

### Company Profile: Mareauto Colombia S.A.

Mareauto Colombia S.A. is a short and long-term car rental company in Bogota under the AVIS brand. The company focuses on providing the highest quality standards while always putting customers at the center of operations. Mareauto's vision is to be the leader in the car rental business in the region, while continuously offering world-class customer service.



### The Challenge

Every year AVIS Colombia's fleet requires numerous oil changes causing hundreds of gallons of motor oil to be used and disposed of each year. This is a significant financial expense for the company from the purchase and disposal of oil, the labor, downtime and other maintenance costs of the vehicles during the oil changes. Additionally, and most importantly, the use and disposal of the oil has a huge environmental impact. Engine oil has a dirty life cycle from start to finish; the oil has negative environmental impacts from when the crude is drilled from the earth to when it is refined into engine oil to when the used oil needs to be disposed of.

### The Sustainability Innovation Grant

In May of 2015, AVIS Colombia was awarded a \$50,000CAD Sustainability Innovation Grant (SIG) from Global Affairs Canada and managed by the Mennonite Economic Development Associates (MEDA) to install bypass oil filters on a portion of their fleet to reduce the amount of engine oil used by the vehicles.

The bypass filters are an extra filter, working alongside the normal filter, to help clean the engine oil on a micro level. This filtration method reduces 99.97% of contaminants and traps particles on an extremely small level. The effect of this is that the oil always stays clean and as research has demonstrated, the engine oil will never need to be changed. Trabold supplied the oil filters and provided in-depth training to AVIS Colombia's in-house mechanics to install the filters.

### SIG Impact

#### Environmental Conservation

The grant initiative was primarily to strengthen the environmental performance of the company through the installation of oil bypass filters on a subset of the fleet. Given this, the main achievement to date was the effective installation of 64 bypass oil filters, saving 270 gallons of oil! This conservation effort reduced the company's associated carbon footprint and provided awareness to their stakeholders of Mareauto Colombia's environmental innovative efforts. See photo below of a bypass filter.



#### Increased ESG Awareness

Behavioral change can be a difficult task, especially if it is at a managerial level and deals with disruptive innovations in the sector. This initiative successfully brought about a shift in the perspective of top tier management when it came to risk taking and innovation for environmental concerns.

## Improved Business Performance

The cost savings of this initiative are already coming into fruition. As shown in the table below Mareauto, has saved \$3,057 CAD (\$6,823,264 COP) from January to March 2017 from the installation of bypass filters on 64 vehicles due to lower engine oil and maintenance costs. This will contribute to \$12,227 CAD (\$27,293,055 COP) annually.

	Cost Savings (CAD)	Cost Savings (COP)
Engine Oil Cost	\$1,814.16	\$4,049,454.91
Labor Cost	-\$1,295.66	-\$2,892,106.00
Maintenance Cost	\$2,538.33	\$5,665,914.91
Total Savings (January-March 2017)	\$3,056.82	\$6,823,263.82
Annual Savings for 64 Vehicles	\$12,227.29	\$27,293,055.28
Annual Savings for 170 Vehicles	\$32,478.74	\$72,497,178.09

## Sustainability

By the end of this year, AVIS Colombia plans to have installed the remaining 106 oil filters to hit their target of 170 making a successful pilot and achieving the annual savings of \$32,479 CAD and 717 gallons of oil. Additionally, other environmental initiatives have started to take place within the company. The in-house maintenance team has started to use an organic compound spray that washes cars without the use of water. This project has contributed to the Sustainable Development Goals of 'Climate Action' and 'Sustainable Cities and Communities'.

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## Lessons Learned

The company discovered three main factors that would inhibit oil bypass filters to yield a low return on investment: Low annual mileage on vehicles, small oil capacity and driving within highly polluted areas. Only vehicles that drive 40,000-60,000 km/year, have a large oil capacity and do not drive within the highly-polluted areas, would yield a high return of investment. This means, at a minimum, a small sized truck with 4-gallon engine oil tank with a longer-term rental and consistent longer hauls trips and not operating within mining areas would be an ideal candidate. The investment return would be three years, on average, with filters costing \$800 USD. It is noteworthy that the process to arrive at these conclusions was not easy. Eight vehicles had to be recalled and the oil filter had to be removed. This also caused some problems with external maintenance and repairs as some other shops would not honor the warranty on vehicles because the parts were altered.

*“When you install the filter in a brand new car, if the car presents any faults, the maintenance company will not accept the car guarantee since you have altered an engine component. When we get a brand new car we have to wait until 5,000-10,000 km after the first maintenance. We only pick the cars that have had more time in the fleet.”*

Oscar Ardniegas

One of the greatest challenges, which was eventually overcome with passion and persistence, and became one of the project's biggest successes, was the change in mindset. This change not only had to occur at a company level, but among many external stakeholders, such as service providers and suppliers.

*“One of our greatest challenges was changing the culture based on oil changes. There are huge companies in the oil industry. They use the oil change as a hook for other maintenance and services. This is a very disruptive change to traditional culture.”* Esteban Andino

