# SUMMARY OF OECD TEST 2948–NEBRASKA SUMMARY 1025
# MASSEY FERGUSON 7719 DYNA VT DIESEL
## CONTINOUSLY VARIABLE TRANSMISSION

### 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)* | Gal/hr *(l/h)* | Mean Atmospheric Conditions |
|---|---|---|---|---|---|---|
| **MAXIMUM POWER AND FUEL CONSUMPTION** | | | | | | |
| **Rated Engine Speed—(PTO speed—1103 rpm)** | | | | | | |
| 161.1 *(120.1)* | 2099 | 9.14 *(34.58)* | 0.397 *(0.241)* | 17.63 *(3.47)* | 0.59 *(2.25)* | |
| **Standard Power Take-off Speed (1001 rpm)** | | | | | | |
| 181.3 *(135.2)* | 1905 | 9.81 *(37.14)* | 0.378 *(0.230)* | 18.48 *(3.64)* | 0.62 *(2.34)* | |
| **Maximum Power (1 hour)** | | | | | | |
| 184.7 *(137.7)* | 1800 | 9.83 *(37.20)* | 0.372 *(0.226)* | 18.79 *(3.70)* | 0.66 *(2.51)* | |
| **VARYING POWER AND FUEL CONSUMPTION** | | | | | | |
| 161.1 *(120.1)* | 2099 | 9.14 *(34.58)* | 0.397 *(0.241)* | 17.63 *(3.47)* | 0.59 *(2.25)* | Air temperature |
| 138.1 *(103.0)* | 2118 | 8.00 *(30.28)* | 0.405 *(0.246)* | 17.26 *(3.40)* | 0.55 *(2.08)* | 72°F *(22°C)* |
| 104.1 *(77.6)* | 2126 | 6.40 *(24.21)* | 0.429 *(0.261)* | 16.27 *(3.21)* | 0.46 *(1.73)* | Relative humidity |
| 69.6 *(51.9)* | 2134 | 4.90 *(18.54)* | 0.492 *(0.299)* | 14.20 *(2.80)* | 0.34 *(1.28)* | 71% |
| 34.9 *(26.0)* | 2140 | 3.37 *(12.77)* | 0.675 *(0.411)* | 10.36 *(2.04)* | 0.25 *(0.95)* | Barometer |
| --- --- | 2151 | 2.16 *(8.16)* | --- --- | --- --- | --- --- | 30.4" Hg *(102.8 kPa)* |

Maximum torque - 595 lb.-ft. *(807 Nm)* at 1448 rpm
Maximum torque rise - 47.7%
Torque rise at 1700 engine rpm - 35%
Power increase at 1800 engine rpm - 14%

### 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)* | Hp.hr/gal *(kW.h/l)* | Temp.°F *(°C)* cool-ing med | Air dry bulb | Barom. inch Hg *(kPa)* |
|---|---|---|---|---|---|---|---|---|---|
| **Power at Rated Engine Speed—Turtle 8** | | | | | | | | | |
| 129.5 *(96.6)* | 10140 *(45.1)* | 4.79 *(7.71)* | 2097 | 5.2 | 0.506 *(0.308)* | 13.81 *(2.72)* | 194 *(90)* | 34 *(1)* | 30.1 *(102.0)* |
| **75% of Pull at Rated Engine Speed—Turtle 8** | | | | | | | | | |
| 99.9 *(74.5)* | 7600 *(33.8)* | 4.93 *(7.93)* | 2122 | 2.5 | 0.532 *(0.324)* | 13.15 *(2.59)* | 189 *(87)* | 34 *(1)* | 30.1 *(102.0)* |
| **50% of Pull at Rated Engine Speed—Turtle 8** | | | | | | | | | |
| 68.1 *(50.8)* | 5125 *(22.8)* | 4.99 *(8.03)* | 2128 | 1.5 | 0.615 *(0.374)* | 11.37 *(2.24)* | 189 *(87)* | 34 *(1)* | 30.1 *(102.0)* |
| **75% of Pull at Reduced Engine Speed—Turtle 10** | | | | | | | | | |
| 99.5 *(74.2)* | 7555 *(33.6)* | 4.94 *(7.94)* | 1376 | 2.3 | 0.465 *(0.283)* | 15.02 *(2.96)* | 183 *(84)* | 36 *(2)* | 30.1 *(101.9)* |
| **50% of Pull at Reduced Engine Speed—Turtle 10** | | | | | | | | | |
| 67.7 *(50.5)* | 5105 *(22.7)* | 4.98 *(8.01)* | 1384 | 1.7 | 0.500 *(0.304)* | 13.99 *(2.76)* | 181 *(83)* | 36 *(2)* | 30.1 *(101.9)* |

**Location of tests:** IRSTEA, Centre d'Antony, 1 rue Pierre-Giles de Gennes, CS 10030 92761 Antony, Cedex France

**Dates of tests:** February, 2016

**Manufacturer:** AGCO S.A. ZA, n2, BP 60307, Avenue Blaise Pascal, 60026 Beauvais, Cedex, France

**CONSUMABLE FLUIDS: Fuel** No. 2 Diesel **Specific gravity converted to 60°/60°F *(15°/15°C)*** 0.838 **Fuel weight** 6.98 lbs/gal *(0.836 kg/l)* **Diesel Exhaust Fluid (DEF)** 32% aqueous urea solution **DEF weight** 9.08 lbs/gal *(1.091 kg/l)* **Oil SAE** 15W40 **API service classification** CJ-4 **Transmission and hydraulic lubricant** BP Terrac Tractan 9 10W/40 **Front axle lubricant** SAE 85W140 API GL-5

**ENGINE: Make** AGCO Power Diesel **Type** six cylinder vertical with turbocharger, air to air intercooler and SCR (selective catalyst reduction) technology **Serial No.** Z 0018 **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 4.252" x 4.724" *(108.0 mm x 120.0 mm)* **Compression ratio** 17.4 to 1 **Displacement** 402 cu in *(6596 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **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 **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

**CHASSIS: Type** front wheel assist **Serial No.** D 242 901 **Tread width** rear 52.8" *(1340 mm)* to 87.8" *(2230 mm)* front 52.8" *(1340 mm)* to 87.8" *(2230 mm)* **Wheelbase** 117.0" *(2973 mm)* **Hydraulic control system** direct engine drive **Transmission** CVT. A combination of mechanical and hydrostatic sections allow an infinite speed adjustment within the ranges noted. The transmission has two mechanical ranges. **Nominal travel speeds mph *(km/h)*** forward: Low range 0-19 *(0-30)*, high range 0-25 *(0-40)* reverse: Low range 0-19 *(0-30)*, high range 0-19 *(0-30)* **Clutch** a foot pedal controls the hydrostatic oil flow **Brakes** multiple wet disc hydraulically operated by two foot pedals that can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1868 engine rpm or 1000 rpm at 1903 engine rpm **Unladen tractor mass** 18180 lb *(8250 kg)*

## DRAWBAR PERFORMANCE

### (Unballasted - Front Drive Engaged)

### MAXIMUM 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)* | Temp.°F*(°C)* cool-ing med | Air dry bulb | Barom. inch Hg *(kPa)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Turtle 3 | | | | |
| 72.3 *(53.9)* | 16095 *(71.6)* | 1.68 *(2.71)* | 2126 | 14.6 | 0.618 *(0.376)* | 11.32 *(2.23)* | 181 *(83)* | 34 *(1)* | 30.2 *(102.1)* |
| | | | | | Turtle 4.5 | | | | |
| 99.8 *(74.4)* | 15940 *(70.9)* | 2.35 *(3.78)* | 2114 | 11.8 | 0.589 *(0.358)* | 11.88 *(2.34)* | 187 *(86)* | 34 *(1)* | 30.2 *(102.1)* |
| | | | | | Turtle 6.5 | | | | |
| 146.3 *(109.1)* | 15060 *(67.0)* | 3.64 *(5.86)* | 1794 | 8.1 | 0.477 *(0.290)* | 14.67 *(2.89)* | 185 *(85)* | 34 *(1)* | 30.1 *(102.0)* |
| | | | | | Turtle 8 | | | | |
| 152.2 *(113.5)* | 11960 *(53.2)* | 4.77 *(7.68)* | 1837 | 6.3 | 0.459 *(0.279)* | 15.23 *(3.00)* | 196 *(91)* | 34 *(1)* | 30.1 *(102.0)* |
| | | | | | Turtle 10 | | | | |
| 153.0 *(114.1)* | 9420 *(41.9)* | 6.09 *(9.80)* | 1835 | 4.9 | 0.453 *(0.276)* | 15.43 *(3.04)* | 189 *(87)* | 36 *(2)* | 30.1 *(102.0)* |
| | | | | | Turtle 13 | | | | |
| 145.6 *(108.6)* | 7015 *(31.2)* | 7.79 *(12.54)* | 1805 | 3.2 | 0.472 *(0.287)* | 14.82 *(2.92)* | 192 *(89)* | 37 *(3)* | 30.1 *(101.8)* |
| | | | | | Turtle 15 | | | | |
| 141.3 *(105.3)* | 5880 *(26.2)* | 9.01 *(14.50)* | 1788 | 2.4 | 0.483 *(0.294)* | 14.47 *(2.85)* | 199 *(93)* | 37 *(3)* | 29.9 *(101.2)* |
| | | | | | Rabbit 9 | | | | |
| 134.1 *(100.0)* | 9710 *(43.2)* | 5.18 *(8.34)* | 1811 | 3.4 | 0.515 *(0.313)* | 13.57 *(2.67)* | 198 *(92)* | 41 *(5)* | 30.0 *(101.6)* |
| | | | | | Rabbit 12 | | | | |
| 144.4 *(107.7)* | 7485 *(33.3)* | 7.23 *(11.64)* | 1821 | 2.4 | 0.475 *(0.289)* | 14.72 *(2.90)* | 199 *(93)* | 39 *(4)* | 30.0 *(101.6)* |
| | | | | | Rabbit 15 | | | | |
| 146.6 *(109.3)* | 6055 *(26.9)* | 9.08 *(14.61)* | 1810 | 1.9 | 0.472 *(0.287)* | 14.82 *(2.92)* | 196 *(91)* | 37 *(3)* | 30.0 *(101.6)* |
| | | | | | Rabbit 17 | | | | |
| 142.0 *(105.9)* | 5165 *(23.0)* | 10.31 *(16.59)* | 1819 | 1.5 | 0.494 *(0.301)* | 14.15 *(2.79)* | 198 *(92)* | 37 *(3)* | 30.0 *(101.6)* |
| | | | | | Rabbit 20 | | | | |
| 135.8 *(101.3)* | 4170 *(18.6)* | 12.21 *(19.65)* | 1786 | 1.2 | 0.510 *(0.310)* | 13.71 *(2.70)* | 198 *(92)* | 37 *(3)* | 30.0 *(101.6)* |

| TRACTOR SOUND LEVEL WITH CAB | Front wheel drive Engaged dB(A) | Disengaged dB(A) |
|---|---|---|
| At no load in Turtle 8 | 70.0 | 70.0 |
| Bystander | | -- |

| TIRES, BALLAST AND WEIGHT | Tested without ballast |
|---|---|
| **Rear Tires** - No., size, ply & psi*(kPa)* | Two 620/70R42;**;15*(100)* |
| **Front Tires** - No., size, ply & psi*(kPa)* | Two 480/70R30;**;15*(100)* |
| **Height of Drawbar** | 19.7 in *(500 mm)* |
| **Static Weight with operator** - Rear | 10770 lb *(4885 kg)* |
| - Front | 7585 lb *(3440 kg)* |
| - Total | 18355 lb *(8325 kg)* |

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

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet the manufacturer's 3 point lift claim of 16700 lbs *(7575 kg)*. The performance figures on this summary were taken from a test conducted under the OECD Code 2 test procedure.

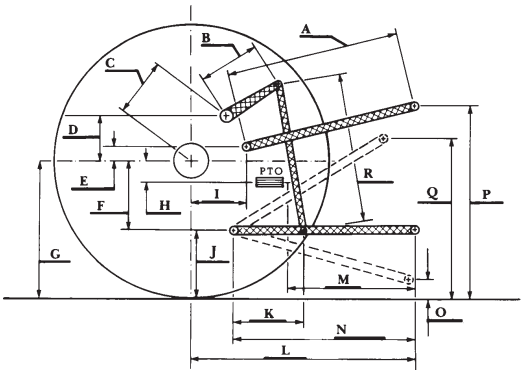
We, the undersigned, certify that this is a true summary of data from OECD Report No. **2948,** Nebraska Summary 1025, June 16, 2016.

Roger M. Hoy
Director

M.F. Kocher
S.K. Pitla
J.D. Luck
Board of Tractor Test Engineers

## HYDRAULIC PERFORMANCE

| | | |
|---|---|---|
| CATEGORY: III | | |
| Quick Attach: None | | |
| OECD Static test | | |
| Maximum force exerted through whole range: | 15105 lbs *(67.2 kN)* | |
| i) Sustained pressure of the open relief valve: | 2870 psi *(198 bar)* | |
| | Standard Pump | Optional pump |
| | 29 GPM *(110 l/min)* | 50 GPM *(190 l/min)* |
| | two outlet sets combined | two outlet sets combined |
| ii) Pump delivery rate at minimum pressure: | 29.9 GPM *(113.0 l/min)* | 52.5 GPM *(198.8 l/min)* |
| iii) Pump delivery rate at maximum hydraulic power: | 27.8 GPM *(105.3 l/min)* | 47.6 GPM *(180.2 l/min)* |
| Delivery pressure: | 2490 psi *(172 bar)* | 1855 psi *(128 bar)* |
| Power: | 40.3 HP *(30.0 kW)* | 51.5 HP *(38.4 kW)* |
| | single outlet set | single outlet set |
| ii) Pump delivery rate at minimum pressure: | 29.4 GPM *(111.2 l/min)* | 32.9 GPM *(124.6 l/min)* |
| iii) Pump delivery rate at maximum hydraulic power: | 26.9 GPM *(101.9 l/min)* | 30.0 GPM *(113.8 l/min)* |
| Delivery pressure: | 2235 psi *(154 bar)* | 2110 psi *(146 bar)* |
| Power: | 35.1 HP *(26.2 kW)* | 37.0 HP *(27.6 kW)* |

**HITCH DIMENSIONS AS TESTED—NO LOAD**

| | inch | *mm* |
|---|---|---|
| A | 29.8 | *756* |
| B | 15.7 | *400* |
| C | 16.5 | *419* |
| D | 14.0 | *355* |
| E | 8.8 | *223* |
| F | 10.9 | *276* |
| G | 36.4 | *925* |
| H | 2.4 | *60* |
| I | 18.5 | *471* |
| J | 25.5 | *649* |
| K | 27.4 | *696* |
| L | 46.9 | *1192* |
| M | 23.6 | *600* |
| N | 39.5 | *1003* |
| O | 9.0 | *229* |
| P | 52.5 | *1334* |
| Q | 40.2 | *1020* |
| R | 33.1 | *840* |