2015

Test 2113: John Deere 7310R

Nebraska Tractor Test Lab
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NEBRASKA OECD TRACTOR TEST 2113-SUMMARY 976
JOHN DEERE 7310R DIESEL
e23 TRANSMISSION

Location of tests: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln, Nebraska 68583-0832

Dates of tests: March 23 to April 2, 2015

Manufacturer: John Deere Tractor Works, 3500 East Donald Street, P.O. Box 270, Waterloo Ia, 50704-0270

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Diesel Consumption Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	D.E.F. Consumption Hp.hr/gal *(kW.h/l)*	D.E.F. Consumption Gal/hr *(l/h)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION						
Rated Engine Speed—(PTO speed—1077 rpm)						
272.40 *(203.13)*	2100	14.77 *(55.90)*	0.381 *(0.232)*	18.45 *(3.63)*	0.31 *(1.18)*	Fuel used during active exhaust regeneration-1.12 gal *(4.25 l)* (see note 1, p.2)
Standard Power Take-off Speed (1000 rpm)						
302.41 *(225.50)*	1950	15.96 *(60.41)*	0.371 *(0.226)*	18.95 *(3.73)*	0.32 *(1.23)*	
Maximum Power (1 hour)						
309.83 *(231.04)*	1751	16.04 *(60.71)*	0.364 *(0.221)*	19.32 *(3.81)*	0.34 *(1.29)*	
VARYING POWER AND FUEL CONSUMPTION						
272.40 *(203.13)*	2100	14.77 *(55.90)*	0.381 *(0.232)*	18.45 *(3.63)*	0.31 *(1.18)*	Air temperature
237.67 *(177.23)*	2155	13.13 *(49.70)*	0.389 *(0.236)*	18.10 *(3.57)*	0.29 *(1.09)*	73°F *(23°C)*
179.17 *(133.61)*	2166	10.38 *(39.30)*	0.408 *(0.248)*	17.26 *(3.40)*	0.24 *(0.91)*	Relative humidity
120.14 *(89.58)*	2176	7.89 *(29.85)*	0.462 *(0.281)*	15.24 *(3.00)*	0.20 *(0.77)*	22%
60.20 *(44.89)*	2185	5.55 *(21.00)*	0.648 *(0.394)*	10.85 *(2.14)*	0.17 *(0.66)*	Barometer
1.11 *(0.83)*	2198	3.02 *(11.44)*	19.155 *(11.652)*	0.37 *(0.07)*	0.20 *(0.74)*	28.88" Hg *(97.79 kPa)*

Maximum torque - 991 lb.-ft. *(1226 Nm)* at 1550 rpm
Maximum torque rise - 45.5%
Torque rise at 1682 engine rpm - 41%
Power increase at 1751 engine rpm - 13.7%

DRAWBAR PERFORMANCE
UNBALLASTED - FRONT DRIVE ENGAGED
FUEL CONSUMPTION CHARACTERISTICS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Fuel Consumption Hp.hr/gal *(kW.h/l)*	D.E.F Consumption lb/hp.hr *(kg/kW.h)*	Temp.°F *(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
Maximum Power—11th Gear-Manual mode										
255.61 *(190.60)*	16189 *(72.01)*	5.92 *(9.53)*	2100	3.1	0.407 *(0.248)*	17.26 *(3.40)*	0.010 *(0.006)*	218 *(103)*	43 *(6)*	28.86 *(97.73)*
75% of Pull at Maximum Power—11th Gear-Manual mode										
198.77 *(148.22)*	12116 *(53.89)*	6.15 *(9.90)*	2160	2.1	0.419 *(0.255)*	16.77 *(3.30)*	0.010 *(0.006)*	218 *(103)*	45 *(7)*	28.86 *(97.73)*
50% of Pull at Maximum Power—11th Gear-Manual mode										
134.13 *(100.02)*	8064 *(35.87)*	6.24 *(10.04)*	2171	1.3	0.463 *(0.282)*	15.20 *(2.99)*	0.011 *(0.007)*	217 *(103)*	45 *(7)*	28.86 *(97.73)*
75% of Pull at Reduced Engine Speed—6.3 mph *(10.2 km/h)*-Auto mode										
198.48 *(148.00)*	12022 *(53.48)*	6.19 *(9.96)*	1429	2.2	0.384 *(0.234)*	18.31 *(3.61)*	0.010 *(0.006)*	217 *(103)*	45 *(7)*	28.87 *(97.77)*
50% of Pull at Reduced Engine Speed—6.5 mph *(10.4 km/h)*-Auto mode										
134.67 *(100.42)*	8085 *(35.96)*	6.25 *(10.06)*	1237	1.2	0.396 *(0.241)*	17.78 *(3.50)*	0.015 *(0.009)*	216 *(102)*	45 *(7)*	28.87 *(97.77)*

CONSUMABLE Fluids, OIL and TIME: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F *(15°/15°C)*** 0.8447 **Fuel weight** 7.033 lbs/gal *(0.843 kg/l)* **Diesel Exhaust Fluid (DEF)** 32% aqueous urea solution **DEF weight** 9.071 lbs/gal *(1. 087 kg/l)* **Oil SAE** 10W-30 **API service classification** CJ-4 **Transmission and hydraulic lubricant** John Deere Hy-Gard fluid **Front axle lubricant** John Deere Hy-Gard fluid **Total time engine was operated:** 24.0 hours

ENGINE: Make John Deere Diesel **Type** six cylinder vertical with two turbochargers, air to air aftercooler and D.E.F. (diesel exhaust fluid) exhaust treatment **Serial No.** *RG6090U014744* **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 4.661 x 5.354" *(118.4 mm x 136.0 mm)* **Compression ratio** 16.0 to 1 **Displacement** 548 cu in *(8984 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** one paper element and prestrainer **Fuel cooler** radiator for pump return fuel **Exhaust** DOC (diesel oxidation catalyst), SCR (selective catalyst reduction) and regenerative DPF (diesel particulate filter) integrated within a vertical muffler **Cooling medium temperature control** thermostat and variable speed fan

ENGINE OPERATING PARAMETERS: Fuel rate: 98.8 - 106.9 lb/h *(44.8 - 48.5 kg/h)* **High idle:** 2150 - 2250 rpm **Turbo boost:** nominal 21.8 - 25.4 psi *(155 - 175 kPa)* as measured 23.4 psi *(161 kPa)*

CHASSIS: Type front wheel assist with duals **Serial No.** *1RW7310RPFS085448* **Tread width** rear 60.0" *(1524 mm)* to 128.9" *(3272 mm)* front 60.0" *(1524 mm)* to 88.0" *(2235 mm)* **Wheelbase** 115.2" *(2925 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with full range operator controlled power shift **Nominal travel speeds mph *(km/h)*** first 1.50 *(2.42)* second 1.74 *(2.80)* third 2.01 *(3.23)* fourth 2.32 *(3.73)* fifth 2.67 *(4.29)* sixth 3.08 *(4.96)* seventh 3.53 *(5.68)* eighth 4.08 *(6.56)* ninth 4.66 *(7.50)* tenth 5.38 *(8.66)* eleventh 6.21 *(10.00)* twelfth 7.15 *(11.51)* thirteenth 8.26 *(13.29)* fourteenth 9.45 *(15.21)* fifteenth 10.91 *(17.57)* sixteenth 12.68 *(20.41)* seventeenth 14.65 *(23.57)* eighteenth 16.91 *(27.22)* nineteenth 19.54 *(31.44)* twentieth 22.48 *(36.17)* twenty-first 25.96 *(41.78)* twenty-second 26.10 *(42.00)* twenty-third 26.10 *(42.00)* electronically limited

DRAWBAR PERFORMANCE
UNBALLASTED - FRONT DRIVE ENGAGED
MANUAL MODE - 2100 ENGINE RPM
DRAWBAR POWER IN SELECTED GEARS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	D.E.F. Consumption lb/hp.hr *(kg/kW.h)*	Temp.°F*(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
					8th Gear					
227.62	24964	3.42	2102	13.9	0.451	15.58	0.011	217	44	28.94
(169.74)	*(111.05)*	*(5.50)*			*(0.275)*	*(3.07)*	*(0.007)*	*(103)*	*(7)*	*(98.00)*
					9th Gear					
248.01	21524	4.32	2100	5.7	0.421	16.72	0.010	219	44	28.87
(184.94)	*(95.74)*	*(6.95)*			*(0.256)*	*(3.29)*	*(0.006)*	*(104)*	*(6)*	*(97.77)*
					10th Gear					
254.89	18812	5.08	2100	4.0	0.410	17.16	0.010	218	43	28.88
(190.07)	*(83.68)*	*(8.18)*			*(0.249)*	*(3.38)*	*(0.006)*	*(103)*	*(6)*	*(97.80)*
					11th Gear					
255.61	16189	5.92	2100	3.1	0.407	17.26	0.010	218	43	28.86
(190.60)	*(72.01)*	*(9.53)*			*(0.248)*	*(3.40)*	*(0.006)*	*(103)*	*(6)*	*(97.73)*
					12th Gear					
255.43	13981	6.85	2100	2.5	0.405	17.35	0.010	219	43	28.89
(190.47)	*(62.19)*	*(11.02)*			*(0.247)*	*(3.42)*	*(0.006)*	*(104)*	*(6)*	*(97.83)*
					13th Gear					
254.33	11998	7.95	2100	2.1	0.407	17.27	0.010	218	44	28.89
(189.65)	*(53.37)*	*(12.79)*			*(0.248)*	*(3.40)*	*(0.006)*	*(103)*	*(6)*	*(97.83)*
					14th Gear					
252.27	10358	9.13	2100	1.7	0.410	17.16	0.010	219	44	28.89
(188.11)	*(46.07)*	*(14.69)*			*(0.249)*	*(3.38)*	*(0.006)*	*(104)*	*(7)*	*(97.83)*

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive Engaged dB(A)	Disengaged dB(A)
At no load in 9th gear	66.6	66.4
Transport speed - no load - 21st gear		70.2
Bystander in 21st gear		84.1

TIRES, BALLAST AND WEIGHT	With Ballast	Without Ballast
Rear Tires - No., size, ply & psi*(kPa)*	Four 480/80R50;***;17*(115)*	Four 480/80R50;***;12*(85)*
Ballast - Liquid (total)	None	None
- Cast Iron (total)	4940 lb *(2241 kg)*	None
Front Tires - No., size, ply & psi*(kPa)*	Two 420/85R34;***;23*(160)*	Two 420/85R34;***;17*(115)*
Ballast - Liquid (total)	None	None
- Cast Iron (total)	1945 lb *(882 kg)*	None
Height of Drawbar	20.5 in *(520 mm)*	20.5 in *(520 mm)*
Static Weight with operator - Rear	20575 lb *(9333 kg)*	16240 lb *(7366 kg)*
- Front	11235 lb *(5096 kg)*	8685 lb *(3940 kg)*
- Total	31810 lb*(14429 kg)*	24925 lb*(11306 kg)*

reverse 1.38 *(2.22)*, 1.88 *(3.02)*, 2.50 *(4.02)*, 3.30 *(5.31)*, 3.77 *(6.07)*, 5.03 *(8.10)*, 6.69 *(10.76)*, 8.84 *(14.22)*, 11.86*(19.08)*, 15.81*(25.45)*, 18.64*(30.00)*, 18.64 *(30.00)* electronically limited **Clutch** wet multiple disc hydraulically actuated by foot pedal **Brakes** wet multiple disc hydraulically operated by two foot pedals that can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1958 engine rpm or 1000 rpm at 1950 engine rpm **Unladen tractor mass** 24750 lb *(11226 kg)*

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

NOTE 1: The manufacturer declares that the average time between active regenerations is 50 hours, while operated in Auto Filter Cleaning Mode, at rated speed, full load, under steady state conditions.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. This tractor did not meet the manufacturer's remote hydraulic flow claim of 59 GPM *(223.3 l/min)* with the 85 cc pump. The performance figures on this summary were taken from a test conducted under the OECD Code 2 test procedure.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **2113**, Nebraska Summary 976, April 27, 2015.

Roger M. Hoy
Director

M.F. Kocher
P.J. Jasa
J.D. Luck
Board of Tractor Test Engineers

DRAWBAR PERFORMANCE

UNBALLASTED - FRONT DRIVE ENGAGED - AUTO MODE

(Loads based on 2100 engine rpm manual mode performance runs)

DRAWBAR POWER AT SELECTED TRAVEL SPEEDS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	D.E.F. Consumption lb/hp.hr *(kg/kW.h)*	Temp.°F*(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
				3.9 mph *(6.2 km/h)*						
220.23 *(164.23)*	24143 *(107.39)*	3.42 *(5.50)*	1497	9.3	0.412 *(0.251)*	17.05 *(3.36)*	0.012 *(0.007)*	217 *(103)*	45 *(7)*	28.94 *(98.00)*
				4.7 mph *(7.6 km/h)*						
247.50 *(184.56)*	21242 *(94.49)*	4.37 *(7.03)*	1588	5.5	0.397 *(0.241)*	17.73 *(3.49)*	0.010 *(0.006)*	219 *(104)*	43 *(6)*	28.87 *(97.77)*
				5.3 mph *(8.6 km/h)*						
249.09 *(185.75)*	18598 *(82.73)*	5.02 *(8.08)*	1562	4.0	0.391 *(0.238)*	18.00 *(3.55)*	0.010 *(0.006)*	218 *(103)*	43 *(6)*	28.88 *(97.80)*
				6.2 mph *(10.0 km/h)*						
254.73 *(189.95)*	16209 *(72.10)*	5.89 *(9.48)*	1572	3.1	0.390 *(0.237)*	18.03 *(3 .55)*	0.010 *(0.006)*	218 *(103)*	43 *(6)*	28.87 *(97.77)*
				7.2 mph *(11.6 km/h)*						
253.90 *(189.33)*	13847 *(61.59)*	6.88 *(11.06)*	1594	2.5	0.387 *(0.235)*	18.18 *(3.58)*	0.010 *(0.006)*	218 *(103)*	43 *(6)*	28.89 *(97.83)*
				8.3 mph *(13.4 km/h)*						
250.87 *(187.07)*	11785 *(52.42)*	7.98 *(12.84)*	1594	2.0	0.387 *(0.236)*	18.15 *(3.58)*	0.010 *(0.006)*	218 *(103)*	44 *(7)*	28.89 *(97.83)*
				9.4 mph *(15.2 km/h)*						
245.58 *(183.13)*	10095 *(44.90)*	9.12 *(14.68)*	1562	1.8	0.391 *(0.238)*	18.01 *(3.55)*	0.010 *(0.006)*	218 *(103)*	44 *(7)*	28.89 *(97.83)*

DRAWBAR PERFORMANCE
UNBALLASTED - FRONT DRIVE ENGAGED - 1750 RPM
MAXIMUM POWER IN SELECTED GEARS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	D.E.F. Consumption lb/hp.hr *(kg/kW.h)*	Temp.°F*(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
					8th Gear					
228.88 *(170.67)*	24979 *(111.11)*	3.44 *(5.53)*	2101	13.4	0.451 *(0.274)*	15.60 *(3.07)*	0.011 *(0.007)*	217 *(103)*	44 *(7)*	28.95 *(98.04)*
					9th Gear					
256.16 *(191.02)*	23556 *(104.78)*	4.08 *(6.57)*	2040	8.6	0.423 *(0.257)*	16.62 *(3.27)*	0.011 *(0.006)*	218 *(103)*	46 *(8)*	28.92 *(97.93)*
					10th Gear					
273.29 *(203.79)*	22099 *(98.30)*	4.64 *(7.47)*	1971	7.2	0.409 *(0.249)*	17.19 *(3.39)*	0.010 *(0.006)*	218 *(103)*	47 *(9)*	28.91 *(97.90)*
					11th Gear					
283.28 *(211.24)*	21216 *(94.37)*	5.01 *(8.06)*	1831	6.1	0.399 *(0.243)*	17.64 *(3.47)*	0.011 *(0.007)*	218 *(103)*	48 *(9)*	28.90 *(97.87)*
					12th Gear					
285.94 *(213.22)*	19275 *(85.74)*	5.56 *(8.95)*	1750	5.1	0.394 *(0.239)*	17.87 *(3.52)*	0.012 *(0.007)*	218 *(103)*	48 *(9)*	28.89 *(97.83)*
					13th Gear					
288.02 *(214.77)*	16606 *(73.86)*	6.50 *(10.46)*	1750	3.9	0.390 *(0.237)*	18.02 *(3.55)*	0.011 *(0.007)*	219 *(104)*	49 *(9)*	28.88 *(97.80)*
					14th Gear					
289.64 *(215.98)*	14492 *(64.46)*	7.50 *(12.06)*	1750	3.2	0.388 *(0.236)*	18.11 *(3.57)*	0.011 *(0.007)*	219 *(104)*	49 *(9)*	28.87 *(97.76)*
					15th Gear					
288.91 *(215.44)*	12436 *(55.32)*	8.71 *(14.02)*	1750	2.6	0.390 *(0.237)*	18.04 *(3.55)*	0.011 *(0.007)*	219 *(104)*	49 *(9)*	28.86 *(97.73)*

DRAWBAR PERFORMANCE
BALLASTED - FRONT DRIVE ENGAGED - 1750 RPM
MAXIMUM POWER IN SELECTED GEARS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	D.E.F. Consumption lb/hp.hr *(kg/kW.h)*	Temp.°F*(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
					6th Gear					
220.59	31119	2.66	2127	13.8	0.464	15.16	0.011	219	50	28.84
(164.49)	*(138.42)*	*(4.28)*			*(0.282)*	*(2.99)*	*(0.007)*	*(104)*	*(10)*	*(97.66)*
					7th Gear					
242.21	29185	3.12	2075	10.0	0.435	16.17	0.011	219	52	28.84
(180.62)	*(129.82)*	*(5.01)*			*(0.265)*	*(3.19)*	*(0.007)*	*(104)*	*(11)*	*(97.66)*
					8th Gear					
259.17	28107	3.46	1977	8.9	0.426	16.49	0.011	219	55	28.83
(193.26)	*(125.03)*	*(5.57)*			*(0.259)*	*(3.25)*	*(0.007)*	*(104)*	*(13)*	*(97.63)*
					9th Gear					
271.64	26985	3.78	1869	7.9	0.414	16.97	0.011	219	57	28.83
(202.56)	*(120.03)*	*(6.08)*			*(0.252)*	*(3.34)*	*(0.007)*	*(104)*	*(14)*	*(97.63)*
					10th Gear					
277.54	25258	4.12	1750	7.0	0.404	17.39	0.011	219	59	28.83
(206.96)	*(112.35)*	*(6.63)*			*(0.246)*	*(3.43)*	*(0.007)*	*(104)*	*(15)*	*(97.63)*
					11th Gear					
281.23	21787	4.84	1750	5.4	0.398	17.66	0.012	219	60	28.82
(209.71)	*(96.91)*	*(7.79)*			*(0.242)*	*(3.48)*	*(0.007)*	*(104)*	*(16)*	*(97.60)*
					12th Gear					
284.40	18971	5.62	1750	4.6	0.392	17.96	0.012	219	61	28.82
(212.07)	*(84.39)*	*(9.04)*			*(0.238)*	*(3.54)*	*(0.007)*	*(104)*	*(16)*	*(97.60)*
					13th Gear					
286.28	16386	6.55	1750	3.7	0.391	18.00	0.012	219	63	28.82
(213.48)	*(72.89)*	*(10.54)*			*(0.238)*	*(3.55)*	*(0.007)*	*(104)*	*(17*	*(97.60)*
					14th Gear					
286.48	14237	7.55	1751	3.0	0.390	18.04	0.012	219	64	28.81
(213.62)	*(63.33)*	*(12.15)*			*(0.237)*	*(3.55)*	*(0.007)*	*(104)*	*(18)*	*(97.56)*
					15th Gear					
283.71	12146	8.76	1750	2.5	0.394	17.85	0.012	219	65	28.81
(211.56)	*(54.03)*	*(14.10)*			*(0.240)*	*(3.52)*	*(0.007)*	*(104)*	*(19)*	*(97.56)*

HYDRAULIC PERFORMANCE

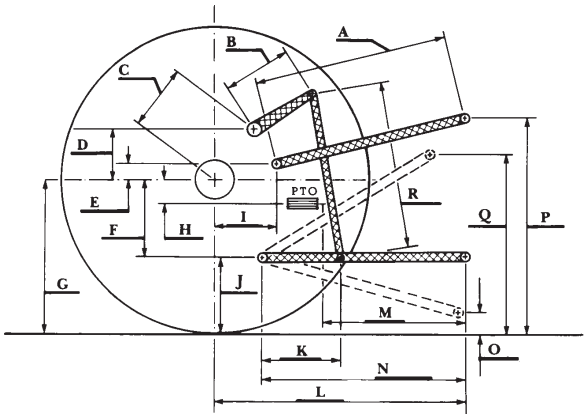
CATEGORY: III
Quick Attach: Yes
OECD Static test

	lift cylinders	
Maximum force exerted through whole range:	15862 lbs *(70.6 kN)* (2x100 mm)	
	18302 lbs *(81.4 kN)* (1x100 mm & 1x115 mm)	
	63 cc pump	85 cc pump
i) Sustained pressure at compensator cutoff:	2871 psi *(198 bar)*	2931 psi *(202 bar)*
	three outlet sets combined	
ii) Pump delivery rate at minimum pressure and rated engine speed:	44.4 GPM *(168.0 l/min)*	58.3 GPM *(220.7 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	43.8 GPM *(165.9 l/min)*	57.5 GPM *(217.6 l/min)*
Delivery pressure:	2791 psi *(192 bar)*	2571 psi *(177 bar)*
Power:	71.4 HP *(53.2 kW)*	86.2 HP *(64.3 kW)*
	single outlet set	
ii) Pump delivery rate at minimum pressure and rated engine speed:	36.5 GPM *(138.3 l/min)*	36.4 GPM *(137.9 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	35.4 GPM *(134.0 l/min)*	35.4 GPM *(134.0 l/min)*
Delivery pressure:	2739 psi *(189 bar)*	2244 psi *(155 bar)*
Power:	56.6 HP *(42.2 kW)*	46.4 HP *(34.6 kW)*

HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	*mm*
A	28.0	*710*
B	20.5	*520*
C	22.9	*581*
D	18.9	*480*
E	7.3	*185*
F	14.4	*365*
G	38.8	*985*
H	3.5	*90*
I	22.4	*570*
J	24.4	*620*
K	29.3	*745*
L	52.0	*1321*
*L'	56.0	*1423*
M	28.0	*712*
N	43.4	*1102*
O	9.0	*230*
P	51.9	*1319*
Q	39.4	*1001*
R	44.9	*1140*

*L' to Quick Attach ends



JOHN DEERE 7310R DIESEL

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University of Nebraska–Lincoln