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Test 1236: Steiger Panther III ST-325 Diesel 10-Speed, Also Steiger Panther IV CM-325 Diesel 20-Speed

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1236—STEIGER PANTHER III ST-325 DIESEL 10 SPEED ALSO STEIGER PANTHER IV CM-325 DIESEL 20 SPEED

DRAWBAR PERFORMANCE

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption gal/hr (l/h)	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 Gear											
269.86 (201.23)	16535 (73.55)	6.12 (9.85)	2099	4.03	18.208 (68.923)	0.471 (0.287)	14.82 (2.920)	182 (83.1)	62 (16.7)	75 (23.6)	28.845 (97.405)
75% of Pull at Maximum Power—Ten Hours 5th Gear											
225.60 (168.23)	12862 (57.21)	6.58 (10.58)	2229	2.93	15.902 (60.194)	0.492 (0.299)	14.19 (2.795)	177 (80.3)	65 (18.3)	74 (23.5)	28.919 (97.655)
50% of Pull at Maximum Power—Two Hours 5th Gear											
155.71 (116.12)	8606 (38.28)	6.78 (10.92)	2278	2.06	12.317 (46.626)	0.552 (0.336)	12.64 (2.490)	172 (77.8)	60 (15.3)	63 (16.9)	28.855 (97.439)
50% of Pull at Reduced Engine Speed—Two Hours 7th Gear											
156.95 (117.04)	8642 (38.44)	6.81 (10.96)	1381	1.89	9.847 (37.274)	0.438 (0.266)	15.94 (3.140)	174 (78.9)	64 (17.5)	69 (20.6)	28.835 (97.371)

MAXIMUM POWER IN SELECTED GEARS

209.99 (156.59)	28189 (125.39)	2.79 (4.50)	2230	14.76	2nd Gear		172 (77.5)	53 (11.7)	58 (14.4)	28.960 (97.794)
247.83 (184.81)	27052 (120.33)	3.44 (5.53)	2101	13.23	3rd Gear		175 (79.2)	53 (11.7)	60 (15.6)	29.050 (98.097)
268.17 (199.97)	20990 (93.37)	4.79 (7.71)	2100	5.58	4th Gear		178 (81.1)	57 (13.9)	69 (20.6)	28.990 (97.895)
273.74 (204.13)	16738 (74.45)	6.13 (9.87)	2101	3.87	5th Gear		178 (81.1)	57 (13.9)	69 (20.6)	29.000 (97.929)
281.94 (210.24)	13334 (59.32)	7.93 (12.76)	2099	2.99	6th Gear		178 (81.1)	58 (14.4)	70 (21.1)	28.980 (97.861)
281.41 (209.85)	10219 (45.46)	10.33 (16.62)	2099	2.10	7th Gear		176 (79.7)	58 (14.4)	70 (21.1)	28.970 (97.827)

LUGGING ABILITY IN 5th GEAR

Crankshaft Speed rpm	2101	1889	1679	1472	1254	1050
Pull—lbs (kN)	16738 (74.45)	18099 (80.51)	19382 (86.21)	20541 (91.37)	20934 (93.12)	20483 (91.11)
Increase in Pull %	0	8	16	23	25	22
Power—Hp (kW)	273.74 (204.13)	264.80 (197.46)	250.96 (187.14)	231.54 (172.66)	200.61 (149.59)	164.55 (122.71)
Speed—Mph (km/h)	6.13 (9.87)	5.49 (8.83)	4.86 (7.81)	4.23 (6.80)	3.59 (5.78)	3.01 (4.85)
Slip %	3.87	4.34	4.81	5.43	5.74	5.58

TRACTOR SOUND LEVEL WITH CAB dB(A)

Maximum Available Power—Two Hours	80.5
75% of Pull at Maximum Power—Ten Hours	80.5
50% of Pull at Maximum Power—Two Hours	80.0
50% of Pull at Reduced Engine Speed—Two Hours	77.0
Bystander in 10th gear	101.0

TIRES, BALAST AND WEIGHT

Rear Tires	—No., size, ply & psi (kPa)	Tested Without Ballast
Ballast	—Liquid (each)	Four 23.1-34; 8; inner 14 (95); outer 12 (85)
	—Cast Iron (each)	None
Front Tires	—No., size, ply & psi (kPa)	Four 23.1-34; 8; inner 14 (95); outer 12 (85)
Ballast	—Liquid (each)	None
	—Cast Iron (each)	None
Height of drawbar	18.5 in (470 mm)	
Static weight with operator—rear	12600 lb (5715 kg)	
—front	18480 lb (8383 kg)	
—total	31080 lb (14098 kg)	

Department of Agricultural Engineering

Dates of Test: April 11 to May 2, 1977

Manufacturer: STEIGER TRACTOR, INC.,
3101 First Ave. North, Fargo, North Dakota
58102

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°)** 0.8386 **Fuel weight** 6.982 lbs/
gal (0.837 kg/l) **Oil SAE 30 API service classi-
fication** SB/SE-CA/CD **To motor** 7.960 gal
(30.132l) **Drained from motor** 5.485 gal (20.763l)
Transmission and dropbox lubricant IH Hy-tran
or equivalent **Final drive lubricant** SAE 90 **Total
time engine was operated** 47.0 hours.

ENGINE: Make Caterpillar Diesel **Type** 6
cylinder vertical with turbocharger **Serial No.**
92U2318 **Crankshaft** lengthwise **Rated rpm**
2100 **Bore and stroke** 5.4" × 6.5" (137.2 mm ×
165.1 mm) **Compression ratio** 14.5 to 1 **Displace-
ment** 893 cu in (14637 ml) **Cranking system** 12
volt **Lubrication pressure** **Air cleaner** two paper
elements with aspirator **Oil filter** one full flow
cartridge **Oil cooler** engine coolant heat exchan-
ger for crankcase oil, radiator for transmission and
dropbox oil **Fuel filter** one paper cartridge and
prestrainer **Muffler** none **Cooling medium**
temperature control one thermostat.

CHASSIS: **Type** four wheel drive with duals
Serial No. 123-00047 **Tread width** rear 76.1"
(1933 mm) to 135.9" (3452 mm) front 76.1" (1933
mm) to 135.9" (3452 mm) **Wheel base** 128" (3251
mm) **Center of gravity** (without operator or bal-
last, with minimum tread, with fuel tank filled and
tractor serviced for operation) Horizontal distance
forward from center-line of rear wheels 76.0"
(1929 mm) Vertical distance above roadway 45.5"
(1157 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 2.3 (3.7) second 2.9 (4.7) third 3.7 (6.0)
fourth 4.8 (7.7) fifth 6.0 (9.7) sixth 7.7 (12.4)
seventh 9.9 (16.0) eighth 12.7 (20.5) ninth 15.5
(25.0) tenth 19.9 (32.0) reverse 2.3 (3.7), 2.9 (4.7)
Clutch multiple dry disc hydraulically operated
by foot pedal **Brakes** dual caliper disc hydraulically
operated by foot pedal and mechanically by
hand lever **Steering** hydrostatic and articulated
Turning radius (on concrete surface without
brake) right 283" (7.19 m) left 288" (7.32 m) **Turn-
ing space diameter** (on concrete surface without
brake) right 578" (14.68 m) left 586" (14.88 m)
Power take off none.

REPAIRS and ADJUSTMENTS: Transfer case
control shift lever linkage was found to be broken
during preliminary drawbar test. This was re-
paired and test continued.

REMARKS: All test results were determined from observed data obtained in accordance with SAE and ASAE test code or official Nebraska test procedure. Temperature at injection pump was 123°F (50.6°C) Six gears were chosen between 15% slip and 15 mph (24.1 km/h).

NOTE: Supplemental permit for Panther IV CM-325 granted October, 1983.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1236.**

LOUIS I. LEVITICUS
Engineer-in Charge

G. W. STEINBRUEGGE, Chairman
W. E. SPLINTER
K. VON BARGEN
Board of Tractor Test Engineers



Steiger Panther III ST-325 Diesel