1736A & 1736AF Series V Haulage Tractors

ENGINE

Model
John Deere 6068HF285

Configuration
Six-cylinder, in-line

Emission certification
Tier 3/Stage IIIA

Aspiration
Turbo charged & A/A intercooled

Displacement
6.8 Litre

Net power
173 hp / 129 kW

Torque rise
32%

Governed engine speed
2 200 rpm

Maximum torque (Net, Nm @ rpm)
714 Nm @ 1 500 rpm

Compression ratio
19:1

Engine/transmission cooling
Custom built high debris tolerant cooling pack with spacing. Transmission cooler mounted side by side with the radiator and the CAC.

Engine exhaust/retardation
Pneumatically engaged exhaust brake.

Engine air cleaner
Dual stage air filter with heavy duty pre-cleaner.

TRANSMISSION

Model
Allison #3000

Torque converter layout
Hydrodynamic with lock-up in 1-6 gears and converter mode in gears 1 & 2

TRANSFER CASE

Layout
1736A: N/A
1736AF: Mounted off the rear differential.

REAR AXLE

Bell structural steel 13-ton axle

Static load rating
32 500 kg

Dynamic load rating
13 000 kg

FRONT AXLE

1736A: Bell
1736AF: Carraro cast iron, steering axle, centre pivot, side input

Static Load Rating
1736A: 7 590 kg
1736AF: 5 750 kg

Dynamic Load Rating
1736A: 3 600 kg
1736AF: 3 600 kg

STEERING SYSTEM

Single steering cylinder with through-rod and adjustable tie-rod ends.

BRAKING SYSTEM AND BRAKING FORCE

Disc brakes
Service brake
Rear axle braking only.
430 mm ventilated dry disc using pneumatic dual function actuator.

Park brake
Rear axle braking only.
Spring applied, pneumatic release.

Brake system charge & release pressure
8,5 bar

Braking force
Brake torque per wheel:
25 412 Nm

Specification compliance
SANS 1447-1:2007 Ed.2

WHEELS

1736A Wheels
600/65R38
315/80R22.5

1736AF Wheels
420/70R24
580/70R38

UNLADEN MACHINE SPEEDS (GOVERNED)

1736A:

1st gear	10,3 km/hr
2nd gear	19,3 km/hr
3rd gear	25,6 km/hr
4th gear	36,0 km/hr
5th gear	40,0 km/hr
6th gear	40,0 km/hr

1736AF:

1st gear	9,8 km/hr
2nd gear	18,3 km/hr
3rd gear	24,2 km/hr
4th gear	34,6 km/hr
5th gear	40,0 km/hr
6th gear	40,0 km/hr

SUSPENSION

Front
1736A: Coil springs on front axle.

1736AF: Centre pivot above the axle.

Rear
None

HYDRAULIC SYSTEM

Pump application
Pump supplying steering (with priority flow valve) and hitch lift and trailer auxiliary (2 function direct lever control valve).

Rated flow @ engine governed rpm
61,2 L/min
153 L/min(hi-flow option)

Control valve relief pressure
210 bar

STEERING SYSTEM

Steering orbitrol valve

Lock-to-lock turns
3,5

PNEUMATIC SYSTEM

System pressure
8.5 bar

Air reservoir capacity
30 L

Auxiliary (trailer) air supply
Quick coupler at vehicle rear

ELECTRICAL SYSTEM

Voltage
24 V

Alternator rating
24V/80A

Battery rating
100 Ah x 2

CAB

Fully enclosed with HVAC.

ROPS certified to ISO5700:2013.

FOPS certified to ISO27850:2013.

Mounting
Rubber

Operator seat
Mechanical suspension. Lap strap restraining belt.

Operator trainer seat
Optional side mounted rigid seat with lap strap restraining belt.

Ventilation
Heater ventilation & airconditioning (HVAC)

Guarding
Full-size expanded mesh rear window cab guard.

Instrumentation
Air pressure, engine speed, machine speed, engine coolant temperature, fuel level and hour meter permanently displayed. Audible warning buzzer and colour change to red as warning of undesirable conditions.

FRONT BODYWORK

Bonnet
Front section one-piece fibre glass bonnet.

Hinges towards rear at an angle of 70 degrees for full-service access to coolers, engine and transmission.

Grill
Part of the bonnet

Fluid tanks
Side-side diesel / hydraulic tank.

Optional long-range spill over tank mounted to LHS of chassis.

Rear mudguards
Steel with integrated tail-lights, and front indicator lights

OPTIONS

- FM radio
- Fleetm@tic®
- Underside belly plates
- 140L Long-range tank
- Trainer seat
- Hi-flow hydraulic
- Front guard

DRIVE-BY NOISE EMISSION

SANS 10205:2007
88 dBA

HITCH

Certified capacity:
5 097 kg

Hitch forward of rear axle:
65 mm

FLUID CAPACITIES

Standard option

• Hydraulic oil	94 L
• Diesel:	
- standard	160 L
• Front axle oil	8.5 L
• Rear axle oil	32 L
• Engine oil	19 L
• Transmission oil	28 L
• Transfer case oil:	
- 1736A	N/A
- 1736AF	2,5 L

Long range/Hi-flow option

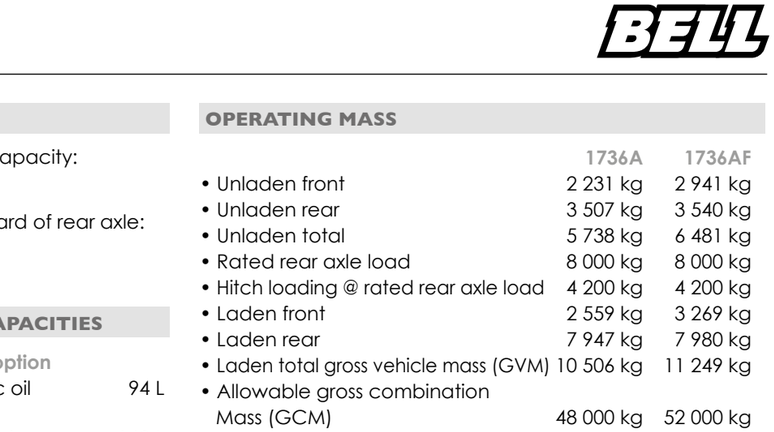
• Hydraulic oil	132 L
• Fuel tank	253 L

OPERATING MASS

	1736A	1736AF
• Unladen front	2 231 kg	2 941 kg
• Unladen rear	3 507 kg	3 540 kg
• Unladen total	5 738 kg	6 481 kg
• Rated rear axle load	8 000 kg	8 000 kg
• Hitch loading @ rated rear axle load	4 200 kg	4 200 kg
• Laden front	2 559 kg	3 269 kg
• Laden rear	7 947 kg	7 980 kg
• Laden total gross vehicle mass (GVM)	10 506 kg	11 249 kg
• Allowable gross combination Mass (GCM)	48 000 kg	52 000 kg

Gradeability/Rimpull

1. Determine the GCM (mass) of the rig.
2. Estimate grade and find the corresponding (red) line.
3. Where vertical (mass) line and red (grade) line cross.
4. Draw a horizontal line to intersect tractive chart on the right.
5. Drop a vertical line at that point and read off the maximum speed at a given grade and mass.



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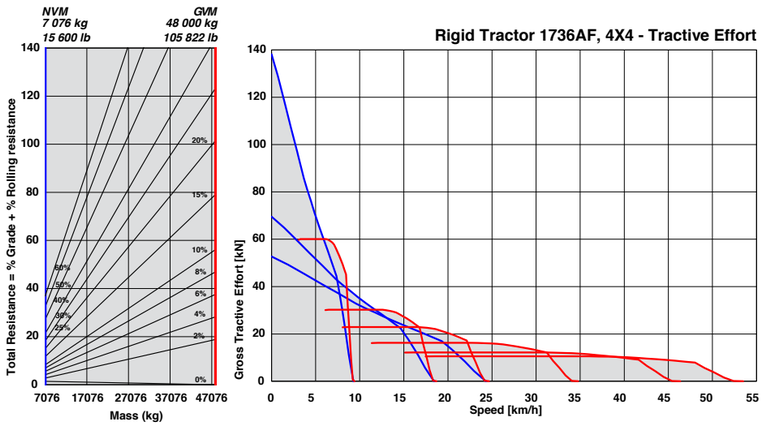
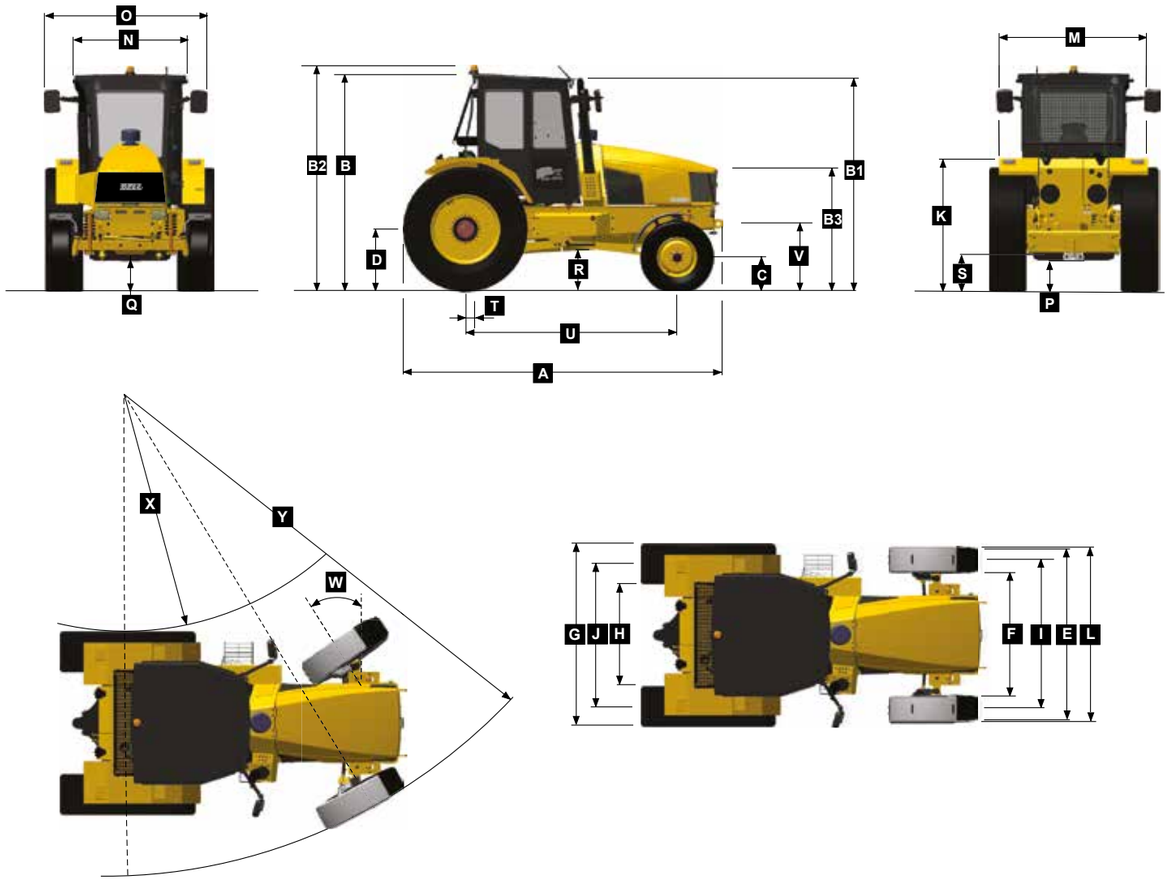


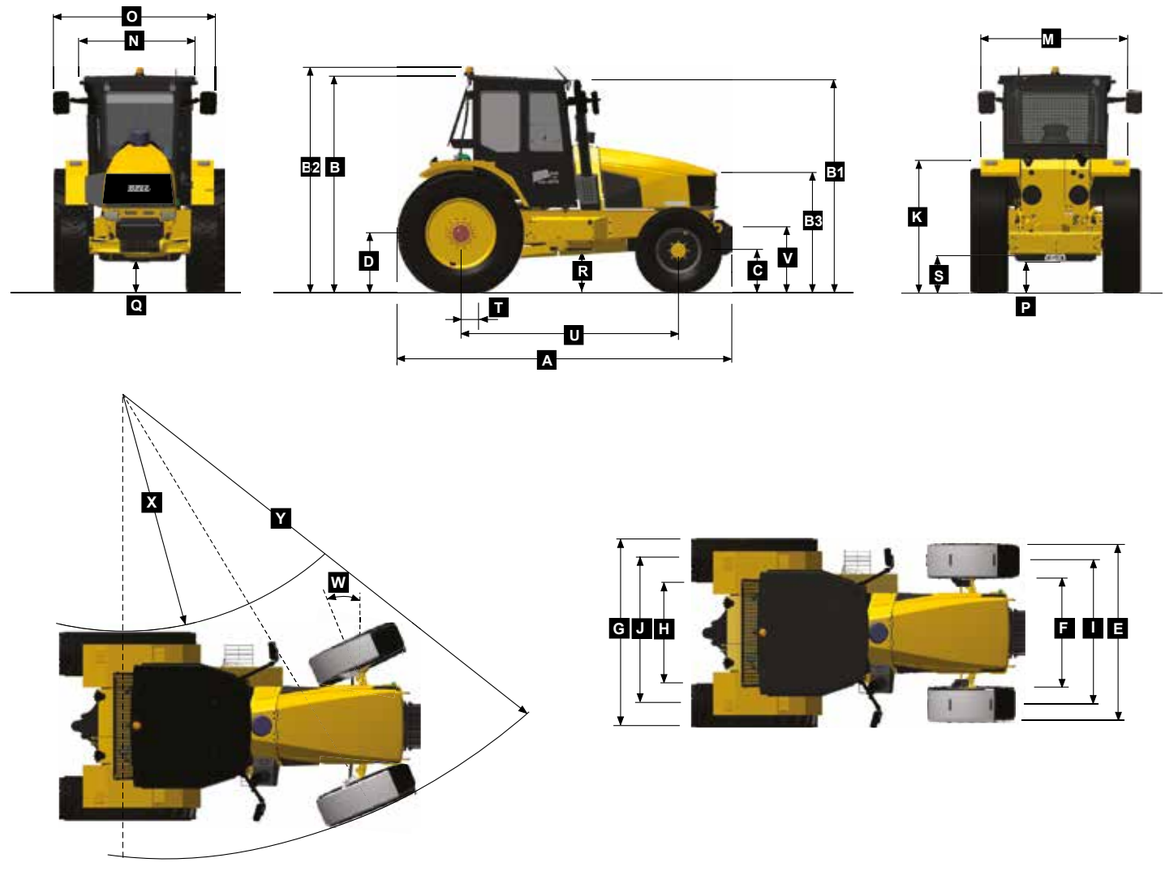
Dimensions



Machine Dimensions

A	Length-Transport Position	4 697 mm
B	Height-Cab	3 197 mm
B1	Height-Exhaust Stack	3 146 mm
B2	Height-Rotating Beacon	3 317 mm
B3	Height-Bonnet Front	1 845 mm
C	Height-Front Axle Centre(Rolling Radius)	543 mm
D	Height-Rear Axle Centre (Rolling Radius)	915 mm
E	Width over Tyres-Front - 315/80 R22.5	2 292 mm
F	Inside Tyre Width-Front	1 668 mm
G	Width over Tyres-Rear - 540/80 R38	2 476 mm
H	Inside Tyre Width - Rear	1 376 mm
I	Tyre Track Width - Front	1 980 mm
J	Tyre Track Width - Rear	1 926 mm
K	Height-Rear Mudguard	1 963 mm
L	Width over Mudguards Front	2 380 mm
M	Width over Mudguards Rear	2 172 mm
N	Width over Cab	1 675 mm
O	Width over Mirrors - Operating Position	2 393 mm
P	Ground Clearance - Hitch	461 mm
Q	Ground Clearance - Front Axle	521 mm
R	Ground Clearance - Max	648 mm
S	Height-Hitch Ball Centre	552 mm
T	Rear Axle Centre to Ball Hitch Centre	63 mm
U	Front Axle Centre to Rear Axle Centre	3 106 mm
V	Front Tie Down Height	1 036 mm
W	Maximum Steering Angle	34°
X	Inner Turning Circle Radius	3 814 mm
Y	Outer Turning Circle Radius	7 030 mm

Dimensions



Machine Dimensions

A	Length-Transport Position	4 844 mm
B	Height-Cab	3 195 mm
B1	Height-Exhaust Stack	3 104 mm
B2	Height-Rotating Beacon	3 313 mm
B3	Height-Bonnet Front	1 755 mm
C	Height-Front Axle Centre(Rolling Radius)	627 mm
D	Height-Rear Axle Centre (Rolling Radius)	918 mm
E	Width over Tyres-Front-420/70 R24	2 288 mm
F	Inside Tyre Width-Front	1 450 mm
G	Width over Tyres-Rear-580/70 R38	2 510 mm
H	Inside Tyre Width-Rear	1 342 mm
I	Tyre Track Width-Front	1 869 mm
J	Tyre Track Width-Rear	1 926 mm
K	Height-Rear Mudguard	1 962 mm
M	Width over Mudguards Rear	2 172 mm
N	Width over Cab	1 675 mm
O	Width over Mirrors-Operating Position	2 393 mm
P	Ground Clearance-Hitch	458 mm
Q	Ground Clearance-Front Axle	500 mm
R	Ground Clearance-Max	616 mm
S	Height-Hitch Ball Centre	550 mm
T	Rear Axle Centre to Ball Hitch Centre	54 mm
U	Front Axle Centre to Rear Axle Centre	3 142 mm
V	Front Tie Down Height	946 mm
W	Maximum Steering Angle	25°
X	Inner Turning Circle Radius	5 554 mm
Y	Outer Turning Circle Radius	8 617 mm