

2020 DP - RAM 4500/5500 CHASSIS CAB ETN - 6.7L

Saturday, January 2, 2021

02 - Front Suspension / Wheel Alignment / Standard Procedure

TOE ADJUSTMENT - RECIRCULATING BALL STEERING SYSTEM

The wheel toe position adjustment is the final adjustment.

1. Start the engine and turn the steering wheel both ways before straightening the steering wheel. Center and secure the steering wheel and turn off engine.

NOTE: The design specification for the steering wheel angle is 1.5° to the right of center.

2. Loosen the adjustment sleeve jam nuts and adjuster clamps.

NOTE: With the vehicle in a level position, verify the drag link/tie rod ball joints are not twisted and are centered. Rotate drag link/tie rod until ball joints are level, top of ball joint housing is level with the steering knuckle.

NOTE: Prior to tightening the adjustment sleeve jam nuts or tie rod adjuster clamp fasteners, verify:

1. Equal number of threads on both sides of the tie rod adjusters and clamps cover male threads.
2. Clamps are in vertical position.
3. Ball joint sockets are aligned with ball studs.

NOTE: When tightening the drag link jam nuts, the adjuster sleeve must always be held secure with a wrench/tool.

3. Adjust the right wheel toe position with the drag link adjuster sleeve. Turn the sleeve until the right wheel is at the correct specification. **Verify a level drag link ball joint.** After adjustment, using a backer wrench and a 41 mm crowsfoot, such as Snap-on SCOM41 or equivalent, tighten the drag link adjustment sleeve jam nut, or tighten the adjuster clamps to the proper [\(Torque Specifications\)](#). **Make sure the toe setting does not change during tightening.**
4. Adjust the left wheel toe position with the tie rod adjuster sleeve. Turn the sleeve until the left wheel is at the correct specification. **Verify a level tie rod ball joint.** Position the clamp bolts to their original position and tighten to the proper [\(Torque Specifications\)](#). **Make sure the toe setting does not change during tightening.**

NOTE: Toe setting may change during tightening, make sure to verify reading after tightening.

- 5. Verify the steering wheel is slightly to the right of center and the toe settings are correct (repeat steps 2-5 if necessary).
- 6. Road test the vehicle.

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02 - Front Suspension / Wheel Alignment / Technical Specifications

MEASUREMENT SPECIFICATIONS

NOTE: All alignment specifications are in degrees.

NOTE: All wheel alignments are to be set with the vehicle at curb height or Normal Ride Height (NRH) for vehicles equipped with air suspension ([Refer to 02 - Front Suspension/Wheel Alignment - Standard Procedure](#)).

NOTE: Use service measurement check specifications when doing initial alignment check in service. Service measurement check specifications should be used to determine if the vehicle is out of desired alignment specifications. If a vehicle's measurements are found to be outside of the service measurement check specifications, then it should be aligned using the set-to specifications. No development testing to be done with service measurement check specifications.

Front Wheel Alignment Measurement Specifications							
	Caster – Left	Caster – Right	Cross Caster*	Camber – Left	Camber – Right	Cross Camber*	Total Toe**

144" to 173" WB	7.80° +/- 0.65°	8.10° +/- 0.65°	-0.30° +/- 0.65°	0.10° +/- 0.65°	0.10° +/- 0.65°	0.00° +/- 0.65°	0.20° +/- 0.20°
192" to 197" WB	8.30° +/- 0.65°	8.60° +/- 0.65°	-0.30° +/- 0.65°	0.10° +/- 0.65°	0.10° +/- 0.65°	0.00° +/- 0.65°	0.20° +/- 0.20°
204" WB	8.60° +/- 0.65°	8.90° +/- 0.65°	-0.30° +/- 0.65°	0.10° +/- 0.65°	0.10° +/- 0.65°	0.00° +/- 0.65°	0.20° +/- 0.20°
* Cross Alignment values are determined by taking the left side value minus the right side value.							
** TOTAL TOE is the sum of both left and right wheel toe setting. TOTAL TOE must be equally split between each wheel on the same axle to ensure the steering wheel is centered after setting toe. Positive toe is toe-in and negative toe is toe-out.							

Rear Wheel Alignment Measurement Specifications					
	Individual Camber	Cross Camber	Individual Toe	Total Toe	Thrust Angle
All	- 0.10° +/- 0.50°	0.00° +/- 0.45°	0.15° +/- 0.30°	0.30° +/- 0.33°	0.00° +/- 0.40°
* Cross Alignment values are determined by taking the left side value minus the right side value.					
** TOTAL TOE is the sum of both left and right wheel toe setting. TOTAL TOE must be equally split					

between each wheel on the same axle to ensure the steering wheel is centered after setting toe. Positive toe is toe-in and negative toe is toe-out.

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Saturday, January 2, 2021

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02 - Front Suspension / Wheel Alignment / Technical Specifications

SET-TO SPECIFICATIONS

NOTE: All alignment specifications are in degrees.

NOTE: All wheel alignments are to be set with the vehicle at curb height or Normal Ride Height (NRH) for vehicles equipped with air suspension ([Refer to 02 - Front Suspension/Wheel Alignment - Standard Procedure](#)).

NOTE: With service there is both a set-to and service measurement check specifications. Set-to specifications are the parameters and tolerances used when adjusting alignment is necessary. A measurement specification is for the initial measurement of a vehicle in service. If this vehicle does not pass the measurement specification then the alignment should be adjusted to the set-to specification. Measurement specification is due to variation from measurement tools and setting.

Front Wheel Alignment Set To Specifications							
	Caster – Left	Caster – Right	Cross Caster*	Camber – Left	Camber – Right	Cross Camber*	Total Toe**
144” to 173” WB	7.80° +/- 0.50°	8.10° +/- 0.50°	-0.30° +/- 0.50°	0.10° +/- 0.50°	0.10° +/- 0.50°	0.00° +/- 0.50°	0.20° +/- 0.10°

192" to 197" WB	8.30° +/- 0.50°	8.60° +/- 0.50°	-0.30° +/- 0.50°	0.10° +/- 0.50°	0.10° +/- 0.50°	0.00° +/- 0.50°	0.20° +/- 0.10°
204" WB	8.60° +/- 0.50°	8.90° +/- 0.50°	-0.30° +/- 0.50°	0.10° +/- 0.50°	0.10° +/- 0.50°	0.00° +/- 0.50°	0.20° +/- 0.10°
* Cross Alignment values are determined by taking the left side value minus the right side value.							
** TOTAL TOE is the sum of both left and right wheel toe setting. TOTAL TOE must be equally split between each wheel on the same axle to ensure the steering wheel is centered after setting toe. Positive toe is toe-in and negative toe is toe-out.							

Rear Wheel Alignment Set To Specifications					
	Individual Camber	Cross Camber	Individual Toe	Total Toe	Thrust Angle
All	- 0.10° +/- 0.35°	0.00° +/- 0.30°	0.15° +/- 0.30°	0.30° +/- 0.30°	0.00° +/- 0.40°
* Cross Alignment values are determined by taking the left side value minus the right side value.					
** TOTAL TOE is the sum of both left and right wheel toe setting. TOTAL TOE must be equally split between each wheel on the same axle to ensure the steering wheel is centered after setting toe. Positive toe is toe-in and negative toe is toe-out.					

2020 DD - RAM 3500 CHASSIS CAB ETN - 6.7L

Saturday, January 2, 2021

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02 - Front Suspension / Wheel Alignment / Technical Specifications

SET-TO SPECIFICATIONS

NOTE: All alignment specifications are in degrees.

NOTE: All wheel alignments are to be set with the vehicle at curb height or Normal Ride Height (NRH) for vehicles equipped with air suspension ([Refer to 02 - Front Suspension/Wheel Alignment - Standard Procedure](#)).

NOTE: With service there is both a set-to and service measurement check specifications. Set-to specifications are the parameters and tolerances used when adjusting alignment is necessary. A measurement specification is for the initial measurement of a vehicle in service. If this vehicle does not pass the measurement specification then the alignment should be adjusted to the set-to specification. Measurement specification is due to variation from measurement tools and setting.

Front Wheel Alignment Set To Specifications							
	Caster – Left	Caster – Right	Cross Caster*	Camber – Left	Camber – Right	Cross Camber*	Total Toe**
All	3.75° +/- 0.50°	3.75° +/- 0.50°	0.00° +/- 0.50°	0.25° +/- 0.50°	0.25° +/- 0.50°	0.00° +/- 0.50°	0.20° +/- 0.10°

* Cross Alignment values are determined by taking the left side value minus the right side value.							
** TOTAL TOE is the sum of both left and right wheel toe setting. TOTAL TOE must be equally split between each wheel on the same axle to ensure the steering wheel is centered after setting toe. Positive toe is toe-in and negative toe is toe-out.							

Rear Wheel Alignment Set To Specifications					
	Individual Camber	Cross Camber	Individual Toe	Total Toe	Thrust Angle
All	- 0.10° +/- 0.35°	0.00° +/- 0.30°	0.15° +/- 0.30°	0.30° +/- 0.30°	0.00° +/- 0.40°
* Cross Alignment values are determined by taking the left side value minus the right side value.					
** TOTAL TOE is the sum of both left and right wheel toe setting. TOTAL TOE must be equally split between each wheel on the same axle to ensure the steering wheel is centered after setting toe. Positive toe is toe-in and negative toe is toe-out.					

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