RAM TRAILER TOWING

ENGINE	TRANS.	AXLE RATIO	GCWR	MAX. TRAILER WEIGHT RATING
6.7L Cummins Diesel	A6 68RFE	3.42	25,300	17,550
6.7L Cummins Diesel	A6 68RFE	3.73	27,300	19,550
6.7L Cummins Diesel	A6 68RFE	4.10	30,300	22,550

"The simple act of towing it, is no proof that the tow vehicle is not exceeding weight safety ratings, nor does it prove another family of a different size can do the same."

Safety Concerns

The problem simply may be an individual's lack of concern for towing safety and vehicle longevity.

Anytime a vehicle's gross vehicle weight rating (GVWR) or the gross combination weight rating (GCWR) is exceeded, there are safety concerns and, over time, excessive wear will contribute to premature failure of vehicle components. Some vehicle manufacturers even state that the warranty could be invalidated if the weight safety ratings are exceeded. Driving an overweight rig may develop into costly liability issues if involved in an accident involving people or another person's property.

GVWR and GCWR

GVWR is primarily specified by the weakest link in the load-bearing components such as the frame, axle, springs, tires, rims and brakes. I have studied the vehicle safety pages at the National Highway Traffic Safety Administration's (NHTSA) Website, and it is clear that NHTSA is highly concerned about braking capacity. NHTSA requires that all fully loaded vehicles will safely stop. The brakes must stop the vehicle within a specified distance when the vehicle is at the maximum GVWR. Exceeding the GVWR can result in failure to stop within a safe distance, resulting in serious injury or death.

The trailer's braking capacity is never included in these guidelines. Trailer brakes are only required to stop the trailer, not the towing combination. Therefore, if the trailer's kingpin or tongue weight causes the tow vehicle's GVWR to be exceeded, there is a potential braking hazard.

The GCWR is assigned by manufacturers and includes the powertrain's capabilities. Any of the powertrain's components, or combinations thereof, may create the weakest link in the powertrain.

Mechanically, the differential gear ratio is not necessarily a weak link, but rather a ratio of power reduction or an increase to the wheels depending on the ratio. When considering same brand trucks having the same engine and transmission combo, a differential ratio such as 3.42:1 will cause the engine and transmission to work harder than if the ratio was 4.10:1 with the same amount of weight hauled or towed. The tow vehicle will still move the weight regardless of the differential gear ratio. But a lower transmission gear may have to be used to move the weight with a lower gear ratio, therefore increasing engine RPM and fuel cost. It may also increase additional stress on the engine and/or transmission, which increases the risk of premature wear and breakdowns.

When viewing some tow-rating charts, you may note that identical vehicles, with the only mechanical

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