

# OBD Inspection System & New Test Procedures

BAR Advisory Group  
January 9, 2014

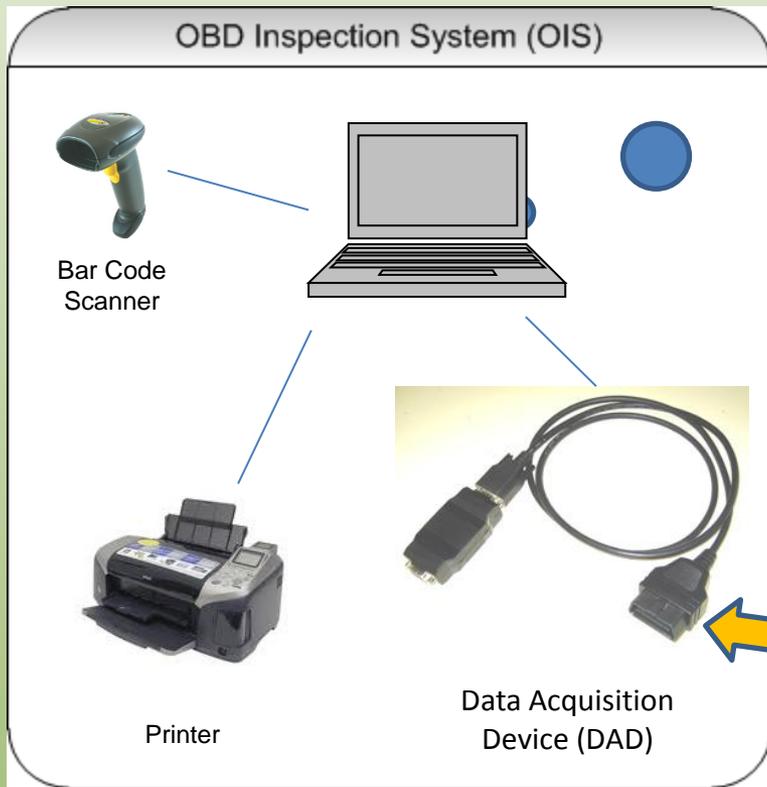
Paul Hedglin



# OBD Inspection System (OIS)

- Data Acquisition Device (DAD) hardware
  - BAR Certified device from equipment manufacturer
  - Only BAR certified piece of OIS
- Ancillary equipment (computer, barcode scanner, printer)
  - Off-the-shelf equipment that meets minimum performance standards (e.g., Windows 7 w/ 32 bit, etc.)
  - May also be sold by DAD vendors
- Web-based inspections
  - Internet connection required during inspection (no off-line tests)
  - Hybrid client approach: Smog Check business via Web page hosted by BAR's central database contractor + DAD hardware driver on computer
- State owned software
  - Smog Check Program or vehicle exception related changes at no cost to industry

# OIS Conceptual Design



Internet Connection



DAD from BAR certified vendors.  
Other equipment off-the-shelf or from other vendors.

# OIS Hardware Functions

- User able to self service; swap DADs
- User responsible for PC, Internet issues
- PC open platform; can run Alldata, etc.
- DAD Firmware updates via DAD Vendor utility on PC

# OIS Software Functions

- VIN-based vehicle data entry
  - POLK decode, populates vehicle data on screen
- BAR adds/removes techs.; owner can block techs.
- Owner view multiple DADs, certs., stations, from one location
- BAR able to deputize, if necessary, Referee functions at any station
- Test modules (on/off): OBD, visual, functional, smoke, liquid leak
- Portions of OBD data collection switchable
- Collecting EO number
- Can save unlimited number of VIRs on PC; hardcopy prints

# OIS Software Preview

BAR LAB #4  
TC999990  
10240 SYSTEMS PKWY  
SACRAMENTO, CA 95827  
CV001122



Is this not the right station?

## Main Menu



1 Perform Inspection



2 Repair Only



3 Reprint VIR



4 DAD Diagnostics



5 Manage Station



6 Manage Staff



7 Manage Messages



8 Manage Account

# BAR-OIS Access by User Type

	Perform Inspection	DAD Diagnostic	Manage Station	Manage Staff *	Repair Only	Reprint VIR	Manage Message	Manage Account
Inspector	X	X			X	X	X	X
Repair Technician					X	X	X	X
Station Owner			X	X	X	X	X	X
Station Manager			X	X	X	X	X	X
Administrator			X **		X	X	X	X
Junior Administrator					X	X	X	X

\* Only BAR can assign the following user types to a station's staff:  
Station Owner, Inspector, Repair Technician

\*\* Administrator Access limited to Manage Certificates part only

# DAD Certification Status

DAD Vendor	Certification Status		
	Alpha	Beta Phase 1 (Sacramento) 1,500 Valid Tests	Beta Phase 2 (Statewide) 18,500 Valid Tests
Applus Technologies			✓
Drew Technologies		✓	
Worldwide Environmental Products		✓	

\* Beta Testing scheduled to resume 1/23/2014.

# OIS Beta Testing

- The BAR-97 and the OIS will have the same OBDII standards
- Follow new Smog Check Manual on Web
  - No OIS entries for 1996 to 1999 vehicle timing and fuel cap tests
- Offer motorists choice of BAR-97 or OIS
  - OIS or BAR-97 sufficient
- Aborted tests not allowed
- Certificates still purchased in books of 50
- Certificate fee and VID communication fee currently remain the same
- Variety of DAD Vendor 'deals' with stations
- BAR will not use OIS data to calculate STAR scores
- BAR provided list of high volume STAR stations to vendors
- Only 50 DADs total per vendor

# OIS Project Schedule

- 7/1/2013 – Regulations adopted, permitting BAR certification start
- 8/19/2013 – BAR started certification (Alpha Testing) on Applus, Drew Technologies, Bosch (SPX), Worldwide Environmental Products wired & wireless DADs
- 12/4/2013 – Applus and Drew started Beta testing in Sacramento area stations
- 1/23/2014 – Applus, Drew, and Worldwide in Beta testing
- 1/27/2014 – New collection period opens for DAD certification
- Spring 2014 – First DAD(s) BAR certified beginning statewide start of OIS inspections.
- Summer 2014 – Mandatory OIS use date

# BAR-97 / OIS Equipment Requirements

## EQUIPMENT AND MATERIALS REQUIREMENTS

EQUIPMENT / MATERIALS		STATION TYPE				
		STAR Test Only	Test Only	STAR Test and Repair	Test and Repair	Repair Only
<b>BAR Certified Equipment</b>	BAR-97 Emissions Inspection System (EIS) with most current hardware and software	√	(1)	√	(1)	
	OBID Inspection System (OIS) with hardware and software necessary to conduct OBD inspections	√	(2)	√	(2)	
	Low Pressure Fuel Evaporative Tester (LPFET) and Operator's Manual	√	(3)	√	(3)	
	Fuel cap tester, adapters, and adapter guide	√	(3)	√	(3)	
	Ignition Timing Light capable of measuring ignition advance	√	(4)	√	(4, 5)	(5)

- (1) Required when performing a tailpipe emission inspection on vehicles.
- (2) Required when performing the OBD test on model-year 2000 and newer vehicles.
- (3) Required when inspecting 1976-1995 model-year vehicles with evaporative control systems.
- (4) Required when inspecting and / or repairing 1976-1995 model-year vehicles with adjustable timing.
- (5) Required when inspecting and / or repairing vehicles with spark ignition engines.

# New Smog Check Manual

- OIS tested vehicles include:
  - Most 2000 and newer model year gasoline powered
  - All 1998+ Diesels
- Starting upon mandatory OIS use date, summer 2014

# New Smog Check Manual

- OBD readiness monitors revised after OIS statewide implementation. BAR will announce start date.
  - Gasoline:
    - One monitor allowed for 1996 to 1999
    - Only the evaporative monitor for 2000 and newer
  - Diesel:
    - Zero monitors allowed for 1998 to 2006
    - Only the exhaust after-treatment monitor (e.g., particulate filter) for 2007 and newer

REQUIRED TESTS	BAR-97			OBD Inspection System (OIS)		
	Gasoline 1976 to 1995	Gasoline 1996 to 1999	Gasoline 2000 and newer exceptions (1)	Hybrid 2000 and newer (2)	Diesel 1998 and newer (3)	Gasoline 2000 and newer
<b>Tailpipe Inspections: (see section 1.2)</b>						
Acceleration Simulation Mode (ASM) or Two Speed Idle (TSI) (4)	√	√	√			
<b>Visual Inspections: (see section 1.3)</b>						
Crankcase Emissions Controls	√	√	√	√	√	√
Thermostatic Air Cleaner	√	√				
Fuel Evaporative System (EVAP)	√	√	√	√		√
Exhaust Gas After Treatment Systems	√	√	√	√	√	√
Exhaust Gas Recirculation (EGR)	√	√	√	√	√	√
Ignition Spark Controls	√	√	√	√		√
Fuel Metering Systems	√	√	√	√	√	√
Air Injection System	√	√	√	√		√
Computers, Sensors, and Switches	√	√	√	√	√	√
Other Emission Related Components	√	√	√	√	√	√
Liquid Fuel Leak (section 1.3.3)	√	√	√	√		√
Visible Smoke Test (section 1.3.4)	√	√	√		√	√
<b>Functional Inspections: (see section 1.5)</b>						
On-Board Diagnostics (OBD)		√	√	√	√	√
Malfunction Indicator Light (MIL)	√	√	√	√	√	√
Exhaust Gas Recirculation (EGR) (5)	√					
Ignition Timing	√					
Fuel Cap Integrity	√					
Low Pressure Fuel Evaporative Test (LPFET)	√					

(1) Some model-year 2000 and newer vehicles will require a tailpipe test on the BAR-97 EIS. These include vehicles with problem OBDII systems (as identified by BAR) or vehicles without OBDII; e.g., over 14,000 GVWR, some federally certified emissions.

(2) Hybrid vehicles are powered by both internal combustion and electric power sources.

(3) Diesel-powered vehicles with a GVWR greater than 14,000 lbs. are exempt from the Smog Check Program.

(4) ASM required for vehicles registered in Enhanced program areas, unless vehicle is incompatible with dynamometer test, then TSI shall be performed. TSI required in basic and change of ownership areas.

(5) The EGR functional inspection is only performed in conjunction with a TSI tailpipe test.

# OIS Training

- On 1/9/14, BAR training on [www.smogcheck.ca.gov](http://www.smogcheck.ca.gov)
  - Registration and Download video
  - Getting Started
  - Inspector
  - Owner & Manager
  - Repair Tech & Junior Admin
  - Senior Administrator
  - Beta Q&A's
- Training built into OIS software in February 2014



# Inspection Volume by Equipment Type

Model Years	Future Test Platform	Inspections Calendar Year 2011	Inspections Calendar Year 2012	Inspections Calendar Year 2013
1976 – 1999	BAR-97	42%	36%	32%
2000 and newer	OIS	58%	64%	68%

# Additional Information

- BAR Website

CA .GOV DEPARTMENT OF CONSUMER AFFAIRS BUREAU OF AUTOMOTIVE REPAIR

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Home Consumers Industry BAR Programs Enforcement General Information About BAR Careers At BAR

Office of Governor  
**Edmund G. Brown Jr.**  
Visit his Website

Secretary  
**Anna M. Caballero**  
Business, Consumer Services, and Housing Agency

Director  
**Denise D. Brown**  
Department of Consumer Affairs

Effective July 1, 2013 the [Repair Cost Waiver](#) increases from \$450 to \$650.

INFORMATION ABOUT

Hot Topics Your Car References Proposed Smog Check Improvements

**STAR** Program - Consumer

**STAR** Wins 2013 best of CA Green IT Award

California **B.R. OIS** New Equipment and Inspection Procedures

Write It Right - A Guide For ARDs

Report a Gross Polluting Vehicle

SB 94 - Vehicle Registration Renewals

[Free Auto Body Inspection Program](#)

**STAR** Program - Industry

Smog Check Licensing Restructure

Station Signs

CAP Operations Manual and Training Module

Consumer Assistance Program (CAP)

Auto Repair & Smog Check News

Regulatory Hearings

View Video on Free Auto Body Inspection Program

**QUICK HITS**

- [Dept. of Consumer Affairs](#)
- [File a Complaint](#)
- [Find a Smog Check Station](#)
- [Find a Station/ License Status](#)
- [Find Vehicle Smog Test History](#)

- Questions to BAR Help Desk

- Email: [bar.industryhelpdesk@dca.ca.gov](mailto:bar.industryhelpdesk@dca.ca.gov)

- Phone: 1-866-860-8509