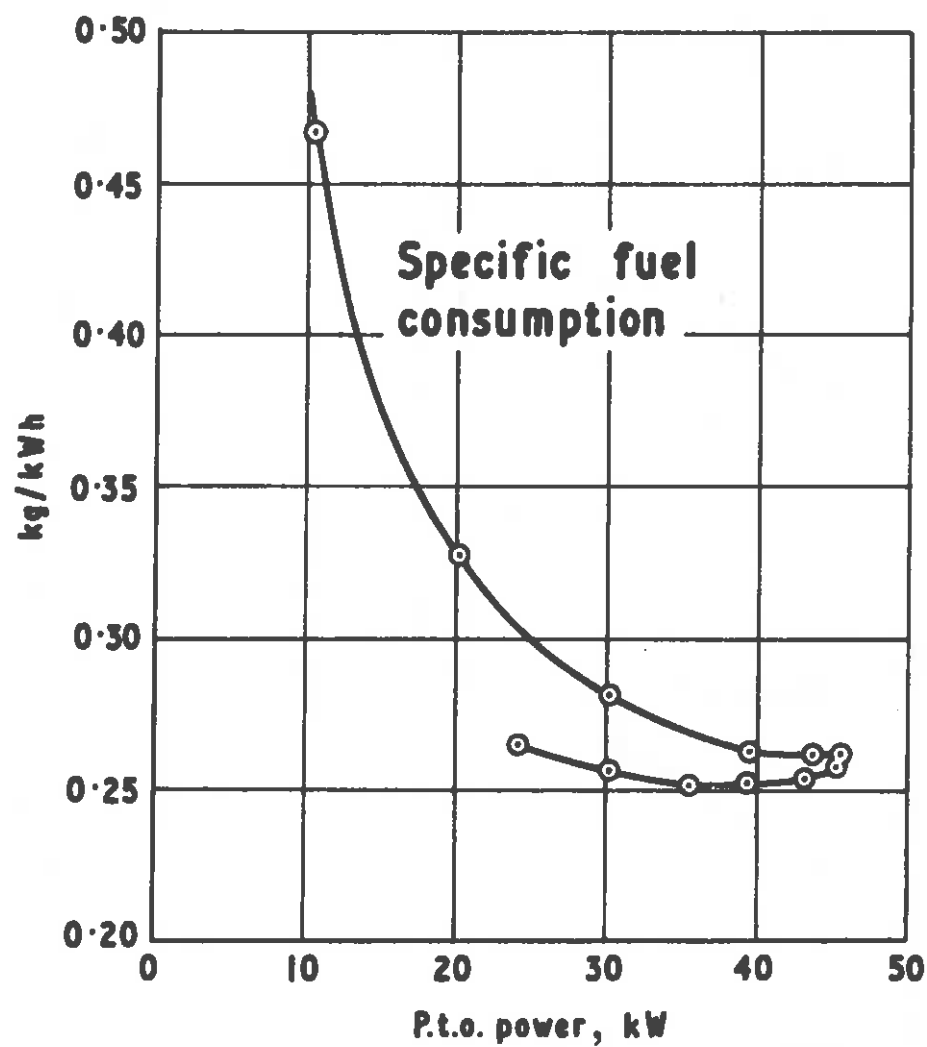
No load, maximum engine speed	2186	rev/min	
Equivalent crankshaft torque at maximum power	210.9	Nm	(155.6 lb ft)
Maximum equivalent crankshaft torque	243.8	Nm	(179.8 lb ft) at 1280 rev/min engine speed
Mean atmospheric conditions	temperature	21	°C (70 °F)
	pressure	1007	m bar (29.74 in Hg)
	relative humidity	59	%
Maximum temperature	coolant	101	°C (214 °F)
	engine oil	117	°C (243 °F)
	fuel	42	°C (108 °F)
	air intake	27	°C (81 °F)

COMPULSORY TESTS

The following results were obtained with 1000 rev/min p.t.o.

Power, kW (hp)	Speed, rev/min		Fuel consumption,			
	Engine	P.t.o.	l/h (UKgal/h)	kg/h (lb/h)	kg/kWh (lb/hph)	kWh/l (hph/UKgal)
Maximum power - 2 hour test						
46.6 (62.5)	2075	1226	14.26 (3.14)	11.93 (26.30)	0.256 (0.421)	3.27 (19.9)
Standard p.t.o. speed (1000 rev/min)						
42.2 (56.6)	1692	1000	12.46 (2.74)	10.42 (22.97)	0.247 (0.406)	3.39 (20.7)
The speed recommended by the manufacturer for drawbar work						
46.1 (61.8)	2000	1182	14.06 (3.09)	11.76 (25.93)	0.255 (0.419)	3.28 (20.0)





Power take-off test

2. DRAWBAR PERFORMANCE Date of tests: 17th February ~ 20th March 1978 Type of track: Concrete Height of drawbar above ground: 455 mm (17.9 in)

Gear	Power, kW (hp)	Drawbar pull, kN (lb)	Speed, km/h (mile/h)	Engine speed, rev/min	Wheel-slip, %	Specific fuel consumption,		Temperature, °C (°F)			Atmospheric conditions			
						kg/kWh (lb/hph)	kWh/l (hph/UKgal)	Coolant	Fuel	Engine oil	Temperature, °C (°F)	Relative humidity, %	Pressure, millibar (in Hg)	
(i) MAXIMUM POWER (ballasted)														
L1	22.7* (30.4)	40.0 (8990)	2.04 (1.27)	2139	15.0	0.372 (0.612)	2.25 (13.7)	82 (180)	17 (63)	100 (212)	4 (39)	83	1009 (29.80)	
L2	32.7* (43.9)	40.0 (8990)	2.94 (1.83)	2100	15.0	0.344 (0.566)	2.43 (14.8)	85 (185)	19 (66)	102 (216)	4 (39)	83	1009 (29.80)	
L3	38.7 (51.9)	34.3 (7710)	4.06 (2.52)	2066	12.5	0.317 (0.521)	2.64 (16.1)	86 (187)	19 (66)	106 (223)	4 (39)	83	1009 (29.80)	
L4	39.4 (52.8)	24.7 (5550)	5.74 (3.57)	2068	8.1	0.316 (0.519)	2.65 (16.2)	85 (185)	16 (61)	100 (212)	2 (36)	91	1015 (29.97)	
H1	40.1 (53.8)	16.0 (3600)	9.02 (5.61)	2067	5.0	0.313 (0.515)	2.68 (16.3)	85 (185)	17 (63)	103 (217)	2 (36)	91	1015 (29.97)	
H2	39.8 (53.4)	10.7 (2410)	13.39 (8.32)	2066	3.4	0.315 (0.518)	2.66 (16.2)	84 (183)	17 (63)	98 (208)	2 (36)	91	1015 (29.97)	
(ii) FIVE HOUR TEST AT 75% OF PULL AT MAXIMUM POWER														
L4	31.0 (41.6)	18.5 (4160)	6.03 (3.75)	2113	6.0	0.337 (0.554)	2.48 (15.1)	86 (187)	24 (75)	107 (225)	12 (54)	76	992 (29.29)	
(iii) FIVE HOUR TEST AT FULL CORRESPONDING TO 15% WHEELSLIP IN TEST (i)														
L2	-	40.0 (8990)	2.94 (1.83)	-	-	-	-	88 (190)	25 (77)	111 (232)	12 (54)	76	986 (29.12)	
(iv) MAXIMUM POWER (unballasted)														
L2	21.1* (28.3)	25.2 (5670)	3.01 (1.87)	2148	15.0	-	-	82 (180)	16 (61)	99 (210)	8 (46)	79	1000 (29.53)	
L3	28.9* (38.8)	25.2 (5670)	4.13 (2.57)	2114	15.0	-	-	85 (185)	18 (64)	102 (216)	11 (52)	63	1000 (29.53)	
L4	38.0* (51.0)	25.2 (5670)	5.43 (3.37)	2072	15.0	-	-	86 (187)	15 (59)	101 (214)	6 (43)	70	1008 (29.77)	
H1	41.3 (55.4)	16.6 (3730)	8.96 (5.57)	2068	7.0	-	-	86 (187)	17 (63)	97 (207)	6 (43)	70	1008 (29.77)	
H2	40.5 (54.3)	10.8 (2430)	13.50 (8.39)	2066	4.1	-	-	86 (187)	17 (63)	99 (210)	6 (43)	70	1008 (29.77)	

Total oil consumption during ten hours duration of tests (ii) and (iii) 84.1 g/h (0.19 lb/h)

*Maximum power available at 15% wheelslip

+Test (iii) was carried out with additional ballast and the results for power, slip and fuel consumption have no practical significance

3. TURNING SPACE AND TURNING CIRCLE

Details of wheel equipment:

As in specification, without ballast

Track of wheels:

front - 1474 mm (58.0 in)
rear - 1422 mm (56.0 in)

	With brakes		Without brakes	
	Right-hand	Left-hand	Right-hand	Left-hand
Radius of turning space, $\frac{m}{(in)}$	3.74 (147)	3.85 (152)	4.11 (162)	4.26 (168)
Radius of turning circle, $\frac{m}{(in)}$	3.63 (143)	3.74 (147)	4.00 (157)	4.15 (163)

4. LOCATION OF CENTRE OF GRAVITY

Height above ground, mm (in)	958 (37.7)
Distance forward from the vertical plane containing the axis of the rear wheels, mm (in)	841 (33.1)
Distance from the median plane of the tractor	0

5. BRAKING

Date of tests:

9th and 10th March 1978

Type of track:

Concrete

Type of decelerometer:

Moto Meter, recording type

Weight of ballasted tractor:

5436 kg (11984 lb)

Cold brakes

	Tractor without ballast	Tractor ballasted
Travelling speed of tractor, km/h (mile/h)	25.0 (15.5)	25.0 (15.5)
Maximum deceleration, m/s^2 (ft/s ²)	3.9 (12.7)	4.3 (14.0)
Stopping distance, m (ft)	6.2 (20.5)	6.3 (20.8)
Force on brake pedal, N (lb)	400 (90)	578 (130)
Force exerted on the brake pedal to achieve a deceleration of $2.5 m/s^2$ (8.2 ft/s ²), N (lb)	285 (64)	427 (96)

Brake fade characteristics (hot tests)

Maximum deceleration hot/cold, %	100	100
Stopping distance cold/hot, %	100	100
Force on pedal cold/hot, %	100	100

Parking brake

Efficacy of handbrake: Satisfactory facing up and down slope of 16%

Pull on handbrake:

258 N (58 lb)

6. MEASUREMENT OF AMBIENT NOISE EMITTED BY THE TRACTOR

Date of tests: 13th March 1978
 Type of sound level meter: Bruel and Kjaer 2209
 Type of track: Concrete
 Results of tests:
 Gear: H4
 Travelling speed before acceleration: 19.9 km/h (12.4 mile/h)
 Sound level: 90 dBA

7. NOISE MEASUREMENT AT THE DRIVER'S EAR LEVEL

Date of tests: 13th March 1978
 Type of sound level meter: Bruel and Kjaer 2209
 Type of track: Concrete

Gear	Travelling speed, km/h (mile/h)	dBA
L4	5.7 (3.5)	83

8. POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

Date of tests: 31st March and 12th April 1978

Hydraulic fluid

Make and type: Agricastrol M.P. S.A.E. 20W/30
 Viscosity: 54 cSt at 50 °C (122 °F)

Type of linkage lock for transport: Hydraulic

Opening pressure of the cylinder over
 pressure relief valve
 (manufacturer's figures): 21.4-22.4 MPa (3100-3250 lb/in²)

Pump characteristics

i) Opening pressure of relief valve: 19.3 MPa (2800 lb/in²)
 Sustained pressure of the open
 relief valve: 22.4 MPa (3250 lb/in²)
 ii) Pump delivery rate at minimum
 pressure and rated engine speed: 26.8 l/min (5.9 gal/min)
 iii) Pump delivery rate at maximum
 hydraulic power: 27.3 l/min (6.0 gal/min)
 Delivery pressure: 19.3 MPa (2800 lb/in²)
 Power: 8.8 kW (11.8 hp)

Linkage geometry when connected to the standard frame, mm (in)

	Maximum mechanical advantage	Minimum mechanical advantage
Projected length in side view Lower links Lift arms Lift rods Top link Distance of lift rod connection point from pivot point of lower link The following dimensions are given relative to the rear wheel centre line, situated 745 mm (29.3 in) above the ground level Lower link pivot points Top link pivot point Lift arm pivot point Maximum and minimum height of lower link hitch points Height of lower link hitch points when locked in transport position	953 267 617 736 (37.5) (10.5) (24.3) (29.0) 427 (16.8) 32 (1.3) forward, 212 (8.3) below 186 (7.3) behind, 205 (8.1) above 196 (7.7) forward, 233 (9.2) above 260 (10.2) above, 492 (19.4) below Any height within lift range	953 267 617 714 (37.5) (10.5) (24.3) (28.1) 427 (16.8) 32 (1.3) forward, 212 (8.3) below 216 (8.5) behind, 132 (5.2) above 196 (7.7) forward, 233 (9.2) above 260 (10.2) above, 492 (19.4) below Any height within lift range

Power lift performance

Lifting height in relation to a horizontal line through the lower link pivoting point	mm (in)	-300 (-11.8)	-280 (-11.0)	-240 (-9.4)	-160 (-6.3)	-80 (-3.1)	0	+80 (+3.1)	+160 (+6.3)	+240 (+9.4)	+320 (+12.6)	+400 (+15.7)	+440 (+17.3)	+480 (+18.9)	+500 (+19.7)	+560 (+22.0)
Lifting force with the pressure at maximum hydraulic power (19.3 MPa(2800 lb/in ²) calculated from measurements made at maximum pressure (22.4 MPa(3250 lb/in ²)), kN (lb)	At the hitch points		*14.6 (3280)	15.3 (3440)	16.4 (3690)	17.2 (3870)	18.1 (4070)	18.8 (4230)	19.3 (4340)	19.8 (4450)	20.1 (4520)	20.5 (4610)	20.7 (4660)			
	On the frame			15.6 (3510)	16.5 (3710)	16.6 (3730)	16.7 (3750)	16.7 (3750)	16.8 (3780)	16.6 (3730)	16.4 (3690)	16.0 (3600)		15.3 (3440)	15.0 (3370)	
	max. mech. advantage															
	min. mech. advantage	13.8 (3100)		14.1 (3170)	14.5 (3260)	14.7 (3300)	14.8 (3330)	14.8 (3330)	14.7 (3300)	14.5 (3260)	14.1 (3170)	13.7 (3080)		13.3 (2990)		*13.0 (2920)

*Maximum force exerted throughout whole range

Force at which front of tractor is calculated to lift with maximum allowable front ballast is in excess of measured values.

OPTIONAL TESTS

9. PERFORMANCE AT THE ENGINE CRANKSHAFT

Date and location of tests: 14th July 1977, N.I.A.E., Silsoe, Bedford, U.K.

Type of dynamometer: Water brake, Heenan and Froude

Power, kW (hp)	Engine speed, rev/min	Fuel consumption,			
		l/h (UKgal/h)	kg/h (lb/h)	kg/kWh (lb/hph)	kWh/l (hph/UKgal)
Maximum power - 2 hour test					
51.7 (69.3)	2090	14.71 (3.24)	12.30 (27.12)	0.238 (0.391)	3.51 (21.5)
The speed recommended by the manufacturer for drawbar work					
51.0 (68.4)	2000	14.39 (3.17)	12.04 (26.54)	0.236 (0.388)	3.54 (21.6)
Part loads					
(1) 85% of the torque at maximum power					
44.6 (59.8)	2120	12.74 (2.80)	10.66 (23.50)	0.239 (0.393)	3.50 (21.3)
(2) Unloaded					
0	2186	3.93 (0.86)	3.29 (7.25)	-	-
(3) 50% of the load defined in (1)					
22.8 (30.6)	2165	7.82 (1.72)	6.54 (14.42)	0.287 (0.472)	2.92 (17.8)
(4) Maximum power					
51.7 (69.3)	2090	14.71 (3.24)	12.30 (27.12)	0.238 (0.391)	3.51 (21.4)
(5) 25% of the load defined in (1)					
11.4 (15.3)	2163	5.51 (1.21)	4.61 (10.16)	0.404 (0.664)	2.07 (12.6)
(6) 75% of the load defined in (1)					
33.8 (45.3)	2145	10.18 (2.24)	8.52 (18.78)	0.252 (0.414)	3.32 (20.2)

No load, maximum engine speed

2186 rev/min

Crankshaft torque at maximum power

236.2 Nm (174.2 lb ft)

Maximum crankshaft torque

268.2 Nm (197.8 lb ft) at 1280 rev/min engine speed

Mean atmospheric conditions temperature

99 °C (66 °F)

pressure

1018 m bar (30.06 in Hg)

relative humidity

48 %

Maximum temperature

coolant

97 °C (207 °F)

engine oil

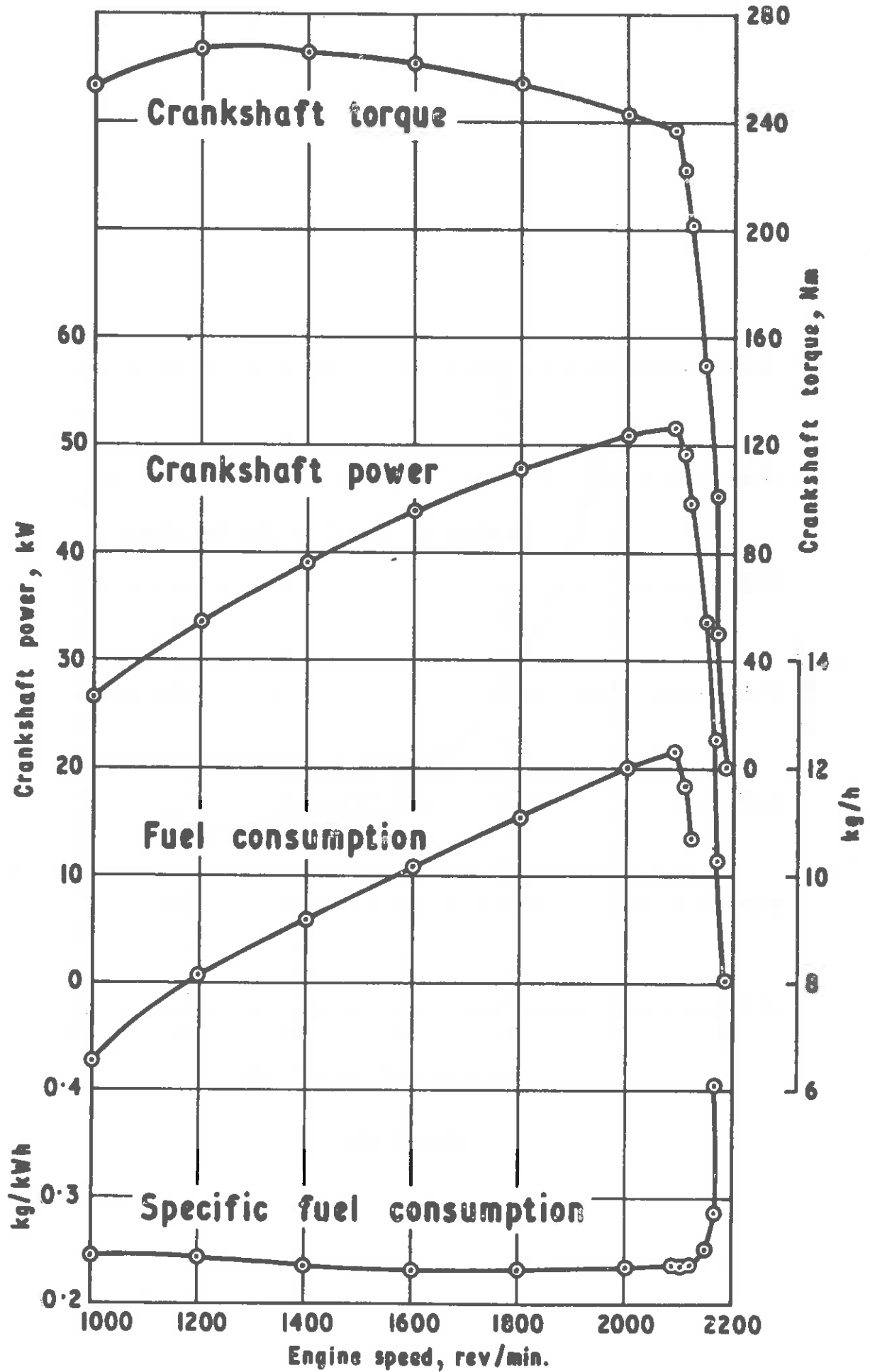
116 °C (241 °F)

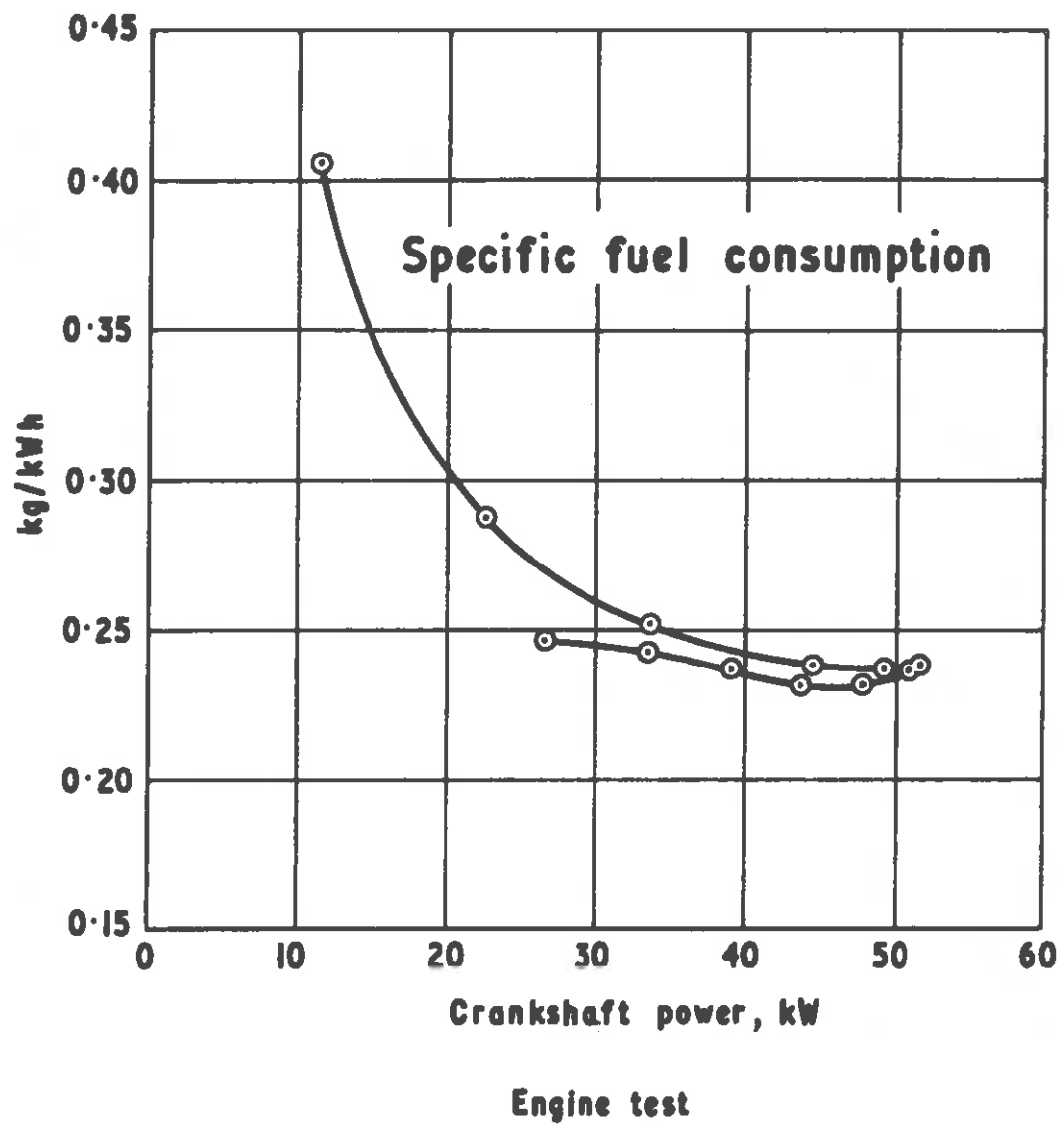
fuel

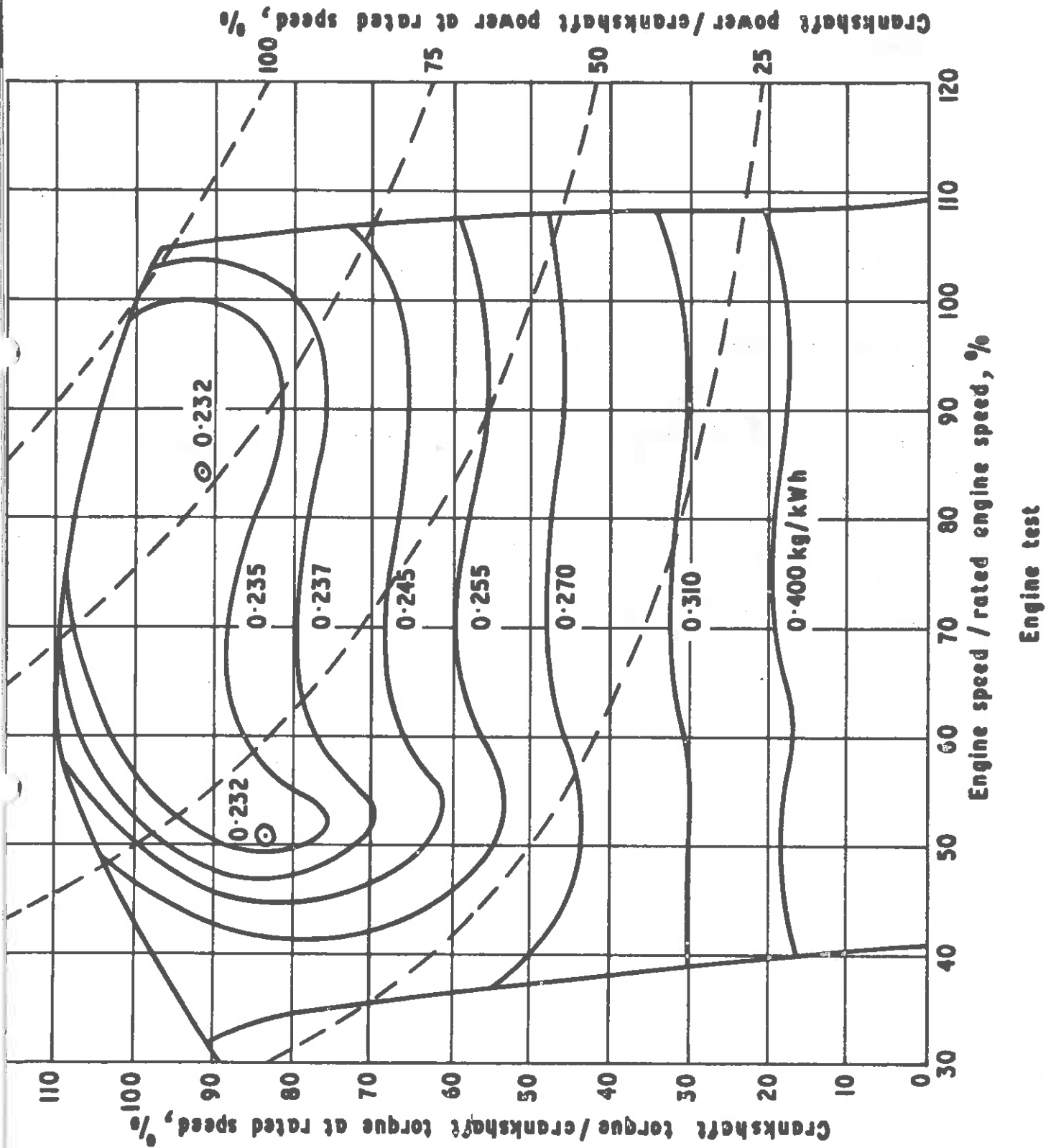
37 °C (99 °F)

air intake

25 °C (77 °F)







REPAIRS AND ADJUSTMENTS DURING TESTS

None

REMARKS

None

Test carried out by: F. Thistlethwaite and P.C. Seward

Officer in charge: D.W. Smith

Signed:



Head of Tractor Department



for the Director

Date:

8 / 6 / 78



