Totally Tommy Blower System Noise Study

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Abstract: In this document you will find the results of a noise level test performed at Tommy's Express Car Wash in Grandville, Michigan. This car wash is located on a four lane divided highway that serves as a major artery for the local area. The car wash uses the current standard blower arrangement, with two downward-facing industrial heated blowers (E-B-HB) and 18 arch-mounted 10 h.p. plastic-housed Drying Blower Producers (E-B-BP).

Noise Levels: Both the amount of noise and the length of exposure determine the possibility of hearing damage to those nearby. Noise levels are measured in decibels (dB). The higher the decibel level, the louder the noise. Sound louder than 80 decibels is considered potentially hazardous. The noise chart below gives an idea of average decibel levels for everyday sounds.

Very Loud	120 dB	Jackhammer
	110 dB	Rock music
	100 dB	Subway train
Potentially Damaging	90 dB	Bass drum
	80 dB	Loud Radio
	70 dB	Hairdryer
Moderate	60 dB	Conversation
	50 dB	Heavy Rain
	40 dB	Moderate Snoring
Faint	30 dB	Quiet Office

Results:

Increasing distance from blowers ↓

At Nozzle	86 dB
5′ Inside	85 dB
10′ Inside	82 dB
Exit Door	74 dB
5′ Outside	74 dB
10′ Outside	75 dB
20′ Outside	66 dB
40′ Outside (Ambient)	64 dB

Overview: At the completion of this study it is clear that although sound levels within a car wash have long been characterized as loud, they are not substantially louder than many other everyday sounds. Individuals working in the blower room for any length of time are advised to wear ear protection, in accordance with government guidelines, but the danger from passing exposure to these noise conditions appears to be minimal.

It should be noted that the volume levels created by this system appear to be somewhat lower than the older style blower system studied in 2008. This is likely a result of the lower horsepower of the current producers and the plastic housings currently in use.