

IM OBD Vehicles Readiness Exception List

Introduction

In June 2001, EPA issued guidance on “Performing Onboard System Diagnostic Checks as Part of a Vehicle Inspection and Maintenance Program” that includes an Appendix D, entitled “Manufacturers Known to Have Readiness Issues.” This appendix lists vehicles that appear to be “Not Ready” for testing using the onboard diagnostic (OBD) system found on 1996 and newer vehicles. It was agreed upon by EPA and the OBD stakeholder community that at a minimum Appendix D should be updated to include more recent model year vehicles, as well as provide any new information such as Technical Service Bulletins or Recalls that may be available to address readiness issues for specific vehicles.

The first step in this effort was to analyze field data from state programs to identify those vehicles that were exhibiting readiness problems during their scheduled OBD test. EPA performed an analysis on over nine million initial test records from calendar year 2005 covering model years 1996 through 2004 and in April 2007 issued a report (EPA420-F-07-025) containing the results of this analysis. The salient points are highlighted below.

Several factors were used to analyze the data in the April 2007 report: make, model, model year, the fraction of vehicles in a make or model that were Not Ready, and the total number of records for that make or model. The model designations contained in the data provided by the states were used as received. Some of the model designations vary among the five states analyzed and even within a state some designations seem to be repetitive (e.g., the 2- and 4-wheel drive versions of a vehicle are entered as different models), thus expanding the number of “models” in the dataset*. A range of criteria was used to investigate the magnitude of the Not Ready problem. Using 8% Not Ready, a minimum of 50 vehicles tested, and state model definitions, many more models with readiness problems were identified than had been originally identified in an informal stakeholder survey. The EPA analysis also shows that the number and percentage of vehicles by model year with Not

* Some of the model duplication is also due to the VIN decoder used to identify models in the MO and NC data as those programs did not report vehicle model in CY05.

Ready issues has declined significantly since OBD systems were first installed in 1996. The overwhelming majority of makes have readiness issues in less than 7% of its vehicles.

The April 2007 analysis did not attempt to investigate the causes for the Not Ready issues. Such causes include: design problems with the vehicle's OBD system, scan tool/ inspection software problems, vehicles being tested that are not OBD equipped, and vehicles that have already been identified as having readiness issues and have a solution identified. EPA has established a workgroup to look into potential readiness problems based on the analysis discussed in this report.

It was originally intended that the workgroup would focus on those models that have a Not Ready rate of 30% or more; however, a number of vehicles in this category were found to be over 8500 lbs. GVWR, already in the existing Appendix D, or subject to a specific recall campaign. Therefore, this update will provide a listing of these vehicles, and the next update will focus on those vehicles with Not Ready rates greater than 30% that are being investigated further. The next update will address vehicles with Not Ready rates greater than 20% also.

It should be noted that the analyses done for this document included data from GA and WI, so that the total number of test records was increased to approximately 12 million.

Solutions for those vehicles under evaluation will be developed by the stakeholder workgroup and shared through periodic updates to the broader IM community via mechanisms such as the IM Solutions List Server.

Please contact Gene Tierney (tierney.gene@epa.gov) or Lee Cook (cook.leila@epa.gov) for questions regarding this document.

Over 30% Not Ready: Vehicles Between 8,500 & 14,000 lbs. GVWR

The table below provides a summary of the Makes, Models, and Model Years of vehicles that were found to be judged Not Ready from the analysis of the seven-state data; however, they are also over 8500 lbs. GVWR and, therefore, are not required to be federally OBD-compliant until a 40% phase-in beginning with the 2004 model year for gasoline and a 50% phase-in beginning with the 2005 model year for diesel. For this reason OTAQ does not recommend these vehicles be OBD-tested. If a state does decide to OBD test these vehicles, the OBD system information should not be the sole source of information for any pass/fail decision. Furthermore, any state that decides to OBD-test these vehicles should exercise caution even if the testing is done on an advisory basis.

It was recognized that those vehicles appearing in Table 1 were identified by chance and, therefore, less than a complete list. A second table was created to address this issue and is much more extensive. It lists all vehicles over 8500 lbs. GVWR certified from MY00 through MY07 and includes engine size. Due to its size, it is only available electronically on the OTAQ web page. (See File Table 1a.)

Table 1: Vehicles Over 8500 lb. GVWR Identified in Data with >30% Not Ready*

Make	Model	MY								
		1996	1997	1998	1999	2000	2001	2002	2003	2004
Chevy	C2500	x		x	x					x
Chevy	G1500						x	x		
Chevy	G2500	x	x	x	x		x	x		
Chevy	G35		x							
Chevy	K2500	x								x
Chevy	K3500		x							
Chevy	Savanna				x		x			
Chevy	3500		x							
Dodge	B2500	x	x	x	x					
Dodge	B3500	x	x							
Dodge	Ram 2500	x					x	x		
Dodge	Ram 3500	x		x			x			
Dodge	Ram Van	x	x	x	x		x	x	x	
Dodge	Ram Wagon	x					x	x		
Ford	E250	x	x	x	x	x	x	x	x	x
Ford	E350	x		x	x		x	x	x	x
Ford	Excursion						x	x	x	
Ford	F250	x	x	x	x		x	x	x	x
Ford	F350				x		x	x	x	
Ford	E150	x								
GMC	C2500	x	x	x	x					
GMC	G25		x							
GMC	G2500	x						x		x
GMC	G35		x							
GMC	Savanna		x	x	x		x			
GMC	Sierra			x						
GMC	3500				x					

* In all tables, an “x” indicates that particular Make, Model, and MY displayed a Not Ready rate >30% in the data set. If the cell is blank, then that Make, Model, and MY Not Ready rate was below 30% and not the focus of this update even though those cells still represent vehicles that are above 8500 lb GVWR.

Over 30% Not Ready: Vehicles Subject to Recall Campaign #678 TSB 18-005-01

The following vehicles in Table 2 have been the focus of a manufacturer recall campaign (Recall Campaign #678). The readiness issue with these vehicles is an improper design that causes all monitors to set to “Not Ready” following every ignition key-off event.

TSB 18-005-01 applies to non-California vehicles and will be performed at no cost, even if the warranty has expired. A similar agreement between ARB and Chrysler has been established for CA vehicles.

Table 2: Recall Campaign #678 Vehicles

Make	Model	MY 1996
Chrysler	Cirrus	x
Chrysler	Concorde	x
Chrysler	Intrepid	x
Chrysler	LHS	x
Chrysler	New Yorker	x
Chrysler	Sebring	x
Dodge	Avenger	x
Dodge	Intrepid	x
Dodge	Neon	x
Dodge	Stratus	x
Jeep Eagle	Talon	x
Jeep Eagle	Vision	x
Plymouth	Breeze	x
Plymouth	Neon	x
Plymouth	Voyager	x

Over 30% Not Ready: Vehicles Already in Existing Appendix D

The vehicles appearing in Table 3 below have been identified previously in the existing Appendix D that can be found in the June 2001 EPA document “Performing Onboard Diagnostic System Checks as Part of a Vehicle Inspection & Maintenance Program”. The document number of this report is EPA420-R-01-015. The recommended procedure for handling these vehicles is to scan them for MIL illumination without regard to readiness status.

Table 3: Vehicles in June 2001 Appendix D*

Make	Model	1996	1997	1998
Mitsubishi	Diamante		x	x
	Eclipse	x	x	x
	Galant	x	x	x
	Mirage	x	x	x
	Montero	x	x	x
	3000	x	x	
Saab	900/9000	x	x	
Subaru	Impreza	x		
	Legacy	x		

* The June 2001 Appendix D recommends All Model Mitsubishi vehicles from MY96-98 be scanned for MIL illumination without regard to readiness. The vehicles in Table 3 were only those that were identified in the state CY05 data, but this guidance update does not supersede that recommendation and all MY96-98 Mitsubishis should continue to be scanned for MIL illumination without regard to readiness.

Over 30% Not Ready: Under Evaluation

The vehicles listed below in Table 4 are the subject of ongoing lab testing and discussions with the auto manufacturers to determine the extent of the readiness problem in each case and develop a recommended handling procedure. Engine information is provided as available and should be used accordingly as some models exhibit readiness problems while those with a different engine do not (e.g. only the 2.0 L Sonatas appear to have a problem with readiness).

Until further notice, states may chose to OBD test these vehicles regardless of their readiness status or default them to a tailpipe test. Any other options a state may wish to pursue should be discussed with EPA's Office of Transportation & Air Quality.

Table 4: Lab Testing or OEM Discussion Vehicles*

Make	Model	MY					
		1996	1997	1998	1999	2000	2003
Chevy	Tracker	x	x				
Dodge	Viper						x
Ford	Probe GT	x	x				
Hyundai	Accent	x			x		
	Elantra	x			x		
	Sonata	x	x	x			
Kia	Sephia	x					
	Sportage	x					
Mazda	Protege	x					
Plymouth	Breeze					x	
Porsche	911	x	x				
Suzuki	Sidekick	x					
Volvo	850	x	x				
	S70			x			
	S90			x			
	V70			x			
VW	Passat	x					

* The June 2001 Appendix D recommends MY96-97 Volvo 850s be treated as non-problematic vehicles. However, based on this analysis of CY05 state data, these vehicles are exhibiting a high degree of not readiness despite the existing TSBs to address this problem. Therefore, the MY96-97 Volvo 850s have been listed in Table 4 as vehicles in need of further study. The same is true for the MY98 Volvo S70, S90 & V70.