



**VEHICLE FACTORS GROUP CHAIRMAN'S
FACTUAL REPORT**

Vehicle Attachment - Vehicle Curb Weight Calculations

Tempe, Arizona

HWY18MH010

(6 pages)



Krypton XC90 Curb Weight

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Document Participants

Name	Role/ Responsibility	Department/Company	Email
[REDACTED]	Sr. Manager	System Safety, Uber ATG	[REDACTED]
[REDACTED]	Sr. Systems Engineer	System Safety, Uber ATG	[REDACTED]

Reference Documents:

Document
Krypton_Weight_Tracking_20180328_01

[REDACTED]

[REDACTED]

Document Overview

This document communicates the curb weight of an Uber ATG Self Driving Vehicle, Krypton XC90 configuration.

Reference Material Overview

[Krypton Weight Tracking 20180328_01](#) referenced above, provides a link into the Phabricator tickets used to drive task completion. Photographs of the weighing process are included in both the tracking document, and within the Phabricator ticket ([T212282 - Krypton Wheel Loading](#))

Methods

The Krypton XC90 vehicle was fully fueled, and placed on a car lift. Appropriate plate scales were then placed under each of the four wheels. The vehicle was slowly lowered onto the plate scales, and measurements were taken in kilograms. Prior to lowering the vehicle, plastic coated sheets were inserted between the bottom of the tires and the scale plates. This allowed the suspension to settle onto the scales evenly instead of binding as the weight of the vehicle was lowered onto the scales. (see *Image 2 below*)

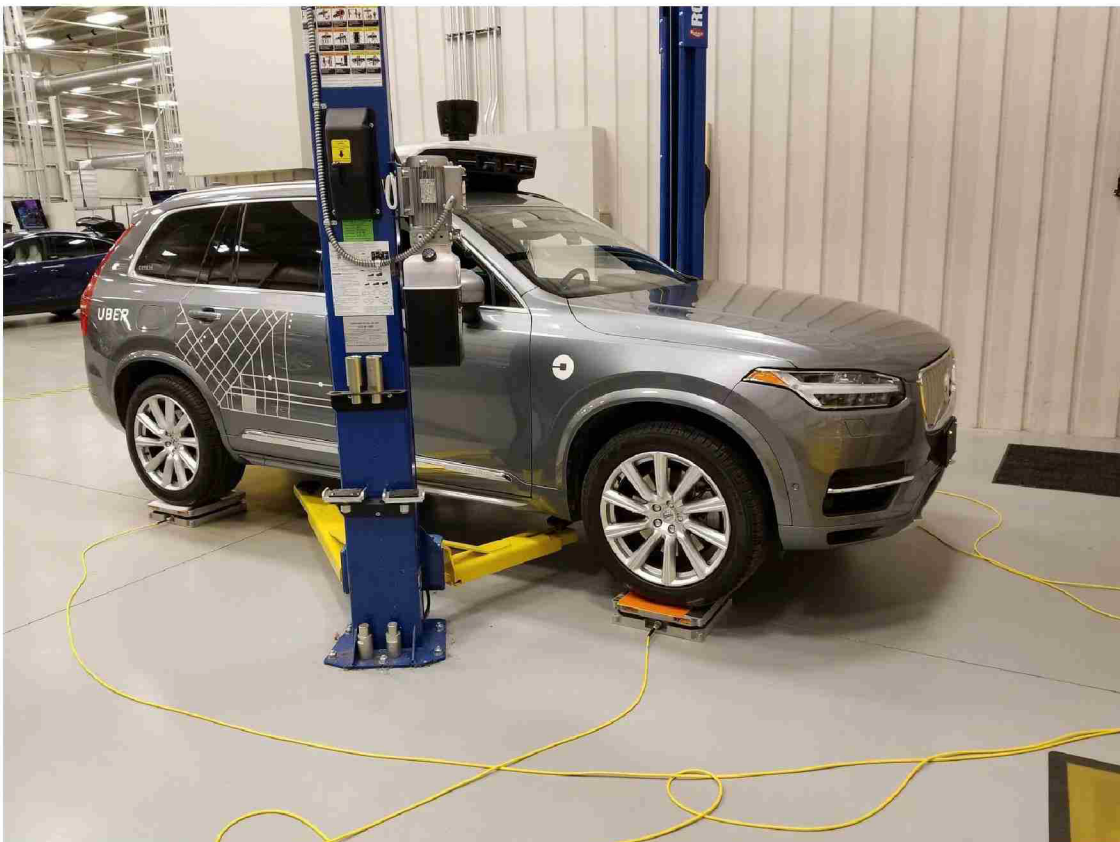


Image 1: Krypton XC90 lowered onto scale plates

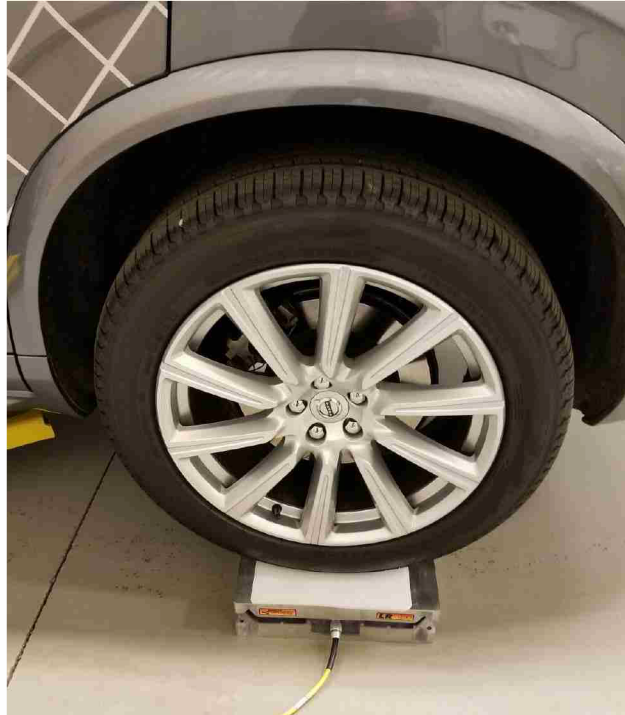


Image 2: Krypton XC90 tire resting on scale plate with plastic coated sheets to prevent binding

Data

The tables below represent weight measurements taken at each wheel, and in total. Vehicles were selected at random from the Krypton XC90 fleet. Please note, measurements were made in kilograms, with imperial conversions provided for ease of use.

Metric Measurements

Date	Technician	Model	Vehicle ID	Fuel Level	Wheel Loads (kg)				Total	Mileage
					LF	RF	LR	RR		
3/26/2018	GS - KB	KRYPTON YV4BC0PL3H1152485	K0191	FULL	626.0	614.6	605.5	584.7	2,430.8	2,855
3/26/2018	GS - KB	KRYPTON YV4BC0PLXH1151835	K0199	FULL	616.9	616.4	606.9	573.3	2,413.6	11,087
AVERAGE					621.4	615.5	606.2	579.0	2,422.2	

Figure A: Metric measurement table of vehicle weight

Imperial Conversion

Vehicle ID	Wheel Loads (lbs)				TOTAL
	LF	RF	LR	RR	
K0191	1380	1355	1335	1289	5359
K0199	1360	1359	1338	1264	5321
AVERAGE	1370	1357	1337	1277	5340

Figure B: Imperial conversion of vehicle weight measurements



Conclusions

Vehicle weight measurement averages for Uber ATG Krypton XC90 SDV are as follows:

Left Front Tire:	1370 lbs / 621 kg
Right Front Tire:	1357 lbs / 616 kg
Left Rear Tire:	1337 lbs / 606 kg
Right Rear Tire:	1277 lbs / 579 kg
Total:	5340 lbs / 2422 kg