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(Restricted code)
Date of approval: March 20,1992

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

REPORT ON TEST IN ACCORDANCE WITH OECD STANDARD CODE FOR THE OFFICIAL TESTING OF AGRICULTURAL TRACTOR PERFORMANCE

RESTRICTED TEST-CODE II

CASE INTERNATIONAL 9240 (4 WD) Rigid Frame
STEIGER 9240 (4 WD) Rigid Frame



MANUFACTURED BY: J.I. Case Company
3401 First Avenue
Fargo, North Dakota, 58102 USA

NEBRASKA TEST NO. 1650

Test date: June 1991

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)53 Final - Annex II, Restricted Code.

This report has been approved by the OECD Coordinating Centre in Paris (CEMAGREF) on March 20 1992

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SPECIFICATIONS OF TRACTOR.

Manufacturers name/address	:	J.I. Case Company 3401 First Avenue North Fargo, North Dakota 58102
Location of tractor assembly	:	Fargo plant
Submitted for test by	:	The manufacturer
Selected for test by	:	The manufacturer in agreement with the test station.
Place of running in	:	Case IH Fargo, North Dakota
Duration of running in	:	188 hours
Location of Test	:	Nebraska Tractor Test Laboratory Lincoln, Nebraska, U.S.A.

SPECIFICATIONS OF TRACTOR

TRACTOR.

Make/Model/Type	Case IH 9240/4WD/Rigid frame
Number of driving wheels	4
Serial number	-JCB0027368-
1st Serial number	-JCB0006498-

ENGINE.

Make	Consolidated Diesel Company
Model	6TA-830
Type	diesel, direct injection, turbocharged and intercooled
Serial Number	*44598515*
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	8269 ml (505 in)
Compression Ratio	16.5 - 1
Arrangement of valves	Overhead
Cylinder liners	Wet, replaceable
Super charging	
Make/Model/Type	Holset/H2E/exhaust gas driven
Pressure	81-106 kPa (12-15.5 psi)
Fuel System	
Feed system	Engine driven transfer pump
Make/Type/Model of filters	Case IH/spin on/ primary J903410 secondary J903640
Fuel tank capacity	757 liters (200 US gallons)

Make/Model/Type Injection Pump	Robert Bosch/PESWM/in line multiple plunger
Pump Serial number	PESMW100/120RS1137-1
Production setting of pump Flow Rate (Rated Eng.Spd & Full Load)	34.3 - 38.0 kg/h (75.6 - 83.8 lb/h) (fuel density - 0.838 kg/l)
Make/Model/Type of injectors	Robert Bosch,17 mm P/N J908511
Injection pressure	20.5 MPa(2975 psi)
Timing	22 degrees BTDC
Governor	
Make/Model/Type	Robert Bosch,mechanical,RSV
Governed engine speed range	From 850 to 2400 rev/min
Rated engine speed	2200 rev/min
High-idle speed range	2400 +/- 50 rev/min
Air Cleaner.	
Pre-cleaner Air intake location	Above engine,intake in front of radiator
Main Cleaner Make/Model/Type	Donaldson/FHG14-0133/ dry element
Secondary element	Donaldson/pleated paper
Maintenance indicator	restriction switch in air inlet tube,light on dash
Lubrication system.	
Type of feed pump	full pressure, positive displacement.
Type of filters	full flow
Number	1
Oil cooler	Heat exchanger with engine coolant
Cooling system.	
Type of coolant	Liquid
Type of pump	Centrifugal,belt driven
Fan specification	ECS P/N 411357
Number of fan blades	6
Fan diameter	610 mm (24.0 in)
Coolant system capacity	28 liter (29 qt)
Type of temperature control	2 thermostats
Starting system.	
Make/Model/Type	Nippendenso/F4.0/electro-mechanical engagement
Power Rating	4.0 kW (5.4 hp)
Cold starting aid	Ether spray in intake manifold and in-block coolant heater
Safety device	Electrical lockout on gearshift and PTO controls

Electrical system.	
Voltage	12 Volt
Generator	
Make/Model/Type	Delco Remy/Series 21SI/2000
Power rating	125 Ampere at 2200 engine rpm.
Batteries	
Number & connection	2-12 V batteries in parallel
Rating	90 amp-hours per battery at 20 hour rating 625 Cold crank amps per battery
Exhaust system.	
Make/Model/Type	Donaldson/P/N MAM09-M090655, expansion chamber
Location	Vertical,right front side of cab outlet directed to right side

TRANSMISSION TO WHEELS

Clutch. (travel alone)	
Make/Model/Type	FTK/wet multiple plate, oil cooled
Number of plates	10
Plate diameter	229 mm (9.0 in)
Method of operation	Hydraulic, foot pedal.
Gear Box.	
Make/Model/Type	FTK Model EW16/Full Powershift
Arrangement	countershaft
Number of gears	12 forward, 3 reverse controlled by a single hand lever
Oil cooler	Heat exchanger with air
Available options	None

Rear axle and final drives.

Make/model/Type	Raba 595/outboard planetary, steerable
Differential Lock Type	multiple disc clutch with limited slip
Method of engagement	electrically
Method of disengagement	electrically

Front Axle and final drives.

Make/Model/Type	Raba 595/outboard planetary, steerable
Differential lock Type	multiple disc clutch with limited slip
Method of engagement	electrically
Method of disengagement	electrically

Total ratios and travelling speeds

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			
1	195.666	3.62	2.25
2	161.709	4.39	2.73
3	131.395	5.40	3.36
4	108.214	6.55	4.07
5	89.439	7.93	4.93
6	72.652	9.76	6.06
7	61.545	11.52	7.16
8	50.872	13.94	8.66
9	41.319	17.16	10.66
10	34.033	20.84	12.95
11	28.123	25.21	15.67
12	22.850	31.03	19.28
Reverse			
R1	149.634	4.74	2.95
R2	82.740	8.57	5.33
R3	47.076	15.06	9.36

Calculated with a tire dynamic radius index of 855 mm (33.7 in) (ISO 4251/1-1984)
Number of revolutions of front wheels for one revolution of rear wheels 1.000

POWER - TAKE - OFF.

Main Power-Take-Off.

Type	Independent
Method of engagement	Hydraulically actuated multi-plate 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	44.4 mm (1.75 in)
Number of splines	20;conforms to ISO 500/1979.
Height above ground	799 mm (31.5 in)
Distance from median plane of tractor	0 mm
Distance behind rear axle	754 mm (29.7 in)
PTO Speed at rated engine spd	1049 rev/min
Engine speed at Std. PTO spd	2098 rev/min
Ratio of Engine rpm to PTO rpm	2.09797:1
Direction of rotation (viewed facing driving end)	Clockwise.

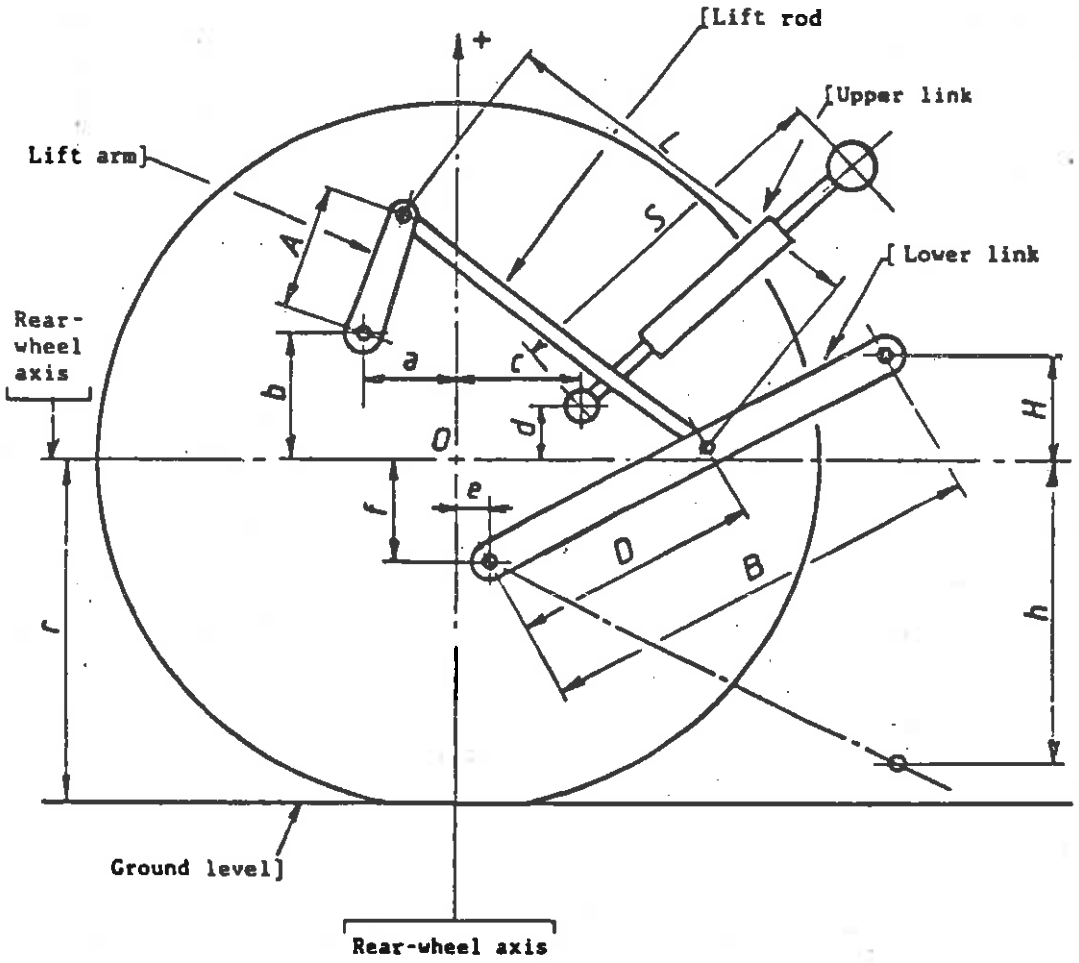
POWER LIFT.

Make/Model/Type	Cessna axial piston pump, pressure and flow compensated
Type of hydraulic system	closed center, load sensing
Number/Type of cylinders	Two external,both single acting
Type of linkage lock for transport	Hydraulic
Relief valve setting	17.237 +/-0.345 MPa (2500 +/- 50 psi)
Opening pressure of cylinder safety valve	20.684 MPa (3000 psi)
Lift pump type	axial piston, pressure and flow compensated
Power transmission to pump	direct drive
Type/Number of filters	Spin on cartridge/one
Location of oil reservoir	separate reservoir, right side,rear end of front frame
Number/Type/Location of tapping points.	4 pairs of ISO standard couplings at rear of tractor
Max. oil volume available for external cylinders.	22.7 l (24 qt)

THREE POINT LINKAGE

- Category 3 in conformity with ISO 730/1-1977, except for horizontal distance from PTO to center of hitch points on the lower links while in horizontal position - 616 mm
- Category adaptor - Quick attach

THREE POINT LINKAGE



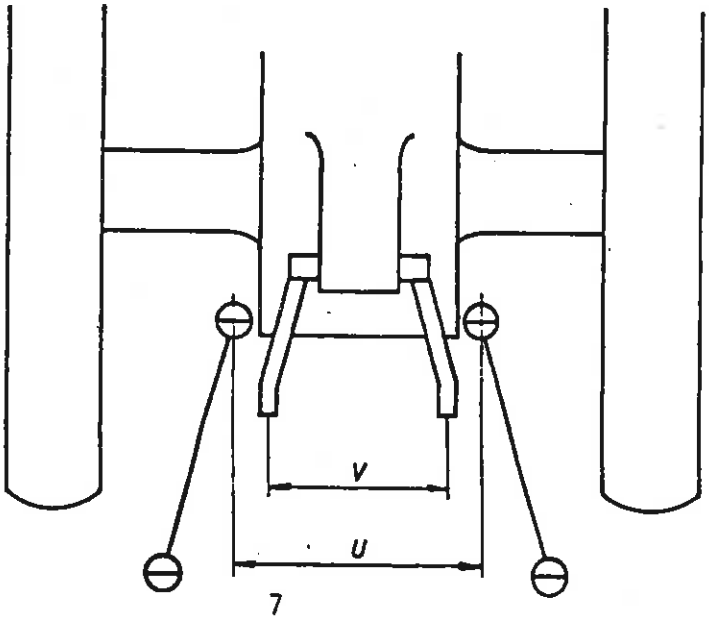


Table 1.1 - *Linkage geometry dimensions

		Dimension or range		Settings used on test	
		[mm]	[in]	[mm]	[in]
Lift category		III			
Rear Tire - Radius Index	(r)	855	33.7		
Front Tire - Radius Index	(r')	855	33.7		
Length of lift arms	(A)	533	21.0	same	
Length of lower links	(B)	1067	42.0	same	
Distance of lift arm pivot from: horizontal	(a)	197	7.8	same	
rear wheel axis: vertical	(b)	637	25.1	same	
Horizontal distance between the 2 lower link points	(u)	627	24.7	same	
Horizontal distance between the 2 lift arm end points	(v)	719	28.3	same	
Length of upper link	(S)	722 to 848	28.4 to 33.4	744	29.3
Distance of upper link pivot from: horizontal	(c)	617 642	24.3 25.3	642	25.3
rear wheel axis: vertical	(d)	187 289	7.4 11.4	289	11.4
Distance of lower link pivot from: horizontal	(e)	322	12.7	same	
rear wheel axis: vertical	(f)	251	9.9	same	
Distance of lower link pivot points to lift rod pivot pts on lower links.	(D)	584	23.0	same	
Length of lift rods	(L)	869 to 965	34.2 to 38.0	953	37.5
Height of lower hitch points relative to rear wheel axis In low position	(h)	518 to 718	20.4 to 28.3	688	27.1
In high position	(H)	105 to 273	4.1 to 10.7	117	4.6
Height above ground of lower hitch points when locked in transport position.		960 to 1128	37.8 to 41.4	972	38.3

*Assuming (r) with a dynamic tire index of 855 mm (33.7 in)
ISO 4251/1-1984

SWINGING DRAWBAR.

Type	Swings for hook-up only
Height above ground:	Maximum 633 mm (24.9 in) Minimum 366 mm (14.4 in)
Adjustments	inverting drawbar
Distance of hitch point from rear wheel axis, horizontal	1230 mm (48.4 in)
Distance of hitch point from PTO shaft end	
Vertically	253 mm (10.0 in)
Horizontally	508 mm (20.0 in)
Lateral adjustment (center of clevis)	
Right hand	none
Left hand	none
Distance of pivot point from rear wheel axle;horizontally	560 mm (22.0 in)
Diameter of drawbar pin hole	46 mm (1.8 in)
Maximum vertical permissible load	56.7 kN (12750 lb)

STEERING

Make/Model/Type	Front-Eaton hydrostatic steering control unit
Method of operation	Front-hand wheel,Rear-automatic or manual (crabbed,centered) by toggle switch
Pump	Front-Cessna axial piston,pressure and flow compensated Rear-Eaton gear pump
Rams	Front-two, Rear-two
Working pressure	15.9 MPa (2300 psi)

BRAKES

Service brake.	
Make/Model/Type	Kelsey Hayes,caliper,dry disc
Method of operation	manual/hydraulic,operated by foot pedal.
Trailer braking take-off	none
Parking brake.	
Type	caliper/dry disc
Method of operation	mechanically by hand lever

WHEELS

Number.	
Front	Four; Driving and steering
Rear	Four; Driving and steering
Wheel base	3150 mm (124.0 in)

Track width adjustment

	Minimum [mm]	Minimum [in]	Maximum [mm]	Maximum [in]	Adjustment method
Front	2135	84.0	3550	139.7	reversible rims and spacers
Rear	2135	84.0	3550	139.7	same as front

PROTECTIVE STRUCTURE

Make/Model/Type	Case IH,4CSF-2
Manufacturer's name/address	Case IH 3401 First Avenue North Fargo, North Dakota
Protective device	Cab,Case IH,4CSF-2,4 post with charpy v-notch certified material
Tiltable	No
OECD approval number	CSS 076/16 - for Case IH 9240 CSS 076/17 - for Steiger 9240

DRIVER'S SEAT

Make/Model/Type	Sears, P108 Air seat,9100
Type of suspension	air suspension
Type of damping	fore/aft and lateral
Range of adjustment	
Longitudinal	152 mm (6.0 in)
Vertical	76 mm (3.0 in)

LIGHTING.

	Height above ground of center [mm]	Height above ground of center [in]	Size [mm]	Distance from outside edge of lights to median plane of tractor. [mm]	Distance from outside edge of lights to median plane of tractor. [in]
Headlights	1823	71.8	102 x 165	419	16.5
Cab-lights(rear)	3301	130.0	90 x 140	968	38.1
(front)	3336	131.3	90 x 140	762	30.0
Rearlights	1984	78.1	102 x 165	940	37.0
Reflectors	N/A				

TEST CONDITIONS.

Overall dimensions.

Length	Width minimum	Width maximum	Height at top of protective structure	Height at top of exhaust silencer
6517 mm	2661 mm	4115 mm	3198 mm	3350 mm

Ground clearance (unballasted)	340 mm (13.4 in)
Clearance-limiting part	bottom of drawbar

Tractor Mass (with Cab, full fuel tank)

		Without driver [kg]	Without driver [lb]	With driver [kg]	With driver [lb]
Unballasted	Front	6582	14510	6621	14596
	Rear	6216	13704	6252	13784
	Total	12798	28214	12873	28380

Tire and track width specifications.

	Front	Rear
Make	Goodyear	Goodyear
Dimensions	20.8R38	20.8R38
Ply rating	1 star (6,8 ply)	1 star (6,8 ply)
Type	Radial	Radial
Max.load (tire manufacturer)	25.35 kN (5700 lb)	25.35 kN (5700 lb)
Max.load(tractor manufacturer)	same	same
Inflation pressure (tire mfr)	124 kPa (18 psi)	124 kPa (18 psi)
Dynamic Radius Index	855 mm (33.7 in)	855 mm (33.7 in)
Chosen track width - inner	2134 mm (84.0 in)	2134 mm (84.0 in)
- outer	3548 mm(139.7 in)	3548 mm(139.7 in)

Oils and Lubrication.

Capacity and change interval:

	Capacity liter	Capacity quart	Oil change hours	Filter change hours
Engine	22	23	250	250
Gear Box	34	36	1000	1000
Front and Rear axle	21	22	1000	---
Hydraulic system (includes steering and 3 point lift)	68	72	1000	1000

Specifications:

	Recommended	Used during test
Engine oil		
Type	SAE 15W40	same
Viscosity	14.8 cSt at 100'C	
Classification	API CE/CD	
Transmission oil		
Type	Case IH Hytran Plus	same
Viscosity	6.2 cSt at 100'C	
Classification	NA	
Hydraulic fluid		
Type	Case IH Hytran Plus	same
Viscosity	6.2 cSt at 100'C	
Classification	NA	
Steering oil	same as hydraulic	same
Grease	NLGI No.2 Lithium	
Number of lubrication points:	46 (includes 17 for PTO and three point hitch)	

Fuel

Type	Grade 2-D, in conformity with the national standard
Density (Pto test)	0.838 g/cubic-cm (6.993 lb/gallon) at 15'C (59'F)
(Drawbar test)	Same as Pto test.
Cetane number	53.9
Viscosity	2.40 cST at 38'C (100'F)

III.TEST RESULTS

COMPULSORY TESTS RESULTS

(1) MAIN POWER TAKE-OFF

Date of tests : 10 June 1991
Location of tests : Nebraska Tractor Test Laboratory
University of Nebraska, Lincoln, Nebraska.
Type of Dynamometer: Eaton Dynamatic 2025 D.G.

Power kW (hp)	Speeds engine rev/min	Speeds PTO rev/min	Fuel Consumption hourly l/h (gal/h)	Fuel Consumption hourly kg/h (lb/h)	Fuel Consumption specific kg/kW.h (lb/hp.h)	Specific energy kW.h/l (hp.h/gal)
1.1 Maximum Power- 2 hour test.						
160.97 (215.87)	2001	954	44.71 (11.81)	37.46 (82.60)	0.233 (0.383)	3.60 (18.28)
1.2 Power at rated engine speed. (1 hour)						
149.53 (200.53)	2199	1048	44.20 (11.68)	37.04 (81.66)	0.248 (0.407)	3.38 (17.17)
1.3 Maximum power at standard PTO speed.(1000 rev/min)						
158.15 (212.08)	2098	1000	44.99 (11.88)	37.70 (83.11)	0.238 (0.392)	3.52 (17.85)

1.4 Part Loads - governor hand lever set for maximum power at rated engine speed

Power kW (hp)	Speeds engine rev/min	Speeds PTO rev/min	Fuel Consumption hourly l/h (gal/h)	Fuel Consumption hourly kg/h (lb/h)	Fuel Consumption specific kg/kW.h (lb/hp.h)	Specific energy kW.h/l (hp.h/gal)
(i) Torque obtained at maximum power at rated engine speed.						
149.53 (200.53)	2199	1048	44.20 (11.68)	37.04 (81.66)	0.248 (0.407)	3.38 (17.17)
(ii) 85% of the torque obtained in (i)						
132.12 (177.18)	2290	1092	41.09 (10.85)	34.43 (75.90)	0.261 (0.428)	3.22 (16.32)
(iii) 75% of the torque defined in (ii)						
97.21 (130.36)	2323	1107	33.78 (8.92)	28.30 (62.40)	0.291 (0.479)	2.88 (14.61)
(iv) 50% of the torque defined in (ii)						
65.40 (87.70)	2355	1123	25.98 (6.86)	21.77 (48.00)	0.333 (0.547)	2.52 (12.78)
(v) 25% of the torque defined in (ii)						
33.92 (45.49)	2380	1135	19.32 (5.11)	16.19 (35.70)	0.477 (0.785)	1.76 (8.91)
(vi) Unloaded						
0.49 (0.66)	2407	1148	12.34 (3.26)	10.34 (22.80)	21.159 (34.784)	0.04 (0.20)

1.5 Part Loads - governor hand lever set for maximum power at standard pto speed.

Power kW (hp)	Speeds engine rev/min	PTO rev/min	Fuel Consumption hourly l/h (gal/h)	hourly kg/h (lb/h)	specific kg/kW.h (lb/hp.h)	Specific energy kW.h/l (hp.h/gal)
(i) Torque obtained at standard pto speed.						
158.15 (212.08)	2098	1000	44.99 (11.88)	37.70 (83.11)	0.238 (0.392)	3.52 (17.85)
(ii) 85% of the torque obtained in (i)						
142.48 (191.07)	2189	1044	42.22 (11.15)	35.38 (78.00)	0.248 (0.408)	3.37 (17.13)
(iii) 75% of the torque defined in (ii)						
106.66 (143.04)	2225	1060	34.43 (9.09)	28.85 (63.60)	0.270 (0.445)	3.10 (15.73)
(iv) 50% of the torque defined in (ii)						
72.97 (97.86)	2250	1073	26.63 (7.04)	22.32 (49.20)	0.306 (0.503)	2.74 (13.91)
(v) 25% of the torque defined in (ii)						
35.10 (47.07)	2284	1089	18.68 (4.93)	15.65 (34.50)	0.446 (0.733)	1.88 (9.54)
(vi) Unloaded						
0.31 (0.42)	2323	1108	11.69 (3.09)	9.80 (21.60)	31.153 (51.216)	0.03 (0.14)

No-load maximum engine speed	2407 rev/min
Equivalent engine torque:	
at rated engine speed	649 Nm(2199 rev/min)
at maximum power	768 Nm(2001 rev/min)
at maximum torque	818 Nm(1699 rev/min)
Mean atmospheric conditions:	
Temperature-dry bulb	22'C (71'F)
Relative Humidity	83 %
Barometer	98.02 kPa(28.94 in Hg)

Maximum temperatures:		
	Thermostat housing	84'C (184'F)
	Engine oil pan	118'C (244'F)
	Fuel at pump inlet	56'C (132'F)
	Engine air intake	29'C (85'F)
	Hydraulic oil	59'C (139'F)
Turbocharger boost pressure		
	at rated engine speed	107 kPa (15.5 psi)
	at maximum power	114 kPa (16.5 psi)

2. HYDRAULIC POWER AND LIFTING FORCE

Date of test: 7 June 1991
Location: TTL/UNL, Lincoln, Nebr.

2.1 HYDRAULIC POWER TEST - Hydraulic pump performance

i. Sustained pressure with pump stalled	17.58 MPa (2550 psi)
ii. Pump delivery rate at minimum pressure and rated engine speed	110.2 l/m (29.1 gpm)

iii.

	Flow Rate l/min (gal/min)	Pressure MPa (psi)	Power kW (hp)
At 90% of relief valve setting.	96.5 (25.5)	15.93 (2310)	25.6 (34.4)
At maximum hydraulic power.	95.8 (25.3)	16.20 (2350)	25.9 (34.7)

Tapping point(s)	Two hydraulic outlets combined
Hydraulic fluid temperature at flow meter	65'C (149'F)

2.2 POWER LIFT TEST.

		Hitch Points	Frame
Lower hitch points above ground - down position.	[mm/in]	167/6.6	211/8.3
Vertical movement without load	[mm/in]	805/31.7	806/31.7
Vertical movement with load	[mm/in]	769/30.3	714/28.1
Maximum corrected force through full range	[kN/lbf]	53.9/12123	58.8/13212
Corresponding pressure	[kPa/psi]	15699/2277	
Moment about rear axle	[kN.m/ft.lb]	80.0/58999	123.0/90722
Maximum mast tilt angle	[degrees]	--	7.2

Lifting height relative to the horizontal position of lower links

[mm]	-424	-343	-201	-99	0
[in]	-16.7	-13.5	-7.9	-3.9	0

Corrected lifting forces.

hitch points	[kN]	53.9	56.7	60.0	63.0	65.4
	[lb]	12123	12740	13478	14166	14702
at frame	[kN]	--	74.3	63.9	64.0	63.6
	[lb]	--	16709	14355	14391	14297

Lifting height relative to the horizontal position of lower links

[mm]	99	201	300	345	371
[in]	3.9	7.9	11.8	13.6	14.6

Corrected lift forces.

hitch points	[kN]	67.6	69.6	70.6	70.8	--
	[lb]	15188	15638	15881	15912	--
at frame	[kN]	63.2	62.2	60.2	59.7	58.8
	[lb]	14211	13982	13523	13419	13212

Date of tests: 10–Jun–91 Fuel density: 0.838 kg/l
11–Jun–91 Test # 1650

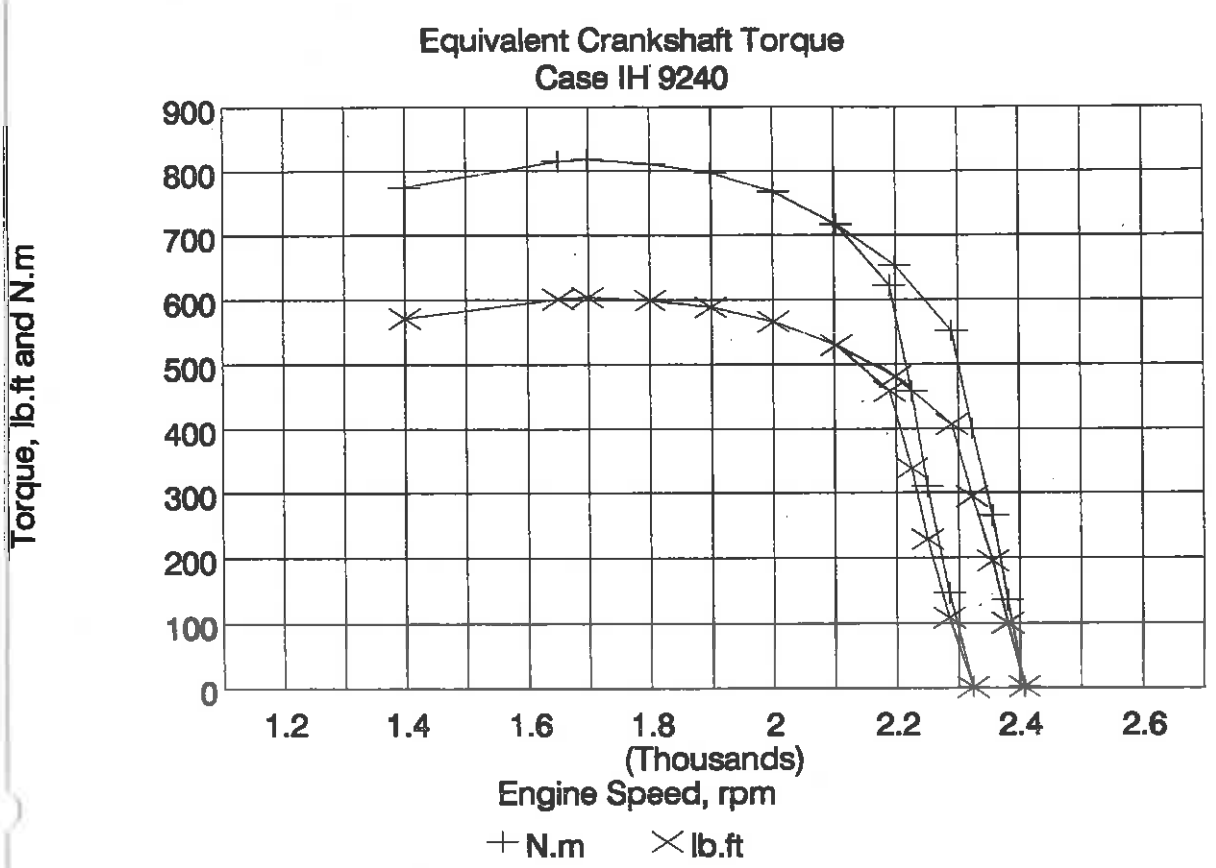
Type of track: Concrete Engine

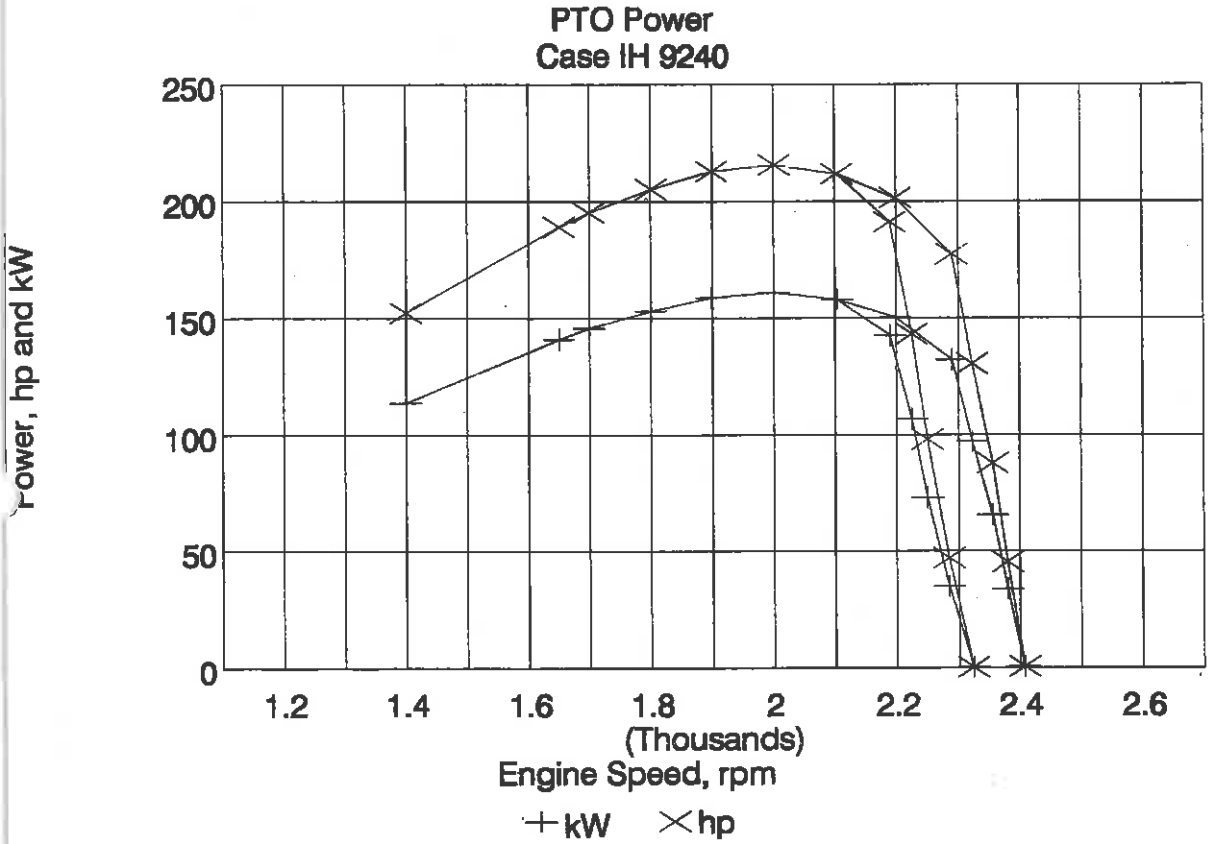
Gear	Power kW	Pull kN	Speed km/h	Speed rev/min	Slip	SFC kg/kW.h	SFE kW.h/l	Temperature, deg C Fuel	Coolant	Oil	Dry	Wet	Relative humidity	Barometric Pressure kPa
I. Maximum Power (unballasted, 4wd at 2200 rev/min)						Tire pressure:		97 kPa, rear (inner)			97 kPa, front (inner)			
			Drawbar height:		368 mm			83 kPa, rear (outer)			83 kPa, front (outer)			
1	119.88	127.87	3.38	2240	10.86%	0.308	2.72	53	82	103	22	20	83%	97.93
2	129.70	120.27	3.88	2082	8.88%	0.292	2.87	55	83	104	25	21	70%	97.93
3	137.88	103.88	4.78	2001	5.14%	0.275	3.05	56	83	103	26	21	64%	97.93
4	139.68	85.25	5.90	2002	3.65%	0.271	3.09	57	83	106	26	22	71%	97.93
5	141.91	70.98	7.20	2000	2.72%	0.266	3.15	54	83	105	21	20	91%	98.04
6	140.59	56.79	8.91	2002	2.30%	0.269	3.12	54	83	105	22	20	83%	98.00
7	139.76	47.72	10.54	2001	1.86%	0.271	3.10	54	83	105	22	20	83%	98.00
8	138.50	38.90	12.82	2002	1.60%	0.274	3.06	54	84	106	27	22	65%	97.93
9	135.61	30.82	15.84	2004	1.25%	0.278	3.01	55	84	106	27	22	65%	97.93
Note: Pull in 1st gear limited due to excessive tractor bounce.														
II. Part Loads (unballasted, 4wd at 2200 rev/min)						Tire pressure:		97 kPa, rear (inner)			97 kPa, front (inner)			
			Drawbar height:		368 mm			83 kPa, rear (outer)			83 kPa, front (outer)			
II.1 in selected gear at maximum power														
5	141.91	70.98	7.20	2000	2.72%	0.266	3.15	54	83	105	21	20	91%	98.04
II.1.1 75% of pull at maximum power at rated speed														
5	102.72	44.51	8.31	2287	1.78%	0.311	2.70	54	84	105	31	23	51%	97.77
II.1.2 50% of pull at maximum power at rated speed														
5	69.97	29.68	8.49	2325	1.25%	0.359	2.33	54	82	103	31	23	51%	97.77
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
6	102.74	44.49	8.31	1860	1.78%	0.275	3.05	54	83	104	31	23	51%	97.77
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
6	70.07	29.68	8.50	1892	1.16%	0.309	2.71	54	82	102	31	23	51%	97.77
II.2 in selected gear nearest to 7.5 km/h														
5	141.91	70.98	7.20	2000	2.72%	0.266	3.15	54	83	105	21	20	51%	98.04
II.2.1 75% of pull at maximum power at rated speed														
5	102.72	44.51	8.31	2287	1.78%	0.311	2.70	54	84	105	31	23	51%	97.77
II.2.2 50% of pull at maximum power at rated speed														
5	69.97	29.68	8.49	2325	1.25%	0.359	2.33	54	82	103	31	23	51%	97.77
II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1														
6	102.74	44.49	8.31	1860	1.78%	0.275	3.05	54	83	104	31	23	51%	97.77
II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2														
6	70.07	29.68	8.50	1892	1.16%	0.309	2.71	54	82	102	31	23	51%	97.77

Date of tests: 10–Jun–91 Fuel density: 6.993 lb/gal
11–Jun–91 Test # 1650

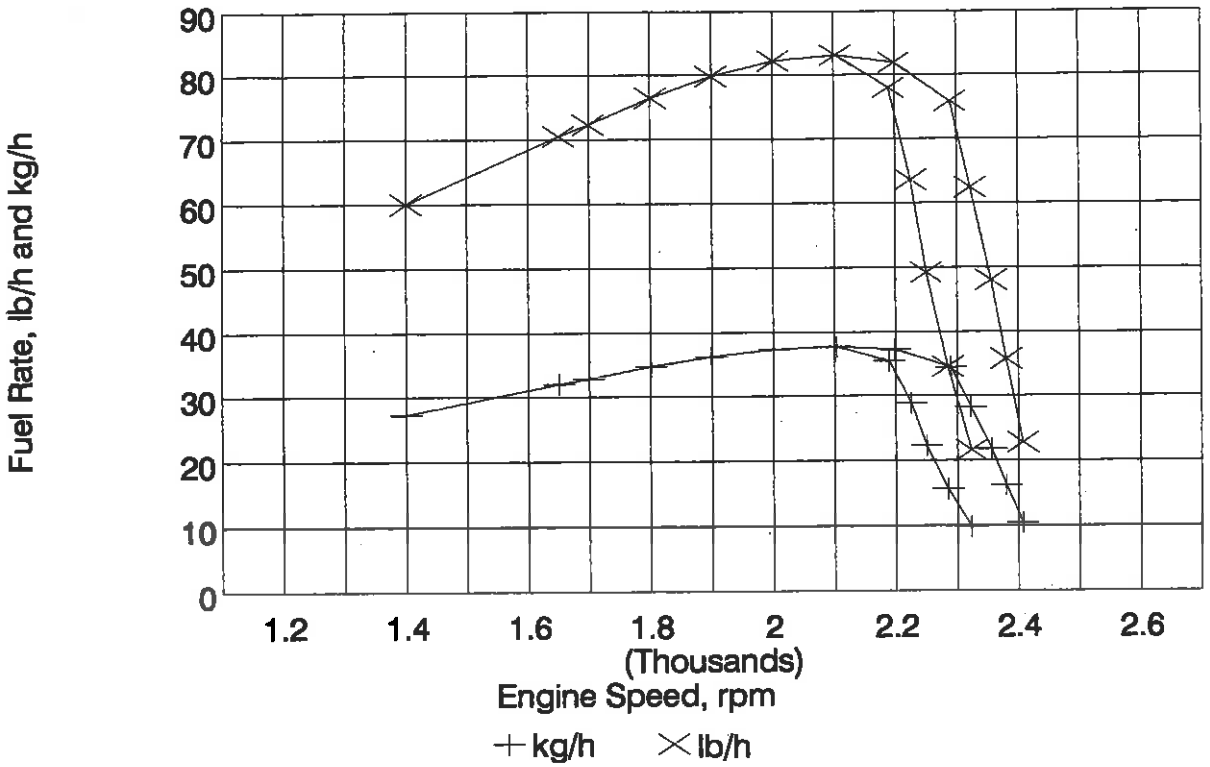
Type of track: Concrete Engine

Gear	Power hp	Pull lb	Speed mph	Speed rpm	Slip	SFC lb/hp.h	SFE hp.h/gal	Temperature, deg F Fuel	Coolant	Oil	Dry	Wet	Relative humidity	Barometric Pressure in Hg
I. Maximum Power (unballasted, 4wd at 2200 rev/min)						Tire pressure:		14 psi, rear (inner)			14 psi, front (inner)			
			Drawbar height:		14.5 in			12 psi, rear (outer)			12 psi, front (outer)			
1	160.76	28747	2.10	2240	10.86%	0.507	13.79	128	180	217	71	68	83%	28.92
2	173.93	27039	2.41	2082	8.88%	0.480	14.58	131	181	219	77	70	70%	28.92
3	184.90	23353	2.97	2001	5.14%	0.452	15.47	132	181	218	78	70	64%	28.92
4	187.32	19164	3.67	2002	3.65%	0.445	15.70	134	182	223	79	71	71%	28.92
5	190.31	15956	4.47	2000	2.72%	0.437	16.01	129	182	222	70	68	91%	28.95
6	188.54	12767	5.54	2002	2.30%	0.442	15.82	129	181	221	71	68	83%	28.94
7	187.42	10728	6.55	2001	1.86%	0.445	15.72	129	182	221	71	68	83%	28.94
8	185.74	8746	7.96	2002	1.60%	0.451	15.52	130	184	223	80	71	65%	28.92
9	181.86	6929	9.84	2004	1.25%	0.457	15.29	131	184	222	81	71	65%	28.92
Note: Pull in 1st gear limited due to excessive tractor bounce.														
II. Part Loads (unballasted, 4wd at 2200 rev/min)						Tire pressure:		14 psi, rear (inner)			14 psi, front (inner)			
			Drawbar height:		14.5 in			12 psi, rear (outer)			12 psi, front (outer)			
II.1 in selected gear at maximum power														
5	190.31	15956	4.47	2000	2.72%	0.437	16.01	129	182	222	70	68	91%	28.95
II.1.1 75% of pull at maximum power at rated speed														
5	137.75	10006	5.16	2287	1.78%	0.511	13.70	129	183	221	88	74	51%	28.87
II.1.2 50% of pull at maximum power at rated speed														
5	93.83	6672	5.27	2325	1.25%	0.591	11.84	129	180	218	88	74	51%	28.87
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
6	137.78	10002	5.17	1860	1.78%	0.451	15.49	130	182	219	88	74	51%	28.87
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
6	93.97	6672	5.28	1892	1.16%	0.508	13.78	129	179	215	88	74	51%	28.87
II.2 in selected gear nearest to 4.6 mph														
5	190.31	15956	4.47	2000	2.72%	0.437	16.01	129	182	222	70	68	91%	28.95
II.2.1 75% of pull at maximum power at rated speed														
5	137.75	10006	5.16	2287	1.78%	0.511	13.70	129	183	221	88	74	51%	28.87
II.2.2 50% of pull at maximum power at rated speed														
5	93.83	6672	5.27	2325	1.25%	0.591	11.84	129	180	218	88	74	51%	28.87
II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1														
6	137.78	10002	5.17	1860	1.78%	0.451	15.49	130	182	219	88	74	51%	28.87
II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2														
6	93.97	6672	5.28	1892	1.16%	0.508	13.78	129	179	215	88	74	51%	28.87

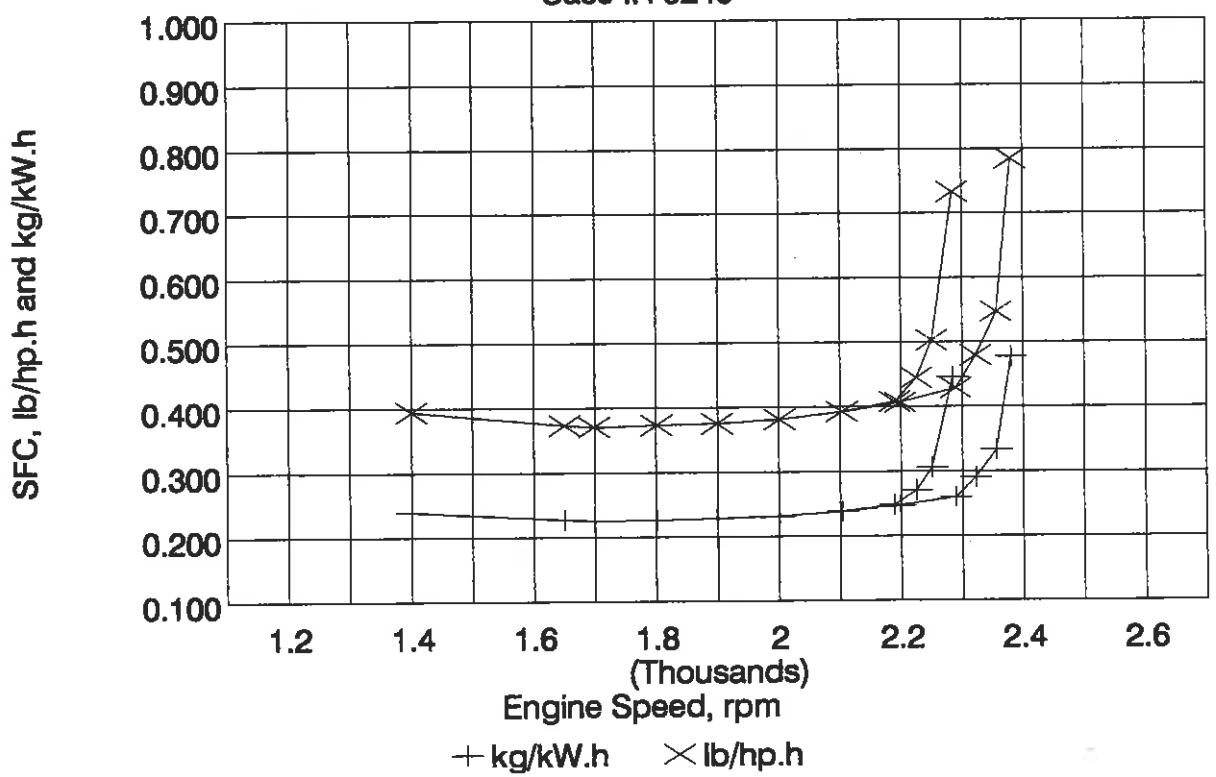

Equivalent Crankshaft Torque
Case IH 9240
Torque, lb.ft and N.m
900
800
700
600
500
400
300
200
100
0
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
(Thousands)
Engine Speed, rpm
N.m
lb.ft

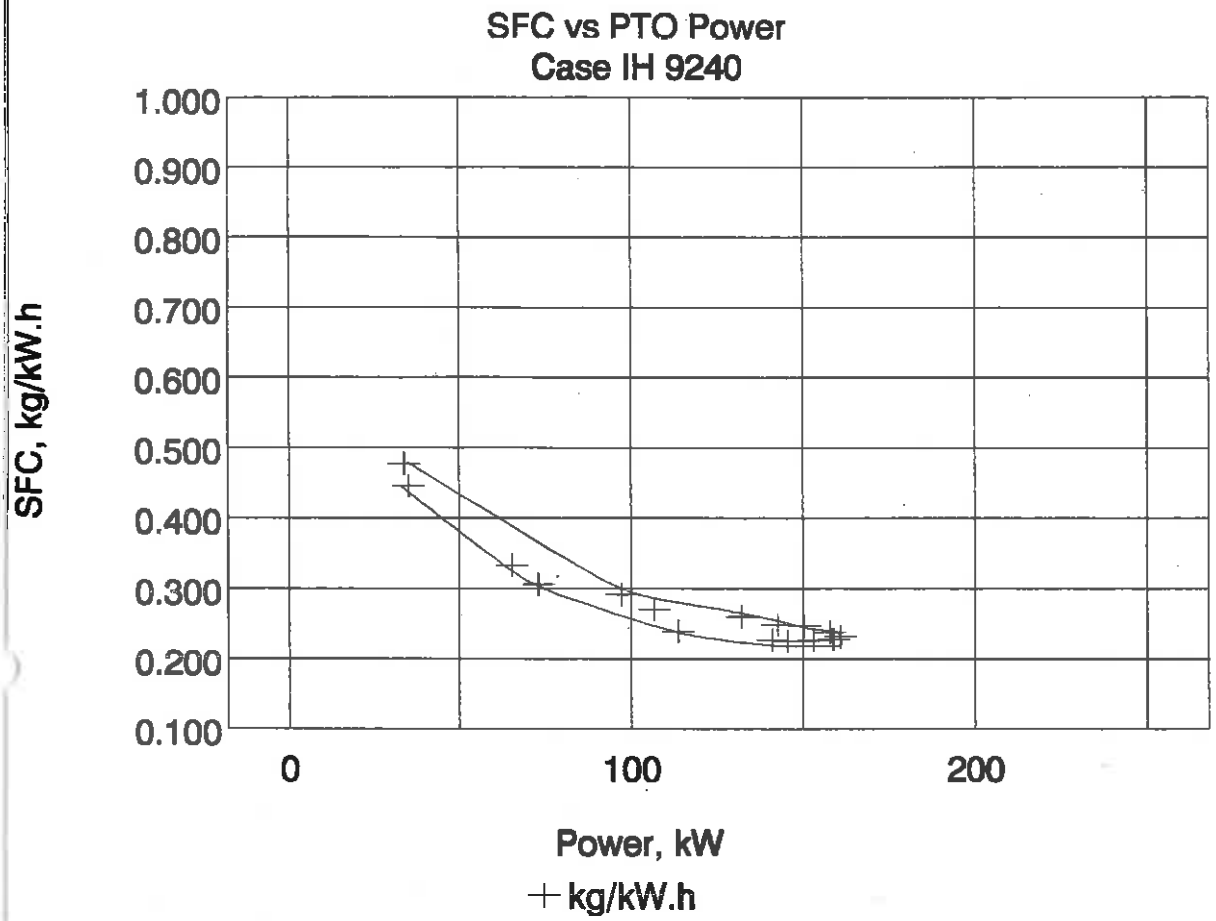

PTO Power
Case IH 9240
Power, hp and kW
250
200
150
100
50
0
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
(Thousands)
Engine Speed, rpm
kW
hp

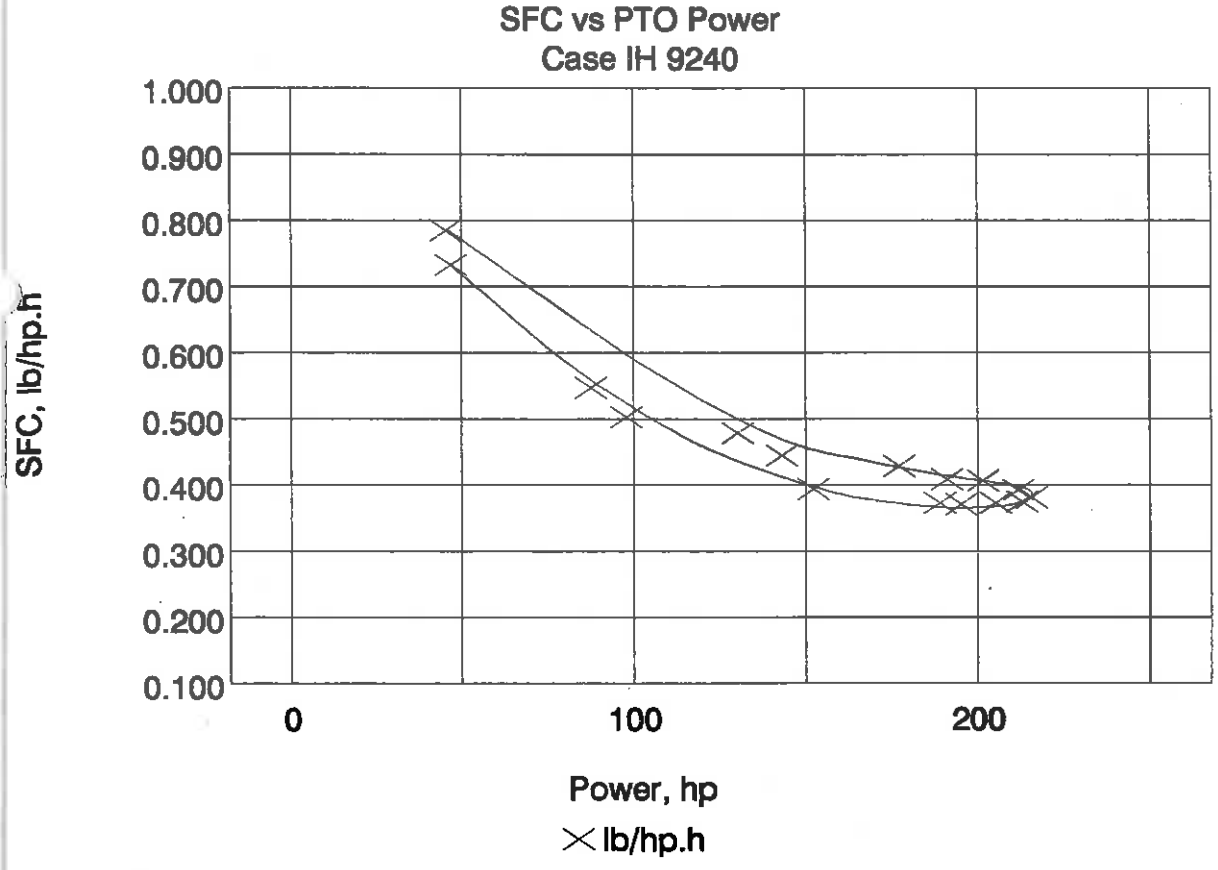
PTO Fuel Consumption
Case IH 9240



PTO Specific Fuel Consumption
Case IH 9240




SFC vs PTO Power
Case IH 9240
SFC, kg/kW.h
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0
100
200
Power, kW
+ kg/kW.h


SFC vs PTO Power
Case IH 9240
SFC, lb/hp.h
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0
100
200
Power, hp
× lb/hp.h

Repairs: None
Remarks: None