PAMI

OECD No. 1126

Date of Approval: January 29, 1988

REPORT OF TEST IN ACCORDANCE WITH OECD STANDARD CODE

CASE INTERNATIONAL 9130
and
STEIGER WILDCAT 1000
4WD Articulated Tractors





Manufactured by: J. I. CASE COMPANY
700 State Street
Racine, Wisconsin 53404 USA

Date of test: April and June of 1987

Prairie Agricultural Machinery Institute

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****
* The Case International 9130 is identical to the Steiger Wildcat* *
* 1000 except with regard to color and model designation. *
****

Manufacturer's name and address:	J.I. Case Company 3101 1st Avenue North Fargo, North Dakota 58102 USA
Submitted for test by:	The manufacturer
Selected for test by:	The manufacturer with agreement of the test station
Place of running-in:	J.I. Case; Fargo, North Dakota
Duration of running-in:	96 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	Case International
Model:	9130
Type:	4 wheel drive, articulated
Serial No.:	17900757
First Serial No.:	Case IH 9130; 17900173 Steiger Wildcat 1000; WKI007001

Engine:

Make:	Consolidated Diesel Company
Model:	6CTA8.3
Type:	Diesel, turbo charged, after cooled
Serial No.:	44191986
Cylinders:	
Number and disposition:	6, in-line, vertical
Bore:	114 mm (4.49 in)
Stroke:	135 mm (5.32 in)
Capacity:	8268.7 cm^3 (504.5 in^3)
Compression ratio:	16.5 - 1
Arrangement of valves:	Overhead
Liners:	Wet, replaceable

Engine (cont'd):

Fuel System:

Feed system:	Engine Driven Transfer Pump
Make, type and model of filters:	Case IH, spin-on, primary J903410 secondary J903640
Tank capacity:	435.2 L (115 gal)
Make, type and model of injection pump:	Robert Bosch, in line multiple plunger, PESMW
Injection pump Serial No.:	65102 813
Manufacturer's production setting of injection pump:	34.9-36.3 kg/h (76.9-80.1 lb/h) at 2100 rev/min engine speed and full load, 25°C (77°F) temperature, using fuel of 0.85 specific gravity at 15.6°C (60°F)
Make/type/model of injectors:	Robert Bosch, 17 mm, P/N J908511
Injection pressure:	20.5 MPa (202.2 atm)
Injection pump delivery starts:	20° before T.D.C.

Governor:

Make and type:	Robert Bosch, Mechanical, RSV
Governed range of engine speed:	850 to 2350 rev/min
Rated engine speed:	2100 rev/min

Air Cleaner:

Make and type:	Nelson, dry with safety element
Model:	71055-N
Position:	Above engine, intake in front of radiator
Maintenance indicator type/model:	Sight glass at engine compartment, Donaldson RBX00-2252

Pre-Cleaner:

Make and type:	Nelson, aspirating
Position:	Integral with air cleaner

Turbo-charger:

Make and type:	Holset, H2E, exhaust gas driver
Intake manifold pressure:	127.6 to 148.2 kPa (18.5 to 21.5 lb/in^2) at rated engine speed

Lubrication system:

Type of feed and pump:	Full pressure positive displacement
Type of filter:	Full Flow
Total oil capacity including filters:	22.4 L (47.3 pt)
Recommended oil:	SAE 15W40*, API Classification CC/CD viscosity 10 cSt at 100°C (210°F)
MIL standard:	L-2104C
Oil and filter change period:	250 hours

Cooling System:

Coolant:	Liquid
Type of pump:	Centrifugal, belt driven
Fan diameter	609.6 mm (24 in)
Number of fan blades:	6
Type of temperature control:	2 thermostats
Coolant capacity:	35.8 L (76 pt)
System pressure:	96.5 kPa (14 lb/in^2)

Starting System:

Make, type and model:	Delco 42 MT 400, Electric motor
Starter motor power rating:	7.46 kW (10 hp)
Safety features:	Electrical lock-out on gear shift and PTO controls
Cold starting aid:	In-block coolant heater and optional ether spray in intake manifold.

* 10W30 can be used for ambient temperature below -5°C (23°F).

Exhaust sytem:

Make and construction:	102 mm (4 in) diameter pipe
Dimensions of expansion chamber:	NA
Position:	Vertical at right, front side of cab outlet directed to right side

Electrical system:

Voltage:	12
Earth polarity:	Negative
Make and type of generator:	Delco 15SI
Output:	105 A at 2100 engine rev/min
Make and type of battery:	GNB low maintenance (2 per tractor)
Rating:	90 Ah at 20 hour/battery 625 cold crank amp/battery 160 min. reserve capacity/battery (per SAE J537)

Transmission:

Clutch:

Make and type:	FTK, multi-plate, oil cooled
Diameter of plates:	Main 228.6 mm (9 in) PTO 177.8 mm (7 in)
Method of Operation:	Hydraulic

Gearbox:

Make and type:	FTK, Full Power Shift
Number of speeds:	12 forward and 2 reverse
Arrangement:	Counter shaft

Rear and Front Axle and Final Drives:

Make and type:	Raba 592, in-board planetary, bar type
Type of differential lock and method of engagement:	Multiple disc clutch, with limited slip, electrically engaged
Driven From:	Transmission

Transmission oils

	Gearbox	Front & rear axles/final drives
Recommended oil:	Case IH Hytran Plus	SAE 80W-90
Capacity:	34 L (71.8 pt)	30.2 L (64 pt)
Viscosity at 100°C (210°F)	6.2 cSt	15.2 cSt
MIL standard	NA	L-2105C
Oil change period	1000 hours	500 hours
Filter change period	500 hours	--

Gear	Number of engine revolutions for one revolution of driving wheel	Nominal travelling speed for 2100 rev/min rated engine speed* km/h	(mile/h)
Forward			
1	194.28	3.3	2.0
2	161.96	3.9	2.5
3	131.60	4.9	3.0
4	107.45	5.9	3.7
5	89.57	7.1	4.4
6	72.77	8.8	5.5
7	61.11	10.5	6.5
8	50.94	12.5	7.8
9	41.38	15.4	9.6
10	33.79	18.9	11.7
11	28.15	22.7	14.1
12	22.89	27.9	17.3
Reverse			
1	148.58	4.3	2.7
2	82.15	7.8	4.8

* Calculated with a tire radius of 812 mm (32.0 in)

Power take-off

Number of shafts/speeds and position:	One, at rear of tractor in vertical centre plane
Height above ground:	756.9 mm (29.8 in)
Distance behind rear axle:	686 mm (27 in)
Diameter:	44.4 mm (1.75 in)
Number of splines:	20 (ISO 500)
Method of engagement:	Hydraulic clutch operated by hand lever, independent of main clutch
Speed at rated engine speed:	1000.5 rev/min
Engine speed at standard pto speed of 1000 rev/min:	2099 rev/min
Engine/PTO speed ratio	2.09797:1

Direction of rotation (viewed facing driving end): Clockwise

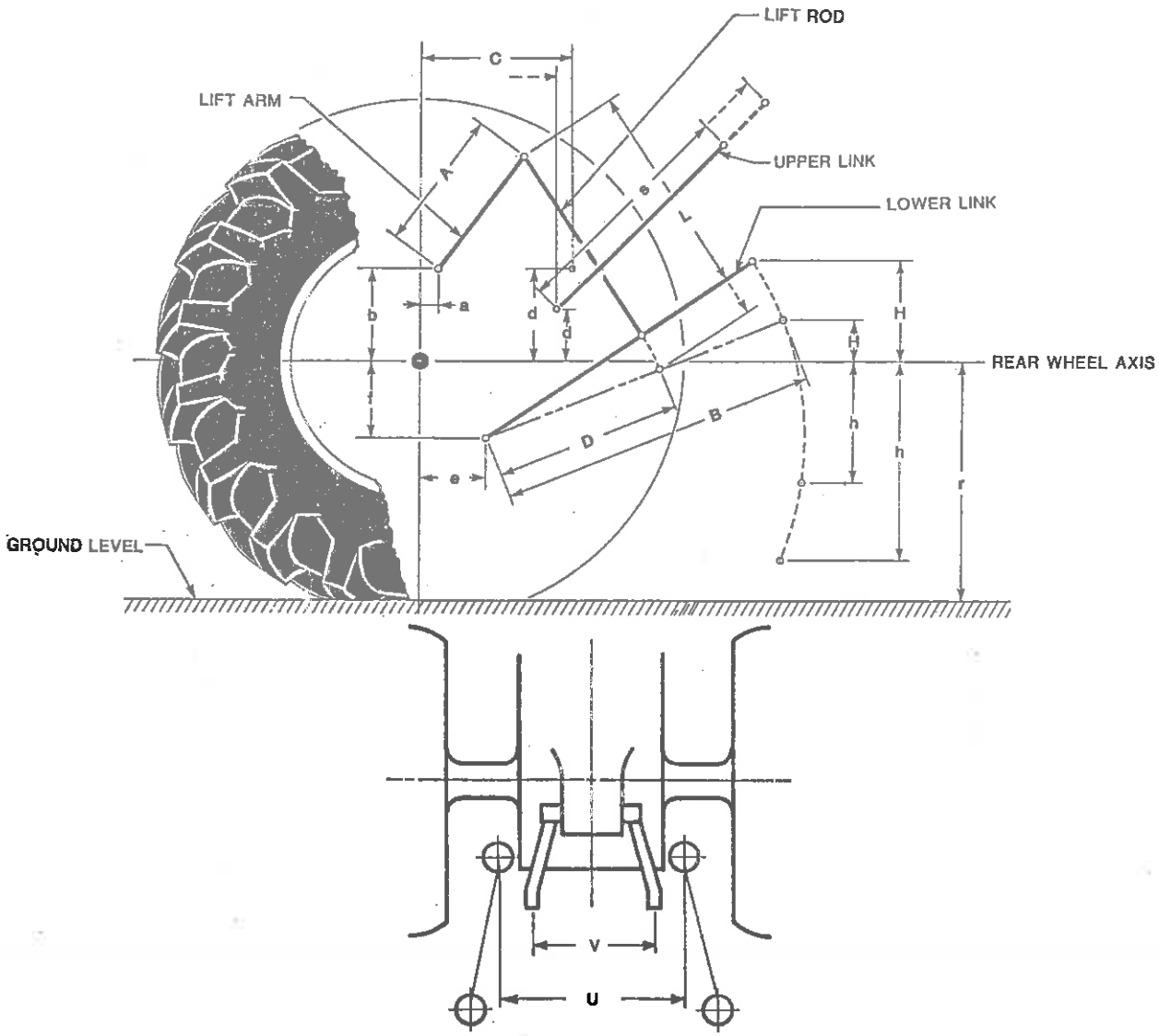
Power lift

Type of hydraulic system	Closed centre, load sensing
Make and type of pump:	Cessna, axial piston, pressure & flow compensated.
Filters:	Cannister type oil filter, one replaceable element, cleanable suction screen inside resevoir
Nominal working pressure:	17.237 MPa (2500 lb/in^2)
Number and type of cylinders:	two, single acting
Pump drive:	Direct drive on transmission
Oil supplied from:	Hydraulic reservoir via charge pump
Type, number and position of external tappings:	ISO standard lever type couplers 4 pairs at rear of tractor
Reservoir oil capacity:	68.1 L (18 US gal), 22.7 L (6 US gal) available to external cylinders
Linkage category:	SAE III; ISO 3, except for horizontal distance PTO to hitch point of horizontal lower links 652 mm (25.7 in)
Controls:	Position control, electrical/ hydraulic, adjustable lower rate
Cylinder safety valve opening pressure:	10.7 MPa (3000 psi)

Drawbar

Type:	Swinging
Vertical height above ground to centre of clevis:	Max. 552 mm (21.75 in) Min. 425 mm (16.75 in)
Changed by:	Inverting drawbar
Distance behind rear axle centre:	1196 mm (47.1 in)
Horizontal distance behind PTO:	509 mm (20 in)
Vertical distance behind PTO	203 mm and 330 mm (8.0 and 13.0 in)
Lateral movement:	165 mm (6.5 in)
Pivot position relative to rear axle:	1295 mm (51 in) forward
Drawbar pin hole diameter:	39.6 mm (1.56 in)

Implement linkage:



Dimensions of rear implement linkage (projected lengths in mm (in), underlined dimensions are valid for power lift measurements (page 17)

Rear tires	radius index	(r)	820	(32.3)
Front tires	radius index	(r')	820	(32.3)
Length of lift arms		(A)	533	(21.0)
Length of lower links		(B)	1067	(42.0)
Distance of lift arm pivot points from rear wheel centre	horizontal	(a)	143	(5.6)
	vertical	(b)	638	(25.1)
Horizontal distance between lower link pivot points		(u)	627	(24.7)
Horizontal distance between lift arm end points		(v)	719	(28.3)
Length of upper link		(s)	747 (29.4) to 847 (33.3), 762 (30)	
Distance of upper link pivot point from rearwheel centre	horizontal	(c)	591(23.3), 566 (22.3)	
	vertical	(d)	289(11.4), 187 (7.4)	
Distance of lower link pivot point from rearwheel centre	horizontal	(e)	271 (10.7)	
	vertical	(f)	251 (9.9)	
Distance of lower link pivot points from lift rod pivot points on lower links		(D)	584 (23.0)	
Length of lift rods		(L)	864 (34.0) to 941 (37.0) 902 (35.5)	

Height of lower link hitch points relative to rearwheel center line (situated 820 mm (32.3 in) above ground), these data are valid for unloaded power lift:

		Lift Test		
Length of lift rods	(L)	902 (35.5)	864 (34.0)	941 (37.0)
Lowest position	(h)	604 (23.8)	533 (21.0)	704 (27.7)
Highest and tranport position	(H)	213 (8.4)	261 (10.3)	39 (1.5)

Type of transport lock: Hydraulic

Steering

Make and type:	Eaton hydrostatic steering control unit operated by hand wheel
Make and type of pump:	Cessna axial piston pressure and flow compensated
Oil supplied from:	Hydraulic reservoir
Working pressure:	15.9 MPa (2300 lb/in^2) maximum
Recommended oil:	CASE IH Hytran Plus viscosity 6.2 cSt min at 100°C (210°F)
MIL/API standard:	NA
Oil change period:	1000 hours
Filter change period:	500 hours

Brakes

Make and type:	Kelsey Hayes, caliper, dry disc
Position:	On transmission rear output shaft
Method of operation:	Manual/hydraulic, operated with foot pedal
Type of parking brake:	caliper/dry disc
Method of operation:	Mechanically operated with hand lever
Trailer braking take-off:	None

Wheels

Make and size:	Goodyear, Dyna Torque, 18.4 x 38
Type:	Bias-ply, 8 ply rating
Rated maximum load at rated pressure of each tire:	2550 kg (5630 lb) at 124 kPa (18 lb/in^2)
Track width:	1524 mm (60 in) to 3302 mm (130 in)
Changed by:	Adjustable clamping wedges on bar axle
Wheelbase	3058 mm (120.4 in)

Seat

Make and type:	Grammer air ride with swivel
Suspension:	Air ride, lateral isolator, weight adjustment, hydraulic damping
Range of adjustment:	Longitudinal 150 mm (5.9 in) Vertical 60 mm (2.36 in)

Safety Cab

Make/model	Case IH, 4CSF-2
CSS No.:	076/7, Case IH 9130 076/8, Steiger Wildcat 1000
Description:	4 post ROPS with Charpy V-notch certified material

Lighting

Unrestricted beam angle of headlight in plan view 100°

	Height above ground of centre mm (in)	Size mm (in)	Distance from outside edge of tractor at 2775 mm (109.2 in) outer wheel track, to centre mm (in)
Headlights	1702 (67.00)	102x152 (4.00x6.00)	1418 (55.8)
Stop and tail lights	1848 (72.75)	51x165 (2.00x6.50)	785 (30.9)
Reflectors: front	1334 (52.50)	48x111 (1.88x4.38)	1253 (49.3)
rear	1854 (73.00	48x111 (1.88x4.38)	1039 (40.9)

Number of grease points

Whole tractor: 33 (includes 17 for PTO and three point hitch)

Overall dimensions

	Length, m (in)	Width max m (in)	Width min m (in)	Maximum height, to top of exhaust m (in)
Single wheels	6.21 (245)	3.76 (148)	3.04 (119.5)	3.29 (129)
Dual wheels	6.21 (245)	3.76 (148)	3.24 (127.7)	3.29 (129)

Minimum ground clearance 368 mm (14.5 in) to underside of linkage restraints

CONDITIONS DURING TEST

Masses

Tractor (without driver but with tanks full)

	Front, kg (lb)	Rear, kg (lb)	Total kg (lb)
Single wheels, unballasted	4925 (10860)	4635 (10220)	9560 (21080)
Dual wheels, ballasted	6780 (14945)	4870 (10740)	11650 (25685)

Track setting during tests

	Inner	Outer
Front:	1524 mm (60.0 in)	2774 mm (109.2 in)
Rear:	1524 mm (60.0 in)	2774 mm (109.2 in)

FUEL AND LUBRICANTS USED IN TESTS

Fuel

Diesel oil to SAE J313, Grade 2-D, specific gravity for pto tests 0.859 at 15°C (59°F), for drawbar tests 0.869 at 15°C (59°F), viscosity 2.0 - 4.27 cSt at 38°C (100°F) Cetane No. 40 min.

Oil

Engine: Texaco URSA SP, SAE 15W-40, viscosity: 10 cSt at 100°C (210°F), API class CD

Transmission: Case IH Transmission Oil 02-7408T1 viscosity 7 cSt at 100°C (210°F) MIL and API not available

Hydraulic power lift and steering: Texaco Rando HD46 SAE 10W viscosity 6.6 cSt at 100°C (210°F) MIL and API not available

COMPULSORY TESTS

1. MAIN POWER TAKE-OFF PERFORMANCE

Date and location of tests: 31th MARCH 1987, Fargo, North Dakota,USA

Type of dynamometer: Eaton, Eddy Current

Power	Speed, rev/min		Fuel Consumption			
kW (hp)	Engine	PTO	1/h (USgal/h)	kg/h (lb/h)	kg/kWh (lb/hph)	KWh/1 (hph/USgal)
MAXIMUM POWER 2 hour test						
148.1 (198.5)	1800	858	41.6 (11.0)	35.7 (78.6)	0.241 (0.396)	3.56 (18.07)
PART LOADS						
(1) Manufacturer's rated engine speed						
142.6 (191.2)	2101	1001	41.7 (11.0)	35.8 (78.9)	0.251 (0.412)	3.42 (17.36)
(2) 85% of the torque obtained at rated speed						
123.3 (165.2)	2136	1018	37.8 10.0)	32.4 (71.4)	0.263 (0.432)	3.27 (16.57)
(3) 75% of the torque defined in (2)						
94.0 (125.9)	2171	1035	31.2 (8.2)	26.8 (59.1)	0.285 (0.469)	3.01 (15.27)
(4) 50% of the torque defined in (2)						
63.4 (84.9)	2196	1047	24.2 (6.4)	20.7 (45.7)	0.327 (0.538)	2.62 (13.31)
(5) 25% of the torque defined in (2)						
32.0 (43.0)	2221	1059	17.5 (4.6)	15.0 (33.0)	0.468 (0.769)	1.83 (9.31)
(6) Unloaded						
0.8 (1.0)	2250	1072	11.1 (2.9)	9.6 (21.1)	- -	0.07 (0.37)

Power	Speed, rev/min		Fuel Consumption			
kW (hp)	Engine	PTO	l/h (USgal/h)	kg/h (lb/h)	kg/kWh (lb/hph)	KWh/l (hph/Usgal)
Part loads, the governor lever in the position corresponding to the standard pto speed at full load (1000 rev/min).						
(1) Maximum Power, rated engine speed						
142.6 (191.2)	2101	1001	41.7 (11.0)	35.8 (78.9)	0.251 (0.412)	3.42 (17.36)
(2) 85% of the torque obtained at rated speed						
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(6) Unloaded						
0.8 (1.0)	2250	1072	11.1 (2.9)	9.6 (21.1)	- -	0.07 (0.37)

Standard specific fuel consumption, kg/kWh (lb/hph)

0.263 (0.432) / 0.327 (0.538) / 0.263 (0.432) / 0.327 (0.538)

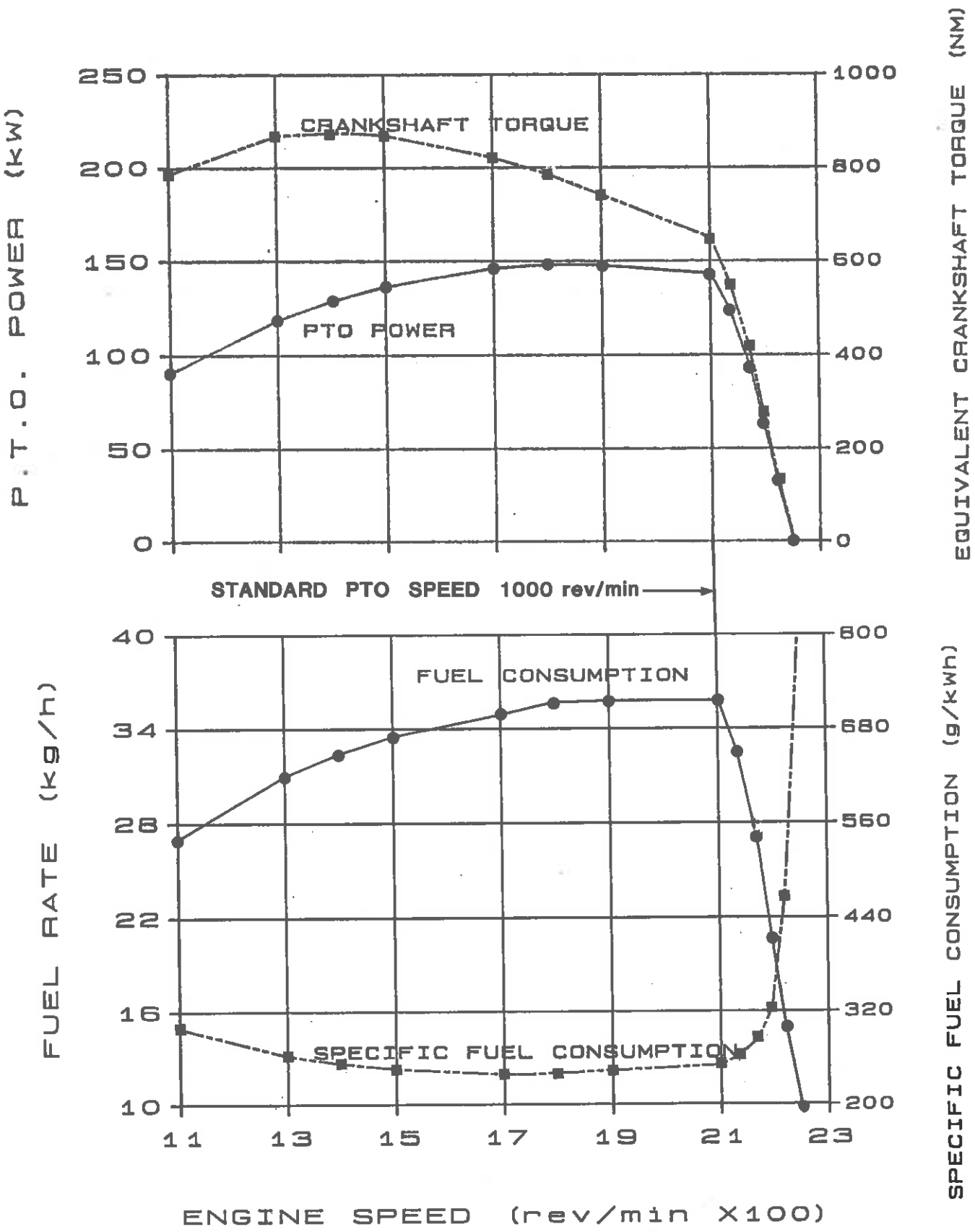
No load, maximum engine speed 2250 rev/min

Equivalent crankshaft torque at maximum power: 784.5 Nm (578.6 lb ft)
at rated engine speed: 647.6 Nm (477.6 lb ft)

Maximum equivalent crankshaft torque 875.7 Nm (645.9 lb ft) at 1400 rev/min engine speed

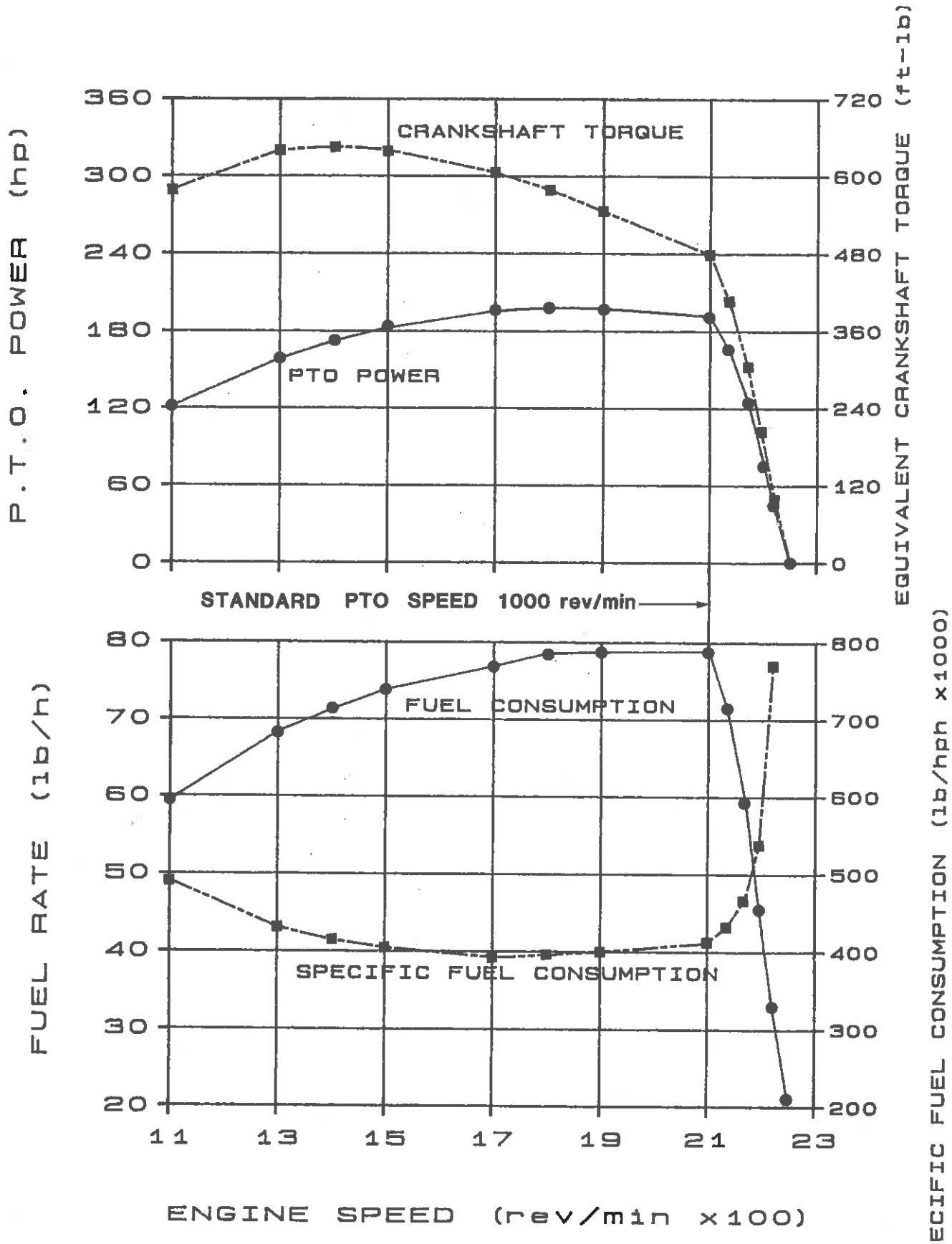
Mean atmospheric conditions temperature 27°C (81°F)
pressure 1003 m bar (29.60 in Hg)
relative humidity 21%

Maximum temperature coolant 88°C (190°F)
engine oil 112°C (234°F)
fuel 44°C (111°F)
air intake 32°C (90°F)



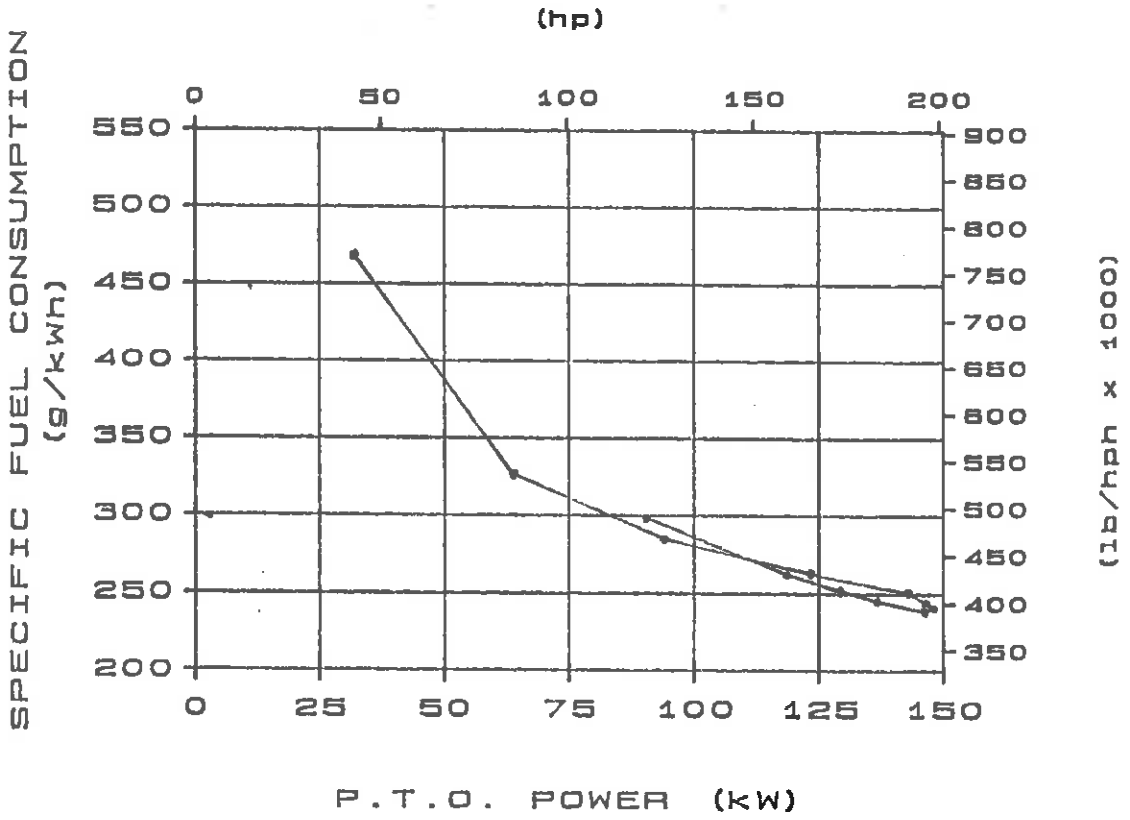
(Metric units)

POWER TAKE-OFF TEST



POWER TAKE-OFF TEST
(English units)

POWER TAKE-OFF PERFORMANCE 9130



2. POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

Date and location of tests: July 1987; Fargo, North Dakota,USA

Hydraulic pump performance

i) Maximum pressure at rated flow: 14.1 MPa (2050 lb/in^2)
Sustained pressure at compensator cutoff: 17.5 MPa (2540 lb/in^2)

ii) Pump delivery rate at minimum pressure and rated engine speed: 107.1 l/min (28.3 gal/min)

iii)

Pump delivery rate	at maximum power	at 90% of compensator cut off pressure
	94.6 L/min (25 gal/min US)	64.3 L/min (17.0 gal/min US)
Delivery Pressure:	14.0 MPa (2030 lb/in^2)	15.8 MPa (2290 lb/in^2)
Power:	22.1 kW (29.6 hp)	16.9 kW (22.7 hp)

Power Lift

Power Lift, Metric Units

	Height of lower hitch point above ground in down position mm	Vertical Movement mm	Maximum force exerted through full range kN	Corresponding pressure of hydraulic fluid MPa	Moment about rear axle kNm	Max. tilt angle of mast over range of lift degrees
At hitch points	216	817	45.8	14.0	58.6	-
On the frame	221	918	50.0		93.2	9.5 *

Temperature of hydraulic fluid at start of test 65°C
***Tilt angle of mast from vertical position to uppermost position 10°**

Lifting heights relative to horizontal lower links											
mm	-350	-300	-200	-100	0	100	200	300	400	450	480
Lifting forces corresponding to 90% of maximum pressure; 15.8 MPa - at hitch points											
kN	51.5	54.3	59.8	63.7	66.9	69.5	71.8	73.3	76.5	77.0	
- at test frame											
kN	57.2	62.3	60.0	61.4	61.7	61.4	59.8	62.2	56.9		56.2
Lifting forces corresponding to pressure at maximum hydraulic power; 14.0 MPa - at hitch points											
kN	45.8	48.3	53.2	56.7	59.5	61.7	63.8	65.2	68.0	68.5	
- at test frame											
kN	50.9	55.4	53.2	54.5	54.8	54.5	53.1	55.3	50.6		50.0

Power Lift, English Units

	Height of lower hitch point above ground in down position in	Vertical Movement in	Maximum force exerted through full range lb	Corresponding pressure of hydraulic fluid lb/in^2	Moment about rear axle lbft	Max. tilt angle of mast over range of lift degrees
At hitch points	8.5	32.2	10300	2030	43220	-
On the frame	8.7	36.1	11230		68720	9.5 *

Temperature of hydraulic fluid at start of test 65°C (149°F)
***Tilt angle of mast from vertical position to uppermost position 10°**

Lifting heights relative to horizontal lower links											
in	-13.8	-11.8	-7.9	-3.9	0	3.9	7.9	11.8	15.7	17.7	18.9
Lifting forces corresponding to 90% of maximum pressure; 2290 lb/in^2 - at hitch points											
lb	11590	12200	13450	14330	15050	15620	16140	16490	17190	17320	
- at test frame											
lb	12870	14000	13500	13800	13870	13800	13440	13990	12790		12640
Lifting forces corresponding to pressure at maximum hydraulic power; 2030 lb/in^2 - at hitch points											
lb	10300	10850	11960	12740	13380	13880	14350	14660	15280	15400	
- at test frame											
lb	11440	12450	12000	12260	12330	12260	11940	12430	11370		11230

2. DRAWBAR PERFORMANCE, SI units
Date of tests: June 1987
Type of track: Concrete

Gear	Speed km/h	Power kW	Drawbar Pull kN	Engine Speed rev/min	Wheel Slip %	Specific Fuel Consumption kg/kWh	Specific Fuel Consumption kWh/L	Temparature, °C Fuel	Coolant	Oil	Atmospheric Conditions Temperature °C	Relative Humidity %	Pressure mbar
(i) MAXIMUM POWER (unballasted, single wheels) Tire inflation pressure: 124 kPa Height of drawbar above ground: 349 mm													
1	2.98	66.57	80.41	2184	14.39	0.375	2.32	46	84	104	24	29	1023
2	3.53	80.23	81.93	2165	14.83	0.347	2.50	43	84	105	23	29	1023
3	4.29	96.18	80.69	2142	14.82	0.332	2.62	40	84	107	22	29	1023
4	5.05	114.26	81.46	2059	14.93	0.317	2.74	40	85	108	23	28	1023
5	5.76	120.84	75.47	1903	12.35	0.298	2.91	40	85	109	23	28	1023
6	7.17	124.98	62.71	1846	8.68	0.287	3.03	41	85	109	23	28	1023
7	8.48	128.04	54.36	1799	7.03	0.267	3.25	41	86	110	23	28	1023
8	10.36	129.52	45.01	1801	5.37	0.262	3.32	41	85	108	24	27	1023
9	12.92	129.74	36.14	1800	3.96	0.248	3.50	41	85	108	23	27	1023
(ii) MAXIMUM POWER (ballasted,dual wheels) Tire inflation pressure: inner 96 kPa, outer 82 kPa Height of drawbar above ground: 365 mm													
1	2.94	96.15	117.70	2147	14.95	0.329	2.64	36	84	106	23	49	1019
2	3.48	112.43	116.38	2116	14.96	0.318	2.73	44	85	107	24	49	1019
3	3.64	117.69	116.42	1800	14.99	0.296	2.94	47	85	107	25	45	1019
4	4.94	126.84	92.45	1854	8.52	0.282	3.08	43	85	107	25	45	1019
5	6.02	128.33	76.77	1842	6.49	0.275	3.16	45	86	109	26	45	1019
6	7.49	129.28	62.12	1830	4.79	0.270	3.22	43	86	109	26	45	1019
7	9.12	130.90	51.66	1851	3.76	0.273	3.18	43	86	109	27	43	1019
8	10.38	130.22	45.18	1744	2.99	0.269	3.23	44	87	110	27	43	1019
9	13.42	128.32	34.43	1815	2.19	0.270	3.22	44	86	109	27	42	1019
(iii) FIVE HOUR TEST AT 75% OF PULL AT MAXIMUM POWER													
7	10.65	114.23	38.61	2132	2.46	0.288	3.02	46	86	109	31	42	1018
(iv) FIVE HOUR TEST AT PULL CORRESPONDING TO 15% WHEELSLIP IN TEST (ii)													
2	3.57	-	116.17	2106	-	-	-	47	86	110	29	45	1011

Total oil consumption during ten hours duration of tests (iii) and (iv) 94 g/h

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

3. DRAWBAR PERFORMANCE, English units
Date of tests: June 1987
Type of track: Concrete

Gear	Speed mile/h	Power hp	Drawbar Pull lb	Engine Speed rev/min	Wheel Slip %	Specific Fuel Consumption lb/hph	Specific Fuel Consumption hph/USgal	Temparature °F Fuel	Coolant	Oil	Atmospheric Conditions Temperature °F	Relative Humidity %	Pressure in Hg
(i) MAXIMUM POWER (unballasted, single wheels) Tire inflation pressure: 18 psi Height of drawbar above ground: 13.7 in													
1	1.85	89.24	18080	2184	14.39	0.617	11.78	115	183	219	75	29	30.20
2	2.19	107.55	18420	2165	14.83	0.571	12.69	109	183	221	73	29	30.20
3	2.67	128.92	18140	2142	14.82	0.546	13.30	104	183	225	72	29	30.20
4	3.14	153.16	18310	2059	14.93	0.521	13.91	104	185	226	73	28	30.20
5	3.58	161.99	16970	1903	12.35	0.490	14.80	104	185	228	73	28	30.20
6	4.46	167.53	14100	1846	8.68	0.471	15.37	106	185	228	73	28	30.20
7	5.27	171.63	12220	1799	7.03	0.439	16.52	106	187	230	73	28	30.20
8	6.44	173.62	10120	1801	5.37	0.430	16.84	106	185	226	75	27	30.20
9	8.03	173.92	8130	1800	3.96	0.407	17.79	106	185	226	73	27	30.20
(ii) MAXIMUM POWER (ballasted, dual wheels) Tire inflation pressure: inner 14 psi, outer 12 psi Height of drawbar above ground: 14.4 in													
1	1.83	128.88	26460	2147	14.95	0.541	13.40	97	183	223	73	49	30.09
2	2.16	150.71	26160	2116	14.96	0.523	13.86	111	185	225	75	49	30.09
3	2.26	157.76	26170	1800	14.99	0.487	14.92	117	185	225	77	45	30.09
4	3.07	170.03	20780	1854	8.52	0.464	15.64	109	185	225	77	45	30.09
5	3.74	172.02	17260	1842	6.49	0.452	16.04	113	187	228	79	45	30.09
6	4.66	173.29	13970	1830	4.79	0.445	16.34	109	187	228	79	45	30.09
7	5.67	175.47	11610	1851	3.76	0.448	16.16	109	189	228	81	43	30.09
8	6.45	174.56	10160	1744	2.99	0.442	16.40	111	187	230	81	43	30.09
9	8.34	172.02	7740	1815	2.19	0.445	16.35	111	187	228	81	42	30.09
(iii) FIVE HOUR TEST AT 75% OF PULL AT MAXIMUM POWER													
7	6.62	153.12	8680	2132	2.46	0.473	15.33	115	187	228	86	42	30.08
(iv) FIVE HOUR TEST AT PULL CORRESPONDING TO 15% WHEELSLIP IN TEST (ii)													
2	2.22	-	26120	2106	-	-	-	117	187	230	84	45	29.86

Total oil consumption during ten hours during of tests (iii) and (iv) 0.21 lb/h

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

4. TURNING SPACE AND TURNING CIRCLE

Details of wheel equipment: As in specification, without ballast

		Inner	Outer
Track of wheels:	Front	1524 mm (60.0 in)	2774 mm (109.2)
	Rear	1524 mm (60.0 in)	2774 mm (109.2)

	Single Wheels		Dual Wheels	
	Left-hand	Right-hand	Left-hand	Right-hand
Radius of turning space, m (in)	5.91 (233)	6.05 (238)	6.23 (245)	6.36 (250)
Radius of turning circle, m (in)	5.15 (203)	5.29 (208)	5.95 (234)	6.07 (239)

5. LOCATION OF CENTRE OF GRAVITY

Height above ground, mm (in)	1202 mm (47.3 in)
Distance forward from the vertical plane containing the axis of the rear wheels, mm (in)	1605 mm (63.2 in)
Distance from the median plane of the tractor, mm (in)	0

6. BRAKING

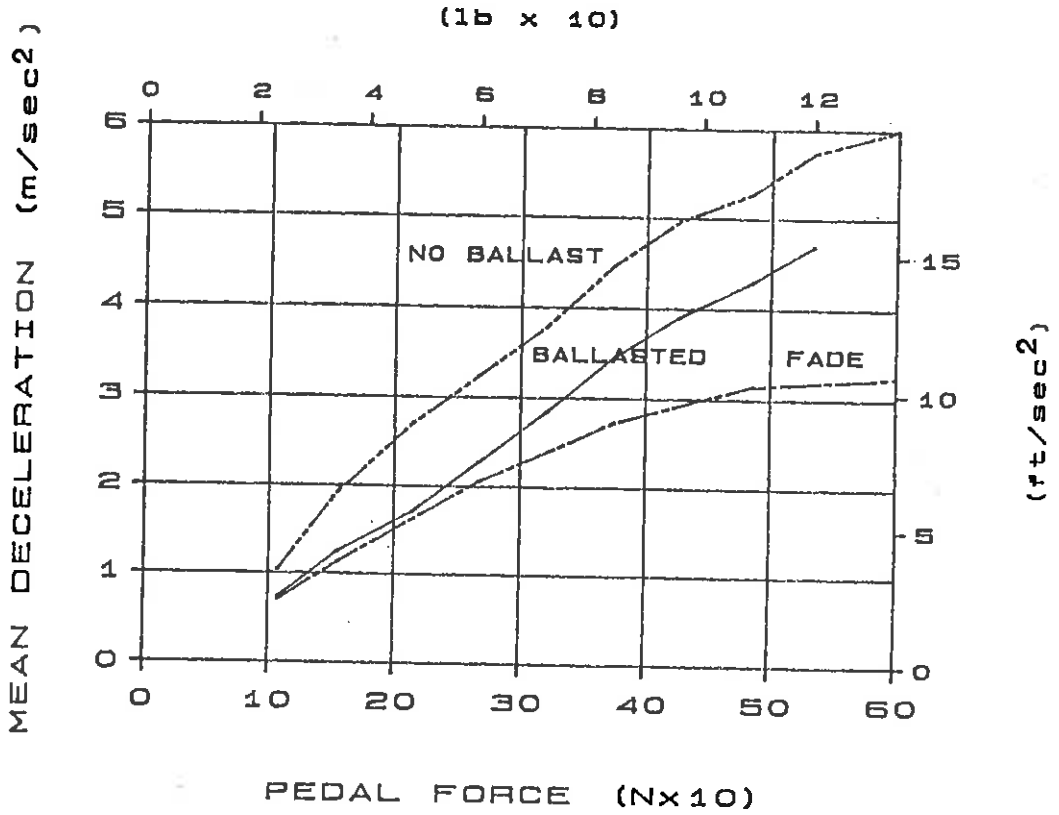
Date of tests: 3rd JUNE 1987

Type of track: Concrete

Masses during brake tests

	Front kg (lb)	Rear kg (lb)	Total kg (lb)
Ballasted	7055 (15555)	4870 (10740)	11925 (26295)
Unballasted	4925 (10865)	4635 (10220)	9560 (21085)

A) Service brakes



Travelling speed before application of brakes, 28.9 km/h (17.9 mile/h)

Brakes-heating: Actuating of brakes for 1 km (0.62 mi) at 80% of maximum speed with pedal force corresponding to 1 m/s^2 (3.3 ft/s^2)

Comments on deviation and vibration: None

B) Parking brake

	Ballasted tractor on slope of 18%		Unballasted tractor on 12% slope with trailer of 8190 kg (18060 lb)	
	Up	Down	Up	Down
Pull on handbrake N (lb)	58 (13)	58 (13)	58 (13)	58 (13)

7. MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of tests:	4th JUNE 1987
Type of sound level meter:	Bruel and Kjaer 2218
Type of track:	Concrete

Results of tests:

Gear:	12
Travelling speed before acceleration:	22.6 km/h (14.0 mile/h)
Sound level:	94.5 dBA

OPTIONAL TESTS

8. NOISE MEASUREMENT AT THE DRIVER'S EAR

Date of tests:	JUNE 1987
Type of sound level meter:	Bruel and Kjaer 2218
Type of track:	Concrete
Cab fitted:	Yes

Results of tests:

Gear	Drawbar pull at which the tractor develops maximum sound level, kN (lb)	Measured travelling speed, km/h (mile/h)	Sound level, dBA
5*	25.8 (5800)	7.44 (4.62)	78.0
5*	3.8 (860)	7.77 (4.83)	76.5
1	68.8 (15460)	3.17 (1.97)	79.0
3	40.8 (9180)	4.95 (3.08)	79.0
4	33.1 (7450)	6.13 (3.18)	79.0
12	No Load	30.1 (18.7)	78.5

*The 5th gear corresponds to the nominal travelling speed nearest to 7.5 km/h (4.7 mile/h).

Details of materials used for sound proofing the protective structures

Interior padding:

• Roof	vinyl covered polyester safety foam, 50 mm (2.0 in) above operator 13 mm (0.50 in) ahead of operator; plastic outer cab top lined with urethane foam, 25 mm (1.0 in)
• Door	glass, as below
• Floor	polyethylene foam, 10.4 mm (0.40 in) ribbed, rubber floor mat , 7.4 mm (0.30)
• Front panel	glass, as below
• Rear and lower right panel	vinyl covered polyester urethane safety foam with accoustical barrier, 25 mm (1.0 in)
• Instrument panel and steering column	ABS plastic shroud 4 mm (0.16 in) thick polyethylene foam with acoustical barrier 12 mm (0.5 in)
Draught proofing:	rubber moulding
Glass:	tinted, tempered, safety glass, 5.6 mm (0.22 in)
Windscreen wipers:	United Technologies Electro Systems Model 1927328 MO 12WC
Direction indicators:	lever on steering column operating blinking lights
Heaters and air conditioner:	located on front console, constant flow cab pressurization, aspirated cab air intake filtration system.

REPAIRS AND ADJUSTMENTS DURING TESTS: None

REMARKS: None

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Test carried out by: R.R. Hochstein, Senior Development Engineer
K.A. Carmichael, C.E.T.

Signed: Mitchell Ernethum Head of Test Station

for the Director

Date: 10 September 1987