

Case Study

VR Data Validating ROI



PEC Fuel Systems is pleased to publish data that validates a significant Return on Investment (ROI) for Stage 2 Vapour Recovery (VR2).

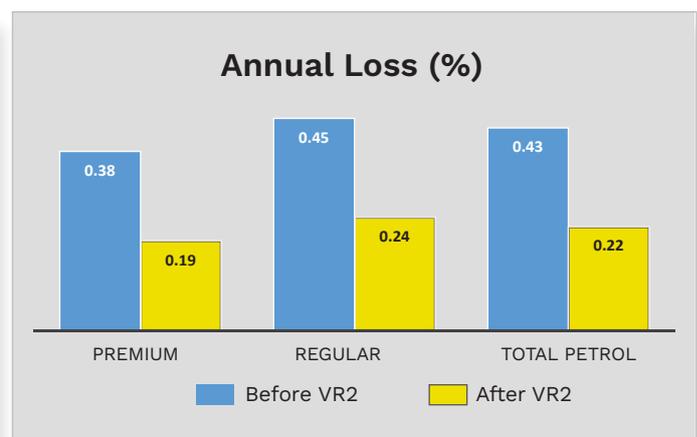
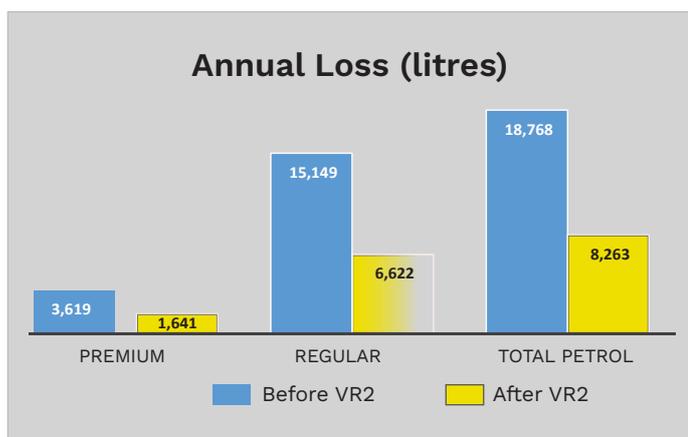
This data was independently gathered by a PEC Fuel Systems customer with the intention of accurately measuring the real cost benefit of installing a PEC VR2 solution based on the true reduction in petrol losses.

The case study provides comparative data collected from a single filling station before and after the installation of a PEC VR2 solution. The “Before” data was taken for a 12 month period from April 2013 to March 2014. The “After” data was taken for a 12 month period from April 2015 to March 2016.

CASE STUDY CONDITIONS:

- This filling station was equipped with Stage 1 Vapour Recovery (VR1) for the entire duration of the case study, i.e. before VR2 and after VR2.
- This filling station is located near sea level. Annual temperatures range between 8°C and 24°C on average.

	BEFORE VR2			AFTER VR2		
Petrol Grade	Annual Volume (litres)	Annual Loss (litres)	Annual Loss (%)	Annual Volume (litres)	Annual Loss (litres)	Annual Loss (%)
PREMIUM	952,368	3,619	0.38	863,684	1,641	0.19
REGULAR	3,366,444	15,149	0.45	2,759,167	6,622	0.24
Total Petrol	4,318,813	18,768	0.43	3,622,851	8,263	0.22



This case study shows petrol losses for this Site were almost halved, from 0.43% to 0.22% following the installation of a PEC VR2 solution.

If this improved loss (0.22%) was applied to the “Before” VR2 data, annual petrol losses would have reduced from 18,768 litres to 9,501 litres, resulting in 9,267 fewer litres of petrol being lost to the atmosphere.

CALCULATIONS

ROI calculations for this case study filling station are as follows:

Annual Petrol Volume	X	% Loss Improvement	X	Retail Petrol Price	=	Retail Value Petrol Saved
4,318,813		0.22		NZD \$1.90		NZD \$18,052.64

SUMMARY

The benefits of Stage 2 Vapour Recovery to protect the environment and the health & safety of forecourt workers, fueling customers and the general public are clearly understood. The financial benefits are less well understood.

This case study demonstrates there are real and tangible financial benefits to the retailer/oil company when an effective, monitored and managed VR2 solution is used to capture petrol vapour at the nozzle that would otherwise escape to the atmosphere.

The fuel retail industry worldwide generally considers losses of up to 0.5% acceptable.

If petrol losses can be reduced by just 0.21%, as was the case in this case study, financial benefits to the bottom line can be substantial over a relatively short period of time.

Of course, the higher the volume of a filling station, the faster the ROI.

Warmer climates and higher altitudes both increase the rate of petrol evaporation, resulting in higher losses which make an effective, monitored and managed VR2 solution all the more important.

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