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January 1974

## Test 1169: Steiger Tiger II Diesel (Also Steiger Panther III - ST-320 Diesel)

Nebraska Tractor Test Lab

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# NEBRASKA TRACTOR TEST 1169 – STEIGER TIGER II DIESEL (ALSO STEIGER PANTHER III – ST-320 DIESEL)

## DRAWBAR PERFORMANCE

Hp	Draw- bar pull lbs	Speed miles per hr	Crank- shaft speed rpm	Slip of drivers %	Fuel Gal per hr	Consumption Lb per hp-hr	Hp-hr per gal	Temp Cool- ing med	Degrees F Air wet bulb	Air dry bulb	Barometer inches of Mercury
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### VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST

#### Maximum Available Power—Two Hours in 6th Gear (3-Hi)

262.13	14606	6.73	2600	3.53	18.886	0.499	13.88	168	51	58	28.715
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#### 75% of Pull at Maximum Power—Ten Hours in 6th Gear (3-Hi)

211.66	11286	7.03	2687	2.49	16.669	0.545	12.70	165	41	50	29.002
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#### 50% of Pull at Maximum Power—Two Hours in 6th Gear (3-Hi)

145.97	7611	7.19	2722	1.55	13.758	0.653	10.61	166	48	59	28.790
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#### 50% of Pull at Reduced Engine Speed—Two Hours in 8th Gear (4-Hi)

144.47	7576	7.15	1639	1.59	9.750	0.467	14.82	165	45	55	28.755
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### MAXIMUM POWER WITH BALLAST

222.77	28097	2.97	2667	14.76	3rd Gear (2-Lo)	167	53	66	28.600
261.19	24375	4.02	2601	7.19	4th Gear (2-Hi)	167	45	54	28.660
265.02	19040	5.22	2601	4.81	5th Gear (3-Lo)	167	45	53	28.640
270.21	15052	6.73	2600	3.53	6th Gear (3-Hi)	166	45	52	28.620
268.66	11375	8.86	2603	2.47	7th Gear (4-Lo)	166	45	53	28.650

### VARYING DRAWBAR PULL AND TRAVEL WITH BALLAST 6th Gear (3-Hi)

Pounds Pull	15052	16845	18604	20148	20188	19259
Horsepower	270.21	271.24	262.95	246.98	212.12	169.56
Crankshaft Speed rpm	2600	2345	2073	1808	1554	1296
Miles Per Hour	6.73	6.04	5.30	4.60	3.94	3.30
Slip of Drivers %	3.53	4.18	4.65	5.44	5.44	5.12

### TRACTOR SOUND LEVEL WITH CAB

dB (A)

Maximum Available Power 2 Hours	87.0
75% of Pull at Max. Power 10 Hours	86.0
50% of Pull at Max. Power 2 Hours	85.5
50% of Pull at Reduced Engine Speed 2 Hours	82.0
Bystander 10th Gear (5-Hi)	98.0

### TIRES, BALLAST AND WEIGHT

#### With Ballast

#### Without Ballast

Rear Tires	—No., size, ply & psi	Four 23.1-34;8; 14 & 12	Four 23.1-34;8; 14 & 12
Ballast	—Liquid	None	None
	Cast Iron	20 lb each	None
Front tires	—No., size, ply & psi	Four 23.1-34;8; 14 & 12	Four 23.1-34;8; 14 & 12
Ballast	—Liquid	542 lb each	None
	Cast Iron	20 lb each	None
Height of drawbar		16 inches	16 inches
Static weight with operator—rear		11650 lb	11570 lb
front		18280 lb	16030 lb
total		29930 lb	27600 lb

## Department of Agricultural Engineering

**Dates of Test:** November 15 to November 26, 1974

**Manufacturer:** STEIGER TRACTOR, INC.,  
FARGO, NORTH DAKOTA

**FUEL, OIL AND TIME** Fuel No 2 Diesel Cetane No 51.9 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° 0.8315 Weight per gallon 6.923 lb Oil SAE 30 API service classification CD, CC, CB, CA, SE, SD, SC and SB To motor 5.834 gal Drained from motor 3.675 gal Transmission and Power Divider 303 oil or equivalent Front and rear axle SAE 90 Total time engine was operated 45 hours

**ENGINE** Make Cummins VT 903 Diesel Type eight cylinder Vee with turbo-charger Serial No 10427069 Crankshaft Mounted lengthwise Rated rpm 2600 Bore and stroke 5.5" x 4.75" Compression ratio 15.5 to 1 Displacement 903 cu in Cranking system 12 volt electric Lubrication pressure Air cleaner pre-cleaner and two replaceable dry type treated paper elements, one primary, one safety and aspirator Oil filter one full flow and one bypass replaceable elements Oil Cooler engine coolant heat exchanger Transmission and power divider cooled by a separate radiator Fuel filter one replaceable element Muffler none Cooling medium temperature control two thermostats

**CHASSIS** Type four-wheel drive Serial No 30152 Tread width rear 71.8" to 131.6" front 71.8" to 131.6" Wheel base 122" 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 73.5" Vertical distance above roadway 45.4" Horizontal distance from center of rear wheel tread 0" to the right/left Hydraulic control system direct engine drive Transmission selective gear fixed ratio Advertised speeds mph first 2.0 second 2.5 third 3.3 fourth 4.1 fifth 5.2 sixth 6.7 seventh 8.7 eighth 11.1 ninth 13.8 tenth 17.6 reverse 2.0 and 2.5 Clutch dry double disc operated by foot pedal Brakes caliper disc brake on drive line operated hydraulically by foot pedal Steering hydrostatic Turning radius (on concrete surface without brake) right 266" left 266" Turning space diameter (on concrete surface without brake) right 585" left 585"

**REPAIRS AND ADJUSTMENTS** No repairs or adjustments

**REMARKS:** The engine manufacturer's warranty is voided if the fuel flow rate exceeds 18.9 gallons per hour for this model and application. All test results were determined from observed data obtained in accordance with SAE and ASAE test code or official Nebraska test procedure.

Five gears were chosen between 15% slip and 15 mph. (Only one gear permitted over 8 mph).

We, the undersigned, certify that this is a true and correct report of official Tractor Test 1169.

L. F. LARSEN

Engineer-in-Charge

G. W. STEINBRUEGGE, Chairman  
W. E. SPLINTER

D. E. LANE

Board of Tractor Test Engineers

The University of Nebraska Agricultural Experiment Station  
Institute of Agriculture and Natural Resources. H. W. Ottoson, Director