



B600

CONVENTIONAL TOW TRACTOR

DESCRIPTION & SPECIFICATIONS



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1. GENERAL DESCRIPTION

1.1. GENERAL

The B600 Aircraft Tow Tractor is a low profile, heavy duty, diesel powered, four wheel drive, two wheel or four wheel (optional) steer tractor for aircraft pushing and towing. It is capable of handling aircraft up to the A330 and B767 even under adverse ramp conditions.

The B600 provides a lower Total Cost of Ownership (TCO) with a design that provides excellent operator visibility, ability to tow a broad range of aircraft, low maintenance driveline components and a simple, but robust design for an extended useful life.

1.2. PERFORMANCE

The B600 delivers a lower TCO by providing features and benefits focused on the key components of TCO including:

Exceptional Safety:

- **Outstanding Visibility** – The B600 has excellent front and rear visibility with sloped rear fenders, notched back design and a large front window that allows the operator to see the front and rear hitches from a seated position in the cab eliminating the need for cameras or lift cabs.
- **Back-up Braking System** . In the unlikely event of engine or hydraulic failure back-up hydraulic pressure is made available by an on-board accumulator to stop the tractor safely. There are three levels of safety on the brake system including: a tandem service brake valve, a failsafe park brake and accumulator back-up.
- **Ergonomic and Safe Operator Environment** . The tractor has ergonomic drive controls which allow precise drive control, for critical operations like connecting the tow bar. Other safety features include a heavy duty bumper and low noise levels.

Efficient Operation:

- **Highly Maneuverable** . The B600 is a highly maneuverable tractor with a small footprint and a tight turning radius especially with the 4 wheel steer.
- **Broad Towing Capability** . The B600 is capable of handling aircraft up to the A330 and B767. It is one of 3 models in the product family that is capable of covering the entire range of aircraft from RJø to B747s. This results in lower investment in specialty tractors with a limited range.
- **Highest Quality Components** . Our conventional tractor product line has modern, fuel efficient engines and drivetrains with the highest quality components.

Easy Maintenance:

- **Excellent Engine Access** – The B600 is designed for extended service intervals with easy access to all major components and filters located adjacent to access hatches.

- **Low Maintenance Driveline Components** . The driveline is designed with safety margin and built with only the highest quality axles, transmissions and engines.
- **Weather Tight Electrical Boxes** . The harnesses are connectorized and modular, corrosion and water resistant and shielded where necessary.

Extended Reliability:

- **Longer Life** . Our conventional tractors are designed for a 20 year useful life with many in operation well beyond this. They are made of heavy-duty steel plate with a high quality drive train. The tractors are subjected to high assembly and test standards including drawbar and brake testing.
- **High Quality Components** . Reliability is extended through the use of the highest quality axles, transmissions and engines.
- **Robust Design** . Our robust design is proven to withstand ramp conditions. The design includes a ring of steel, only flat glass, steel dash, oversized hinges, heavy hoods and hatches, etc. The design has the power of simplicity+ --- it is very simple, but functional without a lot of unnecessary bells and whistles that can reduce overall reliability.
- **Unparalleled Global Service Support** . We offer truly global spare parts and field capability to extend the life of your tractors.
- **Highest Quality Standards** . All of our manufacturing facilities are ISO 9001 certified including facilities in Orlando, Madrid and Juarez.

2. TECHNICAL SPECIFICATION

2.1. GENERAL

The B600 Aircraft Tow Tractor is a low profile, heavy duty, diesel powered, four wheel drive, two wheel or four wheel (optional) steer tractor for aircraft pushing and towing.

The B600 is our mid-range conventional aircraft tow tractor capable of handling aircraft up to the A330 and B767 even under the most adverse ramp conditions.

2.2. APPLICABLE DOCUMENTS

The B600 complies with the majority of the important specifications and requirements set out in the following documents and publications.

- OSHA: Occupational Safety and Health Standards
- SAE: Aerospace Cargo and Ground Equipment Handbook
- ARP: Aerospace Recommended Practice
- AIR: Aerospace Information Report
- ARP 1247B: General Requirements for Aerospace Ground Support Equipment
- AIR1363: Four Wheel Drive Aircraft Tow Tractors . Factors for Design Consideration
- AIR 1375: Minimum Safety Requirements for Special Purpose Airline Ground Support Equipment

- ARP 1330A: Welding of Structures for Ground Support Equipment

2.3. AIRCRAFT COMPATIBILITY

Aircraft Manufacturer							
Airbus	A300	A310	A318	A319	A320	A321	A330
Boeing	B707	B717	B727	B737	B757	B767	
British Aerospace	BAE146						
Douglas	DC9	DC10					
Lockheed	L1011						
McDonnell Douglas	MD80	MD81	MD82	MD83	MD90		

2.4. WEIGHT AND DIMENSIONS

Gross Vehicle Weight (GVW) and Drawbar Pull (DBP): The B600 is available with a standard GVW and DBP and optional ballast kits to increase the GVW and DBP as shown below:

	<u>Gross Vehicle Weight</u>	<u>Drawbar Pull</u>
• Standard	18,144 kg (40,000 lb)	142 kN (32,000 lbf)
• Option 1	22,680 kg (50,000 lb)	178 kN (40,000 lbf)
• Option 2	27,216 kg (60,000 lb)	214 kN (48,000 lbf)

Overall Dimensions:

• Length (without couplers)	5.06 m (199 in)
• Width	2.59 m (102 in)
• Height (to fender)	1.45 m (57 in)
• Height (to hood)	1.59 m (62.5 in)
• Height (with cab)	2.08 m (82 in)
• Wheelbase	2.29 m (90 in)
• Ground Clearance (to frame)	178 mm (7 in)

2.5. POWER UNIT

- Engine: Deutz TCD 2012L06, 155 kW (208 hp), COM/Tier 3

2.6. OPERATING PERFORMANCE

• Drive Speed (forward without load)	24 km/hr (15 mph)
• Drive Speed (reverse without load)	16 km/hr (10 mph)
• Turning Radius (outside - 2WS)	6.4 m (21 ft)
• Turning Radius (outside - 4WS)	4.3 m (14 ft)

2.7. CHASSIS

- Heavy duty, uni-welded steel body equipped with removable ballast located between front and rear wheels in the ballast compartment
- Equipped with a %notched+rear plate to provide an open channel extending from behind the operator's compartment to the rear of the tractor, known as the %notch-back+design

2.8. TRANSMISSION

- Funk 2000 power shift with torque converter and interaxle differential
- Funk Shifter with six (6) forward speeds and three (3) reverse speeds

2.9. ELECTRICAL SYSTEM

- 24-Volt DC negative ground system
- Batteries . two (2) - 12V 625 CCA with heavy duty starter and alternator
- Head lights, taillights, reverse lights and turn signals
- Electrical control panel mounted in cab

2.10. HYDRAULIC SYSTEM

- Centralized hydraulic system using an efficient load sensing piston pump for steering and braking

2.11. STEERING SYSTEM

- Two wheel steer system standard with four wheel steer system optional

2.12. BRAKE SYSTEM

- Service: 4 wheel, dry shoe hydraulic powered
- Back Up: Accumulator
- Parking: Transmission mounted, cable applied with interlock

2.13. AXLES

- Meritor - 4 wheel drive
- 2 wheel steer standard and 4 wheel steer (optional)
- Rigid mounted, rear axle with 4 Degree Roll

2.14. TIRES

- 385/65R22.5 radial front and rear tires

2.15. CAB

- All weather steel construction cab with safety glass
- Heater and defroster in front and defroster in rear
- Mirrors . Interior, LHS, RHS, rear coupler
- Wipers and washers . 2 in front, 1 in rear and 1 for overhead window
- Interior lights
- Fan . swivel vent
- Visors (2) . inside cab
- Seats (2) . adjustable vinyl, non-suspension with retracting seat belts

2.16. TOWING COUPLERS

- 2 level with 63.5 mm (2.5 in) pin - front and rear
- Standard height . 406 mm (16 in)

2.17. PAINT

- Exterior . One color polyurethane
- Hitch . Red

2.18. OPERATION AND SAFETY MONITORING

The table below shows all of the operation and safety monitoring equipment available with the B600.

Operation and Safety Monitoring						
Monitored Conditions	Location	Gauge	Warning Light	Audible Alarm	Engine Derate	Engine Shutdown
Alternator Failure	Dash		X			
Back Up Alarm	Chassis			X		
Brake Pressure	Dash		X	X		
Check Engine - Warning	Dash		X			
Check Engine - Stop	Dash		X	X		X
Engine Coolant Level	Dash		X	X		X
Engine Coolant Temperature	Dash	X	X	X		X
Engine Oil Pressure	Dash	X	X	X		X
Fuel Level	Dash	X				
Fuel Level - Low	Dash		X			
Grid Heater - Wait to Start	Dash		X			
Hour Meter	Dash	X				
Hydraulic Oil Level	Tank	X				
Hydraulic Oil Temperature	Dash		X			
Park Brake	Dash		X			
Shift to Neutral	Dash			X		
Speedometer/Odometer	Dash	X				
Tachometer	Dash	X				
Transmission Oil Pressure	Dash	X				
Transmission Oil Temperature	Dash	X				
Voltmeter	Dash	X				

X = Standard Equipment and O = Optional Equipment

2.19. ADDITIONAL SAFETY FEATURES

The table below shows additional safety features available with the B600.

Additional Safety		
Emergency Stop Button	Dash	X
Switch - Emergency Hydraulic Pump	Dash	O
Switch - Engine Shutdown Override	Main Panel	X
Switch - Keyed Ignition Anti-restart	Dash	O
Switch - Keyless Ignition Anti-Restart	Dash	X

X = Standard Equipment and O = Optional Equipment

2.20. OPTIONAL FEATURES

- Ballast kits to increase gross vehicle weight and drawbar pull
- Cummins diesel engine
- 4 wheel steer system
- CE and PONYA requirement packages
- Open cab
- Sound insulation
- Driver and passenger suspension seats
- Intercom jacks and cable system
- Battery disconnect master switch
- Keyed ignition
- Variety of beacon and work light options
- Cold weather winterization packages

- Fire extinguishers

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