

Subjective Evaluations for Trailair

Tow Vehicle:

Dodge Ram 3500; 5.9-Liter HO Cummins Turbo Diesel; 6 Speed manual transmission

Coach:

DoubleTree Suites; Tandem 8000# axles; Tires @ 110 psi; dry with 1000 lbs load distributed throughout lower coach storage areas, including 250 lbs in right and left rear most storage compartments

Coach Suspension Hardware Conditions:

- OEM, standard spring shackle links
- MOR/ryde Rubber Equalizer System
- Trailair Equaflex

Operating Conditions: (Livonia and Northville, MI)

- 60 mph on M14 expressway, Sheldon to Beck and Beck to Sheldon (broken concrete pavement and bridge joints)
- 30 mph on Amerhein Rd (broken concrete pavement)
- 30 mph across railroad tracks on South bound Stark Rd.
- 30 mph across railroad tracks on North bound Levan Rd.

Subjective Impression of Ride in Tow Vehicle

OEM: Rated as **6.0** (see attached chart)

- Chucking (for/aft) and impact harshness were noted over broken pavement, expansion cracks, and railroad tracks.
- It was evident that there is a need for improving this system.

Morryde: Rated as **5.0** (see attached chart)

- Heavy chucking (for/aft) were felt in the tow vehicle, low frequency vibrations were felt as discomfort in the abdomen
- Evident at 60 mph when 5th wheel coach hit broken pavement, expansion crack, or a series of impacts
- Also evident over railroad tracks after tow vehicle crossed the tracks.
- Noted as the most irritating low frequency issues of all evaluated, including the OEM

Equaflex: Rated as **7.5** (see attached chart)

- Reduced chucking, the rougher the road the better it felt.
- Very little change from OEM over smooth road surfaces.
- Judged best ride of the equipment tested.

Vehicle Subjective Rating System for NVH

Rating Index	1	2	3	4	5	6	7	8	9	10
Performance	Not Acceptable	Intolerable	Must be Fixed	Poor	Boarderline	Acceptable	Fair	Good	Very Good	Excellent
Description of Condition	Painful	Intolerable	Must be Fixed	Correction Desired	Boarders on Annoying	Customer Aware, but Not a Problem	Customer Seldom Aware	Only by Most Perceptive Customer	Trained Observer	Subjectively Undetectable
Feature Description	Impossible	Ridiculous	Terrible	Poor	Boarderline	Fair	Good	Very Good	Excellent	Perfect
Customer Satisfaction					Somewhat Dissatisfied	Fairly Well Satisfied	Fairly Well Satisfied	Very Satisfied	Completely Satisfied	Completely Satisfied
Customer Reaction	--	--	Angry	Annoyed	Disappointed	Aware	Satisfied	Delighted	--	--
Improvement Desired by		All Customers		Average Customer	Average Customer	Critical Customer	Critical Customer	Trained Observer	Trained Observer	Not Perceptable

OEMs and suppliers generally use a subjective rating system similar to this.