

The Case of the Stolen Catalytic Converter

by Rick Escalambre

It is early morning; you start your car and immediately hear a loud roar from the exhaust. Lo and behold, the Catalytic Converter thieves have hit you. This happened to my 2007 Honda Accord SULEV in May 2021. This vehicle and its aftermarket Catalytic Converters are now an interesting case study. So, let's go.....

After realizing the CAT had been stolen, I notified our local police department. The Officer was an expert at this because he handled 4 to 5 of these a night. Then I notified my insurance company, and after getting an estimate for the repair from a local repair shop, which had to quote OEM parts, I received a generous check for my claim. It took a few months for everything to be done; I was in no rush as I had two other vehicles.

I contacted a former student who is a Referee, and he looked up the vehicle at <https://asktheref.org/CatalyticConverterConcerns> and found two BAR-approved CATs for the vehicle. In late August the new exhaust was installed with a BAR approved MAGNAFLOW 5561354 CAT that was advertised as SULEV approved. I drove the vehicle through a few trips and the MIL was OFF! After a few more trips the MIL was ON! On a follow-up trip, the MIL was OFF. All this is happening while I wait for an appointment with the Smog Check Referee to have a BAR Emissions Label installed for the replacement Catalytic Converter and get a Smog Inspection. Unfortunately, I could not get a referee appointment until mid-October in Monterey, CA. I made this appointment and took a vacation on this trip with my wife. I was driving around with expired tags, but I paid my registration fees in case I got stopped or in an accident and to avoid late fees.

The morning I showed up at the Referee the vehicle was all set to pass. Unfortunately, the Referee only installed replacement Emissions Labels; he was not doing Smog Inspections because they handled many stolen Catalytic Converter issues. He installed the new label, and I was on my way.



After leaving the Referee for a few weeks, the MIL was OFF and then ON multiple times. I checked for a TSB and there was one dated September 14, 2012. It stated that the PCM

misinterpreted data and set a false P0420 DTC. I could not see how a bulletin that old could fix my problem. Heck, I had been driving around for 8 years with the original Engine Calibration and it did not set any DTCs for the CAT on this vehicle.

The vehicle still needed to pass a Smog Inspection so I could get my registration tags. On a day when I wanted to do some further testing, I hooked up my scan tool and saw that all Readiness Flags were Completed and that the CAT Monitor passed at 13 out of 16. I immediately drove to get my vehicle inspected, it passed, and I had my new tags.

The MAGNAFLOW CAT list for \$1695, but I got 20% off; it was installed with the original Engine Calibration. During the next few trips, the CAT Monitor passed 50% of the time. MODE \$06 indicated the Passing Tests Results between 13-15 out of a MAX 16. When the CAT Monitor failed the Test Results were between 17-22 out of MAX 16.

Because I had leftover insurance money, I decided to do some extra research, so a BAR-approved Walker CAT was purchased from ROCKAUTO for \$485. The Walker CAT immediately failed and continued to fail 75% of its CAT Monitor trips. MODE \$06 indicated Passing Test Results between 15-16 out of a MAX 16. When failing, the Test Results were between 17-26 out of MAX 16.

Getting somewhat frustrated that both CATs were failing I contacted the California Air Resources Board (CARB) for some help. Their answer was simple: no approved aftermarket CATs for the SULEVs existed.

I contacted BAR and explained the situation. They searched the Smog Check Vehicle Inspection Database (VID), it indicated that the 2006-07 Honda Accord SULEVs with an aftermarket CAT passing a Smog Check Inspection all had the updated Engine Calibration (37805-RAD-L830) installed.

Despite my previous doubts about the effectiveness of this updated Engine Calibration, I reprogrammed the PCM and noticed that the Max Limit for the CAT Monitor increased from 16 to 17!

I drove the vehicle enough to test the effectiveness of the Walker and MAGNAFLOW CATs. After I installed each Catalytic Converter, I cleared the memory and drove the vehicle. This can be seen in Completions/Results 1 and 9. Please refer to the spreadsheet that shows the overall results of my testing.

Calibration: 37805-RAD-L830	Completions	Results	MAX		List Cost
Walker CAT- EO# D-182-64					\$485
3/5/2022	1	15	17	After Recalibration	
3/7/2022	2	7	17		
3/8/2022	3	8	17		
3/18/2022	5	9	17		
3/19/2022	6	9	17		
3/30/2022	8	8	17		
		9.33			
MAGNAFLOW - EO# D-193-141					\$1,695
3/31/2022	9	13	17	First Trip with Magnaflow	
4/1/2022	11	6	17		
4/3/2022	12	10	17		
4/4/2022	13	5	17		
4/11/2022	14	10	17		
4/18/2022	15	6	17		+
		8.33			

The CAT Monitor Test Results don't indicate much difference between the two. Both aftermarket CATs have a 5/50k warranty at many different prices. I am confident these CATs will last through the warranty period. I have to say the Walker CAT is quieter than the MAGNAFLOW. If I were starting over, I would go with the Walker 82895 CAT, now down to \$406 at ROCKAUTO.

This case study aims to ensure the latest engine calibration is installed when installing a replacement CAT. Looking back at some scan data I collected from this vehicle in 2018 and seeing how it runs now: improved idle quality, lower fuel trims, and increased gas mileage, I believe the OEM CAT was masking the issues with the original Engine Calibration. In my opinion, the replacement CATs cannot mask the original Engine Calibration issues.

CAT Monitor test results should never fluctuate as much as they did with the aftermarket CATs when they look for a software update or questionable AFS/O2s because they are the reporting components to the PCM. Let MODE \$06, especially for CAN Powertrain systems, guide you because the PCM is still the best judge of the CAT's efficiency.

This closes my case study. It was a real learning process and I hope it helps someone in the future. OEM CATs will continue to be stolen. Thieves don't rest; OEM CATs are like Gold or Rhodium when they are easily accessible.