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Test 1219: Deutz D 6206 Diesel (Also Deutz-Fahr D 6207 Diesel) 8-Speed

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1219 — DEUTZ D 6206 DIESEL ALSO DEUTZ-FAHR D 6207 DIESEL 8 SPEED

POWER TAKE-OFF PERFORMANCE

Power Hp (kW)	Crank shaft speed rpm	Fuel Consumption		Temperature °F (°C)				Barometer 8nch 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—586 rpm)								
60.23 (44.91)	2050	3.422 (12.956)	0.397 (0.242)	17.60 (3.467)	air- cooled	63 (17.3)	75 (23.7)	29.383 (99.223)
Standard Power Take-off Speed (540 rpm)—One Hour								
57.00 (42.51)	1889	3.242 (12.273)	0.398 (0.242)	17.58 (3.463)	air- cooled	61 (16.3)	75 (23.9)	29.370 (99.178)
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
51.74 (38.58)	2072	2.875 (10.882)	0.388 (0.236)	18.00 (3.546)	air- cooled	62 (16.4)	76 (24.2)	..... .....
0.00 (0.00)	2132	0.768 (2.907)	..... .....	..... .....	air- cooled	60 (15.6)	74 (23.6)	..... .....
26.22 (19.55)	2098	1.751 (6.627)	0.467 (0.284)	14.98 (2.951)	air- cooled	61 (16.1)	75 (23.9)	..... .....
60.80 (45.34)	2050	3.484 (13.188)	0.401 (0.244)	17.45 (3.438)	air- cooled	60 (15.8)	74 (23.3)	..... .....
13.19 (9.83)	2115	1.223 (4.629)	0.648 (0.394)	10.78 (2.124)	air- cooled	61 (16.1)	75 (23.9)	..... .....
39.09 (29.15)	2088	2.283 (8.641)	0.408 (0.248)	17.12 (3.374)	air- cooled	61 (16.1)	75 (23.9)	..... .....
Av Av	31.84 (23.74)	2.064 (7.812)	0.453 (0.276)	15.43 (3.039)	air- cooled	61 (16.0)	75 (23.8)	29.343 (99.088)

DRAWBAR PERFORMANCE

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel gal/hr (l/h)	Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Cool- ing med	Temp. °F (°C) Air wet bulb	Air dry bulb	Barom. inch Hg (kPa)
Maximum Available Power—Two Hours 5th (4-L) Gear											
50.75 (37.85)	3870 (17.21)	4.92 (7.92)	2051	6.60	3.361 (12.723)	0.463 (0.282)	15.10 (2.975)	air- cooled	62 (16.4)	66 (18.9)	28.92 (97.659)
75% of Pull at Maximum Power—Ten Hours 5th (4-L) Gear											
40.48 (30.19)	2973 (13.22)	5.11 (8.22)	2090	4.85	2.639 (9.989)	0.456 (0.277)	15.34 (3.022)	air- cooled	64 (18.0)	69 (20.7)	29.108 (98.293)
50% of Pull at Maximum Power—Two Hours 5th (4-L) Gear											
28.64 (21.36)	2057 (9.15)	5.22 (8.40)	2107	3.54	2.038 (7.715)	0.498 (0.303)	14.05 (2.768)	air- cooled	68 (19.7)	74 (23.1)	28.920 (97.659)
50% of Pull at Reduced Engine Speed—Two Hours 6th (2-S) Gear											
28.76 (21.45)	2066 (9.19)	5.22 (8.40)	1740	3.37	1.877 (7.106)	0.456 (0.278)	15.32 (3.018)	air- cooled	69 (20.6)	77 (25.0)	28.955 (97.777)
MAXIMUM POWER IN SELECTED GEARS											
35.56 (26.52)	6944 (30.89)	1.92 (3.09)	2094	14.99	2nd (2-L) Gear			air- cooled	61 (16.1)	64 (17.8)	29.050 (98.097)
47.88 (35.70)	6502 (28.92)	2.76 (4.44)	2050	14.42	3rd (3-L) Gear			air- cooled	64 (17.8)	80 (26.7)	28.800 (97.253)
51.27 (38.23)	5293 (23.54)	3.63 (5.85)	2051	9.20	4th (1-S) Gear			air- cooled	62 (16.7)	77 (25.0)	28.810 (97.287)
52.11 (38.86)	3971 (17.66)	4.92 (7.92)	2051	6.53	5th (4-L) Gear			air- cooled	61 (16.1)	74 (23.3)	28.810 (97.287)
52.41 (39.08)	3256 (14.49)	6.04 (9.71)	2050	5.14	6th (2-S) Gear			air- cooled	61 (16.1)	75 (23.9)	28.810 (97.287)
51.79 (38.62)	2163 (9.62)	8.98 (14.45)	2050	3.37	7th (3-S) Gear			air- cooled	62 (16.7)	76 (24.4)	28.810 (97.287)

Department of Agricultural Engineering

Dates of Test: September 3 to 15, 1976

Manufacturer: KLOCKNER-HUMBOLDT
-DEUTZ, AG, 5 Cologne 80, West Germany

FUEL, OIL AND TIME: Fuel No. 2 Diesel Cetane No. 51.8 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° (15°/15°) 0.8398 Fuel weight 6.992 lbs/gal (0.838 kg/l) Oil SAE 30 API service classification SB/SE-CA/CD To motor 2.565 gal (9.710 l) Drained from motor 1.838 gal (6.958 l) Transmission and final drive lubricant SAE 90 Total time engine was operated 44 hours

ENGINE: Make Klockner-Humboldt-Deutz AG Diesel Type 4 cylinder vertical Serial No. 5646192 Crankshaft lengthwise Rated rpm 2050 Bore and stroke 3.94" × 4.72" (100.0 mm × 120.0 mm) Compression ratio 17 to 1 Displacement 230 cu in (3770 ml) Starting system 12 volt Lubrication pressure Air cleaner paper and felt elements with centrifugal precleaner and dust evacuation Oil filter full flow spin-on paper cartridge Oil cooler radiator for crankcase oil Fuel filter screw-on paper cartridge Muffler vertical Cooling medium temperature control air-cooled

CHASSIS: Type standard Serial No. 7561/6249 Tread width rear 59.84" (1520 mm) to 75.59" (1920 mm) front 59.84" (1520 mm) to 75.59" (1920 mm) Wheel base 84.3" (2140 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 28.5" (724 mm) Vertical distance above roadway 31.42" (798 mm) Horizontal distance from center of rear wheel tread 0" (0 mm) to the right/left Hydraulic control system direct engine drive Transmission selective gear fixed ratio Advertised speeds mph (km/h) first 1.4 (2.3) second 2.3 (3.7) third 3.2 (5.3) fourth 4.1 (6.6) fifth 5.4 (8.7) sixth 6.6 (10.5) seventh 9.5 (15.4) eighth 15.5 (25.0) reverse 1.6 (2.6), 2.5 (4.1), 3.8 (6.0), 6.1 (9.8) Clutch dry disc dual clutch operated by foot pedal and hand lever for PTO Brakes disc brake operated by two foot pedals which can be locked together and hand lever Steering power assist Turning radius (on concrete surface with brake applied) right 130" (3.30 m) left 136" (3.45 m) (on concrete surface without brake) right 144" (3.66 m) left 153" (3.89 m) Turning space diameter (on concrete surface with brake applied) right 272" (6.91 m) left 284" (7.21 m) (on concrete surface without brake) right 298" (7.57 m) left 318" (8.08 m) Power take-off 540 rpm at 1889 engine rpm and 1000 rpm at 1875 engine rpm.

LUGGING ABILITY IN 5th (4-L) GEAR

Crankshaft Speed rpm	2051	1840	1639	1430	1222	1011
Pull—lbs (kN)	3971 (17.66)	4137 (18.40)	4299 (19.12)	4307 (19.16)	4168 (18.54)	4117 (18.32)
Increase in Pull %	0	4	8	8	5	4
Power—Hp (kW)	52.11 (38.86)	48.63 (36.26)	44.84 (33.44)	39.20 (29.23)	32.50 (24.24)	26.59 (19.82)
Speed—Mph (km/h)	4.92 (7.92)	4.41 (7.09)	3.91 (6.29)	3.41 (5.49)	2.92 (4.71)	2.42 (3.90)
Slip %	6.53	6.72	6.97	6.97	6.84	6.72

TRACTOR SOUND LEVEL WITHOUT CAB

dB(A)

Maximum Available Power—Two Hours	99.0
75% of Pull at Maximum Power—Ten Hours	99.0
50% of Pull at Maximum Power—Two Hours	96.0
50% of Pull at Reduced Engine Speed—Two Hours	91.5
Bystander in 8th (4-S) gear	86.5

TIRES, BALLAST AND WEIGHT

	With Ballast	Without Ballast
Rear Tires		
—No., size, ply & psi (kPa)	Two 16.9/14-30; 6; 18 (120)	Two 16.9/14-30; 6; 18 (120)
Ballast		
—Liquid (each)	700 lb (318 kg)	None
—Cast Iron (each)	930 lb (422 kg)	None
Front Tires		
—No., size, ply & psi (kPa)	Two 7.50-16; 6; 44 (300)	Two 7.50-16; 6; 44 (300)
Ballast		
—Liquid (each)	None	None
—Cast Iron (each)	75 lb (34 kg)	None
Height of Drawbar	18 in (460 mm)	18 in (460 mm)
Static Weight with Operator—Rear	6870 lb (3116 kg)	3610 lb (1637 kg)
—Front	1910 lb (866 kg)	1760 lb (798 kg)
—Total	8780 lb (3982 kg)	5370 lb (2435 kg)

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 or official Nebraska test procedure. Temperature at injection pump return was 142°F (61.2°C). Six gears were chosen between 15% slip and 15 mph (24.1 km/h).

NOTE: 1) Supplemental permit for Deutz D 6207 granted February 1981. 2) Supplemental permit for Deutz-Fahr D 6207 granted November 1982.

We, the undersigned, certify that this is a true and correct report of official Tractor Test **1219**.

LOUIS I. LEVITICUS

Engineer-in Charge

G. W. STEINBRUEGGE, Chairman

W. E. SPLINTER

K. VON BARGEN

Board of Tractor Test Engineers



Deutz D 6206 Diesel