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Test 1574: Deutz-Fahr DX 3.50 Diesel and Deutz-Allis 6260 Diesel (8-Speeds)

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1574—DEUTZ-FAHR DX 3.50 DIESEL ALSO DEUTZ-ALLIS 6260 DIESEL 8 SPEED

POWER TAKE-OFF PERFORMANCE

Power Hp (kW)	Crank shaft speed rpm	Fuel Consumption			Temperature °F (°C)			Barometer inch Hg (kPa)
		gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Cooling medium	Air wet bulb	Air dry bulb	

MAXIMUM POWER AND FUEL CONSUMPTION

Rated Engine Speed — Two hours (PTO Speed —613 rpm)								
57.09 (42.57)	2500	3.840 (14.535)	0.472 (0.287)	14.87 (2.929)	235 (112.7)	66 (18.8)	75 (23.8)	29.31 (98.96)

Standard Power Take-off Speed (540 rpm) — One Hour								
55.35 (41.28)	2202	3.578 (13.545)	0.453 (0.276)	15.47 (3.047)	241 (115.8)	67 (19.2)	75 (23.8)	29.30 (98.94)

VARYING POWER AND FUEL CONSUMPTION — Two Hours

49.61 (36.99)	2556	3.068 (11.612)	0.434 (0.264)	16.17 (3.186)	214 (101.1)	68 (19.7)	76 (24.4)	.....
0.00 (0.00)	2656	0.993 (3.757)	.....	.....	162 (72.2)	67 (19.4)	76 (24.4)	.....
25.23 (18.82)	2600	1.947 (7.369)	0.541 (0.329)	12.96 (2.554)	169 (75.8)	67 (19.4)	75 (23.9)	.....
57.37 (42.78)	2499	3.898 (14.754)	0.476 (0.290)	14.72 (2.900)	223 (106.1)	68 (19.7)	75 (23.6)	.....
12.77 (9.52)	2629	1.420 (5.377)	0.780 (0.475)	8.99 (1.771)	175 (79.2)	67 (19.4)	76 (24.4)	.....
37.67 (28.09)	2587	2.516 (9.523)	0.468 (0.285)	14.97 (2.950)	183 (83.9)	67 (19.4)	76 (24.4)	.....
Av Av	30.44 22.70	2.307 (8.732)	0.531 (0.323)	13.20 (2.600)	188 (86.4)	67 (19.5)	76 (24.2)	29.30 (98.94)

DRAWBAR PERFORMANCE (Front Wheel Drive Engaged)

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption			Temp. °F (°C)			Barom. inch Hg (kPa)
					gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Cool- ing med	Air wet bulb	Air dry bulb	
Maximum Available Power — Two Hours 4th (1H) Gear											
50.22 (37.45)	4099 (18.23)	4.59 (7.39)	2501	6.30	3.879 (14.684)	0.542 (0.329)	12.95 (2.550)	193 (89.4)	43 (6.1)	52 (10.8)	29.01 (97.96)
75% of Pull at Maximum Power — Ten Hours 4th (1H) Gear											
39.94 (29.78)	3104 (13.81)	4.82 (7.76)	2583	4.75	2.966 (11.229)	0.521 (0.317)	13.46 (2.652)	165 (74.1)	45 (7.1)	51 (10.5)	28.93 (97.70)
50% of Pull at Maximum Power — Two Hours 4th (1H) Gear											
27.21 (20.29)	2069 (9.20)	4.93 (7.94)	2608	3.52	2.339 (8.853)	0.603 (0.367)	11.63 (2.292)	151 (66.1)	51 (10.3)	55 (12.5)	29.16 (98.47)
50% of Pull at Reduced Engine Speed — Two Hours 6th (2H) Gear											
27.21 (20.29)	2068 (9.20)	4.94 (7.94)	1637	3.26	1.804 (6.829)	0.465 (0.283)	15.08 (2.972)	157 (69.4)	41 (4.7)	45 (7.2)	29.08 (98.18)

MAXIMUM POWER IN SELECTED GEARS

46.46 (34.65)	7270 (32.34)	2.40 (3.86)	2515	14.96	2nd (2L) Gear			179 (81.7)	50 (10.0)	54 (12.2)	29.18 (98.54)
49.39 (36.83)	4899 (21.79)	3.78 (6.09)	2500	7.54	3rd (3L) Gear			192 (88.9)	50 (10.0)	54 (12.2)	29.18 (98.54)
50.73 (37.83)	4138 (18.41)	4.60 (7.40)	2500	6.24	4th (1H) Gear			195 (90.6)	50 (10.0)	56 (13.3)	29.21 (98.64)
50.39 (37.58)	3067 (13.64)	6.16 (9.92)	2501	4.32	5th (4L) Gear			188 (86.7)	50 (10.0)	55 (12.8)	29.19 (98.57)
50.06 (37.33)	2497 (11.11)	7.52 (12.10)	2502	3.59	6th (2H) Gear			189 (87.2)	50 (10.0)	54 (12.2)	29.19 (98.57)

Dates of Test: September 11 to 25, 1985

Manufacturer: KLOCKNER-HUMBOLDT-DEUTZ AG, 5000 Cologne 80, West Germany

FUEL, OIL AND TIME: Fuel No. 2 Diesel Cetane No. 46.9 (rating taken from oil company's inspection data) **Specific gravity converted to 60°/60°F (15°/15°C)** 0.8422 **Fuel weight** 7.012 lbs/gal (0.840 kg/l) **Oil** SAE 15W-40 **API service classification** CD-SF **To motor** 2.584 gal (9.781 l) **Drained from motor** 1.774 gal (6.714 l) **Transmission and final drive lubricant** SAE 15W-40 engine oil **Front axle lubricant** SAE 90 transmission oil **Total time engine was operated** 48.5 hours.

ENGINE: Make Klockner-Humboldt-Deutz Diesel **Type** three cylinder vertical **Serial No.** 6455 472 **Crankshaft** lengthwise **Rated rpm** 2500 **Bore and stroke** 4.02" × 4.92" (102 mm × 125 mm) **Compression ratio** 17 to 1 **Displacement** 187 cu in (3064 ml) **Starting system** 12 volt **Lubrication pressure** **Air cleaner** one paper element and one felt element **Oil filter** one full flow cartridge **Oil cooler** radiator for crankcase oil, radiator for hydraulic oil **Fuel filter** one paper cartridge **Muffler** vertical **Cooling medium temperature control** air cooled.

CHASSIS: **Type** front wheel assist **Serial No.** 7744 0413 **Tread width** rear 55.9" (1420 mm) to 75.6" (1920 mm) front 59.1" (1500 mm) to 65.0" (1650 mm) **Wheel base** 81.9" (2079 mm) **Center of gravity** (without operator or ballast, with minimum tread, with fuel tank filled and tractor serviced for operation) Horizontal distance forward from center-line of rear wheels 35.6" (904 mm) Vertical distance above roadway 33.2" (844 mm) Horizontal distance from center of rear wheel tread 0.4" (10 mm) to the left **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Advertised speeds mph (km/h)** first 1.7 (2.8) second 2.8 (4.5) third 4.1 (6.6) fourth 4.9 (7.9) fifth 6.5 (10.4) sixth 7.8 (12.6) seventh 12.3 (19.8) eighth 18.9 (30.4) reverse 2.0 (3.2), 3.2 (5.1), 4.7 (7.5), 7.3 (11.7) **Clutch** single dry disc operated by foot pedal **Brakes** caliper disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Turning radius** (on concrete surface with brake applied) right 175" (4.45 m) left 154" (3.91 m) (on concrete surface without brake) right 192" (4.88 m) left 167" (4.24 m) **Turning space diameter** (on concrete surface with brake applied) right 362" (9.19 m) left 320" (8.13 m) (on concrete surface without brake) right 396" (10.06 m) left 346" (8.79 m) **Power take-off** 540 rpm at 2202 engine rpm **Unladen tractor mass** 7080 lb (3211 kg).

LUGGING ABILITY IN 4th (1H) GEAR

Crankshaft Speed rpm	2500	2260	1999	1750	1488	1245
Pull—lbs (kN)	4138 (18.41)	4506 (20.04)	4829 (21.48)	5003 (22.25)	5014 (22.30)	4867 (21.65)
Increase in Pull %	0	9	17	21	21	18
Power—Hp (kW)	50.73 (37.83)	49.59 (36.98)	46.74 (34.85)	42.24 (31.50)	35.97 (26.82)	29.29 (21.84)
Speed—Mph (km/h)	4.60 (7.40)	4.13 (6.64)	3.63 (5.84)	3.17 (5.09)	2.69 (4.33)	2.26 (3.63)
Slip %	6.24	6.86	7.36	7.72	7.72	7.72

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
Maximum Available Power—Two Hours	82.5	82.5
75% of Pull at Maximum Power—Ten Hours		83.0
50% of Pull at Maximum Power—Two Hours		82.5
50% of Pull at Reduced Engine Speed—Two Hours		79.0
Bystander in 7th (3H) gear	85.5	

DRAWBAR PERFORMANCE (Front Wheel Drive Disengaged)

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption			Temp. °F (°C)			Barom. inch Hg (kPa)
					gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Cool- ing med	Air wet bulb	Air dry bulb	
Maximum Available Power - Two Hours 4th (1H) Gear											
48.05 (35.83)	4109 (18.28)	4.39 (7.06)	2499	9.28	3.879 (14.684)	0.566 (0.344)	12.39 (2.440)	200 (93.1)	49 (9.4)	56 (13.3)	29.19 (98.57)

MAXIMUM POWER IN SELECTED GEARS

36.18 (26.98)	5587 (24.85)	2.43 (3.91)	2576	14.84	2nd (2L) Gear			159 (70.3)	41 (5.0)	49 (9.4)	29.06 (98.13)
49.38 (36.82)	4216 (18.75)	4.39 (7.07)	2500	9.28	4th (1H) Gear			195 (90.3)	50 (10.0)	56 (13.3)	29.20 (98.60)
49.38 (36.82)	3099 (13.78)	5.98 (9.62)	2502	6.16	5th (4L) Gear			193 (89.2)	50 (10.0)	55 (12.8)	29.20 (98.60)

TIRES, BALLAST AND WEIGHT

		With Ballast		Without Ballast	
Rear Tires	—No., size, ply & psi (<i>kPa</i>)	Two 16.9-30; 6; 18 (<i>125</i>)		Two 16.9-30; 6; 18 (<i>125</i>)	
Ballast	—Liquid (each)	640 lb (<i>290 kg</i>)		None	
	—Cast Iron (each)	110 lb (<i>50 kg</i>)		None	
Front Tires	—No., size, ply & psi (<i>kPa</i>)	Two 11.2-24; 8; 18 (<i>125</i>)		Two 11.2-24; 8; 18 (<i>125</i>)	
Ballast	—Liquid (each)	None		None	
	—Cast Iron (each)	15 lb (<i>7 kg</i>)		None	
Height of Drawbar		17.5 in (<i>445 mm</i>)		17.5 in (<i>445 mm</i>)	
Static Weight with Operator —Rear		5660 lb (<i>2567 kg</i>)		4160 lb (<i>1887 kg</i>)	
	—Front	3130 lb (<i>1420 kg</i>)		3100 lb (<i>1406 kg</i>)	
	—Total	8790 lb (<i>3987 kg</i>)		7260 lb (<i>3293 kg</i>)	

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with SAE and ASAE test codes and the technically equivalent ISO test codes or official Nebraska test procedure. For the maximum power tests, the fuel temperature at the injection pump inlet was maintained at 136°F (57.7°C). Five gears were chosen between 15% slip and 10 mph (16.1 km/h). The cooling air temperature was measured in the air-stream between the two rearmost cylinders.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1574, October 30, 1985.

LOUIS I. LEVITICUS
Engineer-in-Charge

K. VON BARGEN
T. L. THOMPSON
L. L. BASHFORD

Board of Tractor Test Engineers

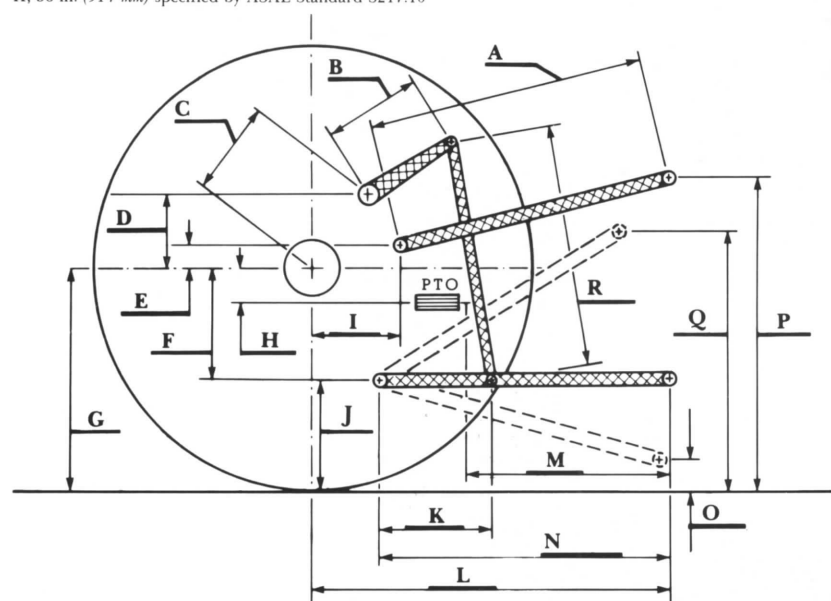
THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi (kPa)	2650 (18270)	
Location	remote outlet	
Hydraulic oil temperature °F (°C)	175 (79)	
Location	dipstick	
	Maximum Lift Capacity	Lift Capacity for Transport
QUICK ATTACH	no	
CATEGORY	II	*not measured
LOAD lbs (kg)	4646 (2107)	
TIME sec	1.48	
HITCH POINT MOVEMENT in (mm)		
Lowest position	13.3 (338)	
* Top of timed range	33.3 (846)	
Highest position	** 33.8 (859)	
LOAD CG MOVEMENT in (mm)		
Lowest position	13.3 (338)	
Top of timed range	33.4 (848)	
Highest position	33.9 (861)	

*Implement load capacity for transport purposes not specified by manufacturer.

** The observed power range, 20.5 in. (521 mm) is less than the minimum power range for Cat II, 24 in. (610 mm) specified by ASAE Standard S217.10

** The observed highest position, 33.8 in. (859 mm) is less than the minimum height for highest position for Cat II, 36 in. (914 mm) specified by ASAE Standard S217.10



Hitch Dimensions as Tested — No Load

	inch	mm
A	27.0	686
B	11.0	280
C	12.4	316
D	12.3	312
E	13.4	340
F	6.5	165
G	26.1	663
H	1.7	42
I	11.9	303
J	19.6	498
K	25.0	636
L	39.1	993
M	22.3	566
N	35.6	905
O	8.0	203
P	38.6	981
Q	32.3	819
R	27.4	695



Deutz-Fahr DX 3.50 Diesel

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