

# SUMMARY OF OECD TEST 2579-NEBRASKA SUMMARY 776

## MASSEY FERGUSON 7475 DIESEL

### CONTINUOUSLY VARIABLE TRANSMISSION

#### SISU ENGINE

#### POWER TAKE-OFF PERFORMANCE

| Power<br>HP<br>(kW)                            | Crank<br>shaft<br>speed<br>rpm | Gal/hr<br>(l/h) | lb/hp.hr<br>(kg/kW.h) | Hp.hr/gal<br>(kW.h/l) | Mean Atmospheric<br>Conditions |
|--|--------------------------------|-----------------|-----------------------|-----------------------|--------------------------------|
| <b>MAXIMUM POWER AND FUEL CONSUMPTION</b>      |                                |                 |                       |                       |                                |
| <b>Rated Engine Speed—(PTO speed—1081 rpm)</b> |                                |                 |                       |                       |                                |
| 115.5<br>(86.1)                                | 2200                           | 7.43<br>(28.12) | 0.458<br>(0.279)      | 15.54<br>(3.06)       |                                |
| <b>Standard Power Take-off Speed(1000 rpm)</b> |                                |                 |                       |                       |                                |
| 138.3<br>(103.1)                               | 2034                           | 8.08<br>(30.60) | 0.416<br>(0.253)      | 17.11<br>(3.37)       |                                |
| <b>Maximum Power (1 hour)</b>                  |                                |                 |                       |                       |                                |
| 142.6<br>(106.3)                               | 2000                           | 8.19<br>(31.00) | 0.409<br>(0.249)      | 17.41<br>(3.43)       |                                |

#### VARYING POWER AND FUEL CONSUMPTION

|                 |      |                 |                  |                 |                      |
|-----------------|------|-----------------|------------------|-----------------|----------------------|
| 115.5<br>(86.1) | 2200 | 7.43<br>(28.12) | 0.458<br>(0.279) | 15.54<br>(3.06) | Air temperature      |
| 98.7<br>(73.6)  | 2214 | 6.59<br>(24.94) | 0.475<br>(0.289) | 14.97<br>(2.95) | 77°F (25°C)          |
| 74.6<br>(55.7)  | 2225 | 5.54<br>(20.98) | 0.529<br>(0.322) | 13.47<br>(2.65) | Relative humidity    |
| 49.9<br>(37.2)  | 2235 | 4.31<br>(16.31) | 0.615<br>(0.374) | 11.57<br>(2.28) | 43%                  |
| 24.9<br>(18.6)  | 2242 | 3.05<br>(11.55) | 0.870<br>(0.529) | 8.16<br>(1.61)  | Barometer            |
| --              | 2253 | 2.03<br>(7.70)  | --               | --              | 30.1" Hg (102.0 kPa) |

Maximum Torque - 460.1 lb.-ft. (623.8 Nm) at 1500 rpm  
 Maximum Torque Rise - 67.0%  
 Torque rise at 1750 engine rpm - 53%

#### DRAWBAR PERFORMANCE (Unballasted - Front Drive Engaged) FUEL CONSUMPTION CHARACTERISTICS

| Power<br>Hp<br>(kW)                                  | Drawbar<br>pull<br>lbs<br>(kN) | Speed<br>mph<br>(km/h) | Crank-<br>shaft<br>speed<br>rpm | Slip<br>% | Fuel Consumption<br>lb/hp.hr<br>(kg/kW.h) | Hp.hr/gal<br>(kW.h/l) | Temp. °F (°C)<br>cool-<br>ing<br>med | Air<br>dry<br>bulb | Barom.<br>inch<br>Hg<br>(kPa) |
|--|--------------------------------|------------------------|---------------------------------|-----------|---|-----------------------|--------------------------------------|--------------------|-------------------------------|
| <b>Maximum Power—Rabbit 8</b>                        |                                |                        |                                 |           |   |                       |                                      |                    |                               |
| 91.3<br>(68.1)                                       | 6405<br>(28.5)                 | 5.35<br>(8.60)         | 2203                            | 4.0       | 0.557<br>(0.339)                          | 12.78<br>(2.52)       | 181<br>(83)                          | 50<br>(10)         | 29.5<br>(100.0)               |
| <b>75% of Pull at Maximum Power—Rabbit 8</b>         |                                |                        |                                 |           |   |                       |                                      |                    |                               |
| 70.0<br>(52.2)                                       | 4835<br>(21.5)                 | 5.43<br>(8.74)         | 2218                            | 3.0       | 0.621<br>(0.378)                          | 11.46<br>(2.26)       | 180<br>(82)                          | 50<br>(10)         | 29.5<br>(100.0)               |
| <b>50% of Pull at Maximum Power—Rabbit 8</b>         |                                |                        |                                 |           |   |                       |                                      |                    |                               |
| 48.0<br>(35.8)                                       | 3235<br>(14.4)                 | 5.57<br>(8.96)         | 2228                            | 2.0       | 0.723<br>(0.440)                          | 9.85<br>(1.94)        | 180<br>(82)                          | 52<br>(11)         | 29.5<br>(100.0)               |
| <b>75% of Pull at Reduced Engine Speed—Rabbit 10</b> |                                |                        |                                 |           |   |                       |                                      |                    |                               |
| 69.5<br>(51.8)                                       | 4785<br>(21.3)                 | 5.44<br>(8.76)         | 1551                            | 2.8       | 0.517<br>(0.314)                          | 13.81<br>(2.72)       | 176<br>(80)                          | 52<br>(11)         | 29.5<br>(100.0)               |
| <b>50% of Pull at Reduced Engine Speed—Rabbit 10</b> |                                |                        |                                 |           |   |                       |                                      |                    |                               |
| 47.9<br>(35.7)                                       | 3245<br>(14.4)                 | 5.54<br>(8.91)         | 1546                            | 1.5       | 0.577<br>(0.351)                          | 12.33<br>(2.43)       | 176<br>(80)                          | 52<br>(11)         | 29.5<br>(100.0)               |

**Location of tests:** Groupement d'Antony, Parc de Touvoie, BP 44 Antony, France 92163

**Dates of tests:** April - May, 2010

**Manufacturer:** AGCO S.A. BP 307, Avenue Blaise Pascal, 60026 Beauvais, France

**FUEL and OIL:** Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.855 **Fuel weight** 7.12 lbs/gal (0.853 kg/l) **Oil SAE** 15W40 **API service classification** CH4 **Transmission and hydraulic lubricant** BP Terrac Tractan 9 10W/40 **Front axle lubricant** SAE 85W140 API GL-5

**ENGINE: Make** Sisu Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** V14985 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.251" 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.** U328999 **Tread width** rear 55.9" (1420 mm) to 85.4" (2168 mm) front 56.5" (1436 mm) to 86.0" (2184 mm) **Wheelbase** 113.1" (2874 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 0-18 (0-29), high range 0-25 (0-40) reverse: Low range 0-10 (0-16), high range 0-25 (0-40) **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 2062 engine rpm or 1000 rpm at 2030 engine rpm **Unladen tractor mass** 15785 lb (7160 kg)

## DRAWBAR PERFORMANCE

### (Unballasted - Front Drive Engaged) MAXIMUM POWER IN SELECTED GEARS

| Power<br>Hp<br>(kW) | Drawbar<br>pull<br>lbs<br>(kN) | Speed<br>mph<br>(km/h) | Crank-<br>shaft<br>speed<br>rpm | Slip<br>% | Fuel Consumption<br>lb/hp.hr<br>(kg/kW.h) | Consumption<br>Hp.hr/gal<br>(kW.h/l) | Temp. <sup>o</sup> F(°C)<br>cool-<br>ing<br>med | Air<br>dry<br>bulb | Barom.<br>inch<br>Hg<br>(kPa) |
|---------------------|--------------------------------|------------------------|---------------------------------|-----------|---|--------------------------------------|---|--------------------|-------------------------------|
| Turtle 2            |                                |                        |                                 |           |   |                                      |   |                    |                               |
| 98.7<br>(73.6)      | 15105<br>(67.2)                | 2.45<br>(3.94)         | 2051                            | 14.6      | 0.561<br>(0.341)                          | 12.69<br>(2.50)                      | 180<br>(82)                                     | 54<br>(12)         | 29.8<br>(101.0)               |
| Turtle 3            |                                |                        |                                 |           |   |                                      |   |                    |                               |
| 111.2<br>(82.9)     | 12700<br>(56.5)                | 3.28<br>(5.28)         | 2022                            | 9.1       | 0.517<br>(0.314)                          | 13.77<br>(2.71)                      | 181<br>(83)                                     | 52<br>(11)         | 29.8<br>(101.0)               |
| Turtle 4            |                                |                        |                                 |           |   |                                      |   |                    |                               |
| 112.9<br>(84.2)     | 9890<br>(44.0)                 | 4.28<br>(6.88)         | 2002                            | 5.2       | 0.514<br>(0.313)                          | 13.85<br>(2.73)                      | 181<br>(83)                                     | 52<br>(11)         | 29.8<br>(101.0)               |
| Turtle 5            |                                |                        |                                 |           |   |                                      |   |                    |                               |
| 113.9<br>(84.9)     | 7420<br>(33.0)                 | 5.76<br>(9.27)         | 2002                            | 3.8       | 0.508<br>(0.309)                          | 14.01<br>(2.76)                      | 180<br>(82)                                     | 46<br>(8)          | 29.5<br>(100.0)               |
| Turtle 6            |                                |                        |                                 |           |   |                                      |   |                    |                               |
| 111.3<br>(83.0)     | 6500<br>(28.9)                 | 6.42<br>(10.33)        | 2011                            | 3.2       | 0.516<br>(0.314)                          | 13.81<br>(2.72)                      | 181<br>(83)                                     | 48<br>(9)          | 29.5<br>(100.0)               |
| Turtle 7            |                                |                        |                                 |           |   |                                      |   |                    |                               |
| 110.6<br>(82.5)     | 5235<br>(23.3)                 | 7.92<br>(12.75)        | 2021                            | 1.8       | 0.512<br>(0.311)                          | 13.91<br>(2.74)                      | 181<br>(83)                                     | 48<br>(9)          | 29.5<br>(100.0)               |
| Rabbit 8            |                                |                        |                                 |           |   |                                      |   |                    |                               |
| 107.4<br>(80.1)     | 8050<br>(35.8)                 | 5.00<br>(8.04)         | 2038                            | 4.1       | 0.531<br>(0.323)                          | 13.40<br>(2.64)                      | 180<br>(82)                                     | 50<br>(10)         | 29.5<br>(100.0)               |
| Rabbit 9            |                                |                        |                                 |           |   |                                      |   |                    |                               |
| 109.4<br>(81.6)     | 6285<br>(27.9)                 | 6.53<br>(10.51)        | 2052                            | 3.7       | 0.505<br>(0.307)                          | 14.11<br>(2.78)                      | 183<br>(84)                                     | 52<br>(11)         | 29.5<br>(100.0)               |
| Rabbit 10           |                                |                        |                                 |           |   |                                      |   |                    |                               |
| 110.6<br>(82.5)     | 5525<br>(24.6)                 | 7.51<br>(12.08)        | 2028                            | 3.1       | 0.516<br>(0.314)                          | 13.81<br>(2.72)                      | 183<br>(84)                                     | 54<br>(12)         | 29.5<br>(100.0)               |
| Rabbit 11           |                                |                        |                                 |           |   |                                      |   |                    |                               |
| 111.4<br>(83.1)     | 5075<br>(22.6)                 | 8.23<br>(13.25)        | 2022                            | 2.4       | 0.506<br>(0.308)                          | 14.06<br>(2.77)                      | 183<br>(84)                                     | 54<br>(12)         | 29.5<br>(100.0)               |
| Rabbit 12           |                                |                        |                                 |           |   |                                      |   |                    |                               |
| 107.3<br>(80.0)     | 3890<br>(17.3)                 | 10.35<br>(16.65)       | 2026                            | 1.9       | 0.524<br>(0.319)                          | 13.55<br>(2.67)                      | 183<br>(84)                                     | 54<br>(12)         | 29.5<br>(100.0)               |

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

**NOTE 1:** The performance figures on this report apply to tractors equipped with a Sisu engine.

**NOTE 2:** The performance figures on this report are the result of replacing the electronic engine control module of the Massey Ferguson 7480 with the Massey Ferguson 7475 module.

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. 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. **2579**, Nebraska Summary 776, July 6, 2011.

Roger M. Hoy  
Director

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

| TRACTOR SOUND LEVEL WITH CAB | Front wheel drive |                     |
|------------------------------|-------------------|---------------------|
|                              | Engaged<br>dB(A)  | Disengaged<br>dB(A) |
| At no load in Turtle 4       | 68.0              | 68.0                |
| Bystander                    |                   | --                  |

#### TIRES, BALLAST AND WEIGHT

**Rear Tires** - No., size, ply & psi(kPa)  
**Front Tires** - No., size, ply & psi(kPa)  
**Height of Drawbar**  
**Static Weight with operator** - Rear  
 - Front  
 - Total

#### Tested without ballast

Two 650/65R38; \*\*; 14(100)  
 Two 540/65R28; \*\*; 16(110)  
 18.9 in (480 mm)  
 9515 lb (4315 kg)  
 6435 lb (2920 kg)  
 15950 lb (7235 kg)

## HYDRAULIC PERFORMANCE

CATEGORY: III

Quick Attach: None

OECD Static test

|   |                        |
|---|------------------------|
| Maximum force exerted through whole range:      | 11555 lbs (51.4 kN)    |
| i) Sustained pressure of the open relief valve: | 2900 psi (200 bar)     |
| ii) Pump delivery rate at minimum pressure:     | 30.9 GPM (117.0 l/min) |
| iii) Pump delivery rate at maximum              |                        |
| hydraulic power:                                | 28.1 GPM (106.4 l/min) |
| Delivery pressure:                              | 2320 psi (160 bar)     |
| Power:  | 38.0 HP (28.3 kW)      |

### THREE POINT HITCH PERFORMANCE - SAE Test

|                                      |                |
|--------------------------------------|----------------|
| Observed Maximum Pressure psi. (bar) | 2900 (200)     |
| Location:                            | lift cylinder  |
| Hydraulic oil temperature: °F (°C)   | 158 (70)       |
| Location:                            | hydraulic sump |
| Category:                            | III            |
| Quick attach:                        | None           |

System pressure 2610 psi (180 bar)

|   |           |            |            |            |            |            |
|---|-----------|------------|------------|------------|------------|------------|
| Hitch point distance to ground level in. (mm) | 9.8 (250) | 15.4 (390) | 21.4 (543) | 26.7 (678) | 32.1 (816) | 38.3 (972) |
| Lift force on frame lb                        | 12905     | 13085      | 13735      | 14250      | 14480      | 13985      |
| " " " " " " (kN)                              | (57.4)    | (58.2)     | (61.1)     | (63.4)     | (64.4)     | (62.2)     |

### HITCH DIMENSIONS AS TESTED - NO LOAD

|   | SAE TEST |      | OECD TEST |      |
|---|----------|------|-----------|------|
|   | inch     | mm   | inch      | mm   |
| A | 30.6     | 776  | 31.2      | 793  |
| B | 14.0     | 355  | 14.0      | 355  |
| C | 13.7     | 348  | 13.7      | 348  |
| D | 12.0     | 305  | 12.0      | 305  |
| E | 8.8      | 223  | 12.6      | 321  |
| F | 10.3     | 261  | 10.3      | 261  |
| G | 34.5     | 875  | 34.5      | 875  |
| H | 2.6      | 65   | 2.6       | 65   |
| I | 16.4     | 416  | 15.0      | 380  |
| J | 24.2     | 614  | 24.2      | 614  |
| K | 25.8     | 655  | 25.8      | 655  |
| L | 45.9     | 1166 | 45.9      | 1166 |
| M | 26.4     | 670  | 26.4      | 670  |
| N | 40.2     | 1021 | 40.2      | 1021 |
| O | 9.8      | 250  | 8.5       | 217  |
| P | 46.2     | 1173 | 51.1      | 1299 |
| Q | 38.3     | 972  | 37.8      | 960  |
| R | 29.2     | 742  | 29.9      | 760  |

