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2018

## Test 2191: John Deere 5090R OC

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, tractortestlab@unl.edu

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## HYDRAULIC PERFORMANCE

CATEGORY: II

Quick Attach: None

OECD Static test

		<u>lift cylinders</u>
Maximum force exerted through whole range:	7720 lbs (34.3 kN) (2 x 75 mm)	
	8678 lbs (38.6 kN) (2 x 80 mm)	
	<u>single outlet set</u>	<u>two outlet sets combined</u>
i) Sustained pressure of the open relief valve:	2857 psi (197 bar)	2865 psi (198 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	21.4 GPM (80.9 l/min)	21.3 GPM (80.6 l/min)
iii) Pump delivery rate at maximum hydraulic power:	21.2 GPM (80.4 l/min)	21.2 GPM (80.3 l/min)
Delivery pressure:	2464 psi (170 bar)	2618 psi (181 bar)
Power:	30.5 HP (22.8 kW)	32.4 HP (24.2 kW)

reverse 1.37 (2.21), 1.70 (2.73), 2.10 (3.38), 2.58 (4.15), 3.18 (5.11), 3.92 (6.31), 4.86 (7.82), 5.96 (9.59), 6.15 (9.89), 7.59 (12.22), 9.40 (15.13), 11.54 (18.57), 13.76 (22.15), 17.00 (27.35), 18.64 (30.00), 18.64 (30.00) electronically limited **Clutch** wet disc hydraulically actuated by foot pedal **Brakes** wet disc hydraulically actuated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2100 engine rpm, Economy PTO 540 rpm at 1645 engine rpm **Unladen tractor mass** 9360 lb (4246 kg)

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

**NOTE 1:** The manufacturer declares that the average time between active regenerations is 150 hours. A 2% power increase was observed during the active exhaust regeneration.

**NOTE 2:** The performance data on this report applies to tractors with an open center hydraulic system.

**REMARKS:** This tractor exceeded the 73 dB(A) sound power claim, with front drive engaged, by 14.8% (0.6 dB(A)) and with front drive disengaged by 9.6% (0.4 dB(A)). All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures.

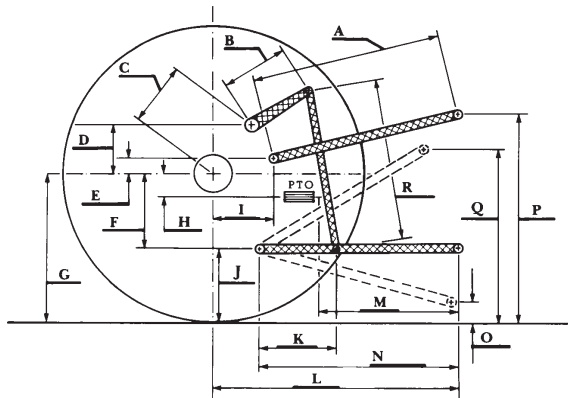
We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **2191**, June 15, 2018.

Roger M. Hoy  
Director

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

### HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	mm
A	26.4	670
B	14.1	358
C	17.7	449
D	15.0	380
E	14.4	365
F	8.8	223
G	31.3	795
H	0.2	4
I	14.4	365
J	22.5	572
K	17.5	444
L	41.7	1060
M	23.0	585
N	33.1	840
O	9.1	230
P	46.5	1182
Q	38.4	975
R	32.3	820



### RECOMMENDED CITATION FORMAT:

NTTL.(2018). Nebraska tractor test 2191 for John Deere 5090R OC Diesel. Lincoln, NE:Nebraska Tractor Test Laboratory. Retrieved from <http://tractortestlab.unl.edu>

## Shiftable PTO Performance

### Economy mode

540 PTO rpm @ 1645 engine rpm

Power HP (kW)	Crank shaft speed rpm	Diesel Consumption		D.E.F. Consumption	
		Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Gal/hr (l/h)
81.86 (61.04)	1645	4.37 (16.55)	0.375 (0.228)	18.73 (3.69)	0.19 (0.71)
61.44 (45.82)	1651	3.38 (12.78)	0.386 (0.235)	18.20 (3.58)	0.14 (0.52)
41.04 (30.60)	1651	2.50 (9.45)	0.427 (0.260)	16.44 (3.24)	0.09 (0.35)
20.46 (15.25)	1641	1.74 (6.59)	0.598 (0.364)	11.74 (2.31)	0.03 (0.11)
0.95 (0.71)	1641	1.09 (4.14)	8.096 (4.925)	0.87 (0.17)	0.04 (0.14)

### Normal mode

540 PTO rpm @ 2100 engine rpm

Power HP (kW)	Crank shaft speed rpm	Diesel Consumption		D.E.F. Consumption	
		Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Gal/hr (l/h)
81.86 (61.04)	2100	4.86 (18.39)	0.417 (0.254)	16.85 (3.32)	0.18 (0.68)
61.42 (45.80)	2098	3.95 (14.97)	0.452 (0.275)	15.53 (3.06)	0.13 (0.50)
40.97 (30.55)	2097	3.10 (11.74)	0.532 (0.323)	13.21 (2.60)	0.06 (0.22)
20.48 (15.27)	2099	2.21 (8.36)	0.757 (0.461)	9.27 (1.83)	0.03 (0.11)
0.93 (0.69)	2097	1.60 (6.07)	12.133 (7.380)	0.58 (0.11)	0.01 (0.02)



**JOHN DEERE 5090R DIESEL**

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