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January 1973

## Test 1125: International 1466 Turbo Diesel (Also International 1486 Diesel)

Nebraska Tractor Test Lab

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# NEBRASKA TRACTOR TEST 1125-INTERNATIONAL 1466 TURBO DIESEL

## (Also INTERNATIONAL 1486 DIESEL)

### POWER TAKE-OFF PERFORMANCE

Hp	Crankshaft speed rpm	Fuel Consumption Gal per hr	Lb per hp-hr	Hp-hr per gal	Cooling medium	Temperature Degrees F Air wet bulb	Air dry bulb	Barometer inches of Mercury
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>								
<b>Rated Engine Speed Two Hours (PTO Speed-1145 rpm)</b>								
145.77	2600	9.595	0.460	15.19	199	63	77	28.797
<b>Standard Power Take-off Speed-(1000 rpm)-One Hour</b>								
145.84	2268	8.563	0.410	17.03	199	63	77	28.790
<b>VARYING POWER AND FUEL CONSUMPTION-Two Hours</b>								
127.01	2667	8.795	0.484	14.44	195	64	79	.....
0.00	2854	3.304	.....	.....	173	64	79	.....
65.72	2760	5.930	0.630	11.08	181	64	79	.....
145.51	2599	9.552	0.458	15.23	198	66	78	.....
33.56	2805	4.623	0.962	7.26	177	65	80	.....
96.98	2718	7.416	0.534	13.08	185	65	80	.....
Av 78.13	2733	6.603	0.590	11.83	185	64	79	28.770

### DRAWBAR PERFORMANCE

Hp	Draw-bar pull lbs	Speed miles per hr	Crankshaft speed rpm	Slip of drivers %	Fuel Consumption Gal per hr	Lb per hp-hr	Hp-hr per gal	Temp Degrees F Cool-ing med	Air wet bulb	Air dry bulb	Barometer inches of Mercury
<b>VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST</b>											
<b>Maximum Available Power-Two Hours-8th Gear (1 Hi TA)</b>											
123.20	8700	5.31	2598	6.92	9.452	0.535	13.03	190	61	75	28.735
<b>75% of Pull at Maximum Power-Ten Tours-8th Gear (1 Hi TA)</b>											
100.58	6709	5.62	2709	5.45	8.375	0.581	12.01	172	47	48	28.870
<b>50% of Pull at Maximum Power-Two Hours-8th Gear (1 Hi TA)</b>											
69.67	4479	5.83	2757	3.61	6.731	0.674	10.35	169	48	56	29.060
<b>50% of Pull at Reduced Engine Speed-Two Hours-12th Gear (2 Hi DD)</b>											
70.29	4519	5.83	1615	3.61	4.798	0.476	14.65	169	49	59	29.045

### MAXIMUM POWER WITH BALLAST

117.91	13673	3.23	2600	14.29	5th Gear (3 Lo TA)	185	61	72	28.730
122.27	10381	4.42	2598	8.71	6th Gear (3 Lo DD)	187	63	75	28.730
126.91	8954	5.32	2600	6.85	8th Gear (1 Hi TA)	186	60	70	28.730
125.57	7770	6.06	2598	5.97	9th Gear (4 Lo DD)	190	63	79	28.710
127.02	6875	6.93	2598	5.29	10th Gear (1 Hi DD)	190	64	83	28.710
126.88	6603	7.21	2599	4.99	11th Gear (2 Hi TA)	187	63	79	28.690

### VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST 8th Gear (1 Hi TA)

Pounds Pull	8954	10022	10598	11106	11154	10736
Horsepower	126.91	125.91	116.95	106.77	91.95	74.38
Crankshaft Speed rpm	2600	2336	2070	1820	1561	1306
Miles Per Hour	5.32	4.71	4.14	3.61	3.09	2.60
Slip of Drivers %	6.85	8.21	8.91	9.74	9.74	9.47

### TRACTOR SOUND LEVEL (with Cab) dB (A)

Maximum Available Power 2 Hours	1466	1486
75% of Pull at Max. Power 10 Hours	91.0	82.5
50% of Pull at Max. Power 2 Hours	93.5	83.0
50% of Pull at Reduced Engine Speed 2 Hours	91.0	84.0
50% of Pull at Reduced Engine Speed 2 Hours	89.5	81.5
Bystander (1466-4 Hi DD, 1486-4 Hi TA)	87.5	89.5

### TIRES, BALLAST AND WEIGHT

		With Ballast	Without Ballast
Rear tires	-No., size, ply & psi	Four 18.4-38; 8; 12	Four 18.4-38; 8; 12
Ballast	-Liquid	745 lb each	None
	-Cast iron	None	None
Front tires	-No., size, ply & psi	Two 11L-15; 8; 28	Two 11L-15; 8; 28
Ballast	-Liquid	None	None
	-Cast iron	None	None
Height of drawbar		21½ inches	22 inches
Static weight with operator-Rear		13140 lb	10160 lb
Front		3520 lb	3510 lb
Total		16660 lb	13670 lb

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

### Department of Agricultural Engineering

Dates of Test: Test 1466, April 17th to April 27,

1973; Sound Test for 1486 on October 3, 1977.

Manufacturer: INTERNATIONAL HARVESTER COMPANY, CHICAGO, ILLINOIS

**FUEL, OIL AND TIME** Fuel No 2 Diesel Cetane No 50.1 (rating taken from oil company's typical inspection data) **Specific gravity converted to 60°/60°** 0.8386 **Weight per gallon** 6.982 lb **Oil SAE 30 API service classification** I.H. No 1 Engine oil SAE 30 recommended series 3 (CD CC CB CA SE SD SC) (Formerly DS DM DG MS) **To motor** 4.034 gal. **Drained from motor** 3.610 gal. **Transmission and final drive lubricant** I.H. Hy-Tran Fluid **Total time engine was operated** 46 hours.

**ENGINE** Make International Diesel Type 6 cylinder vertical with turbo-charger **Serial No.** 436TT2U009542\* **Crankshaft Mounted length-wise** **Rated rpm** 2600 **Bore and stroke** 4.30" x 5.00" **Compression ratio** 16 to 1 **Displacement** 436 cu. in. **Cranking system** 12 volt electric **Lubrication pressure** **Air cleaner** two stage dry type with replaceable pleated paper primary and safety elements with automatic dust un-loader **Oil filter** two full flow pleated paper screw-on cartridges **Oil Cooler** engine coolant heat exchanger for engine oil and radiator for transmission and hydraulic oil **Fuel filter** one primary and one final using replaceable pleated paper screw-on cartridges **Muffler** was used **Cooling medium** temperature control thermostat.

**CHASSIS** Type standard **Serial No.** 2650114U015838\* **Tread width rear** 60" to 104" front 56" to 86" **Wheel base** 104.8" **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 27.3" Vertical distance above roadway 40.3" Horizontal distance from center of rear wheel tread 0" to the right/left **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial range operator controlled power shifting **Advertised speeds mph** first 1½ second 2 third 2¼ fourth 2½ fifth 3¼ sixth 4¾ seventh 5 eighth 5½ ninth 6¼ tenth 7¼ eleventh 7½ twelfth 9½ thirteenth 13 fourteenth 16¾ fifteenth 17½ sixteenth 22¼, reverse 2¾ 3½, 3¾, 4¾, 6¼, 8¼, 8½, 11 **Clutch** single plate dry disc operated by foot pedal with hydraulic power assist **Brakes** dry double disc hydraulically power actuated by two foot pedals that can be locked together with automatic equalizing **Steering** hydrostatic **Turning radius** (on concrete surface with brake applied) right 140" left 140" (on concrete surface without brake) right 173" left 173" **Turning space diameter** (on concrete surface with brake applied) right 292" left 292" (on concrete surface without brake) right 361" left 361" **Power take-off** 1000 rpm at 2268 engine rpm.

**REPAIRS AND ADJUSTMENTS:** No repairs or adjustments.

**REMARKS:** All test results were determined from observed data obtained in accordance with SAE and ASAE test code or official Nebraska test procedure. Six gears were chosen between stability pull limit and 15 mph. Note that only a sound test was performed on the 1486 tractor.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 1125.

LOUIS I. LEVITICUS

Engineer-in-Charge

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