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Dave Lee has over forty years in the automotive service and repair field, from hands-on repairs to management positions. He is A.S.E. Certified as a master technician, an affiliate member of the Society of Automotive Engineers (S.A.E), a member of the Association of Diesel Specialists, and Co-owner of a Automotive Repair Service Facility. He has previously been employed by a Professional Manual Publishing Company for which he had traveled extensively for the past year and a half to gather I/M information for Professional Automotive Emission Manual Preparation. Through the years, he has presented product information and conducted seminars on many automotive subjects. He is certified by the Pennsylvania Department of Transportation to teach Safety Inspection and Emission Certification, which he has been doing for a number of years, through the Delaware County Community College. Because of his involvement with I/M instruction, he was invited to observe and evaluate one state's I/M training program for both new applicants and certified technicians returning for re-certification, and make recommendations for possible changes in their instructional process. During his travels, he has worked with other states' training personnel, in providing direction, suggestions and to gain knowledge of what is needed for the technician entering the I/M field. He has remained in direct contact with varied State I/M personnel, private contractors and local program area I/M personnel, in both Centralized and Decentralized programs to evaluate the various systems used in the I/M tests. He has attended numerous federal I/M meetings, Clean Air Conferences and I/M courses at Colorado State University and is Technical Director of his I/M Consulting and Instructional Services company, along with being an executive board member of the Delaware County Inspection Association.

He has gained much knowledge from the technicians doing the I/M tests in the service bay, the many I/M compliance officers, and program directors in charge of the programs who must comply with Federally mandated rules and regulations, while still maintaining budgetary restrictions.

With the above credentials, he is here to offer recommendations to the committee in determining a direction to make the existing I/M program workable, bring it up-to date, while still complying to the federal government's forthcoming mandates.

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INSPECTION/MAINTENANCE PROGRAM IMPLEMENTATION SUMMARY
January 1992

Region/ State/ I	Program Start	Type	Tamper Test	Waiver Type	Test Fee \$	Vehicles Included	Exemp- tions	Light Duty Years	Cutpoints		
									CO %	HC ppm	
CT statewide	1/83	CC	Waiver	C 40	10	1968+ to	M	1968-1969	7.5	750	
		SE	C,A,I	E		10,000 lbs.	D	1970	7.0	650	
		A	P,E,G	W					1971	6.0	650
		I	R,S,O						1972	6.0	575
			F						1973-1974	6.0	425
									1975-1979	3.0	300
									1980	2.5	275
							1981+	1.2	220		
MA statewide	4/83	DC	Always	C 100	15	Last 15	M	1977-1979	4.0	400	
		SE	I	or 10%		years to	D	1980	2.7	300	
		A	1980+:	of value		8500 lbs.			1981+	1.2	220
		I	C,G	and							
		S	Waiver	L							
			All	E							
NH Nashua: Hillsborough* Rockingham*	10/87	DM/DC	Always	C 50	Market	Last 15	M	1977-1979	3.5		
		SE/CM	1985+:			years to	D	1980	1.5		
		A	C,I			8000 lbs.			1981+	1.2	
		I									
		S									
RI statewide	1/79	DM	None	L	4°	1967+ to	M	1967	10.0	1600	
		RS				8000 lbs.	D	1968-1969	8.0	800	
		A							1970-1974	6.0	600
		I							1975+	3.0	300
		S									

This document summarizes features of every I/M program in the country and is based on promulgated statutes or rules. The list includes the names of states, cities and counties (in that order) implementing I/M; asterisks indicate that only part of the county listed is included. The Program Start date is for the emission testing aspect of the program unless it is a anti-tampering only program; if tampering checks started separately that date is listed after the abbreviation "ATP." When parts of areas started later than others, dates are listed for each area. The Program Type column indicates whether the program is centralized or decentralized, what type of enforcement mechanism is being used, the test type and frequency. The Tamper Type column indicates whether tampering inspections are conducted always or only on waiver and which components are checked. The cost waiver amounts apply only to emission tests. Cutpoints are for light duty vehicles only. The key below identifies the codes used in the tables.

<u>Program Type Key</u>	<u>Program Type Key</u>	<u>Tampering Key</u>	<u>Waiver Key</u>
DC = decentral computer	RE = registration-enforced	C = catalyst	C = cost waiver/\$
DM = decentral manual	SE = sticker-enforced	A = air system	R = reduction/%
DT = decentral anti-tampering	RS = registration & sticker	L = lead test	L = stated repairs
CL = central local-run	CM = computer matching	I = inlet	E = tamper repair costs excluded
CC = central contractor	A = annual inspection	P = PCV	W = no waivers for vehicles under \$207 warranty
CS = central state-run	B = biennial inspection	E = evap system	
<u>Test Mode</u>	H = central/decentral	R = EGR	
I = idle	<u>Exemptions Key</u>	G = gas cap	
L = loaded	A = air-cooled	X = replace cat if inlet fails	
R = two speed	D = diesels	Y = replace O2 sensor if inlet fails	
S = safety	M = motorcycles	S = spark system	
	O = other fuels	O = oxygen sensor	
		F = EFI/carburetor	
		M = computer module	

*Includes safety fee

INSPECTION/MAINTENANCE PROGRAM IMPLEMENTATION SUMMARY

January 1992

Region/ State/Areas	Program Start	Program Type	Tamper Test	Waiver Type	Test Fee \$	Vehicles Included	Exemp- tions	Light Duty Years	Cutpoints CO %	HC ppm
IV										
TN Memphis: Shelby*	8/83	CL	None	C 50	None	All years M to 8500 lbs.		Pre-1972 1972-1974 1975-1979 1980 1981+	8.9 8.2 7.5 4.7 2.1	900 700 600 400 220
Nashville: Davidson	1/85	CC RE A I S	None	None	6	Last 12 years to D 8500 lbs.	M D	1980 1981+	3.0 1.2	300 220
V										
IL Chicago: Cook Du Page* Lake* East St. Louis: Madison* St. Clair*	5/86	CC CM A:8+ years old B:3-7 years old R 81+	Waiver G,C,I,X	L	None	1968+ all vehicles	M D	1968-1971 1972-1974 1975-1977 1978-1979 1980 1981+	9.0 8.0 7.0 6.0 3.0 1.2	900 800 700 600 300 220
IN Chicago suburbs: Lake Porter Louisville suburbs: Clark Floyd	6/84 ATP: 1/90	CS RE B R 81+	Always C,I,X G	Pre-81: C 75 1981+: C 150	None	1976+ to 10,000 lbs.	M D	1976-1979 1980 1981+ 81+ 2500rpm	3.5 2.0 1.2 1.0	350 250 220 200
MI Detroit: Macomb Oakland Wayne	12/85	DC RE A I	Waiver All EC's	C 71 and L E	10 max	Last 9 years to D 8500 lbs. 0	M D 0	1983+	1.2	220
MN Minneapolis /St. Paul: Anoka Carver Dakota Hennepin Ramsey Scott Washington Wright	7/91	CC RE A I	Always C,I,G X	Pre-81: C 75 1981+: C 200 E	10 max	1976+ to M 8500 lbs. D 0	M D O	1976-1977 1978-1979 1980 1981+	6.0 4.0 2.5 1.2	600 400 275 220
OH Cincinnati: Butler Hamilton Cleveland: Lake Lorain Cleveland: Cuyahoga	2/88 12/90	DT RE A CC RE A I	Always C,A,I P,E,R G,O,X Failures C,I G C 200	None Pre-81: C 100 1981+ C 200	8 7	1980+ to M 8500 lbs. D 0 1975+ to M 8500 lbs. D 0	M D O M D 0	None 1975-77 1978 1979 1980 1981+	5.5 4.0 3.0 2.0 1.2	450 350 275 230 220

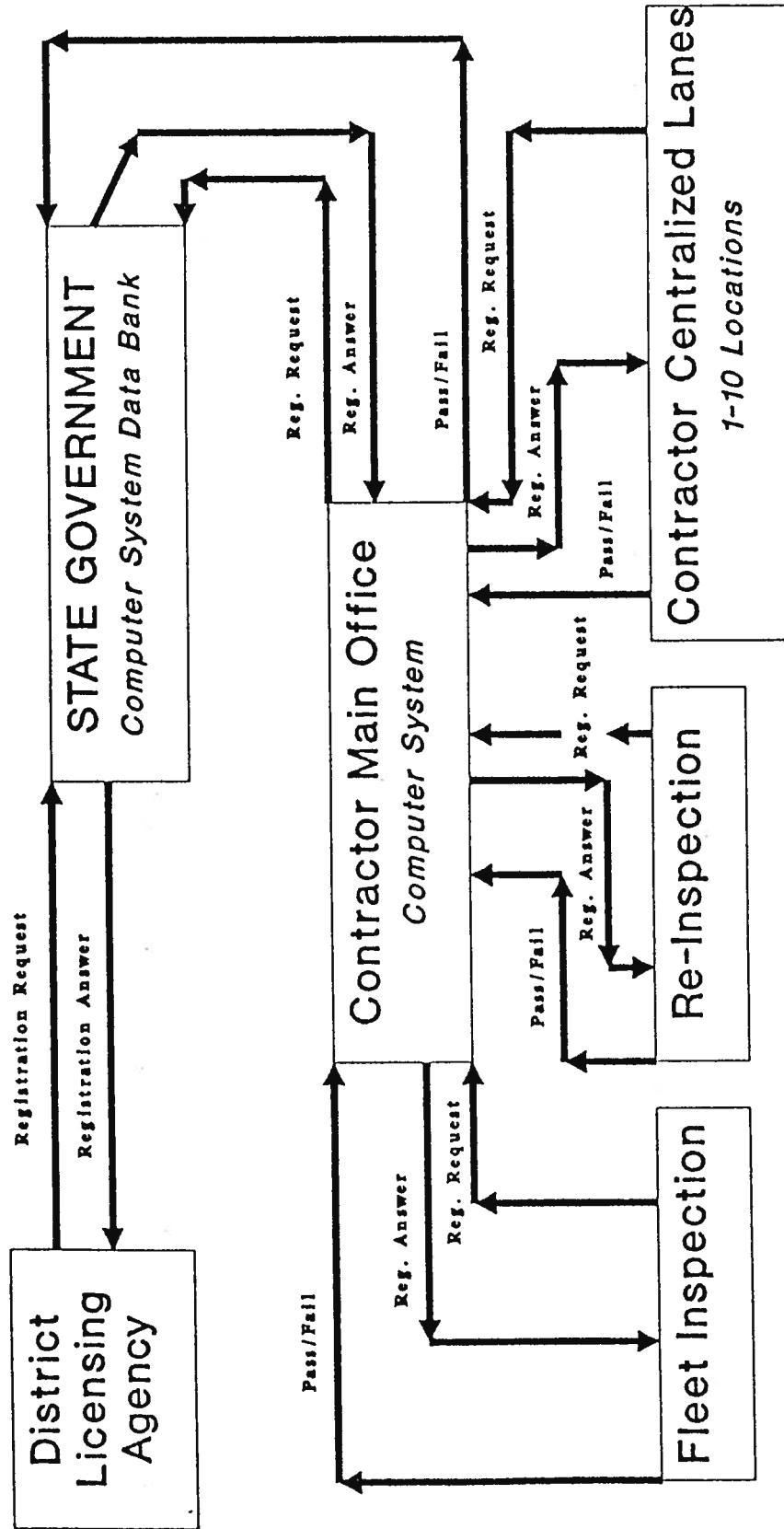
INSPECTION/MAINTENANCE PROGRAM IMPLEMENTATION SUMMARY
January 1992

Region/ State/Areas	Program Start	Type	Tamper Test	Waiver Type	Test Fee \$	Vehicles Included	Exemp- tions	Light Duty Years	Cutpoints CO HC % ppm	
WI Milwaukee:	4/84	CC	Always	C 55	None	Last 15	M	1977	5.5	450
Kenosha	ATP:	RE	1975+:	L (if		years to	D	1978	4.0	350
Milwaukee	4/89	A	C,I,X	10 years		8000 lbs.		1979	3.0	275
Ozaukee		I	Waiver	old)				1980	2.0	230
Racine			A,P,R	E				1981+	1.2	220
Washington										
VI Waukesha										
OK Tulsa:	1/86	DT	Always	None	5°	1979+ to	M	None		
Creek*		SE	C,A,L			8500 lbs.	D			
Osage*		A	I,P,E				O			
Rogers*		S	R,O,X							
Tulsa*										
Wagoner*										
Oklahoma City:	1/87		Always	None	5°	1979+ to	M	None		
Canadian*		DT	C,A,L			8500 lbs.	D			
Cleveland*		SE	I,P,E				O			
Kingfisher*		A	R,O,X							
Lincoln*		S								
Logan*										
McClain*										
Oklahoma*										
Pottawatomie*										
LA Baton Rouge:	9/85	DT	Always	None	10°	1980+ to	M	None		
E. Baton Rouge		SE	1980+:			8500 lbs.	D			
W. Baton Rouge		A	C,A,L,I				O			
		S	P,E,R,X							
			1984+:0							
NM Albuquerque:	3/89	DC	Always	L	Market	1975+ to	M	1975-1976	7.0	900
Bernalillo		RE	C,A,L			25,999 lbs.	D	1977-1978	6.2	700
		B	I,X,O					1979-1980	4.3	700
		I						1981-1982	1.5	300
								1983+	1.2	220
TX Houston:	7/84	DT	Always	None	1980+:	1968+ to	M	None		
Harris		SE	1968+:		11.25	8500 lbs.	D			
			A,P,E,R		1968-					
			1980+		1979:					
			C,L,I,X		8.50					
			1984+:0							
Dallas/	4/90	DC	Same as	C 250	1980+:	1968+ to	M	1975-1977	7.5	750
Ft Worth:	ATP:	SE	Houston		17.25	8500 lbs.	D	1978	6.5	650
Dallas	1/86	A			1975-	Tailpipe	O	1979	6.0	600
Tarrant	1/86	R			1979:	test in		1980	4.0	400
Collin	4/90				14.50	Dallas and		1981+	1.2	220
Denton	4/90					Tarrant				
Ellis	4/90					Counties				
Johnson	4/90					Only on				
Kaufman	4/90					1975+				
Parker	4/90									
Rockwell	4/90									
El Paso:	1/86	DC	Same as	C 200	1980+:	1975+ to	M	1975-1977	7.5	750
El Paso	ATP:	SE	Houston		11.25	8500 lbs.	D	1978	6.5	650
	1/87	A			75-79:		O	1979	6.0	600
		S			8.50			1980	3.0	300
								1981+	1.2	220

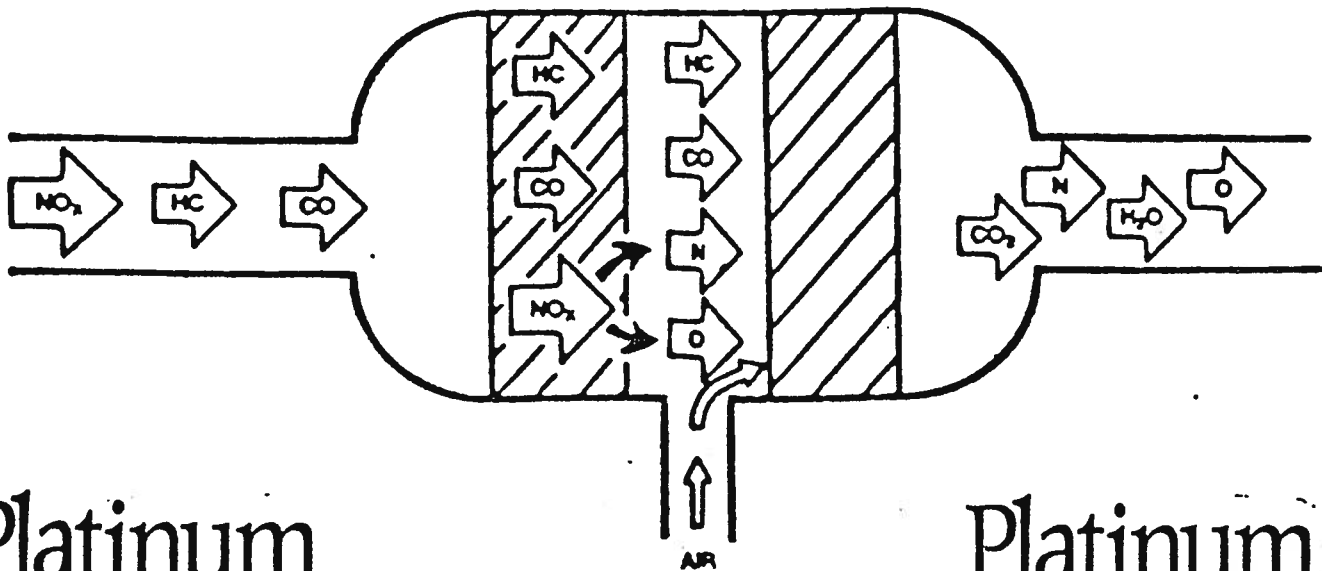
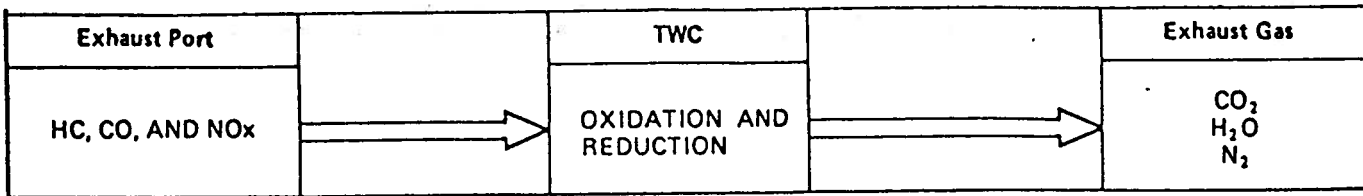
INSPECTION/MAINTENANCE PROGRAM IMPLEMENTATION SUMMARY
January 1992

Region/ State/Areas	Program Start	Type	Tamper Test	Waiver Type	Test Fee	Vehicles Included	Exemp- tions	Light Duty Years	Cutpoints CO	HC	
								1981+	1.2	220	
VII											
MO St. Louis:	1/84	DM	Always	L	4.50	1971+ to	M	1971-1974	7.0	700	
Jefferson		RS	A,P,E	max		8500 lbs.	D	1975-1979	6.0	600	
St. Charles		A	R,S,O				O	1980	3.0	300	
St. Louis City		I	1981+:					1981+	1.2	220	
St. Louis		S	C,I								
VIII											
CO Denver:	1/82	DC	Always	Pre-81:	9.00	All years	M	Pre-1960	8.0	1600	
Adams	ATP:	RS	1975+:	L 50	max	and	D	1960-1967	7.5	1400	
Arapahoe	7/88	R 81+	C,A,I	1982+:		vehicles		1968-1971	6.0	1200	
Boulder		A:6+	X,Y,O	C 200				1972-1974	5.4	1200	
Denver		years old		E				1975-1976	4.4	800	
Douglas		B:1-5		W				1977-1978	3.4	500	
Jefferson		years old						1979	2.0	400	
Colorado Springs:								1980+	1.5	400	
El Paso											
Fort Collins:											
Larimer											
Greeley:	1/88										
Weld											
UT Salt Lake City:		DC	Always	Pre-82:	9	1968+ all	M	1968-1969	6.0	800	
Salt Lake	4/84	RE	1984+:	L 15	max	vehicles	D	1970-1974	5.0	700	
		A	C,A,I	1982+:				1975-1976	4.0	600	
		I	Waiver	C 100				1977-1979	3.0	500	
		S	Pre-84:	E				1980	2.0	300	
			C,A,I					1981+	1.2	220	
Davis	4/84	DC	Always	C 60-150	9	1968+ all	M	1968-1969	6.0	800	
		RE	1984+:	E	max	vehicles	D	1970-1974	5.0	700	
		A	All items					1975-1976	4.0	600	
		R 81+	Waiver					1977-1979	3.0	500	
		S	Pre-84					1980	2.0	300	
								1981+	1.2	220	
Provo:	7/86	DC	Always	Pre-81:	14	1968+ all	M	1968-1969	6.0	800	
Utah		RE	1977+	C 100	max	vehicles	D	1970-1974	5.0	700	
		A	C,A,I	1981+:				1975-1976	4.0	600	
		R 81+	Waiver	C 200				1977-1979	3.0	500	
		S	68-76					1980	2.0	300	
								1981+	1.2	220	
Ogden:	1/92	DC	Always	C 60-150	9	1968+ all	M	1968-1969	6.0	800	
Weber		RE	1992:	E	max	vehicles	D	1970-1974	5.0	700	
		A	All items					1975-1976	4.0	600	
		R 81+	Waiver					1977-1979	3.0	500	
		S	Pre-84					1980	2.0	300	
								1981+	1.2	220	
IX											
AZ Phoenix:	1/77	CC	Always	Pre-75:	50	5.60	1967+	None	67-71	5.5	500
Maricopa*	ATP:	RE	C,A,L	75-79:	200		vehicles		72-74	5.0	400
Tucson:	1/87	A	I,X	1980+:	300				75-78	2.2	250
Pima*		I		E					1979	2.2	220
		L 81+							1980+	1.2	220
NV Las Vegas:	10/83	DC	1968+:	C 200		Clark: 1968+ all	M	1968-1969	4.0	800	
Clark	ATP:	RE	G	100 self	\$15	vehicles	D	1970-1974	3.5	700	
Reno:	6/89	A	1981+:	E		Washoe:	O	1975-1978	2.5	500	
Washoe		R	C,A,I,R	W	\$16			1979-1980	2.0	500	
								1981+	1.2	220	

Florida's Centralized, Computerized Emission Testing Program



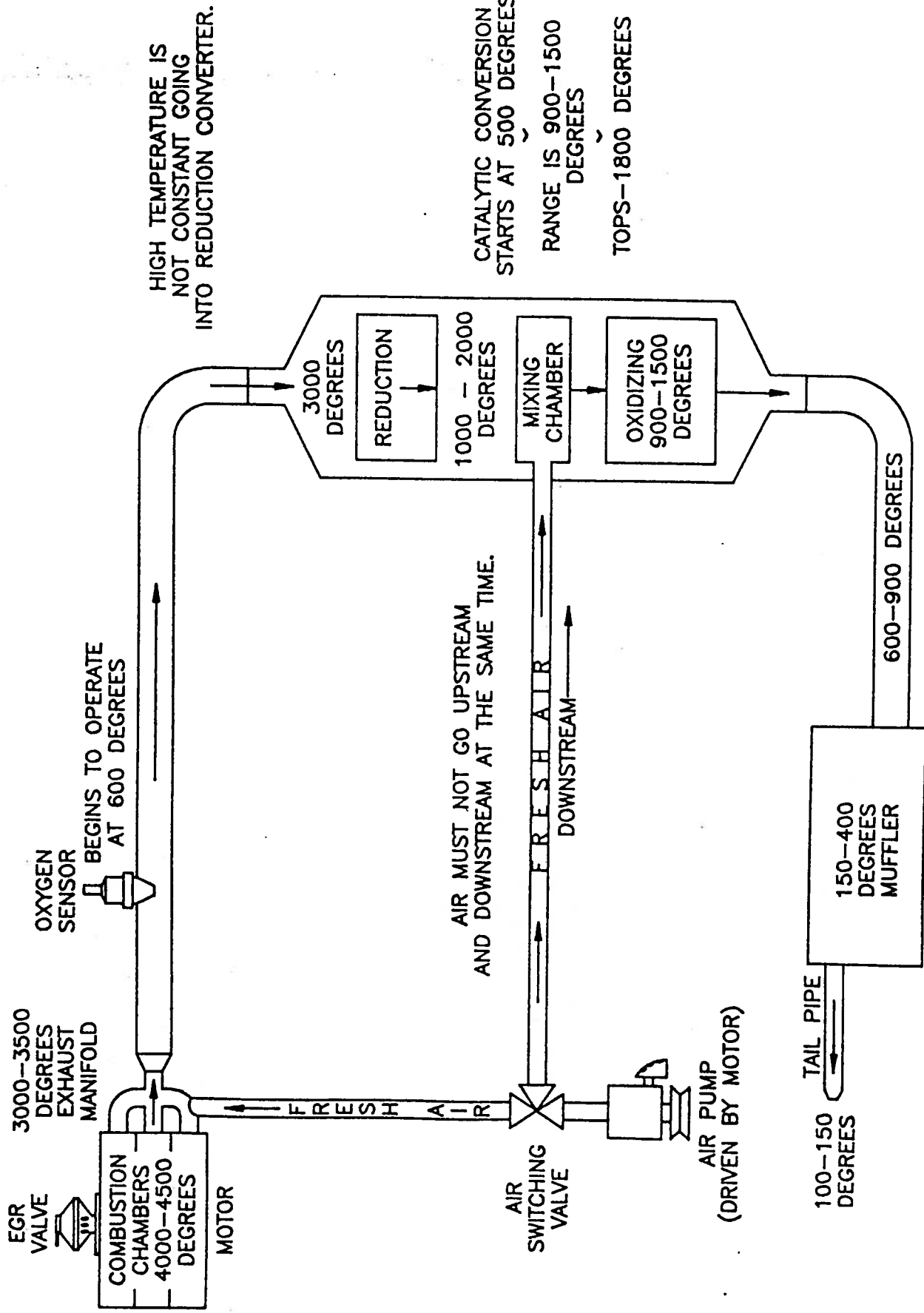
THREE-WAY CATALYST (TWC) SYSTEM



Platinum
Rhodium

Platinum
Palladium

HYPOTHETICAL REDUCTION OF COMBUSTION TEMPERATURES



HIGH TEMPERATURE IS NOT CONSTANT GOING INTO REDUCTION CONVERTER.

CATALYTIC CONVERSION STARTS AT 500 DEGREES RANGE IS 900-1500 DEGREES TOPS-1800 DEGREES

1992 FEDERAL EMISSION CONTROL

5 YEAR/50,000-MILE EMISSION DEFECT WARRANTY

General Motors Corporation warrants to the owners of 1992 passenger cars that the car:

- (1) was designed, built, and equipped so as to conform at the time of sale with applicable regulations of the Federal Environmental Protection Agency, and
- (2) is free from defects in materials and workmanship which cause the car to fail to conform with those regulations for a period of use of 5 years or 50,000 miles, whichever occurs first. The 5-year/50,000-mile warranty period shall begin on the date the car is delivered to the first retail purchaser or, if the car is first placed in service as a demonstrator or company car prior to sale at retail, on the date the car is first placed in such service. Emission related defects in the genuine GM components listed on page 15 including reasonable related diagnostic costs, are covered by this warranty.

EMISSION PERFORMANCE WARRANTY

Some states and local jurisdictions have established periodic vehicle inspection and maintenance (I/M) programs to encourage proper maintenance of your car. If an EPA-approved I/M program is in force in your area, you also may be eligible for Emissions Performance Warranty Coverage if all of the following three conditions apply:

1. The vehicle has been maintained and operated in accordance with the instructions for proper maintenance and use set forth in the Owner's Manual, the Maintenance Schedule and the Warranty and Owner Assistance Information booklet supplied with your new car;
2. The vehicle fails to conform for a period of 5 years or 50,000 miles, whichever occurs first, to the applicable emission standards of the U.S. Environmental Protection Agency, as judged by an EPA-approved I/M test; and
3. The failure to conform results or will result in the owner of the vehicle having to bear a penalty or other sanctions (including the denial of the right to use the vehicle) under local, state or federal law.

If all of these conditions are met, General Motors warrants that your dealer will replace, repair or adjust to GM specification, at no charge to you, any of the components listed on page 15, or parts thereof, which may be necessary to cause your car to conform to the applicable emission standards. Non-GM parts labeled "Certified to EPA Standards" also are covered by this warranty. The Emission Performance Warranty begins on the date the car is first put into use and continues for a period of 5 years or 50,000 miles, whichever occurs first.

SYSTEMS WARRANTIES

WHAT IS COVERED

Listed below are systems that affect emissions of your car. Emission-control components of these systems are covered by the emissions warranties as applicable. Items that require scheduled replacement are warranted up to the replacement interval specified in your Maintenance Schedule.

- Computer Command Control System
- Engine control module, and associated sensors and parts
- Fuel Management System
- Fuel injection system
- Air Induction System
- Thermostatic air cleaner system
- Ignition System
- Ignition parts and associated controls, including spark plugs and ignition wires
- Catalytic Converter System
- Catalytic converter and associated parts
- Positive Crankcase Ventilation System
- PCV valve and associated parts
- Exhaust Gas Recirculation System
- EGR valve and associated controls
- Air Injection System
- Air pump, air distributor and valves
- Evaporative Emission Control System
- Vapor storage canister and associated controls, fuel tank filler cap and restrictor
- Miscellaneous Items Used in Above Systems
- Emission-related hoses, clamps, belts, pulleys, tubes, fittings, sealing devices, mounting hardware, and wiring harnesses.

If failure of one of the above components results in failure of another part, both will be covered by this warranty.

For detailed information concerning specific components covered by these emission control systems warranties, ask your dealership.

WHAT IS NOT COVERED

THESE WARRANTY OBLIGATIONS DO NOT APPLY TO:

- Conditions resulting from tampering, abuse, neglect or improper maintenance; or
- Any other item listed under "What is Not Covered" in the New Car Limited Warranty, on pages 8 and 9.

THE "OTHER TERMS" PRESENTED IN THE NEW CAR LIMITED WARRANTY, ALSO APPLY TO THESE WARRANTIES.

CALIFORNIA EMISSION CONTROL WARRANTY YOUR RIGHTS AND OBLIGATIONS (APPLICABLE TO VEHICLES WITH CALIFORNIA EXHAUST EMISSION OPTION ONLY)

The California Air Resources Board and General Motors are pleased to explain the emission control system warranty on your 1992 vehicle. In California, new motor vehicles must be designed, built, and equipped to meet the state's stringent anti-smog standards. GM must warrant the emission control system on your vehicle for the periods of time listed below provided there has been no abuse, neglect, or improper maintenance of your vehicle.

Your emission control system may include parts such as the carburetor or fuel-injection system, the ignition system, catalytic converter, and engine computer. Also included may be hoses, belts, connectors, and other emission-related assemblies.

Where a warrantable condition exists, GM will repair your vehicle at no cost to you including diagnosis, parts, and labor.

GENERAL MOTORS WARRANTY COVERAGE:

- For 3 years or 50,000 miles (whichever first occurs):
 - If your vehicle fails a Smog Check inspection, GM will make all necessary repairs and adjustments to ensure that your vehicle passes the inspection. This is your emission control system PERFORMANCE WARRANTY.
 - If any emission-related part on your vehicle is defective, GM will repair or replace it. This is your short-term emission control system DEFECTS WARRANTY.
- For 7 years or 70,000 miles (whichever first occurs):
 - If an emission-related part listed in your warranty booklet specially noted with coverage for 7 years or 70,000 miles is defective, GM will repair or replace it. This is your long-term emission control system DEFECTS WARRANTY.

OWNER'S WARRANTY RESPONSIBILITIES:

As the vehicle owner, you are responsible for the performance of the required maintenance listed in your owner's manual/Maintenance Schedule. GM recommends that you retain all receipts covering maintenance on your vehicle, but GM cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

You are responsible for presenting your vehicle to a GM dealer selling your vehicle line as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

As the vehicle owner, you should also be aware that GM may deny you warranty coverage if your vehicle or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The applicable warranty period shall begin on the date the car is delivered to the first retail purchaser or, if the car is first placed in service as a demonstrator or company car prior to sale at retail, on the date the car is first placed in such service. Emissions warranty service will be done at no cost to the customer. It will include parts, labor, and related diagnostics.

If you have any questions regarding your rights and responsibilities under these warranties, refer to the Owner Assistance Section in the booklet or contact the California Air Resources Board at 9528 Telstar Avenue, El Monte, CA 91731.

WHAT IS COVERED

If your car is equipped with the California Emissions Equipment Option, these California warranties apply. Listed below are most of the systems that affect emissions of your car. Emission control components of these systems are covered by the Emission Defect Warranties. Items that require scheduled replacement are warranted up to the first replacement interval specified in the Maintenance Schedule of your Owner's Manual.

- Computer Command Control System
 - Engine control module, and associated sensors and parts
 - Fuel Management System
 - Fuel injection system, throttle body assembly*, fuel rail assembly*
 - Air Induction System
 - Thermostatic air cleaner system, intake manifold*, air cleaner assembly*
 - Ignition System
 - Ignition parts and associated controls, including spark plugs and ignition wires, distributor*
 - Catalytic Converter System
 - Catalytic converter*, exhaust manifolds*, and associated parts
 - Positive Crankcase Ventilation System
 - PCV valve and associated parts, oil filler cap
 - Exhaust Gas Recirculation System
 - EGR valve and associated controls
 - Air Injection System
 - Air pump, air distributor and valves
 - Evaporative Emission Control System
 - Vapor storage canister and associated controls, fuel-tank filler cap and restrictor, fuel sender assembly*, and fuel tank*
 - Miscellaneous Items Used in Above Systems
 - Emission-related hoses, clamps, belts, pulleys, tubes, fittings, sealing devices, mounting hardware, and wiring harnesses.
- If failure of one of the above components results in failure of another part, both will be covered by this warranty.
- For detailed information concerning specific components covered by these emission control systems warranties, ask your dealership.

WHAT IS NOT COVERED

THESE WARRANTY OBLIGATIONS DO NOT APPLY TO:

- Conditions resulting from tampering, abuse, neglect or improper maintenance; or
- Any other item listed under "What is Not Covered" in the New Car Limited Warranty, on page 8 and 9.

THE "OTHER TERMS" PRESENTED IN THE NEW CAR LIMITED WARRANTY, ALSO APPLY TO THESE WARRANTIES.

*Indicates 7 year/70,000 mile coverage.

THINGS YOU SHOULD KNOW ABOUT THE EMISSION CONTROL SYSTEMS WARRANTIES

REPLACEMENT PARTS

The emission control systems of your 1992 passenger car were designed, built and tested using genuine GM parts* and the car is certified as being in conformity with applicable federal and California emission requirements. Accordingly, it is recommended that any replacement parts used for maintenance or for the repair of emission control systems be new, genuine GM parts.

THE WARRANTY OBLIGATIONS ARE NOT DEPENDENT UPON THE USE OF ANY PARTICULAR BRAND OF REPLACEMENT PARTS. THE OWNER MAY ELECT TO USE NON-GENUINE GM PARTS FOR REPLACEMENT PURPOSES. USE OF REPLACEMENT PARTS WHICH ARE NOT OF EQUIVALENT QUALITY MAY IMPAIR THE EFFECTIVENESS OF EMISSION CONTROL SYSTEMS.

If other than new, genuine GM parts are used for maintenance replacements or for the repair of components affecting emission control, the owner should assure himself/herself that such parts are warranted by their manufacturer to be equivalent to genuine General Motors parts in performance and durability.

MAINTENANCE AND REPAIRS

MAINTENANCE AND REPAIRS CAN BE PERFORMED BY ANY QUALIFIED SERVICE OUTLET; HOWEVER, WARRANTY REPAIRS MUST BE PERFORMED BY AN AUTHORIZED DEALER EXCEPT IN AN EMERGENCY SITUATION WHEN A WARRANTED PART OR A WARRANTY STATION IS NOT REASONABLY AVAILABLE TO THE VEHICLE OWNER.

In an emergency, where an authorized dealer is not reasonably available, repairs may be performed at any available service establishment or by the owner, using any replacement part. Chevrolet will reimburse the owner for expense (including diagnosis), not to exceed the manufacturer's suggested retail price for all warranted parts replaced and labor charges based on Chevrolet's recommended time allowance for the warranty repair and the geographically appropriate labor rate. A part not being available within 10 days of a repair and being complete within 30 days constitutes an emergency. Retain receipts and failed parts in order to receive compensation for warranty repairs reimbursable due to an emergency.

* "genuine GM Parts," when used in connection with GM vehicles means parts manufactured by or for GM, designed for use on GM vehicles and distributed by any division or subsidiary of General Motors Corporation.

THINGS YOU SHOULD KNOW (Cont'd.)

MAINTENANCE AND REPAIRS (Cont'd.)

Receipts and records covering the performance of regular maintenance or emergency repairs should be retained in the event questions arise concerning maintenance. These receipts and records should be transferred to each subsequent owner of this car. General Motors reserves the right to deny warranty coverage if the required maintenance has not been properly performed. However, GM will not deny warranty coverage solely on the absence of maintenance records.

CLAIMS PROCEDURE

As with the other warranties covered in this booklet, take your car to any authorized Chevrolet dealership to obtain service under the emission warranties. This should be done as soon as possible after failing an EPA-approved Inspection/Maintenance test or a California Smog Check test, or at any time you suspect a defect in an emission-related part.

Those repairs qualifying under the warranty will be performed by any Chevrolet dealership at no charge. Repairs which do not qualify will be charged to you. You will be notified as to whether or not the repair qualifies under the warranty within a reasonable time (not to exceed 30 days after receipt of the vehicle by the dealership, or within the time period required by local or state law). The only exceptions would be if you request or agree to an extension, or if a delay results from events beyond the control of your dealer or GM. If you are not so notified, GM will provide any required performance warranty repairs at no charge.

In the event a warranty matter is not handled to your satisfaction, refer to the Customer Satisfaction Procedure in this booklet under "Owner Assistance."

For further information or to report violations of the emission control systems warranties, you may contact the Director, Field Operation and Support Division (EN-397) Environmental Protection Agency, 401 "M" Street S.W., Washington, DC 20460.

For a vehicle equipped with the California Exhaust Emissions option, you may contact the California Air Resources Board, 9528 Telstar Avenue, El Monte, CA 91731.

If, in an emergency situation, it is necessary to have repairs performed by other than a Chevrolet dealership and you believe the repairs are covered by emission warranties, take the replaced parts and your receipt to a Chevrolet dealership handling your model for reimbursement consideration. This applies to both the Emission Defect Warranty and Emission Performance Warranty.

CALIFORNIA EMISSION CONTROL WARRANTY
YOUR RIGHTS AND OBLIGATIONS (APPLICABLE TO
VEHICLES WITH CALIFORNIA EXHAUST EMISSION OPTION ONLY)

The California Air Resources Board and General Motors are pleased to explain the emission control system warranty on your 1992 vehicle. In California, new motor vehicles must be designed, built, and equipped to meet the state's stringent anti-smog standards. GM must warrant the emission control system on your vehicle for the periods of time listed below provided there has been no abuse, neglect, or improper maintenance of your vehicle.

Your emission control system may include parts such as the carburetor or fuel-injection system, the ignition system, catalytic converter, and engine computer. Also included may be hoses, belts, connectors, and other emission-related assemblies.

Where a warrantable condition exists, GM will repair your vehicle at no cost to you including diagnosis, parts, and labor.

GENERAL MOTORS WARRANTY COVERAGE:

- For 3 years or 50,000 miles (whichever first occurs):
 - If your vehicle fails a Smog Check inspection, GM will make all necessary repairs and adjustments to ensure that your vehicle passes the inspection. This is your emission control system PERFORMANCE WARRANTY.
 - If any emission-related part on your vehicle is defective, GM will repair or replace it. This is your short-term emission control system DEFECTS WARRANTY.
- For 7 years or 70,000 miles (whichever first occurs):
 - If an emission-related part listed in your warranty booklet specially noted with coverage for 7 years or 70,000 miles is defective, GM will repair or replace it. This is your long-term emission control system DEFECTS WARRANTY.

OWNER'S WARRANTY RESPONSIBILITIES:

As the vehicle owner, you are responsible for the performance of the required maintenance listed in your owner's manual/Maintenance Schedule. GM recommends that you retain all receipts covering maintenance on your vehicle, but GM cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

You are responsible for presenting your vehicle to a GM dealer selling your vehicle line as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

As the vehicle owner, you should also be aware that GM may deny you warranty coverage if your vehicle or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The applicable warranty period shall begin on the date the car is delivered to the first retail purchaser or, if the car is first placed in service as a demonstrator or company car prior to sale at retail, on the date the car is first placed in such service. Emissions warranty service will be done at no cost to the customer. It will include parts, labor, and related diagnostics.

If you have any questions regarding your rights and responsibilities under these warranties, refer to the Owner Assistance Section in the booklet or contact the California Air Resources Board at 9528 Telstar Avenue, El Monte, CA 91731.

WHAT IS COVERED

If your car is equipped with the California Emissions Equipment Option, these California warranties apply. Listed below are most of the systems that affect emissions of your car. Emission control components of these systems are covered by the Emission Defect Warranties. Items that require scheduled replacement are warranted up to the first replacement interval specified in the Maintenance Schedule of your Owner's Manual.

- **Computer Command Control System**
Engine control module, and associated sensors and parts
- **Fuel Management System**
Fuel injection system, throttle body assembly*; fuel rail assembly*
- **Air Induction System**
Thermostatic air cleaner system, intake manifold*, air cleaner assembly*
- **Ignition System**
Ignition parts and associated controls, including spark plugs and ignition wires, distributor*
- **Catalytic Converter System**
Catalytic converter*, exhaust manifolds*, and associated parts
- **Positive Crankcase Ventilation System**
PCV valve and associated parts, oil filler cap
- **Exhaust Gas Recirculation System**
EGR valve and associated controls
- **Air Injection System**
Air pump, air distributor and valves
- **Evaporative Emission Control System**
Vapor storage canister and associated controls, fuel tank filler cap and restrictor, fuel sender assembly*, and fuel tank*
- **Miscellaneous Items Used in Above Systems**
Emission-related hoses, clamps, belts, pulleys, tubes, fittings, sealing devices, mounting hardware, and wiring harnesses.

WHAT IS NOT COVERED

If failure of one of the above components results in failure of another part, both will be covered by this warranty.
 For detailed information concerning specific components covered by these emission control systems warranties, ask your dealership.

THESE WARRANTY OBLIGATIONS DO NOT APPLY TO:

- Conditions resulting from tampering, abuse, neglect or improper maintenance; or
- Any other item listed under "What is Not Covered" in the New Car Limited Warranty, on page 8 and 9.

THE "OTHER TERMS" PRESENTED IN THE NEW CAR LIMITED WARRANTY, ALSO APPLY TO THESE WARRANTIES.
 *Indicates 7 year/70,000 mile coverage.

THINGS YOU SHOULD KNOW ABOUT THE EMISSION CONTROL SYSTEMS WARRANTIES

REPLACEMENT PARTS

The emission control systems of your 1992 passenger car were designed, built and tested using genuine GM parts* and the car is certified as being in conformity with applicable federal and California emission requirements. Accordingly, it is recommended that any replacement parts used for maintenance or for the repair of emission control systems be new, genuine GM parts.

THE WARRANTY OBLIGATIONS ARE NOT DEPENDENT UPON THE USE OF ANY PARTICULAR BRAND OF REPLACEMENT PARTS. THE OWNER MAY ELECT TO USE NON-GENUINE GM PARTS FOR REPLACEMENT PURPOSES. USE OF REPLACEMENT PARTS WHICH ARE NOT OF EQUIVALENT QUALITY MAY IMPAIR THE EFFECTIVENESS OF EMISSION CONTROL SYSTEMS.

If other than new, genuine GM parts are used for maintenance replacements or for the repair of components affecting emission control, the owner should assure himself/herself that such parts are warranted by their manufacturer to be equivalent to genuine General Motors parts in performance and durability.

MAINTENANCE AND REPAIRS

MAINTENANCE AND REPAIRS CAN BE PERFORMED BY ANY QUALIFIED SERVICE OUTLET; HOWEVER, WARRANTY REPAIRS MUST BE PERFORMED BY AN AUTHORIZED DEALER EXCEPT IN AN EMERGENCY SITUATION WHEN A WARRANTED PART OR A WARRANTY STATION IS NOT REASONABLY AVAILABLE TO THE VEHICLE OWNER.

In an emergency, where an authorized dealer is not reasonably available, repairs may be performed at any available service establishment or by the owner, using any replacement part. Chevrolet will reimburse the owner for expense (including diagnosis), not to exceed the manufacturer's suggested retail price for all warranted parts replaced and labor charges based on Chevrolet's recommended time allowance for the warranty repair and the geographically appropriate labor rate. A part not being available within 10 days of a repair and being complete within 30 days constitutes an emergency. Retain receipts and failed parts in order to receive compensation for warranty repairs reimbursable due to an emergency.

* "genuine GM Parts", when used in connection with GM vehicles means parts manufactured by or for GM, designed for use on GM vehicles and distributed by any division or subsidiary of General Motors Corporation.

THINGS YOU SHOULD KNOW (Cont'd.)

MAINTENANCE AND REPAIRS (Cont'd.)

Receipts and records covering the performance of regular maintenance or emergency repairs should be retained in the event questions arise concerning maintenance. These receipts and records should be transferred to each subsequent owner of this car. General Motors reserves the right to deny warranty coverage if the required maintenance has not been properly performed. However, GM will not deny warranty coverage solely on the absence of maintenance records.

CLAIMS PROCEDURE

As with the other warranties covered in this booklet, take your car to any authorized Chevrolet dealership to obtain service under the emission warranties. This should be done as soon as possible after failing an EPA-approved Inspection/Maintenance test or a California Smog Check test, or at any time you suspect a defect in an emission-related part.

Those repairs qualifying under the warranty will be performed by any Chevrolet dealership at no charge. Repairs which do not qualify will be charged to you. You will be notified as to whether or not the repair qualifies under the warranty within a reasonable time (not to exceed 30 days after receipt of the vehicle by the dealership, or within the time period required by local or state law). The only exceptions would be if you request or agree to an extension, or if a delay results from events beyond the control of your dealer or GM. If you are not so notified, GM will provide any required performance warranty repairs at no charge.

In the event a warranty matter is not handled to your satisfaction, refer to the Customer Satisfaction Procedure in this booklet under "Owner Assistance."

For further information or to report violations of the emission control systems warranties, you may contact the Director, Field Operation and Support Division (EN-397) Environmental Protection Agency, 401 "M" Street S.W., Washington, DC 20460.

For a vehicle equipped with the California Exhaust Emissions option, you may contact the California Air Resources Board, 9528 Telstar Avenue, El Monte, CA 91731.

If, in an emergency situation, it is necessary to have repairs performed by other than a Chevrolet dealership and you believe the repairs are covered by emission warranties, take the replaced parts and your receipt to a Chevrolet dealership handling your model for reimbursement consideration. This applies to both the Emission Defect Warranty and Emission Performance Warranty.

Vehicle Test Data

Sufficient data must be collected to allow accurate characterization of each vehicle tested, of the tests performed, and of the results of those tests. The data collection process shall be routinely monitored for data loss problems and corrective actions implemented when found. At a minimum, the SIP must commit to collecting the following information:

1. Test Record Number
2. Inspection Station Number
3. Analyzer Number
4. Inspector Identification Number
5. Date of Test
7. Emission Test Start Time
8. Time Final Emission Scores Are Found
9. Vehicle Identification Number
10. Certificate Number
11. GVWR
12. Vehicle Model Year
13. Vehicle Make
14. Vehicle Model Name
15. Vehicle Type
16. Number of Cylinders
17. Transmission Type
18. Odometer Reading
19. Type of Test Performed (i.e., initial test, first retest, or subsequent retest)
20. Fuel Type of Vehicle (gas, diesel, etc.)
21. Catalytic Converter Test Results (Pass/Fail/Not Applicable)
22. Air System Test Results (P/F/NA)
23. Gas Cap Test Results (P/F/NA)
24. Evaporative Canister Test Results (P/F/NA)
25. PCV Valve Test Results (P/F/NA)
26. Inlet Test Results (P/F/NA)
27. Plumbtesmo Test Results (P/F/NA)
28. Other Component Test Results (P/F/NA)
29. Type of Vehicle Preconditioning Performed
30. Emission Test Sequence(s) Used
31. Hydrocarbon Emission Scores for Each Test Mode
32. Hydrocarbon Emission Standards for Each Test Mode
33. Carbon Monoxide Emission Scores for Each Test Mode
34. Carbon Monoxide Emission Standards for Each Test Mode
35. Carbon Dioxide Emission Scores for Each Test Mode
36. Carbon Dioxide Emission Standards for Each Test Mode
37. Engine Speed in RPM for Each Non-Loaded Test Mode
38. Engine Speed Standard in RPM for Each Non-Loaded Test Mode

Test record data must be collected from the stations at least once per month in basic I/M programs and once per week in enhanced I/M programs.

Test Procedures Currently Used in I/M Programs

<u>Program</u>	<u>Network Type¹</u>	<u>Test Type²</u>	<u>Preconditioning</u>
D.C.	CG/D	Idle	None
Delaware	CG	Idle	None
Indiana	CG	Two Speed	High Speed
Memphis	CG	Idle	None
New Jersey	CG	Idle	None
Oregon	CG	Two Speed	High Speed
Arizona	CC	Loaded/Idle	Loaded
Connecticut	CC	Idle	Loaded
Florida	CC	Idle	Loaded
Illinois	CC	Two Speed	High Speed
Louisville	CC	Idle	High Speed
Maryland	CC	Idle	High Speed
Minnesota	CC	Idle	Loaded
Nashville	CC	Idle	None
Washington	CC	Two Speed	High Speed
Wisconsin	CC	Idle	Loaded
Alaska	D	Two Speed	High Speed
California	D	Two Speed	High Speed
Colorado	D	Two Speed	High Speed
Dallas	D	Idle	High Speed
El Paso	D	Idle	High Speed
Georgia	D	Idle	High Speed
Idaho	D	Idle	None
Massachusetts	D	Idle	High Speed
Michigan	D	Idle	High Speed
Missouri	D	Idle	High Speed
Nevada	D	Two Speed	High Speed
New Hampshire	D	Idle	High Speed
North Carolina	D	Idle	High Speed
New Jersey	D	Idle	High Speed
New Mexico	D	Idle	High Speed
New York	D	Idle	High Speed
Pennsylvania	D	Idle	High Speed
Rhode Island	D	Idle	None
Utah	D	Two Speed	High Speed
Virginia	D	Idle	High Speed

1 CG = Centralized government, CC = Centralized contractor, D= Decentralized

2 Idle = pass/fail determined only from idle emission readings

Two Speed = pass/fail determined from both idle and 2500 rpm readings

Loaded/Idle = pass/fail determined from loaded and idle readings.

G

Model Year Coverage of Anti-Tampering Inspections
(oldest model year checked is listed)

<u>Program</u>	<u>Network Type¹</u>	<u>Catalytic Converter</u>	<u>Fuel Inlet</u>	<u>Lead Test</u>	<u>Air Pump</u>	<u>PCV</u>	<u>Evap Canister</u>
Arizona	C	75	75	75	67		
Connecticut	C						
D.C.	C						
Delaware	C						
Florida ²	C	75	75				
Illinois	C						
Indiana	C						
Louisville	C						
Maryland	C	77	77				
Memphis	C						
Minnesota ²	C	76	76				
Nashville	C						
New Jersey	C	75	75				
Oregon	C	75	75		80	80	80
Washington	C						
Wisconsin	C	75	75				
Anchorage	D	75	75	75	75	75	
Fairbanks	D	75		75	75	75	
California	D	75	75		67	67	70
Colorado	D	75	75		75		
Dallas/El Paso	D	80	80	80	68	68	68
Georgia	D	78	78		78		
Idaho	D	84	84		84		
Massachusetts	D						
Michigan	D						
Missouri	D	81	81		71	71	71
Nevada	D	81	81		81		
New Hampshire	D	85	85				
New Mexico	D	75	75	75	75		
New York	D	84	84		84	64	84
North Carolina	D	84	84		77	77	
Pennsylvania	D	77	77				
Rhode Island	D						
Davis Co., UT	D	84	84		84	84	84
Provo	D	77	77	77	77		
Salt Lake City	D	84	84		84		
Virginia	D	75	75		73	73	73
Louisiana	A	80	80	80	80	80	80
N. Kentucky	A	80	80	80	80	80	80
Ohio	A	80	80	80	80	80	80
Oklahoma	A	80	80	79	79	79	79
Houston	A	79	79	79	79	79	79
	A	80	80	80	68	68	68

1 C = Centralized, D = Decentralized, A = Anti-tampering only
2 Not currently operating

The Visual Inspection

Defective is defined as an obvious condition noticed during the visual inspection that would affect the operation of an emission control part or system and is due to normal wear or deterioration. This definition applies only to those worn or deteriorated systems that have not been removed or disconnected.

As always, missing, modified or disconnected emission controls must be repaired, regardless of cost.

Some other new categories have been added under the visual inspection. They are: "O2 sensor and connectors"; "wiring of other sensors/switches/computer"; "vacuum line connections to sensors/switches."

If a part not listed is in failing condition, fail it under "other emission-related components." Likewise enter results of retrofit device inspections under "other." ■

Emissions Control System Inspection

- PCV system
- Thermostatic air cleaner
- Fuel evaporative controls
- Catalyst
- Exhaust gas recirculation
- Ignition spark controls
- Carburetor
- Fuel injection
- Air injection
- O2 sensor and connectors
- Other sensors/switches wiring
- Sensors/switches vacuum lines
- Other emission-related components

Enter one of the following codes for each system at the left:

P = Passed
 D = Disconnected
 M = Modified
 S = Missing
 N = Not applicable
 F = Defective

Catalyst: 3-way with feedback

Select 'Continue' to proceed.

Escape/Abort

Continue

Previous display

Help

After you complete the visual inspection, the BAR-90 will ask you to check and confirm your entries. If any entries differ from those stored in the BAR-90's memory, you will be asked to re-check and re-confirm the entries. If you again indicate you are correct, the BAR-90 will accept your answers and continue the test.

Part A
CERTIFICATE OF VEHICLE EMISSIONS INSPECTION

H-2

COMMONWEALTH OF VIRGINIA
Department of Air Pollution Control

VEHICLE EMISSIONS CONTROL PROGRAM

VEHICLE EMISSIONS QUESTIONS: Call Division of Mobile Source Operations
703-339-8553

DO NOT DESTROY OR DISPOSE OF THIS CERTIFICATE - KEEP IN VEHICLE
(See reverse side for more information)

978110

VOID



STATION INFORMATION		VEHICLE INFORMATION		EMISSIONS CONTROL SYSTEMS	
STATION NO.	99999	VIN:	A123456789B123456789	P.C.V. SYSTEM	FAIL
ANALYZER NO.	S186	MAKE:	DODG	CATALYTIC CONVERTER	PASS
TEST DATE:	01/11/91	YEAR:	87	AIR INJ. SYSTEM	PASS
TEST TIME:	8:43	VEHICLE TYPE:	1	EVAPORATIVE SYSTEM	FAIL
INSPECTOR ID:	123456789	CYLINDERS:	4	FUEL RESTRICTOR	PASS
SEQUENTIAL NO.	00239	ODOMETER READING:	65123		
		TYPE OF TEST:	1		
		DUAL EXHAUST:	NO		
		AIR INJ. SYSTEM:	YES	VISIBLE SMOKE	PASS

TAILPIPE EMISSION TEST RESULTS

RETEST INFORMATION

Test Type	Standards	Prior Test	Current Test	Results
CO%	1.20			
HC PPM	220			
DILUTION	4.00		12.98	VALID
RPM	1600		836	VALID

VOID

VEC PROGRAM RESULTS: **FAILED** CERTIFICATE NO. 0000978110

John Doe

Part B
DAPC CEI 8 (8/89)

CERTIFICATE OF VEHICLE EMISSIONS INSPECTION 978110

VIN: A123456789B123456789 TEST DATE: 01/11/91
MAKE: DODG YEAR: 87 STATION NO. 99999

CERTIFICATE NO. 0000978110

Important:
If vehicle PASSED or is issued a WAIVER, THE OWNER MUST, AT THE TIME OF VEHICLE REGISTRATION OR RENEWAL, SUBMIT TO DMV this part of the inspection certificate as proof of emissions program compliance.

VEC PROGRAM RESULTS: **FAILED** VOID

ANY ATTEMPT TO ALTER, FABRICATE, OR DUPLICATE THIS EMISSION CERTIFICATE CONSTITUTES FRAUD AND IS PUNISHABLE BY A FINE AND IMPRISONMENT.

DETACH PART B AND SUBMIT TO DMV AT TIME OF REGISTRATION OR RENEWAL

STATE OF FLORIDA
DEPARTMENT OF HIGHWAY
SAFETY and MOTOR VEHICLES

Division of Motor Vehicles
2901 Apalache Parkway, Room B-104
Tallahassee, Florida 32399-0000
(904) 487-0128 or (904) 487-0129



VEHICLE EMISSIONS
INSPECTION REPORT

CHAPTER 325, FLORIDA STATUTES

17-3

A PARTNERSHIP FOR CLEAN AIR

Pursuant to Section 325.316, Florida Statute, it is unlawful for any person to forge or alter an inspection certificate or to produce an inspection certificate unless authorized by the department. It is unlawful for any person to knowingly possess an unauthorized inspection certificate. Any person who violates this section is guilty of a felony of the third degree, punishable as provided in s. 775.082, s. 775.083 or s. 775.084.

Date: 04/25/91	Time: 11:59	Certificate No. F29C002041115036
----------------	-------------	----------------------------------

DY02798

Your motor vehicle test results are shown below under FINAL RESULTS.

IF THE RESULTS ARE:

PASS— Please detach the inspection certificate below and submit it with your registration renewal documents or, if renewing in person, present the certificate to your county tag agent.

FAIL— You should have your vehicle repaired or adjusted and pass a reinspection prior to the expiration date of your registration. The first reinspection is free. Repair diagnostic information is listed on the back of this page.

- This report must accompany the vehicle at the time of reinspection •
- Reinspection requirements do not change your registration deadline •

This test was done in conformance with Section 207(b) of the Federal Clean Air Act. Your vehicle may be eligible for warranty coverage under this act for the required repairs if it is less than 5 years old and has been driven less than 50,000 miles. Check your motor vehicle owner's manual or contact your automotive dealer service department for details.

VEHICLE INFORMATION

License Plate Number	Vehicle Identification Number	Year	Make	Model	Fuel	Odometer Reading
JGU981	JN1H214S9G1144404	86	NISS		6	55

EXHAUST EMISSIONS READINGS

Test Readings	CONDITIONING					FINAL IDLE			
	HC/PPM	CO-%	CO2-%	NO/PPM	OPACITY-%	HC/PPM	CO-%	CO2-%	NO/PPM
Static Limits						220	1.20		
Test Readings						29	0.85	15.3	
Test Results						PASS	PASS		

3-POINT COMPONENT CHECK

Post-Test Review	Analyzer Comments	Universal Post-Op
	PASS	PASS

FINAL RESULTS

PASS

Inspector I.D. No.: 5205

Fee Charged: 10.00

----- TAGS HERE! ----- TOP FOR FIVE YEAR VEHICLES ----- TAGS HERE! -----

VEHICLE EMISSIONS INSPECTION CERTIFICATE

LICENSE PLATE NUMBER	VEHICLE IDENTIFICATION NUMBER	YEAR	MAKE	MODEL
JGU981	JN1H214S9G1144404	86	NISS	
FUEL 6	ODOMETER READING 0055	CERTIFICATE NUMBER F29C002041115036		

FINAL RESULTS

PASS
04/25/91

IF YOUR VEHICLE FAILED THE EMISSIONS INSPECTION

If you have your vehicle repaired, the "REPAIR DATA" section below must be completed and presented to any inspection station or licensed reinspection facility. A motorist whose vehicle is unable to pass a reinspection, may be eligible for a one year waiver. Waiver eligibility information is available at all inspection facilities and Division of Motor Vehicles, Bureau of Emissions Control Regional Offices.

- This report must accompany the vehicle at the time of reinspection •
- Reinspection requirements do not change your registration deadline •

H-3
(CONT)

REPAIR DATA -- Must be completed by the person performing the repairs and copies of your receipts must be retained in order to qualify for waiver determination.

Place an in the box to indicate the repair work that has been completed and if the repair was covered by warranty. Indicate the total cost of parts and labor, the overall cost of repairs, and a cost estimate of further repairs needed to bring the vehicle into compliance with emissions standards. You may wish to refer to the diagnostic information below as a guide for repair.

	REPAIRED	WARRANTY		REPAIRED	WARRANTY
1. Air Filter Element	<input type="checkbox"/>	<input type="checkbox"/>	13. Other Ignition System Repairs	<input type="checkbox"/>	<input type="checkbox"/>
2. Thermostatic Air Cleaner System	<input type="checkbox"/>	<input type="checkbox"/>	14. EGR Valve	<input type="checkbox"/>	<input type="checkbox"/>
3. Carburetor Assembly	<input type="checkbox"/>	<input type="checkbox"/>	15. Air Injection System	<input type="checkbox"/>	<input type="checkbox"/>
4. Idle Mixture Adjustment	<input type="checkbox"/>	<input type="checkbox"/>	16. Positive Crankcase Ventilation System	<input type="checkbox"/>	<input type="checkbox"/>
5. Idle Speed Adjustment	<input type="checkbox"/>	<input type="checkbox"/>	17. Catalyst	<input type="checkbox"/>	<input type="checkbox"/>
6. Fuel Injection Components	<input type="checkbox"/>	<input type="checkbox"/>	18. Evaporative Canister	<input type="checkbox"/>	<input type="checkbox"/>
7. Other Carburetor Repairs	<input type="checkbox"/>	<input type="checkbox"/>	19. Miscellaneous Hoses	<input type="checkbox"/>	<input type="checkbox"/>
8. Choke Adjustment	<input type="checkbox"/>	<input type="checkbox"/>	20. Other Pollution Control Repairs	<input type="checkbox"/>	<input type="checkbox"/>
9. Other Choke Repairs	<input type="checkbox"/>	<input type="checkbox"/>	21. Electrical Control Module	<input type="checkbox"/>	<input type="checkbox"/>
10. Spark Control System	<input type="checkbox"/>	<input type="checkbox"/>	22. Oxygen Sensor	<input type="checkbox"/>	<input type="checkbox"/>
11. Initial Timing Adjustment	<input type="checkbox"/>	<input type="checkbox"/>	23. Diagnostic System Codes	<input type="checkbox"/>	<input type="checkbox"/>
12. Spark Plugs and/or Wires	<input type="checkbox"/>	<input type="checkbox"/>	24. Other Sensors	<input type="checkbox"/>	<input type="checkbox"/>

IF YOU APPLY FOR A WAIVER, YOU MUST ATTACH REPAIR WORK ORDER AND REPAIR RECEIPTS

TOTAL COST OF PARTS: \$ _____
 TOTAL COST OF LABOR: \$ _____
 TOTAL COST OF REPAIRS: \$ _____

TOTAL COST ESTIMATE OF FURTHER REPAIRS NEEDED TO BRING VEHICLE INTO COMPLIANCE WITH EMISSIONS STANDARDS: _____

REPAIR STATEMENT (Please Print or Type)	Repair Date	Name of Person Performing Repairs	Signature of Person Performing Repairs
Name of Repair Facility	Repair Facility Number (State Tax I.D. Number)	Reported by: <input type="checkbox"/> Dealer	<input type="checkbox"/> Independent Garage <input type="checkbox"/> Service (Gas) Station <input type="checkbox"/> Other

DIAGNOSTIC INFORMATION FOR GASOLINE ENGINES

	If emissions reading is:	Probable causes are:	You may want to check for:
CO (carbon monoxide)	High at idle	Improper carburetor air/fuel mixture adjustment and/or idle speed	1. Incorrect air/fuel mixture 2. Dirty air cleaner, choke or carburetor/fuel injection 3. Carburetor float level improperly adjusted 4. Inoperative air pump 5. Power valve actuating too early 6. Carburetor main jetting too rich 7. Weak valve springs
	High at loaded conditioning mode	Carburetor main system malfunction NOTE: This problem cannot be corrected by idle adjustment only	
	High at idle and loaded conditioning mode	A combination of malfunctioning carburetor main system and a maladjusted air/fuel ratio	
HC (hydrocarbons)	1. High at idle only, or 2. High at loaded conditioning mode	1. Idle speed adjustment (usually too low) 2. Excessively high CO at idle can cause moderately high HC at idle 3. Idle circuits on 2- and 4-barrel carburetors imbalanced or adjusted improperly 4. Improper basic ignition timing 5. Excessively lean idle mixture or vacuum leaks causing subsequent misfire in some cylinders 6. Compression leak through one or more valves	1. Defective points/electronic ignition 2. Open plug wires or fouled spark plug 3. Vacuum leak 4. Incorrect air/fuel mixture 5. Inoperative air pump 6. Incorrect ignition timing 7. EGR valve is broken 8. Vacuum source is misrouted 9. Engine condition is worn
	1. High at loaded conditioning mode only, or 2. High at idle and loaded conditioning mode	Ignition misfire	

FOR DIESEL ENGINES

In most cases, a low emissions adjustment (basically a tune-up) will bring a diesel-driven motor vehicle into compliance with the standards of the MVIP. White smoke indicates an engine problem. Black smoke indicates an incorrect air/fuel mixture.

NEW JERSEY
PRIVATE INSPECTION CENTER (PIC)
VEHICLE INSPECTION REPORT

5 H-4

RESULTS OF YOUR INSPECTION

*
* INVALID TEST *
*

REJECTION STICKER #: 99999999

PIC IDENTIFICATION

STATION NUMBER 7466
EMISSIONS ANALYZER NO. 001H
TEST DATE 3/12/91
TEST TIME 14:36
MECHANIC IDENTIFICATION 061453

VEHICLE IDENTIFICATION

LICENSE NUMBER 000000
TEST TYPE INITIAL
VEHICLE MAKE AUDI
MODEL YEAR 1988
VEHICLE TYPE LIGHT-DUTY
ODOMETER READING 888888
FUEL TYPE GASOLINE
NUMBER OF CYLINDERS 4
AIR PUMP YES

INSPECTION RESULTS

	PASS	FAIL
CREDENTIALS	X	
SMOKE TEST	X	
VEHICLE TAMPERING	X	

INVALID EMISSIONS TEST:
EXHAUST SYSTEM LEAK
INADEQUATE ENGINE IDLE SPEED

SAFETY ITEMS

STEERING AND SUSPENSION	X
LIGHTS	X
BRAKES	X
EXHAUST SYSTEM	X
MISCELLANEOUS	X

Filter Abck
INSPECTION FEE \$22.50

MECHANIC'S SIGNATURE



H-5

VEIP REPRESENTATIVES INSPECTION CHECK LIST

YEAR/MAKE	TITLE NUMBER	VEHICLE IDENTIFICATION NUMBER	TAG NUMBER
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The following items on the vehicle indicated above were inspected by the undersigned before the issuance of Certificate of Waiver # _____ on: _____.

INSPECTION ITEMS	PRESENT		REMARKS
	YES	NO	
EPA Vehicle Emissions Control Label			
Gas Cap			
Filler Restrictor			
(CAT) Catalytic Converter			
(EGR) Exhaust Gas Recirculation Valve			
(AIS) Air Injection (Pump) System			
(TAC) Thermostatic Air Cleaner			
(PCV) Positive Crankcase Ventilation			
Gasoline Vapor Canister			
Are All Emissions Vacuum Lines Hooked Up?			

Waiver Denied

Inspected by _____

WHITE - CUSTOMER
 CANARY - VEIP

EP-116 (4-86)

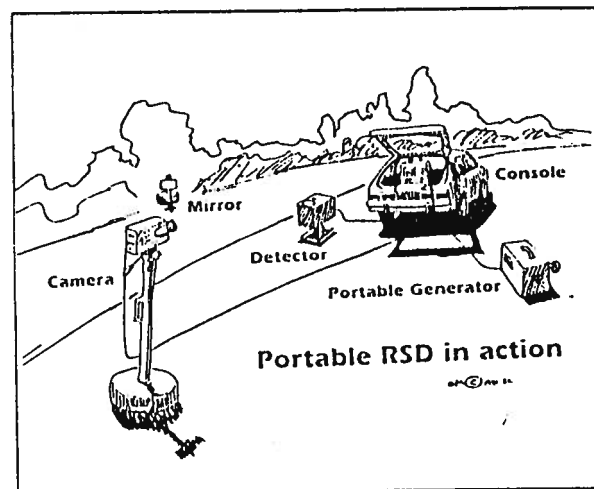
REMOTE SENSING TECHNOLOGY FOR MEASURING VEHICLE EMISSIONS

THE TECHNOLOGY

The Remote Smog Detector (RSD-1000) consists of three basic elements: an emitter, a detector, and a microprocessor. The unit also uses calibrated gases for automatic zero and span adjustments. The RSD-1000 measures carbon monoxide, hydrocarbons, and carbon dioxide in vehicle exhaust. The emitter is mounted on one side of the roadway and transmits a beam of infrared light to a reflector on the other side, which returns the signal to the detector. Interruption of the beam by a vehicle signals the instrument to prepare to perform a measurement. The detector separates the beam into channels and filters it to detect the three gases. The microprocessor analyzes the measurements, performs optional functions, and calculates the carbon monoxide, carbon dioxide, and hydrocarbon values.

VEHICLE IDENTIFICATION AND DATA STORAGE

An optional video camera takes a picture of the vehicle being measured for identification or reference purposes. The photo can be displayed along with the date, time, and measured emission values. This information can be stored on computer disk for future access. The system has been designed to easily support mass fleet data storage.



RELIABLE & NON-OBSTRUSIVE TECHNOLOGY

Tests have been performed under all types of weather, temperatures ranges, and speed conditions. The unit has proven most effective under dry conditions, since rain, snow, and wet pavement can interfere with the infrared beam. Emissions levels have been successfully monitored at speeds up to 150 MPH. The mass collection of data on single lane streets, expressway ramps, and at toll gates offers a convenient and non-obstrusive method of collecting and processing data.

**REMOTE SENSING
APPLICATIONS**

The Remote Smog Detector (RSD-1000) is being commercialized to complement and enhance State emission testing programs.

Potential applications include:

- Random Inspection
- Tamper Inspection
- Mass Data Collection
- Hot Spot Inspection
- Attainment Fleet Monitoring
- Traffic Signal Setting
- Entrance/Access Limitation
- Driver Information

Random Inspection

The unit monitors vehicles and identifies gross emitters of CO or HC. The high emission readings are retained on VCR or computer disks with the photo of the vehicle, its license number, CO value, HC value, time and date.

Tamper Inspection

Vehicles with high levels of HC or CO may be selected to be pulled over for on-road tamper inspection by law enforcement agents.

Mass Data Collection

With the ability to monitor and capture data on up to 1000 vehicles per hour the RSD-1000 is ideally suited for gathering fleet data for analysis purposes e.g., age of vehicles, types of vehicles, geographic source of vehicles, emissions levels versus various parameters such as time, temperature, etc.

Hot Spot Inspection

Vehicles in "Hot Spot" areas can be monitored to identify gross emitters.

Attainment Monitoring

Once an area has achieved the air quality objective, the RSD-1000 can be used to gather mass fleet data. These data can be compared to future or past data to identify trends or changes in vehicle emissions and air quality.

Traffic Signal Setting

Traffic signal timing and throughway on-ramp gates can use data from a RSD-1000 to optimize the switching frequency to minimize emissions concentration.

Entrance/Access Limitation

Vehicles with gross emissions levels could be prohibited from entering tunnels or sensitive areas.

Driver Information

Emission levels could be monitored on the highway and displayed on lighted panels as acceptable or high. This would alert the driver to potential vehicle problems that may be contributing to poor fuel economy and high emissions.

EPA DRAFT GUIDANCE INSPECTION AND MAINTENANCE

DRAFT

station license suspension shall be imposed for at least 6 months whenever a vehicle is intentionally improperly passed for either the emission test or an emission control device check. EPA believes that this level of severity is necessary due to the increased incentive for inspectors to cheat on the test given a \$450 cost waiver limit. In the case of neglect, a first offense must result in a minimum fine of \$100 each for the station and the inspector, with subsequent violations resulting in suspension or revocation.

The program must have the authority to enforce against both stations and inspectors, even if the station owner may not have direct knowledge of actions taken by inspectors. Auditors must have the authority to suspend inspector and station licenses immediately upon finding a violation, pending a hearing when requested by the station or inspector.

4.15 On-road Testing

SIP submittals for enhanced I/M programs must include provisions for on-road emission testing. On-road testing is to complement the regular emission testing program, not replace such testing. The role which on-road testing must play is temporarily left to the individual states to decide. At a minimum, on-road testing must provide information about on-road vehicle emission rates. In addition, information about vehicle compliance rates, inspector performance, regular vs. on-road emission test failure rates, and rates of emission control device tampering might also be collected. The SIP must provide details about the on-road testing program, including the types of testing to be conducted, the test procedures planned, the level of testing effort (number of vehicles to be tested or number of weeks of testing per year), the objectives of the testing program (e.g., enforcement, program evaluation, etc.) and the results to be collected and reported. The results of the testing effort shall be reported to EPA and the states. EPA will conduct an assessment of the utility of on-road testing.

Given the lack of sufficient data available, EPA and others are pursuing on-road testing efforts. States may petition EPA for a new plan. Some approaches might include: use of centralized stations; roadside pull-overs with tailpipe tests and emission control device checks; use of analyzers that are placed on the vehicle so that it can be driven and tested continuously while being driven on the road. Such approaches

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