



DETROIT[®] SINGLE REAR AXLES

TECHNICAL SPECIFICATIONS

WEIGHT RATINGS **13,000-23,000 lb.**

ADVANCED TECHNOLOGY DELIVERS INNOVATIVE AXLES THAT IMPROVE UPTIME, FUEL EFFICIENCY AND OVERALL COST OF OWNERSHIP.

The New Detroit Model 6 Axle is All About Efficiency, Reliability and Durability.

- Modular differential with laser-welded ring gear
- Gear set and carrier optimization for improved powertrain efficiency
- Low-viscosity and friction-optimized oil
- Faster rear axle ratios to support downspeeding



AXLE LUBRICATION MANAGEMENT (ALM) SYSTEM REDUCES FUEL CONSUMPTION.

Available exclusively on the new Cascadia[®], this innovation regulates the oil level at the ring gear through the use of a valve integrated into the ring gear cover. This helps reduce the “churning” associated with the ring gear moving through the new lower-viscosity oil. This reduction in parasitic power loss when combined with the other efficiency improvements adds up to better fuel economy. ALM was put through the same rigorous testing as all other Detroit products and has successfully met or exceeded all of our design standards. It provides an innovative and durable way of improving efficiency in even the most extreme conditions.



Improving Efficiency and Performance

Our ring and pinion gears are machined using highly advanced power-dry cutting and grinding that result in exacting tooth profiles and ideal gear mesh. They're so precise that the ring and pinion gears do not require pairing. These sophisticated processes render perfectly matched gearing to ensure more efficient power transmission, longer durability, quiet axle operation and enhanced driver comfort.

Other features of the Detroit Single Rear Axle are:

- Larger differential components, adding stability and increasing durability
- Compatibility with all brake systems offered by Freightliner Trucks, Western Star, Thomas Built Buses and FCCC
- The Model 2 has increased ground clearance due to its smaller bowl, helping to avoid obstacles

Single Rear Axle Specifications

	DATA CODE	MODEL CODE	GAWR ¹ (LB / KG)	HOUSING WALL THICKNESS (MM / IN)	MAX. CREEP RATING (LB / KG) ³	MAX. GCW (LB / KG) ^{2,3}	RING GEAR SIZE (IN / MM)	OIL CAPACITY (QT / LITERS)	MAXIMUM TORQUE ⁴ (LB-FT)	AVAILABLE RATIOS ⁵	ALM
MODEL 2*	420-1C3	DA-RS-13.0-2	13,000 / 5,896	9.5 / 0.37	Application Approval Required	42,000 / 19,051 (Pick-up & Delivery) 36,000 / 16,329 (all other vocations)	12.8 / 325	7.4 / 7.0	660	2.92, 3.15, 3.63, 3.91, 4.10, 4.30, 4.56, 4.78, 5.13, 5.71, 6.14	
	420-1GF	DA-RS-13.5-2	13,500 / 6,123								
	420-1CY	DA-RS-15.0-2	15,000 / 6,803								
	420-1C4	DA-RS-17.5-2	17,500 / 7,937								
	420-1C6										
	420-1GF	DA-RS-19.0-2	19,000 / 8,617								
	420-1F9										
	420-1JB	DA-RS-20.0-2	20,000 / 9,072								
	420-1GA										
420-1GX	DA-RS-21.0-2	21,000 / 9,525	11.0 / 0.43								
MODEL 4*	420-1GH	DA-RS-17.5-4	17,500 / 7,937	9.5 / 0.37	Application Approval Required	55,000 / 24,948 (pick up and delivery/vocational)	15.35 / 390	12.0 / 11.0	1,200	2.85, 3.08, 3.31, 3.58, 3.91, 4.10, 4.30, 4.56, 4.78, 5.22, 5.56, 5.88, 6.14	
	420-1C7	DA-RS-19.0-4	19,000 / 8,617	11.0 / 0.43							
	420-1G7	DA-RS-20.0-4	20,000 / 9,072	12.7 / 0.50							
	420-1C8	DA-RS-21.0-4	21,000 / 9,525	11.0 / 0.43							
			12.7 / 0.50								
420-1GK	DA-RS-23.0-4	23,000 / 10,431	12.7 / 0.50								
MODEL 6	420-1W0	DA-RS-20.0-6S	40,000 / 18,141	9.5 / 0.37	Application Approval Required	105,000 / 47,627	17.32 / 440	12.0 / 11.0	2,050	2.28, 2.41, 2.53, 2.61, 2.73, 3.31, 3.58, 3.91, 4.30, 4.78, 5.22	
	420-1W1	DA-RS-20.0-6T								2020: 3.08, 5.88	
	420-1W3	DA-RS-23.0-6S	23,000 / 10,431	11.0 / 0.43						12.0 / 11.0	

¹Gross Axle Weight Rating

²Standard application—may vary with optional equipment

³Gross Combination Weight Rating—dependent on application and selected ratio—may require application approval

⁴Max engine torque—dependent on application and selected ratio—may require application approval

⁵2020 ratios are available in classic axles until that date

*Model 2 and Model 4 are classic axles.

Understanding a Model Code New Detroit Single Rear Axles

EXAMPLE:

DA-RS-20.0-6S or T



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