

## INTRODUCING THE *integrated* DETROIT POWERTRAIN.



Only one company can deliver this level of *integration*.

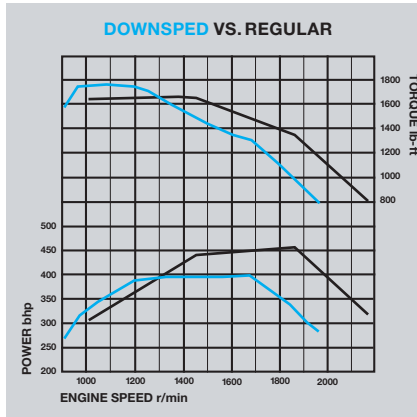
Detroit has designed, engineered and manufactured the engine, transmission and axles to work together to lower your Real Cost of Ownership.™ Available in the Freightliner Cascadia® Evolution and the all-new Western Star® 5700.

### DD15® ENGINE



*We all know slowing down is the best way to save fuel, so we've designed an engine that can cruise at the same road speed at lower RPMs, reducing fuel consumption and friction. This, made possible by *integrating* our fastest-ever tandem axle and made easy with our smooth-shifting DT12.*

- 1750 lb-ft torque at 1075 RPM, which pulls down to 975 RPM
- 400 horsepower at 1625 RPM, with usable power from 1100 RPM
- Dropping engine speed reduces the number of fuel injections, dramatically improving fuel economy
- *Integrated* with an automated manual transmission and fast axle ratio, this engine torque curve keeps you in top gear longer
- Lower RPMs at cruise speed reduces friction, leading to higher efficiency *AND* reliability
- New 6-blade cooling fan design draws less power, so the engine doesn't burn as much fuel



Power	400 HP @ 1625 RPM
Torque	1750 lb-ft @ 1075 RPM
Displacement	906 cu. in. (14.8 L)
Bore	5.47 in. (139 mm)
Stroke	6.42 in. (163 mm)
Compression Ratio	18.4:1
Weight	2763 lbs. (1254 kg)
Oil Capacity	45.5 qts. (43 L)

# DT12™ TRANSMISSION

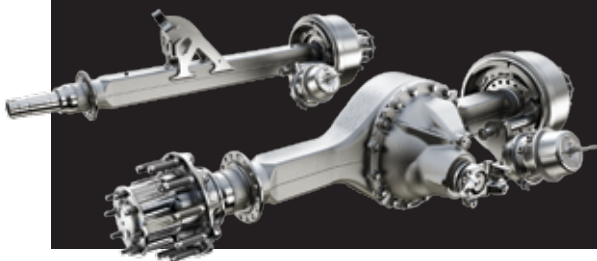


With our DT12 transmission linking engine to axles, the *integrated* Detroit Powertrain is not only strong and efficient, but smooth and safe to operate as well. With direct drive top gearing, the DD15 doesn't waste power as it puts it down to the Detroit tandem axle. With 12 tightly spaced speeds, the DT12 always knows where the sweet spot is.

- Intelligent Powertrain Management (IPM) *integrates* terrain maps into engine and transmission functions so the truck works with its surroundings, not against them
- eCoast is *integrated* with the downsped engine, now working at 500 RPM, adding to fuel savings
- Direct drive offers the most efficiency while cruising in top gear
- An *integrated* communication network allows the DT12 to share damage-reducing information, such as clutch overloading and active driveline protection

Torque Input	1750 lb-ft
Forward Gears / Ratios	12 / 14.93 - 1
Reverse Gears / Ratios	4 / - 16.39 to - 2.90
GCW Rating	80,000 lbs. (36,300 kg)
Clutch	16.9 in. (430 mm)
Length	40.2 in. (102 cm)
Weight	789 lbs. (358 kg)
Oil Capacity	15.4 qts. (14.6 L)

## TANDEM AXLES



Our tandem drive axle features fast ratios and is engineered to improve fuel economy without sacrificing durability.

- 6x2 single drive with tag axle configuration with a non-driven tag axle saves 380 pounds and reduces complexity
- The 6x2 axle is integrated with the downsped torque curve and a direct-drive transmission to deliver better fuel economy regardless of cruise speed
- 6x4 configuration is available for applications requiring superior traction

Model	Model 4, 6x4 Tandem Axle	Model 6, 6x2 Single Drive w/ Tag Axle
Weight Rating	40,000 lbs. (18,141 kg)	40,000 lbs. (18,141 kg)
Housing Wall Thickness	0.43 in. (11 mm)	Drive Axle: 0.37 in. (9.5 mm) Tag Axle: 0.43 in. (11 mm)
Max. Creep Rating	55,200 lbs. (25,038 kg)	48,000 lbs. (21,780 kg)
Ring Gear Size	15.35 in. (390 mm)	17.32 in. (440 mm)
Oil Capacity	Forward Axle: 16 qts. (15 L) Rear Axle: 12 qts. (11 L)	12 qts. (11 L)
Input Torque	1750 lb-ft	1750 lb-ft
Drive Ratio	2.412	2.412

## STEER AXLE



Detroit steer axles match rugged strength with a lightweight design, and function optimally with the other components.

- Multiple ratings available for tailored weight distribution
- Needle bearings won't damage the kingpins, and are designed for the life of the axle

Weight Rating	12,000 lbs. (5442 kg)	12,500 lbs. (5670 kg)	13,300 lbs. (6033 kg)
Kingpin Intersection	71.5 in. (1,816.1 mm)		
Axle Beam Drop	3.74 in. (96 mm)		
Max. Wheel Cut Angle	55 degrees		
Kingpin Diameter	1.77 in. (45 mm)		

