OECD APPROVAL # 1433
(Restricted code)
Date of approval: 22 March 1993

NEBRASKA TRACTOR TESTING LABORATORY
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INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES
UNIVERSITY OF NEBRASKA - EAST CAMPUS
LINCOLN, NEBRASKA 68583-0832, USA

REPORT ON TEST IN ACCORDANCE WITH OECD RESTRICTED CODE (CODE II)

OR THE OFFICIAL TESTING OF AGRICULTURAL TRACTORS

CASE INTERNATIONAL 7150 - MFWD (4WD)





MANUFACTURED BY: J.I. Case Company
700 State Street
Racine, Wisconsin 53404 USA

NEBRASKA TEST NO. 1663

Test date: November 1992

This test report provides the results of the tests conducted in accordance with the OECD Standard Test Code for the Official Testing of Agricultural Tractor Performance - C(87)53Final-Annex II, Restricted Code.

This report has been approved by the OECD Coordinating Centre in Paris (CEMAGREF) 22 March 1993

Case International 7150 OECD test # 1433

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SPECIFICATIONS OF TRACTOR.

Manufacturers name/address	J.I. Case Company 700 State Street Racine, Wisconsin 53404, USA
Location of tractor assembly	J.I.Case Company 24th and Mead Streets Racine, Wisconsin 53404, USA
Submitted for test by	The manufacturer
Selected for test by	The manufacturer in agreement with the test station.
Place of running in	J.I. Case Racine Tractor Engineering, Racine, Wisconsin
Duration of running in	163 hours
Location of Test	Nebraska Tractor Test Lab. Lincoln, Nebraska, U.S.A.

SPECIFICATIONS OF TRACTOR

TRACTOR.

Make/Model/Type	Case International/7150/MFWD; Unit construction
Number of driving wheels	2 or 4
Serial number	*JJA0043990*
1st Serial number	*JJA0038014*

ENGINE.

Make	Consolidated Diesel Co
Model	6TA-830
Type	Diesel, direct injection, turbocharged and intercooled
Serial Number	*44746415*
Cylinders	
Number/disposition	6, in-line, vertical
Bore x stroke	114.0 mm x 135.0 mm (4.488 in x 5.315 in)
Capacity	8268 ml (504.5 in³)
Compression Ratio	16.5 - 1
Arrangement of valves	Overhead
Cylinder liners	Wet, replaceable
Turbo-charging	
Make/Model/Type	Holset/H1E/exhaust gas driven with wastegate control
Pressure	114-155 kPa (16.5-22.5 psi) at rated speed and load.
Fuel System	
Feed system	Engine driven transfer pump
Make/Type/Model of filters	Fleetguard/FF5038, FF5052/ Spin-on cartridges

Number of filters	Two
Fuel tank capacity	359 liters (95 US gallons)
Make/Model/Type Injection Pump	Nippondenso/EP-9/In-line
Pump Serial number	04M0124
Production setting of pump Flow Rate (Rated Eng.Spd and full load)	40.8+/-2.0 kg/h (90+/-4.5 lb/hr)
Make/Model/Type of injectors	Robert Bosch/J921359/17 mm
Injection timing	19° BTDC; Lock timed at TDC+/-2°
Injection pressure	20.50-21.30 MPa (2975-3091 psi)
Governor	
Make/Model/Type	Nippondenso/RSV/Variable speed/ Mechanical
Governed engine speed range	From 825 to 2440 rev/min
Rated engine speed	2200 rev/min
High-idle speed range	2315-2440 rpm
Air Cleaner.	
Pre-cleaner Make/Model/Type	Donaldson/PSH00-1790/Aspirated to exhaust
Air intake location	Underhood; ahead of radiator
Main Cleaner Make/Model/Type	Donaldson/EGBB11-0077/ or Nelson/71198A/Dry, dual element, pleated paper
Location of main cleaner	Underhood
Maintenance indicator	Service indicator on digital instrument cluster
Lubrication system.	
Type of feed pump	Full pressure, positive displacement.
Type of filters	Full flow/spin-on/dual filter
Number	One
Oil cooler	Water to oil intercooler
Cooling system.	
Type of coolant	Liquid
Type of pump	Centrifugal,belt driven
Fan specification	Viscous drive fan
Number of fan blades	6
Fan diameter	600 mm (23.6 in)
Coolant system capacity	29.3 liter (31 US qt)
Type of temperature control	Two thermostats
Superpressure	103 kPa (15 psi)
Starting system.	
Make/Model/Type	Nippondenso/4 kW/Electric
Power Rating	4.0 kW (5.4 hp)
Cold starting aid	Ether spray in intake manifold

Safety device	Electrical lockout on gearshift and PTO controls
Electrical system.	
Voltage	12 Volt
Generator Make/Model/Type	Bosch/N1/Alternator; belt drive
Power rating	110 Amp. at 1000-2200 rpm
Batteries	
Number & connection	2-12 V batteries in parallel
Rating	180 amp-hours per battery at 20 hour rating 950 Cold crank amps per battery 185 min. reserve cap/battery (SAE J537)
Exhaust system.	
Make/Model/Type	Nelson(muffler)/24148-A/ horizontal, spark arresting
Location	Muffler underhood; vertical exhaust stack; right front corner of cab

TRANSMISSION TO WHEELS

Clutch. (travel)	
Make/Model/Type	Case International/multi-plate/ oil cooled
Number of plates	9 friction plates
Plate diameter	228.5 mm (9.0 in)
Method of operation	Hydraulic, pedal actuated.
Gear Box.	
Make/Type	Case International/full powershift
Arrangement	Countershaft type with one 2-speed and two 3-speed powershift modules
Number of gears	18 forward, 4 reverse controlled by single hand lever
Oil cooler	Air/oil in front of radiator
Available options	Creeper gear with 6 forward and 2 reverse speeds
Rear axle and final drives.	
Make/model/Type	Case International; Crown wheel & pinion; differential and planetary reduction
Differential Lock	
Type	Hydraulic
Method of engagement	Electrical; switch on console
Method of disengagement	Electrical; switch on console or activating brake pedals.

Front Axle and final drives.

Make/Model/Type	Dana/070BP123/Crown wheel & pinion, differential & planetary reduction
Differential lock	
Type	Limited slip
Method of engagement	Self locking
Method of disengagement	Self unlocking

Total transmission ratios and travelling speeds (18 speed transmission)

Gear Number	Number of engine revolutions for one revolution of the driving wheels	Nominal travelling speed at rated engine speed of 2200 rev/min [km/h]	[mph]
Forward			
1st	243.260	3.09	1.92
2nd	212.073	3.54	2.20
3rd	183.909	4.08	2.54
4th	160.331	4.68	2.91
5th	139.776	5.37	3.34
6th	121.856	6.16	3.83
7th	104.463	7.19	4.47
8th	91.070	8.24	5.12
9th	78.976	9.50	5.91
10th	68.851	10.90	6.78
11th	60.024	12.50	7.77
12th	52.328	14.34	8.92
13th	45.741	16.41	10.21
14th	39.877	18.82	11.70
15th	34.581	21.71	13.50
16th	30.148	24.90	15.49
17th	26.283	28.56	17.76
18th	22.913	32.76	20.37
Reverse			
R1	168.997	4.44	2.76
R2	147.331	5.09	3.17
R3	72.572	10.34	6.43
R4	63.268	11.86	7.38

Calculated with a tire dynamic radius index of 905 mm (35.6 in) SAE J1261 Nov. 1984
Number of revolutions of front wheels for one revolution of rear wheels 1.3228

Total transmission ratios and travelling speeds (18 speed transmission plus optional 6 forward/2 reverse Creeper gears)
Not fitted on tested tractor.

Gear Number		Number of engine revolutions for one revolution of the driving wheels	Nominal travelling speed at rated engine speed of 2200 rev/min [km/h]	[mph]
Forward				
1st	Creeper	835.817	0.90	0.56
2nd	Creeper	631.893	1.19	0.74
3rd	Creeper	480.256	1.56	0.97
4th	Creeper	358.923	2.09	1.30
5th	Creeper	271.354	2.77	1.72
6th	Standard	243.260	3.09	1.92
7th	Standard	212.073	3.54	2.20
8th	Creeper	206.234	3.64	2.26
9th	Standard	183.909	4.08	2.54
10th	"	160.331	4.68	2.91
11th	"	139.776	5.37	3.34
12th	"	121.856	6.16	3.83
13th	"	104.463	7.19	4.47
14th	"	91.070	8.24	5.12
15th	"	78.976	9.50	5.91
16th	"	68.851	10.90	6.78
17th	"	60.024	12.50	7.77
18th	"	52.328	14.34	8.92
19th	"	45.741	16.41	10.21
20th	"	39.877	18.82	11.70
21th	"	34.581	21.71	13.50
22th	"	30.148	24.90	15.49
23th	"	26.283	28.56	17.76
24th	"	22.913	32.76	20.37
Reverse				
R1	Creeper	580.657	1.29	0.80
R2	Creeper	249.351	3.01	1.87
R3	Standard	168.997	4.44	2.76
R4	"	147.331	5.09	3.17
R5	"	72.572	10.34	6.43
R6	"	63.268	11.86	7.38

Same dynamic radius as used on preceding table.
Same front to rear ratio as on preceding table.

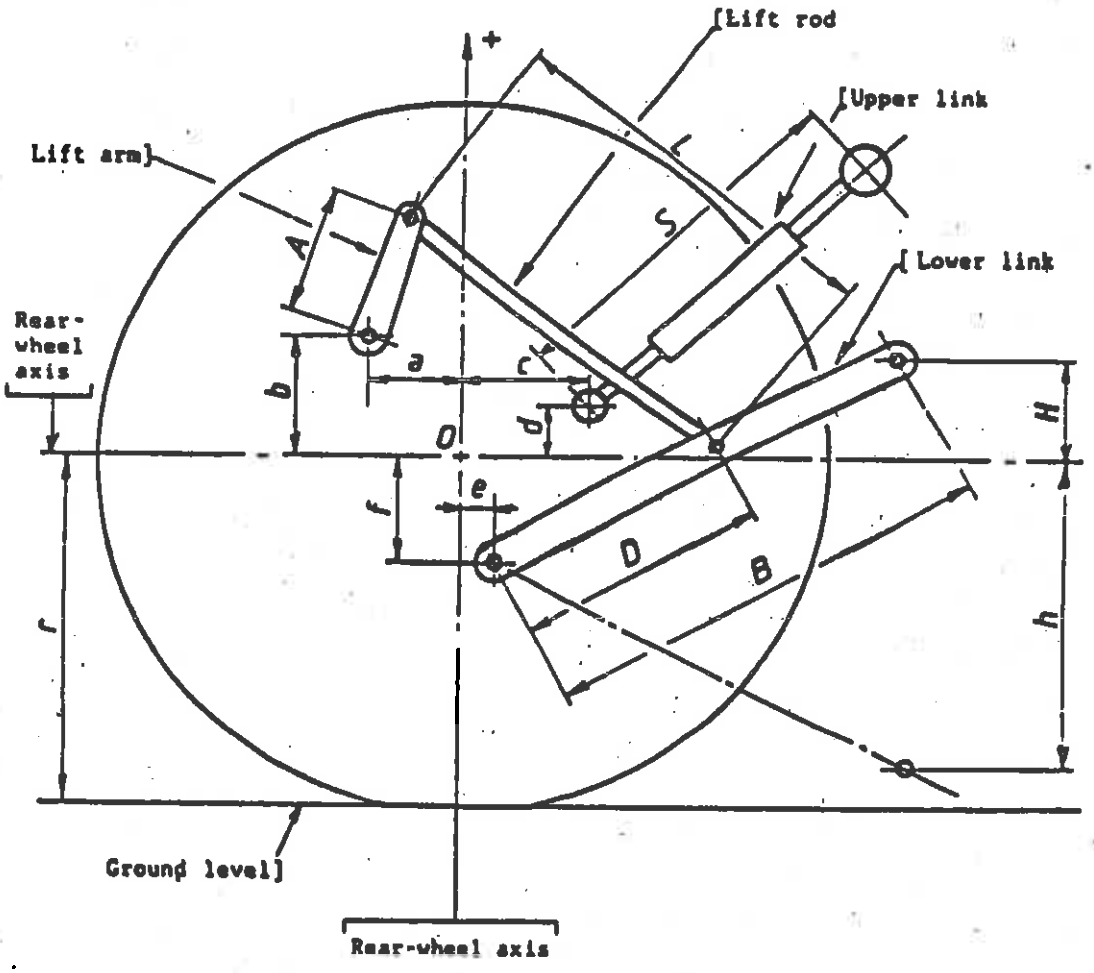
POWER - TAKE - OFF.

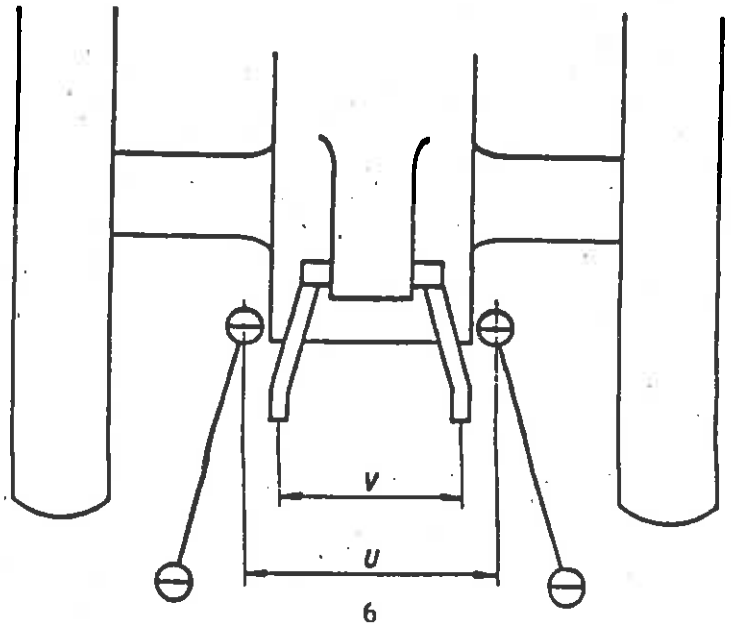
Main Power-Take-Off.	
Type	Independent
Method of engagement	Hydraulically actuated multi-plate wet clutch operated by hand lever, independent of main drive clutch.
Number of shafts	One
Power take-off proportional to engine speed 1000 rev/min.	
Location	Rear of tractor, vertical center plane.
Diameter of shaft	45 mm (1.75 in)
Number of splines	20; conforms to ISO 500/1979.
Height above ground	815 mm (32.1 in)
Distance from median plane of tractor	0 mm
Distance behind rear axle	796 mm (31.3 in)
PTO Speed at rated engine spd	1003 rev/min
Engine speed at Std. PTO spd	2193 rev/min
Ratio of Engine rpm to PTO rpm	2.193:1
Direction of rotation (viewed facing driving end)	Clockwise.

POWER LIFT.

Make/Type	Case international/3-point
Type of hydraulic system	Closed center, load sensing
Number/Type of cylinders	One internal, Two external; all single acting
Type of linkage lock for transport	Hydraulic, with locking notch on hand lever on console
Relief valve setting (High pressure standby)	18.27+/-0.35 MPa (2650+/-50 psi)
Opening pressure of cylinder safety valve	19.65-20.34 MPa (2850-2950 psi)
Lift pump type	Axial piston, pressure and flow compensated
Power transmission to pump	Direct drive on transmission
Type/Number of filters	One Spin-on cartridge; Cleanable suction screen inside reservoir
Location of oil reservoir	Transmission housing
Number/Type/Location of tapping points	3 pairs of ISO standard couplings at rear of tractor
Max. oil volume available for external cylinders	8.5 liter (9 US qt)

THREE POINT LINKAGE





THREE POINT LINKAGE. (Upper link in bottom hole on tractor)

- Category III in conformity with ISO 730/3 -1990.
- Category adaptor Quick-attach coupler

Table 1.1 - *Linkage geometry dimensions.

		Dimension or range [mm]	[in]	Settings used on test [mm]	[in]
Lift category		III			
Rear Tire - Radius Index	(r)	905	35.6	same	
Front Tire - Radius Index	(r')	695	27.4	same	
Length of lift arms	(A)	381	15.0	same	
Length of lower links	(B)	861	33.9	same	
Distance of lift arm pivot from: horizontal	(a)	364	14.3	same	
rear wheel axis: vertical	(b)	422	16.6	same	
Horizontal distance between the 2 lower link points	(u)	604	23.8	same	
Horizontal distance between the 2 lift arm end points	(v)	737	29.0	same	
Length of upper link	(S)	600 to 831	23.6 to 32.7	657	25.9
Distance of upper link pivot from horizontal	(c)	627	24.7	same	
rear wheel axis: vertical	(d)	169 or 250	6.7 or 9.8	169 same	6.7
Distance of lower link pivot from: horizontal	(e)	455	17.9	same	
rear wheel axis: vertical	(f)	332	13.1	same	
Distance of lower link pivot points to lift rod pivot pts on lower links.	(D)	579	22.8	same	
Length of lift rods	(L)	660 to 866	26.0 to 34.1	844	33.2
Height of lower hitch points relative to rear wheel axis In low position	(h)	701 to 378	27.6 to 14.9	676	26.6
In high position	(H)	3 to 269	0.1 to 10.6	33	1.3
Height above ground of lower hitch points when locked in transport position.		from 908 to 1174	35.7 to 46.2	937	36.9

*Assuming (r) with a dynamic tire index of 905 mm (35.6 in) SAE J1261 Nov.1984, Dynamic indices table.

SWINGING DRAWBAR.

Type	Swinging
Height above ground:	Maximum 594 mm (23.4 in) Minimum 479 mm (18.9 in)
Adjustments	Laterally adjustable with 3 fore-aft positions
Distance of hitch point from rear wheel axis, horizontal	
Position 1	1202 mm (47.3 in)
Position 2	1304 mm (51.3 in)
Position 3	1406 mm (55.3 in)
Distance of hitch point from PTO shaft end	
Vertically	222 and 336 mm (8.7 and 13.2 in)
Horizontally	
Position 1	406 mm (16.0 in)
Position 2	508 mm (20.0 in)
Position 3	610 mm (24.0 in)
Lateral adjustment (center of clevis)	
Right hand & Left hand	
Position 1	210 mm (8.3 in)
Position 2	228 mm (9.0 in)
Position 3	246 mm (9.7 in)
Distance of pivot point from rear wheel axle;horizontally	50 mm (2.0 in) forward
Diameter of drawbar pin hole	42 mm (1.65 in)
Maximum vertical permissible load (static)	
Positions 1 & 2	20.9 kN (4700 lbs)
Position 3	16.5 kN (3700 lbs)

STEERING

Make/Model/Type	Eaton/266-4101-001/ hydrostatic steering control unit.
Method of operation	
Pump(s)	Cessna main axial piston pump thru steering priority valve
Ram(s)	2 double-acting cylinders
Working pressure	16.2-16.9 MPa (2350-2450 psi)

BRAKES

Service brake.

Make/Model/Type	Case International/Oil immersed disc type

Method of operation	Hydraulic,operated by two foot pedals, separate or coupled.
Trailer brake	none
Parking brake.	
Type	Transmission lock
Method of operation	Mechanical; Gear selector lever

WHEELS

Number.	
Front	Two; Driving and steering
Rear	Two or four (duals); Driving
Wheel base	3006 mm (118.3 in)

Track width adjustment

	Inside distance [mm]	[in]	Outside distance [mm]	[in]	Adjustment method
Front	1527	60.1	2408	94.8	Reversing wheel rims and offset lug rims
Rear	1626	64.0	3953	155.6	Adjustable clamping edges on bar axle and offset lug rims

PROTECTIVE STRUCTURE

Make/Model/Type	Case International/CX-96/Cab
Manufacturer's name/address	J.I.Case Company 700 State Street Racine, Wisconsin 53404, USA
Protective device	Cab, 4-post with charpy v-notch certified material
Tiltable	No
OECD approval number	None

DRIVER'S SEAT

Make/Model/Type	Sears/SA9754/Air suspension
Type of suspension	Air ride; fore-aft isolator; adjustable for weight.
Type of damping	Air damping
Range of adjustment	
Longitudinal	152.4 mm (6.0 in.)
Vertical	76.2 mm (3.0 in.)

LIGHTING.

	Height above ground of center [mm]	[in]	Size [mm]	Distance from outside edge of lights to median plane of tractor. [mm]	[in]
Headlights	1667	65.6	260.5x130.8	390	15.4
Rearlights	2104	82.8	100.0x 45.2	654	25.7
Reflectors-rear	2104	82.8	50.0x 45.2	554	21.8
				704	27.7

TEST CONDITIONS.

Overall dimensions(unballasted).

Length mm/inch	Width minimum mm/inch	Width maximum mm/inch	Height at top of protective structure mm/inch	Height at top of exhaust stack mm/inch
5273/207.6	3048/120.0	4623/182.0	3077/121.1	3082/121.3

Overall dimensions(ballasted).

Length mm/inch	Width minimum mm/inch	Width maximum mm/inch	Height at top of protective structure mm/inch	Height at top of exhaust stack mm/inch
5485/216.0	3048/120.0	4623/182.0	3077/121.1	3082/121.3

Ground clearance (unballasted) 440 mm (17.4 in)
Clearance-limiting part Swinging drawbar pin

Tractor Mass (with Cab, full fuel tank)

		Without driver [kg]	[lb]	With driver [kg]	[lb]
Unballasted	Front	2604	5740	2614	5762
	Rear	5827	12846	5892	12990
	Total	8431	18586	8506	18752
Ballasted	Front	4074	8982	4084	9004
	Rear	7635	16832	7700	16976
	Total	11709	25814	11784	25980

Ballast.

	Number of weights	Mass (total) (kg)	(lb)	Water (kg)	(lb)
Front-wts	22	998	2200	--	--
-bracket	1	186	410	--	--
Rear -wts	12	789	1740	525	1158
-duals	2	780	1720	--	--

Tire and track width specifications.

	Front	Rear
Make	Goodyear	Goodyear
Dimensions	16.9R30	20.8R42
Ply rating	2 star (10 ply)	2 star (10 ply)
Type	Radial	Radial
Max.load (tire manufacturer)	23.5 kN/tire (5290 lb)/tire	40.7 kN/tire (9150 lb)/tire
Max.load(tractor manufacturer)	27.1 kN/tire (6080 lb)/tire	40.7 kN/tire (9150 lb)/tire
Inflation pressure(tire mfr)	165 kPa (24 psi)	165 kPa (24 psi)
Dynamic Radius Index	695 mm (27.4 in)	905 mm (35.6 in)
Chosen track width - inner	2075 mm (81.8 in)	1815 mm (71.5 in)
- outer		3327 mm (131 in)

Oils and Lubrication.

Capacity and change interval:

	Capacity liter	Capacity quart	Oil change hours	Filter change hours
Engine (without filter)	19	20	250	250
Gear Box	191	202	1000	1000
Front axle	11.4	12	1000	----
Rear axle	Common with Gear box			
Hydraulic system	Common with Gear box			
Final drive-front	2x0.9	2x1.0	1000	
Final drive-rear	Common with Gear box			

Specifications:

	Recommended	Used during test
Engine oil		
Type	Case IH NO. 1 SAE 15W-40	same
Viscosity	14.9 cSt at 100°C	
Classification	API SF/CD/CE	
Transmission oil		
Type	Case IH Hytran Plus	same
Viscosity	6.3 cSt at 100°C	
Classification	NA	
Hydraulic fluid		
Type	Case IH Hytran Plus	same
Viscosity	6.3 cSt at 100°C	
Classification	NA	
Front differential and final drive		
Type	Case IH 135HEP Gear Lube; SAE 85W-140	same
Viscosity	27 cSt at 100°C	
Classification	API GL-5 or MIL-L-2105D	
Grease		
Type	Case IH Hi-Temp EP	
Number of lube points	30	
Fuel		
Type	Premier; Grade 2-D,in conformity with the national standard	
Density (Pto test)	0.8392 kg/liter (6.987 lb/gallon) at 15°C (59°F)	
(Drawbar test)	Same as PTO test	
Cetane number	53.9	
Viscosity	2.31 cSt at 37.8°C (100° F)	

COMPULSORY TESTS

1. MAIN POWER TAKE-OFF

Date: 04-Nov-92 Location: UNL Tractor Test Lab, Lincoln, NE, U.S.A.

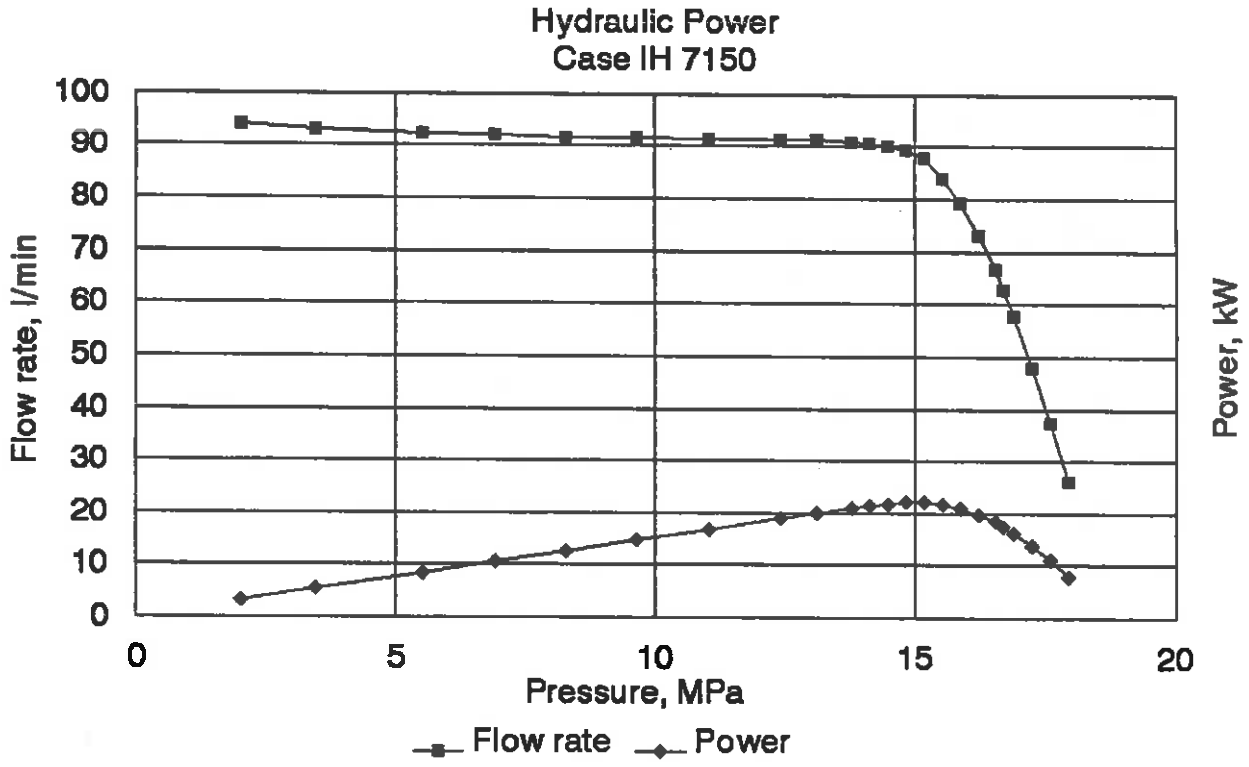
Type of dynamometer: Eddy current, Eaton Fuel density: 6.987 lb/gal

Power kW *hp*	Eng rev/min	PTO rev/min	l/h *gal/h*	kg/h *lb/h*	kg/kW-hr *lb/hp-hr*	kW-hr/l *hp-hr/gal*
1.1 Maximum Power – 2 hours						
179.70	2002	913	49.72	41.63	0.232	3.61
240.99			*13.13*	*91.77*	*0.381*	*18.35*
1.2 Power at Rated Engine Speed – 1 hour						
161.69	2200	1003	47.34	39.63	0.245	3.42
216.83			*12.51*	*87.38*	*0.403*	*17.34*
1.3 Power at Standard Power Take-Off Speed – 1 hour						
161.69	2200	1003	47.34	39.63	0.245	3.42
216.83			*12.51*	*87.38*	*0.403*	*17.34*
1.4 Part Loads						
1.4.1 Torque at maximum power at rated engine speed						
161.69	2200	1003	47.34	39.63	0.245	3.42
216.83			*12.51*	*87.38*	*0.403*	*17.34*
1.4.2 85% of torque obtained in 1.4.1						
141.23	2258	1030	43.07	36.06	0.255	3.28
189.39			*11.38*	*79.50*	*0.420*	*16.65*
1.4.3 75% of torque defined in 1.4.2						
107.85	2294	1046	35.43	29.66	0.275	3.04
144.63			*9.36*	*65.40*	*0.452*	*15.45*
1.4.4 50% of torque defined in 1.4.2						
72.76	2331	1063	27.47	23.00	0.316	2.65
97.57			*7.26*	*50.70*	*0.520*	*13.45*
1.4.5 25% of torque defined in 1.4.2						
37.03	2363	1078	19.34	16.19	0.437	1.91
49.66			*5.11*	*35.70*	*0.719*	*9.72*
1.4.6 unloaded						
0.31	2389	1089	11.70	9.80	31.674	0.03
0.41			*3.09*	*21.60*	*52.072*	*0.13*
1.5 Part Loads at Standard Power Take-off Speed						
1.5.1 Torque at maximum power						
161.69	2200	1003	47.34	39.63	0.245	3.42
216.83			*12.51*	*87.38*	*0.403*	*17.34*
1.5.2 85% of torque obtained in 1.5.1						
141.23	2258	1030	43.07	36.06	0.255	3.28
189.39			*11.38*	*79.50*	*0.420*	*16.65*
1.5.3 75% of torque defined in 1.5.2						
107.85	2294	1046	35.43	29.66	0.275	3.04
144.63			*9.36*	*65.40*	*0.452*	*15.45*
1.5.4 50% of torque defined in 1.5.2						
72.76	2331	1063	27.47	23.00	0.316	2.65
97.57			*7.26*	*50.70*	*0.520*	*13.45*
1.5.5 25% of torque defined in 1.5.2						
37.03	2363	1078	19.34	16.19	0.437	1.91
49.66			*5.11*	*35.70*	*0.719*	*9.72*
1.5.6 unloaded						
0.31	2389	1089	11.70	9.80	31.674	0.03
0.41			*3.09*	*21.60*	*52.072*	*0.13*

No load maximum engine speed:	2389 rev/min	
Equivalent torque at rated speed:	702 N-m	*518 lb-ft*
Equivalent torque at maximum power:	857 N-m	*632 lb-ft*
(engine speed:	2002 rev/min)	
Maximum equivalent crankshaft torque:	937 N-m	*691 lb-ft*
(engine speed:	1556 rev/min)	
Mean Dry bulb:	24 deg C	*76 deg F*
Wet bulb:	14 deg C	*57 deg F*
Relative humidity:	31 %	
Pressure:	98.12 kPa	*28.97 in Hg*
Maximum Coolant:	91 deg C	*196 deg F*
Engine oil:	114 deg C	*238 deg F*
Fuel:	77 deg C	*171 deg F*
Air intake:	27 deg C	*80 deg F*
Transmission/hydraulic oil:	55 deg C	*131 deg F*
Intake manifold pressure at rated speed:	145 kPa	*21.0 psig*
Intake manifold pressure at maximum power:	148 kPa	*21.5 psig*

2.1 Hydraulic Power Test

Date of test: 5–Nov–92					
Location of test–City–State:	Tractor Test Lab, Lincoln, NE, USA				
Tapping point used for test:	Remote hydraulic outlets				
I. Sustained pressure with pump stalled:					
18.48 MPa					
2680 psi					
II. Pump delivery rate at minimum pressure and rated engine speed:					
93.9 l/min					
24.8 gpm					
III. Flow rate, pressure, power:					
90% of relief valve setting:					
62.8 l/min		16.69 MPa		17.48 kW	
16.6 gpm		*2420 psi*		*23.44 hp*	
Maximum hydraulic power:					
87.8 l/min		15.17 MPa		22.21 kW	
23.2 gpm		*2200 psi*		*29.78 hp*	
IV. Hydraulic fluid temperature at flow meter:					
64 C					
148 F					



2.2 POWER LIFT TEST. Test A - Top link in lower hole on tractor (for settings see p.7)

Date of test: 12 November 1992

		Hitch points	Frame
Lower hitch points above ground - down position:	[mm/in]	229/9.0	216/8.5
Vertical movement: without load:	[mm/in]	724/28.5	813/32.0
Vertical movement: with load:	[mm/in]	671/26.4	742/29.2
Maximum corrected force through full range:	[kN/lb]	61.6/13838	54.7/12294
Corresponding pressure:	[kPa/psi]	16630/2412	
Moment about rear axle:	[kN.m/lb.ft]	88.8/65498	112.2/82780
Maximum mast tilt angle:	[deg]	--	5.5

Lifting height relative to horizontal position of lower links.

	[mm]	-353	-340	-312	-299	-200	-98
	[in]	-13.9	-13.4	-12.3	-11.8	-7.9	-3.9
Corrected lift forces							
Hitch point.	[kN]	--	62.7	--	61.6	65.7	69.5
	[lb]	--	14094	--	13838	14774	15620
at frame	[kN]	64.0	--	63.6	--	64.5	64.4
	[lb]	14382	--	14292	--	14499	14472

Lifting height relative to horizontal position of lower links.

	[mm]	1	100	201	300	331	389
	[in]	0	3.9	7.9	11.8	13.0	15.3
Corrected lift forces							
Hitch point	[kN]	71.0	71.6	70.9	70.8	71.0	--
	[lb]	15971	16106	15930	15917	15962	--
at frame	[kN]	63.5	61.8	58.9	--	56.0	54.7
	[lb]	14274	13887	13239	--	12582	12294

OECD Drawbar Data (SI)

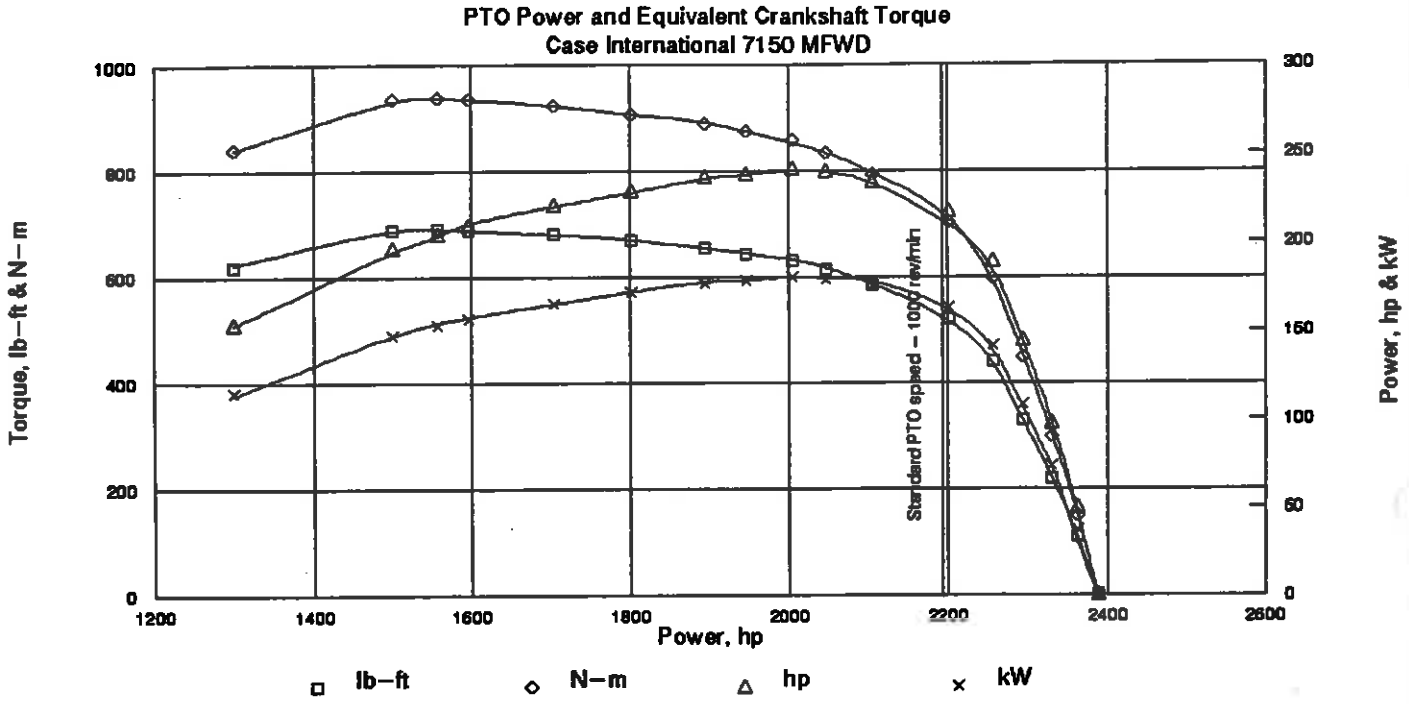
Date of tests: 9 Nov 92 | Fuel density: 0.837 kg/l
Type of track: Concrete | Test number: 1663

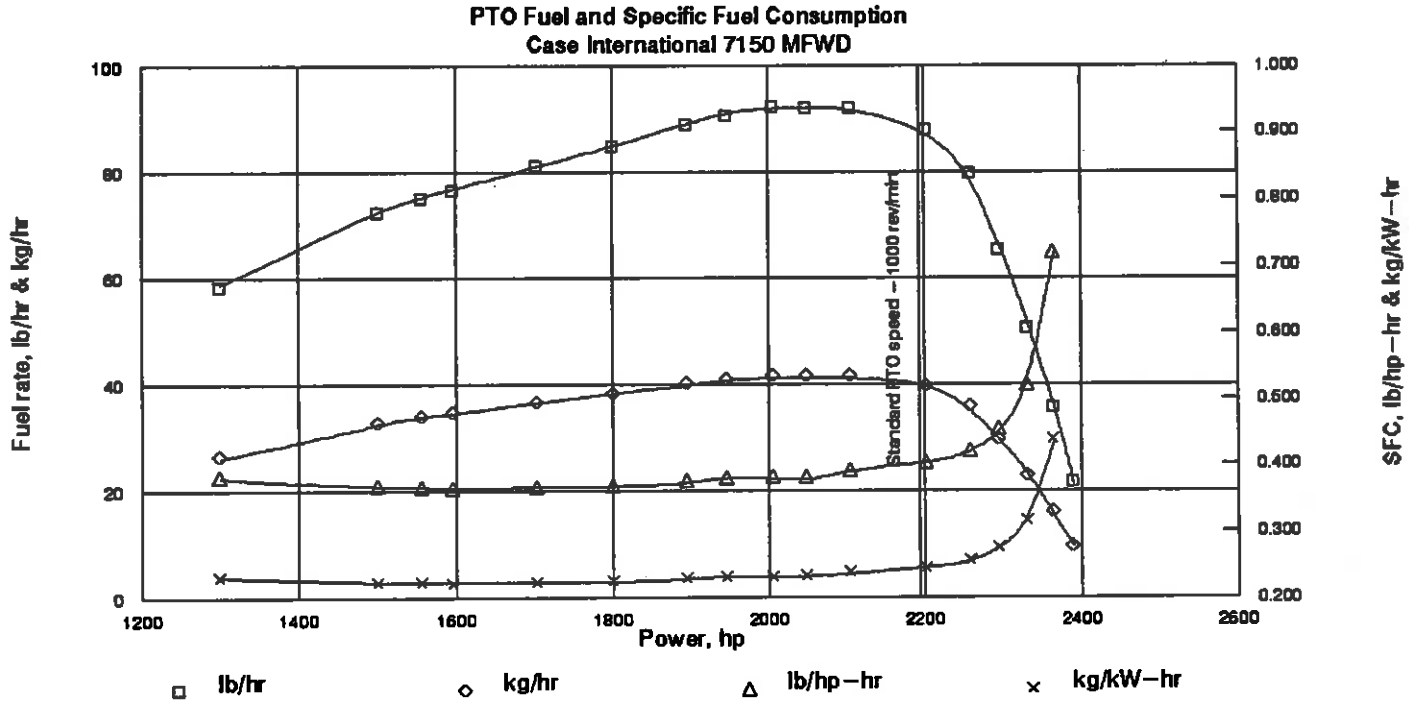
Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg C					Rel humidity	Pressure
	kW	kN	km/h	rev/min		kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet		kPa
I. Maximum Power (unballasted, 4wd at 2000 rev/m					Tire pressure:		110 kPa, rear		110 kPa, front		Drawbar height:		470 mm	
5	111.71	84.82	4.74	2252	14.72%	0.327	2.56	76	83	105	10	7	66%	98.21
6	125.69	84.95	5.33	2198	14.44%	0.315	2.66	75	84	105	10	7	66%	98.21
7	147.54	82.37	6.45	2116	7.83%	0.278	3.01	76	84	108	10	7	66%	98.21
8	155.72	78.15	7.17	2012	6.03%	0.268	3.12	74	85	108	11	8	67%	98.21
9	158.93	67.88	8.43	2008	4.16%	0.262	3.20	74	85	107	11	8	67%	98.21
10	158.27	58.58	9.73	2001	3.11%	0.262	3.20	74	87	109	11	8	67%	98.21
11	157.05	50.39	11.22	2000	2.58%	0.264	3.18	74	87	109	11	8	67%	98.21
12	155.14	43.23	12.92	1998	2.04%	0.268	3.13	74	86	109	10	7	66%	98.21
II. Part loads (unballasted, 4wd)														
II.1 in selected gear at maximum power														
9	143.89	55.49	9.33	2199	2.94%	0.276	3.03	76	86	109	11	8	67%	98.21
II.1.1 75% of pull at maximum power at rated speed														
9	112.53	41.50	9.76	2276	2.04%	0.298	2.81	71	83	104	9	7	76%	98.34
II.1.2 50% of pull at maximum power at rated speed														
9	76.96	27.75	9.98	2312	1.31%	0.344	2.44	72	82	103	9	7	76%	98.34
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
11	112.30	41.47	9.75	1727	1.86%	0.258	3.24	69	82	102	9	7	76%	98.34
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
11	77.06	27.74	10.00	1760	1.22%	0.286	2.93	69	81	100	9	7	76%	98.34
II.2 in selected gear nearest to 7.5 km/h														
7	142.10	74.00	6.91	2200	5.02%	0.279	3.00	76	84	106	10	7	66%	98.21
II.2.1 75% of pull at maximum power at rated speed														
7	112.65	55.38	7.32	2278	2.67%	0.294	2.85	72	83	104	10	7	66%	98.21
II.2.2 50% of pull at maximum power at rated speed														
7	77.15	36.94	7.52	2314	1.77%	0.334	2.51	73	82	103	9	7	76%	98.34
II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1														
9	112.78	55.34	7.34	1726	2.85%	0.254	3.30	71	82	104	9	7	76%	98.21
II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2														
9	77.47	36.87	7.56	1759	1.77%	0.276	3.03	68	81	99	9	7	76%	98.34

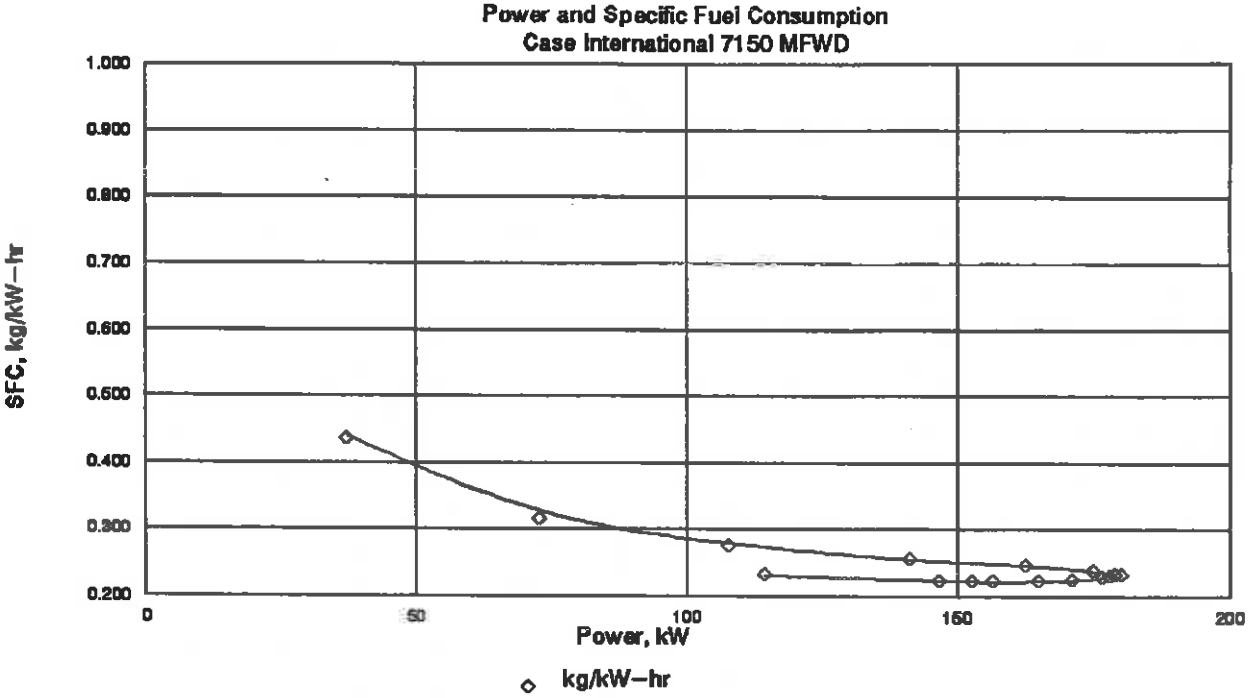
OECD Drawbar Data (US)

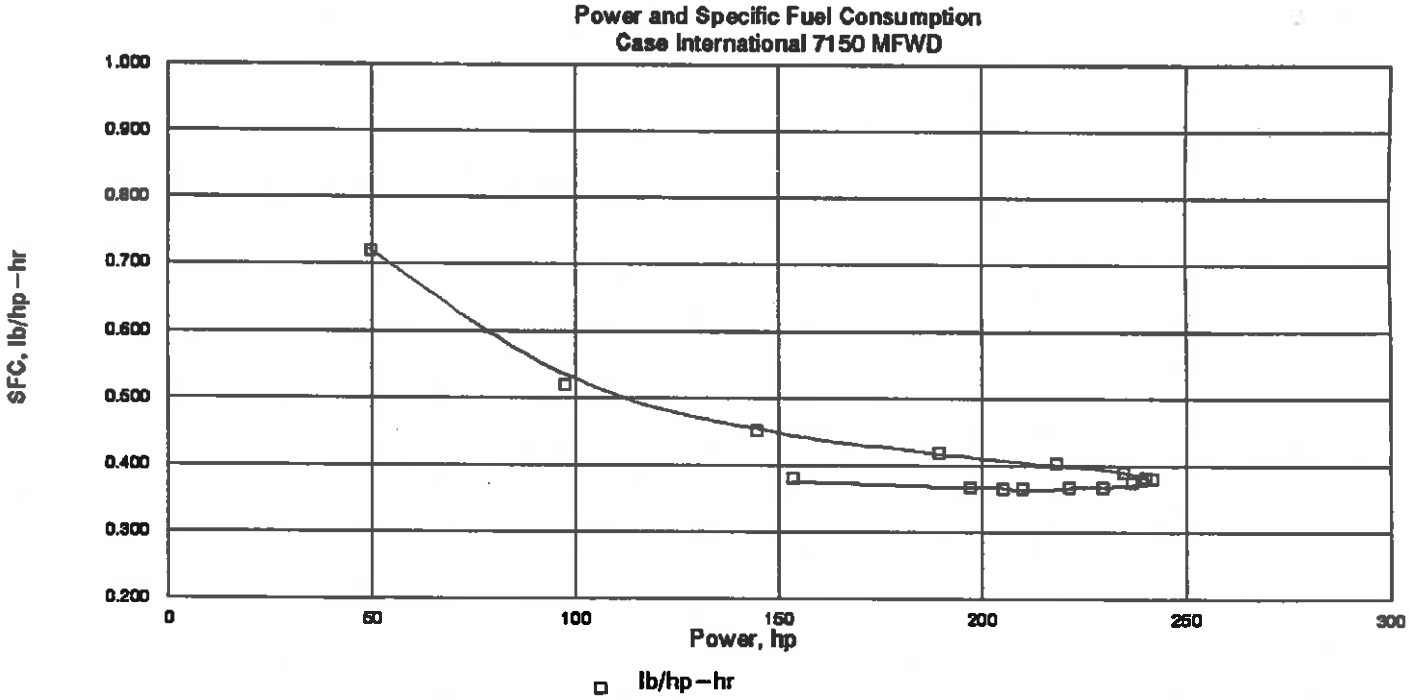
Date of tests: 9 Nov 92 | Fuel density: 6.987 lb/gal
Type of track: Concrete | Test number: 1663

Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg F					Rel humidity	Pressure
	hp	lb	mph	rev/min		lb/hp.h	hp.h/gal	Fuel	Coolant	Oil	Dry	Wet		in Hg
I. Maximum Power (unballasted, 4wd at 2000 rev/m					Tire pressure:		16 psig, rear		16 psig, front		Drawbar height:		18.5 in	
5	149.81	19069	2.95	2252	14.72%	0.538	12.99	169	182	221	50	45	66%	29.00
6	168.55	19098	3.31	2198	14.44%	0.517	13.51	167	183	222	50	45	66%	29.00
7	197.86	18519	4.01	2116	7.83%	0.457	15.30	169	184	226	50	45	66%	29.00
8	208.83	17569	4.46	2012	6.03%	0.441	15.86	165	185	227	51	47	67%	29.00
9	213.13	15261	5.24	2008	4.16%	0.431	16.22	165	186	225	51	47	67%	29.00
10	212.24	13169	6.04	2001	3.11%	0.430	16.25	166	188	228	51	47	67%	29.00
11	210.60	11329	6.97	2000	2.58%	0.433	16.12	165	188	228	51	47	67%	29.00
12	208.05	9719	8.03	1998	2.04%	0.440	15.88	166	188	228	50	44	66%	29.00
II. Part loads (unballasted, 4wd)														
II.1 in selected gear at maximum power														
9	192.96	12475	5.80	2199	2.94%	0.454	15.39	168	187	228	51	47	67%	29.00
II.1.1 75% of pull at maximum power at rated speed														
9	150.91	9330	6.07	2276	2.04%	0.490	14.25	160	182	220	48	45	76%	29.04
II.1.2 50% of pull at maximum power at rated speed														
9	103.20	6239	6.20	2312	1.31%	0.565	12.37	162	180	217	48	45	76%	29.04
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
11	150.59	9323	6.06	1727	1.86%	0.425	16.45	156	180	215	48	45	76%	29.04
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
11	103.33	6236	6.21	1760	1.22%	0.470	14.87	156	178	213	48	45	76%	29.04
II.2 in selected gear nearest to 4.6 mph														
7	190.56	16635	4.30	2200	5.02%	0.458	15.25	169	183	224	50	45	66%	29.00
II.2.1 75% of pull at maximum power at rated speed														
7	151.06	12451	4.55	2278	2.67%	0.483	14.45	162	182	219	50	44	66%	29.00
II.2.2 50% of pull at maximum power at rated speed														
7	103.46	8305	4.67	2314	1.77%	0.548	12.74	164	180	218	48	45	76%	29.04
II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1														
9	151.24	12440	4.56	1726	2.85%	0.417	16.76	159	180	219	48	45	76%	29.00
II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2														
9	103.89	8289	4.70	1759	1.77%	0.454	15.39	155	177	211	48	45	76%	29.04


PTO Power and Equivalent Crankshaft Torque
Case International 7150 MFWD
Torque, lb–ft & N–m
Power, hp & kW
Power, hp
Standard PTO speed – 1000 rev/min
lb–ft
N–m
hp
kW


PTO Fuel and Specific Fuel Consumption
Case International 7150 MFWD
Fuel rate, lb/hr & kg/hr
SFC, lb/hp–hr & kg/kW–hr
Power, hp
Standard PTO speed – 1000 rev/min
lb/hr
kg/hr
lb/hp–hr
kg/kW–hr


Power and Specific Fuel Consumption
Case International 7150 MFWD
SFC, kg/kW–hr
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0
50
100
150
200
Power, kW
kg/kW–hr


Power and Specific Fuel Consumption
Case International 7150 MFWD
SFC, lb/hp–hr
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0
50
100
150
200
250
300
Power, hp
lb/hp–hr

Optional Tests - Ballasted, Front Drive Engaged

OECD Drawbar Data (SI)

Date of tests: 9 Nov 92 Fuel density: 0.837 kg/l
Type of track: Concrete Test number: 1663

Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg C					Rel hum-	Pressu
	kW	kN	km/h	rev/min		kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet	idity	kPa
I. Maximum Power (ballasted, 4wd at 2000 rev/min)					Tire pressure:		83 kPa, rear		138 kPa, fron	Drawbar height:			495 mm	
4 *	140.17	116.18	4.34	2170	7.18%	0.288	2.90	86	85	107	14	12	79%	97.2
5	150.93	115.59	4.70	2035	6.52%	0.277	3.03	86	85	107	14	12	79%	97.2
6	155.16	102.04	5.47	2007	3.98%	0.268	3.12	85	85	108	13	11	79%	97.2
7	159.21	89.02	6.44	2004	3.01%	0.259	3.23	86	87	109	13	11	79%	97.2
8	158.92	76.99	7.43	2003	2.48%	0.261	3.21	84	86	109	12	10	78%	97.3
9	158.47	66.43	8.59	2001	2.02%	0.262	3.19	85	87	109	12	10	78%	97.3
10	156.73	57.12	9.88	2000	1.66%	0.265	3.17	85	87	109	12	10	78%	97.3
11	155.20	49.08	11.38	2005	1.48%	0.267	3.13	84	86	109	12	10	78%	97.3
12	152.28	41.93	13.07	2002	1.11%	0.272	3.08	85	87	109	12	10	78%	97.3
Note: Fuel temperatures were taken from return line only. * Pull limited in these gears to avoid excessive tractor bounce.														
II. Maximum Power (ballasted, 4wd at 2200 rev/min)					Tire pressure:		83 kPa, rear		138 kPa, fron	Drawbar height:			495 mm	
3 *	125.63	115.80	3.91	2248	7.75%	0.302	2.77	86	84	106	14	12	79%	97.2
4 *	138.81	111.23	4.49	2204	5.52%	0.287	2.92	86	85	107	14	12	79%	97.2
5	141.41	96.86	5.26	2202	3.54%	0.281	2.98	86	85	107	13	11	79%	97
6	141.84	84.00	6.08	2201	2.74%	0.281	2.98	86	85	108	12	10	78%	97.3
7	144.77	73.02	7.14	2204	2.29%	0.274	3.06	87	86	109	13	11	79%	97.2
8	143.45	62.96	8.20	2199	1.84%	0.277	3.03	86	85	108	12	10	78%	97.3
9	141.96	53.89	9.48	2201	1.75%	0.279	3.00	88	86	109	12	10	78%	97.3
10	140.49	46.47	10.88	2197	1.48%	0.282	2.96	88	86	109	12	10	78%	97.3
11	138.33	39.70	12.54	2204	1.20%	0.287	2.91	86	86	108	12	10	78%	97.3
12	134.98	33.72	14.41	2202	1.11%	0.294	2.85	88	87	109	12	10	78%	97.3
Note: Fuel temperatures were taken from return line only. * Pull limited in these gears to avoid excessive tractor bounce.														

OECD Drawbar Data (US)

Date of tests: 9 Nov 92 Fuel density: 6.987 lb/gal
Type of track: Concrete Test number: 1663

Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg F					Rel hum-	Pressu
	hp	lb	mph	rev/min		lb/hp.h	bp.h/gal	Fuel	Coolant	Oil	Dry	Wet	idity	in Hg
I. Maximum Power (ballasted, 4wd at 2000 rev/min)					Tire pressure:		12 psig, rear		20 psig, fror	Drawbar height:			19.5 in	
4 *	187.97	26119	2.70	2170	7.18%	0.474	14.75	187	185	225	57	54	79%	28.7
5	202.40	25986	2.92	2035	6.52%	0.455	15.36	186	185	225	57	54	79%	28.7
6	208.08	22939	3.40	2007	3.98%	0.441	15.84	185	186	226	55	52	79%	28.7
7	213.51	20013	4.00	2004	3.01%	0.426	16.39	187	188	229	55	52	79%	28.7
8	213.11	17307	4.62	2003	2.48%	0.429	16.29	184	187	228	53	50	78%	28.7
9	212.51	14933	5.34	2001	2.02%	0.431	16.21	185	188	229	53	50	78%	28.7
10	210.17	12841	6.14	2000	1.66%	0.435	16.07	185	189	229	53	50	78%	2
11	208.13	11033	7.07	2005	1.48%	0.440	15.89	183	187	228	53	50	78%	28.
12	204.21	9427	8.12	2002	1.11%	0.447	15.62	186	189	229	53	50	78%	28.7
Note: Fuel temperatures were taken from return line only. * Pull limited in these gears to avoid excessive tractor bounce.														
II. Maximum Power (ballasted, 4wd at 2200 rev/min)					Tire pressure:		12 psig, rear		20 psig, fror	Drawbar height:			19.5 in	
3 *	168.47	26034	2.43	2248	7.75%	0.497	14.07	187	183	223	57	54	79%	28.7
4 *	186.15	25007	2.79	2204	5.52%	0.471	14.83	188	185	225	57	54	79%	28.7
5	189.64	21776	3.27	2202	3.54%	0.462	15.13	187	185	225	55	52	79%	28.7
6	190.21	18885	3.78	2201	2.74%	0.461	15.15	187	186	226	53	50	78%	28.7
7	194.15	16417	4.43	2204	2.29%	0.450	15.53	188	188	228	55	52	79%	28.7
8	192.37	14155	5.10	2199	1.84%	0.455	15.37	187	185	226	53	50	78%	28.7
9	190.37	12116	5.89	2201	1.75%	0.459	15.21	190	188	228	53	50	78%	28.7
10	188.40	10447	6.76	2197	1.48%	0.464	15.05	190	188	229	53	50	78%	28.7
11	185.51	8926	7.79	2204	1.20%	0.472	14.79	187	186	226	53	50	78%	28.7
12	181.01	7581	8.95	2202	1.11%	0.483	14.46	190	188	228	53	50	78%	28.7
Note: Fuel temperatures were taken from return line only. * Pull limited in these gears to avoid excessive tractor bounce.														

THREE POINT LINKAGE. (Upper link in top hole on tractor)

- Category III in conformity with ISO 730/3 -1990.
- Category adaptor Quick-attach coupler

Table 1.1 - *Linkage geometry dimensions.

		Dimension or range [mm]	[in]	Settings used on test [mm]	[in]
Lift category		III			
Rear Tire - Radius Index	(r)	905	35.6	same	
Front Tire - Radius Index	(r')	695	27.4	same	
Length of lift arms	(A)	381	15.0	same	
Length of lower links	(B)	861	33.9	same	
Distance of lift arm pivot from: horizontal	(a)	364	14.3	same	
rear wheel axis: vertical	(b)	422	16.6	same	
Horizontal distance between the 2 lower link points	(u)	604	23.8	same	
Horizontal distance between the 2 lift arm end points	(v)	737	29.0	same	
Length of upper link	(S)	600 to 831	23.6 to 32.7	657	25.9
Distance of upper link pivot from horizontal	(c)	627	24.7	same	
rear wheel axis: vertical	(d)	169 or 250	6.7 to 9.8	250 same	9.8
Distance of lower link pivot from: horizontal	(e)	455	17.9	same	
rear wheel axis: vertical	(f)	332	13.1	same	
Distance of lower link pivot points to lift rod pivot pts on lower links.	(D)	579	22.8	same	
Length of lift rods	(L)	660 to 866	26.0 to 34.1	844	33.2
Height of lower hitch points relative to rear wheel axis In low position	(h)	701 to 378	27.6 to 14.9	676	26.6
In high position	(H)	3 to 269	0.1 to 10.6	33	1.3
Height above ground of lower hitch points when locked in transport position.		from 908 to 1174	35.7 to 46.2	937	36.9

*Assuming (r) with a dynamic tire index of 905 mm (35.6 in) SAE J1261 Nov.1984, Dynamic indices table.

2.2 POWER LIFT TEST. Test B - Top link in upper hole on tractor (for settings see p. 20)

Date of test: 12 November 1992

		Hitch points	Frame
Lower hitch points above ground - down position:	[mm/in]	229/9.0	263/10.7
Vertical movement: without load:	[mm/in]	708/27.9	679/26.8
Vertical movement: with load:	[mm/in]	671/26.4	643/25.3
Maximum corrected force through full range:	[kN/lb]	66.0/14846	64.7/14535
Corresponding pressure:	[kPa/psi]	16630/2412	
Moment about rear axle:	[kN.m/lb.ft]	95.3/70269	132.7/97869
Maximum mast tilt angle:	[deg]	--	3.4*

*Tilt angle of mast from vertical position to uppermost position +0.7°

Lifting height relative to horizontal position of lower links.

	[mm]	-340	-305	-299	-200	-98
	[in]	-13.4	-12.0	-11.8	-7.9	-3.9
Corrected lift forces						
Hitch point.	[kN]	68.4	--	66.0	68.7	71.0
	[lb]	15368	--	14846	15449	15962
at frame	[kN]	--	87.2	81.9	77.7	76.1
	[lb]	--	19611	18405	17478	17100

Lifting height relative to horizontal position of lower links.

	[mm]	1	100	201	300	331	338
	[in]	0	3.9	7.9	11.8	13.0	13.3
Corrected lift forces							
Hitch point	[kN]	72.8	73.4	72.9	73.1	73.0	--
	[lb]	16358	16511	16385	16430	16421	--
at frame	[kN]	73.9	72.1	68.5	66.1	--	64.7
	[lb]	16614	16200	15408	14868	--	14535

Repairs: None
Remarks: None