



Automated Vehicle Health Monitoring Helps Brampton Reduce Mechanical Breakdowns

When Brampton, a city in the Canadian province of Ontario, put in place its [vision for the future](#), enhancing its public transportation infrastructure played a critical role. Over the past five years, Brampton has implemented transit technology solutions that have contributed to achieving that vision. In 2019, the city was awarded a [Smart City Award](#) for its deployment of Automated Vehicle Monitoring (AVM) from Clever Devices.

CHALLENGE

Prior to the implementation of AVM, Brampton's maintenance processes were almost entirely manual. When a vehicle had a mechanical or electrical fault, the agency was dependent upon drivers to report it. Repairs were only made after there was an issue. Often, that issue resulted in the bus breaking down in service and needing to be towed to the garage for repair. This resulted in inconvenienced passengers and significant service delays.

Additionally, the agency had no way to detect fleetwide issues that could possibly be covered by the manufacturer's warranty if exposed in time. Without AVM, the agency had to wait until those issues accumulated, causing significant service disruptions and increasing repair costs.

Finally, Brampton had no automated way to disable active regeneration on diesel-powered buses inside their garages resulting in dangerous air quality and a safety hazard to workers.

SUMMARY



CUSTOMER

Brampton Transit
Brampton, Ontario, Canada

ABOUT BRAMPTON

Brampton Transit is a public transport bus operator for the City of Brampton in the Regional Municipality of Peel, and within the Greater Toronto Area in Ontario, Canada.

BUS FLEET SIZE

- 460 buses
- 68 bus routes
- Over 31 million annual riders



[Smart 50 Awards](#), in partnership with Smart Cities Connect, Smart Cities Connect Foundation, and US Ignite, annually recognize global smart cities projects, honoring the most innovative and influential work. In 2019, the city of Brampton was honored as one of over 50 cities to be recognized for implementing innovative solutions in the mobility category for its deployment of AVM.

CASE STUDY

BRAMPTON TRANSIT AUTHORITY

SOLUTION

AUTOMATED VEHICLE HEALTH MONITORING—AVM®

AVM® has helped Brampton automate many of its maintenance processes and increase the reliability and state of good repair of its fleet. The system will ultimately help Brampton to increase the lifecycle of their fleet and because it reduces the likelihood of a mechanical breakdown on the road, it reduces the road calls that lead to unhappy, inconvenienced customers.

RESULTS

FROM RE-ACTIVE TO PRO-ACTIVE MAINTENANCE

Because AVM automatically reports mechanical and electrical faults, the agency is no longer dependent upon its drivers to report faults that occur while out on the road. Maintenance crews can see the faults and pro-actively address them, reducing the likelihood that a fault goes unreported or a vehicle with an issue is accidentally sent into service.

REDUCED ROAD CALLS

AVM enables Brampton to address mechanical breakdowns BEFORE they occur resulting in fewer service crushing road calls and fewer unhappy, inconvenienced customers.

REDUCED MAINTENANCE COSTS

The visibility that AVM provides into the health of the entire fleet enables Brampton to better manage its entire maintenance process, control overtime costs and identify warranty repairs faster.

IMPROVED INDOOR AIR QUALITY AND WORKER SAFETY

With AVM, Brampton was able to set a geofence around the perimeter of the depot, automatically disabling the regeneration functionality prior to the bus entering the building resulting in improved indoor air quality and reducing the likelihood of injury to maintenance workers.

PILOT UNCOVERS FLEETWIDE DEFECT

Saves Brampton over \$30,000

During an evaluation pilot program, Brampton sought to evaluate the return on investment of AVM should it opt to deploy it fleetwide. As part of the evaluation process, Brampton tested forty vehicles. Twenty were installed with AVM, and twenty served as the control group.

After six months, Brampton identified savings in towing, lost vehicle hours, components, fuel, labor and parts on vehicles with AVM installed. They also sighted intangible benefits such as service reliability, passenger safety and comfort as well as improved planning for repairs in their findings.

But, perhaps more significant was an unexpected discovery that occurred during the pilot when AVM uncovered an issue on two engines in the AVM group that were approaching the end of the warranty period. Had AVM not exposed the problem, the engines likely would have failed at some point in the future when the warranty had already expired, costing the agency between \$15,000-\$20,000 each.

For more information on automated vehicle health monitoring
visit www.cleverdevices.com/products/avm/