January 2000

Test 1769: AGCO Allis 8745 Diesel (Cummins Engine)

Nebraska Tractor Test Laboratory Submitted by Larsen Museum

University of Nebraska-Lincoln

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NEBRASKA TRACTOR TEST 1769
WHITE 6410 DIESEL
ALSO AGCO ALLIS 8745 DIESEL (CUMMINS ENGINE)
ALSO AGCO LT70 DIESEL 12 SPEED

Location of Test: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln Nebraska 68583-0832
Dates of Test: March 16-17, 2000
Manufacturer: AGCO Corporation, Duluth Georgia 30096

FUEL, OIL and TIME: Fuel No. 2 Diesel Specific gravity converted to 60°/60° F (15°/15°C) 0.8487 Fuel weight 7.067 lbs/gal (0.847 kg/l) Oil SAE 15W40 API service classification CE/CF-4 Transmission and hydraulic lubricant AGCO Power Fluid 821 XL fluid Total time engine was operated 10.0 hours

ENGINE: Make Cummins Diesel Type four cylinder vertical with turbocharger Serial No. 21299443 Crankshaft lengthwise Rated engine speed 2200 Bore and stroke 4.016" x 4.724" (102.0 mm x 120.0 mm) Compression ratio 17.0 to 1 Displacement 239 cu in (3920 ml) Starting system 12 volt Lubrication pressure Air cleaner one paper element and one polyester felt element Oil filter one full flow cartridge Oil cooler engine coolant heat exchanger for crankcase oil Fuel filter one paper element and one polyester felt element Muffler underhood

ENGINE OPERATING PARAMETERS: Fuel rate: 32.7 - 36.1 lb/h (14.8 - 16.4 kg/h) High idle: 2350 - 2450 rpm Turbo boost: nominal 20.0 - 23.5 psi (138 - 162 kPa) as measured 21.8 psi (150 kPa)

CHASSIS: Type standard Serial No. G08191 Tread width rear 56.1" (1425 mm) to 83.9" (2130 mm) front 54.0" (1372 mm) to 78.0" (1981 mm) Wheelbase 96.0" (2438 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio Nominal travel speeds mph (km/h) first 1.44 (2.32) second 1.73 (2.79) third 2.16 (3.48) fourth 2.58 (4.16) fifth 3.96 (6.38) sixth 4.77 (7.68) seventh 5.90 (9.49) eighth 7.10 (11.42) ninth 8.85 (14.24) tenth 10.64 (17.13) eleventh 16.22 (26.10) twelfth 19.51 (31.40) reverse 2.16 (3.48) 2.60 (4.19) 8.85 (14.24) 10.64 (17.13) Clutch multiple wet disc operated by foot pedal Brakes single wet disc hydraulically operated by two foot pedals which can be locked together Steering hydrostatic Power take-off 540 rpm at 1902 engine rpm or 1000 rpm at 2000 engine rpm Unladen tractor mass 7975 lb (3617 kg)
THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II

Quick Attach: None

Maximum Force Exerted Through Whole Range: 3348 lbs (14.9 kN)

Sustained pressure of the open relief valve: 3010 psi (207 bar)

Pump delivery rate at minimum pressure and rated engine speed:

i) Opening pressure of relief valve: NA

ii) Pump delivery rate at minimum pressure and rated engine speed:

Pump delivery rate at maximum hydraulic power:

Delivery pressure: 2870 psi (198 bar)

High lift Option

Combination flow

Power: 12.7 HP (9.5 kW)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

REPORTS AND ADJUSTMENTS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. For the maximum power tests, the fuel temperature at the injection pump was maintained at 141°F (61°C).


Leonard L. Bashford
Director

M.F. Kocher
V.I. Adamchuk
G.J. Hoffman
Board of Tractor Test Engineers

SAE Static Test  System pressure 2990 psi (206 Bar)

Hitch point distance to ground level in. (mm) 7.7(196) 14.9(378) 21.9(556) 28.9(729) 35.7(907)

Lift force on frame lb (kN) 6894 (30.7) 7421 (33.0) 7565 (33.7) 7488 (33.3) 7425 (33.0)

SAE Static Test  System pressure 2990 psi (206 Bar)

Hitch point distance to ground level in. (mm) 9.4(239) 15.1(384) 21.9(556) 28.9(729) 35.7(907)

Lift force on frame lb (kN) 4115 (18.3) 4500 (20.0) 4631 (20.6) 4615 (20.5) 4743 (21.1)

HITCH DIMENSIONS AS TESTED - NO LOAD

High lift option

inch  mm  inch  mm
A  31.0  788  34.0  864
B  12.2  310  12.2  310
C  15.1  384  15.1  384
D  9.4  240  9.4  240
E  7.6  192  7.6  192
F  8.3  210  11.0  280
G  31.3  795  31.3  795
H  1.3  32  1.3  32
I  5.7  145  5.7  145
J  23.0  585  20.3  515
K  26.3  667  24.3  622
L  38.3  972  41.3  1048
M  21.8  552  24.8  629
N  39.0  991  42.0  1067
O  7.9  200  7.9  200
P  47.0  1195  44.3  1125
Q  33.9  860  35.1  841
R  31.6  802  32.1  815

White 6410 Diesel

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