



## HYDRAULIC PERFORMANCE

CATEGORY: II

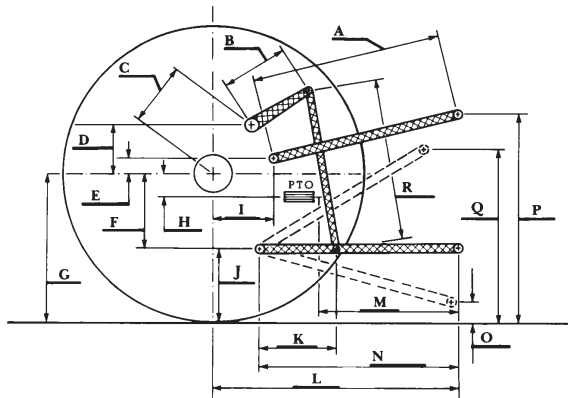
Quick Attach: None

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:                    | 2884 psi (199 bar)             | 2894 psi (200 bar)              |
| ii) Pump delivery rate at minimum pressure and rated engine speed: | 30.3 GPM (114.5 l/min)         | 31.7 GPM (119.9 l/min)          |
| iii) Pump delivery rate at maximum hydraulic power:                | 28.8 GPM (109.2 l/min)         | 31.1 GPM (117.8 l/min)          |
| Delivery pressure:   | 2347 psi (162 bar)             | 2599 psi (179 bar)              |
| Power:   | 39.5 HP (29.5 kW)              | 47.2 HP (35.2 kW)               |

### 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 2192 for John Deere 5090R PFC Diesel. Lincoln, NE:Nebraska Tractor Test Laboratory. Retrieved from <http://tractortestlab.unl.edu>

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), 21.05 (33.88), 25.84 (41.58) **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** 9565 lb (4338 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 decrease was observed during the active exhaust regeneration.

**NOTE 2:** The performance data on this report applies to tractors with a Pressure-and-Flow Compensated(PFC) hydraulic system.

**REMARKS:** This tractor exceeded the 73 dB(A) sound power claim, with front drive engaged, by 95.0% (2.9 dB(A)) and with front drive disengaged by 31.8% (1.2 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. **2192**, June 15, 2018.

Roger M. Hoy  
Director

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

## Shiftable PTO Performance

### Economy mode

540 PTO rpm @ 1645 engine rpm

| Power<br>HP<br>(kW) | Crank<br>shaft<br>speed<br>rpm | Diesel<br>Consumption |                       | D.E.F.<br>Consumption |                 |
|---------------------|--------------------------------|-----------------------|-----------------------|-----------------------|-----------------|
|                     |                                | Gal/hr<br>(l/h)       | lb/hp.hr<br>(kg/kW.h) | Hp.hr/gal<br>(kW.h/l) | Gal/hr<br>(l/h) |
| 86.33<br>(64.38)    | 1644                           | 4.45<br>(16.83)       | 0.362<br>(0.220)      | 19.41<br>(3.82)       | 0.22<br>(0.81)  |
| 64.68<br>(48.23)    | 1649                           | 3.54<br>(13.38)       | 0.384<br>(0.234)      | 18.29<br>(3.60)       | 0.15<br>(0.56)  |
| 43.14<br>(32.17)    | 1643                           | 2.56<br>(9.71)        | 0.418<br>(0.254)      | 16.82<br>(3.31)       | 0.09<br>(0.34)  |
| 21.63<br>(16.13)    | 1646                           | 1.75<br>(6.64)        | 0.569<br>(0.346)      | 12.33<br>(2.43)       | 0.01<br>(0.02)  |
| 0.54<br>(0.40)      | 1643                           | 1.11<br>(4.19)        | 14.491<br>(8.814)     | 0.48<br>(0.10)        | 0.01<br>(0.03)  |

### Normal mode

540 PTO rpm @ 2100 engine rpm

| Power<br>HP<br>(kW) | Crank<br>shaft<br>speed<br>rpm | Diesel<br>Consumption |                       | D.E.F.<br>Consumption |                 |
|---------------------|--------------------------------|-----------------------|-----------------------|-----------------------|-----------------|
|                     |                                | Gal/hr<br>(l/h)       | lb/hp.hr<br>(kg/kW.h) | Hp.hr/gal<br>(kW.h/l) | Gal/hr<br>(l/h) |
| 86.33<br>(64.37)    | 2109                           | 4.97<br>(18.80)       | 0.404<br>(0.246)      | 17.38<br>(3.42)       | 0.19<br>(0.73)  |
| 64.69<br>(48.24)    | 2104                           | 4.02<br>(15.21)       | 0.436<br>(0.265)      | 16.10<br>(3.17)       | 0.13<br>(0.50)  |
| 43.14<br>(32.17)    | 2102                           | 3.16<br>(11.96)       | 0.514<br>(0.313)      | 13.66<br>(2.69)       | 0.07<br>(0.26)  |
| 21.63<br>(16.13)    | 2100                           | 2.22<br>(8.39)        | 0.720<br>(0.438)      | 9.75<br>(1.92)        | 0.01<br>(0.03)  |
| 0.63<br>(0.47)      | 2100                           | 1.54<br>(5.84)        | 17.119<br>(10.413)    | 0.41<br>(0.08)        | 0.01<br>(0.02)  |



**JOHN DEERE 5090R DIESEL**

Institute of Agriculture and Natural Resources  
University of Nebraska-Lincoln