

QAP Dealer - Weight Analysis Process Instruction Sheet



This instruction sheet is intended to assist dealers with performing comprehensive vehicle weight analysis. This is a recommended practice document and while each dealer may have its own standard operating procedures, the general process flow of weight analysis to be performed by QAP dealers are described in this instruction for use as a best practice.

Reference: Weight Analysis Process Flow sheet document (QAP-F30)

Instructions:

The following instruction steps (along with the companion process flow sheet QAP-F30) detail the general sequence of operations QAP dealers conduct when evaluating if a proposed vehicle and mobility equipment modifications are appropriate for the clients needs. The instructions are divided into two sections, the first section (A) describes the efforts QAP dealers take on the front-end (sales and assessment) and second section (B) that is typically conducted post-modification by the dealer's service manager or technician. The NMEDA Guidelines require both pre-sale and post-modification weight analysis to be completed, however only the post-modification weight analysis is required to be documented when the lesser of 100 lbs (or 1.5% of GVWR) net weight has been added to the vehicle as a result of all modifications.

A. Pre-sale weight analysis (undocumented):

1. Interview the client as to how the vehicle will be used on a routine basis. Note that routine basis means how it will be used on a typical day. During this evaluation, the dealer is looking to find out who is routinely travelling in the vehicle and what type of cargo will routinely be loaded into the vehicle. For example, knowing that the client has a large family, or a small family is important in understanding how many seating



positions will routinely be used. Additionally, knowing (for example) that the client is routinely loading a large oxygen tank is also important.

2. While it can often be uncomfortable to weigh every person who will routinely be travelling in the vehicle, and as a person's weight may change over time, the dealer should make a judgement as to the weight of the client and any others who will be routinely be traveling in the vehicle. The purpose for this is to better understand if the 150 pounds used by NHTSA for seating positions will give an accurate conclusion when determining if a vehicle could be routinely overloaded.
3. Note the physical weight of any mobility devices such as wheelchairs and scooters that will routinely be loaded in the vehicle. The best practice would be to document the make model and weight of each device and keep that on file. And while it is true that the dealer has no control over the client purchasing or obtaining new equipment, the dealer will have a record of what equipment or devices were used by the client at the time of sale and that can be important information for future reference.
4. Once the dealer has all the pertinent information on how the vehicle will be used, who will be routinely be travelling in the vehicle, what devices and cargo will routinely be loaded in the vehicle, and the size of the client and the client's family, the dealer can determine if there is any concerns regarding weight or the potential to routinely overload the vehicle.
5. The dealer at this point should also reassess if the vehicle and equipment planned to be installed is appropriate for the client and if there are any concerns with the placement of the equipment or cargo could be a concern to overload one or more of the axles



(GAWR). For example, if there is concern that the installation of equipment in a particular area of the vehicle could overload one of the axles, it is recommended that the dealer use some type of dunnage to simulate the weight and place it, then weigh the vehicle to find out if the axle weight limit could be exceeded.

6. Once the dealer has completed the interview and client/vehicle/equipment assessment, and addressed any weight concerns, the job can continue and the instructions for documented weight analysis can be followed.

B. Documented weight analysis:

1. Weigh the curb weight (UVW) of vehicle prior to installation. Record weight as pre-installation curb weight.
2. Record the number of seating positions (DSP) and verify is same as shown on tire placard.
3. If not full, record fuel tank level and account for any missing fuel weight.
4. Calculate available load carrying capacity (LCC) using the formula: GVWR – UVW. Record this as the pre-installation load carrying capacity.
5. Weigh the curb weight of vehicle after all installations and work has been completed. Record as post-installation curb weight.
6. Verify that the GVWR or either the GAWR-rear or GAWR-front have not been exceeded.
7. Calculate the post installation load carrying capacity.
8. Determine the reduction in load carrying capacity by taking the post LCC and subtracting the pre-installation LCC.
9. Record the reduction in LCC.



10. If the reduction is equal to or greater than 100 lbs or 1.5% of GVWR (whichever is smaller) then a reduction in load carrying capacity label shall be applied.
11. If the reduction is 220 lbs or greater, then the load carrying capacity section of the Make Inoperative disclosure form shall be completed.
12. Verify that there is sufficient load carrying capacity to allow for DSP x 150 lbs. For example, if there are 6 DSP and the post installation load carrying capacity is 1000 lbs. Then $6 \times 150 = 900$ lbs and 900 lbs is less than 1000 lbs. If $DSP \times 150$ lbs is greater than the load carrying capacity, the vehicle cannot be delivered.
13. Once the dealer has completed all steps herein and completed the documented weight analysis, make inoperative form, and applied the reduction in load carrying capacity label. The comprehensive vehicle weight analysis is complete.
14. The dealer should always disclose to the client what the remaining available load carrying capacity is as part of the dealer's delivery process and coach the client in how to safely load the vehicle. It is recommended that the dealer supply the client with one of NMEDA's "Consumer Safe Loading Guide" brochures (PUB-101). This brochure can be purchased from NMEDA using the supply order form or can also be downloaded as PDF one-page flyer from the NMEDA website (PUB-102).