

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-8
Relating to Exemptions under Section 27156
of the Vehicle Code

AIR QUALITY PRODUCTS
"66-70 PURE POWER"

Pursuant to the authority vested in the Air Resources Board by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Section 39023 of the Health and Safety Code;

IT IS ORDERED AND RESOLVED: That the installation of a "66-70 Pure Power" high performance system manufactured by Air Quality Products has been found by the Board to not reduce the effectiveness of a required motor vehicle pollution control device on 1966 through 1970 model year vehicles with engine displacement greater than 140 cubic inches, and therefore, vehicles so equipped are exempt from the prohibitions of Section 27156 of the Vehicle Code.

The "66-70 Pure Power" high performance system consists of a capacitive discharge ignition circuit, 2° electric spark retard, and vacuum spark advance disconnect at engine speeds 3000 ± 200 rpm or less.

This Executive Order is valid provided that installation instructions for this device will not recommend tuning the vehicle to specifications different than those listed by the vehicle manufacturer.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF THE "66-70 PURE POWER" DEVICE.

No claim of any kind, such as "Approved by Air Resources Board" may be made with respect to the action taken herein in any advertising or other oral or written communication.

Section 17500 of the Business and Professions Code makes unlawful, untrue or misleading advertising and Section 17534 makes violation punishable as a misdemeanor.

Section 39130 and 39184 of the Health and Safety Code provide as follows:

"39130. No person shall install, sell, offer for sale, or advertise, or, except in an application to the board for certification of a device, represent, any device as a motor vehicle pollution control device unless that device has been certified by the board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as a certified device which, in fact, is not a certified device. Any violation of this section is a misdemeanor.

"39184. No person shall install, sell, offer for sale, or advertise, or, except in an application to the board for accreditation of a device, represent, any device as a motor vehicle pollution control device for use on any used motor vehicle unless that device has been accredited by the board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as an accredited device which, in fact, is not an accredited device. any violation of this section is a misdemeanor.

Any apparent violation of the policy or laws will be submitted to the Attorney General of California for such action as he deems advisable.

Executed at Sacramento, California, this 19th day of March, 1973.

JOHN A. MAGA
Executive Officer

State of California

AIR RESOURCES BOARD

March 13, 1973

Staff Report

AIR QUALITY PRODUCTS

Evaluation of Model "66-70 PURE POWER" High
Performance System for Compliance with the
Requirements of Section 27156 of the Motor Vehicle Code

I. Introduction

Section 27156 of the California Motor Vehicle Code prohibits the installation of a device, apparatus or mechanism which, when used with a required motor vehicle emission control system, alters or modifies the emission control system in such a manner that it reduces the effectiveness of the emission control system.

In order to determine whether a device constitutes a violation of Section 27156, the device manufacturer shall submit an application requesting that the Air Resources Board make an evaluation of the device's effect on emissions conducted in accordance with applicable ARB test procedures. By established policy, the evaluation is limited to the effect on emissions and does not include evaluations of vehicle driveability and performance and device durability.

At the February 21, 1973 Board meeting, Air Quality Products requested the Pure Power Device as modified in its NOx device application dated January 8, 1973 be considered for an exemption under Section 27156 of the Vehicle Code for used 1966 through 1970 model-year class (b) through (f) vehicles. A copy of the application for accreditation of the NOx device is attached as Exhibit A.

The Board adopted a motion granting exemption for 1966-1970 vehicles equipped with the Model 66-70 Pure Power high performance system from mandatory accredited device installation. The modification from the previously accredited 1955-65 device involves additional electronic components which act to disconnect the vehicle vacuum spark advance below speeds of approximately 65 mph.

II. Device Description

The Air Quality Products device, "66-70 PURE POWER" model combines an emission control system with a capacitive discharge ignition system in a single package. The applicant states the device includes a solenoid valve which is employed to selectively regulate the vacuum advance. In operation, the valve causes the vacuum advance mechanism to be disconnected at engine speeds above 900 RPM, and reconnected at vehicle speeds above approximately 65 mph. (The actual speed at which this occurs is based on an engine speed of approximately 3000 ± 200 rpm.) The ignition timing according to AQP is electronically retarded an additional two degrees from manufacturers' specifications by an electronic timing computer which controls ignition signals. This electronic retard function is gradually released with increased engine speed, and normal timing is restored above 65 mph. No mechanical adjustments are made to manufacturer's initial spark timing or carburetor specifications. Exhibit B presents a detailed description of the device supplied by AQP.

III. Emission Testing

To determine the effects of the 66-70 Pure Power device on exhaust emissions, the applicant submitted hot start CVS and steady state data from Olson Laboratories. According to the applicant, the test vehicles were adjusted to manufacturer's specifications and baseline and device tests were conducted according to the California Oxides of Nitrogen Control Device Test Procedures for Used 1966 through 1970 Model Year Motor Vehicles, adopted February 16, 1972. This data, attached as Exhibit C, is a summary of the Olson test results.

According to ARB policy for a finding under Section 27156 of the Vehicle Code, the average emissions of the 20 car emission fleet as tested by the oxides of nitrogen test procedure is acceptable for determining if an increase in emissions would result from the installation of an ignition system component. Based on staff experience concerning vacuum spark advance disconnect, there is no expected increase in exhaust emissions and aldehydes or in hydrocarbon reactivity. Since confirmatory tests were not performed at the ARB Laboratory, any other claimed performance of the device was not evaluated.

IV. Other Effects

The manufacturer has made no claims regarding any adverse thermal effects. The staff has previously expressed the opinion that devices which employ vacuum spark advance disconnect may have adverse effects on exhaust valve life and/or engine overheating for 1966 through 1970

model year vehicles. However, durability, driveability and performance are not evaluated under existing criteria for compliance with Section 27156 of the Vehicle Code.

A description of the identification method proposed by AQP is contained in its March 2, 1973 letter as Exhibit D. This identification method allows the manufacturer to use a similar device for both the 1955-65 and 1966-70 applications with a minor modification to the hardware. The 1955-65 device restores vacuum spark advance at approximately 35 mph. To assure the proper system is installed in 1966-70 vehicles, it will be necessary to check that the initial timing is retarded 2° from manufacturer's specifications and that the vacuum advance is not restored at less than 3000 + 200 rpm engine speed.

V. Recommendation

Based on the Air Resources Board criteria for determining compliance with Section 27156 of the Vehicle Code, it is the staff's opinion that the AQP Model "66-70 PURE POWER" high performance system does not reduce the effectiveness of the required motor vehicle pollution control device. Therefore, the staff recommends that this system be exempt from the prohibitions of Vehicle Code Section 27156.

EXHIBIT "A"

AIR QUALITY PRODUCTS INC.

950 NORTH MAIN STREET
ORANGE, CALIFORNIA 92667

(714) 532-6727

January 8, 1973

Mr. John Maga
Air Resources Board
1025 "P" Street
Sacramento, California 95814

SUBJECT: APPLICATION FOR ACCREDITATION OF AN OXIDES OF
NITROGEN CONTROL DEVICE FOR USED 1966 THROUGH
1970 MODEL YEAR MOTOR VEHICLES

Dear Mr. Maga:

Air Quality Products is herein submitting an application for accreditation of an oxides of nitrogen control device for used 1966 through 1970 model year motor vehicles. Testing has been accomplished per Air Resources Board test procedures. Test results show a system NOx emission reduction capability of 46% and compliance with the general standards.

The device involved herein is basically the "PURE POWER" High Performance Ignition and Emission Control device which is currently accredited, in production, and being installed on 1955-1965 vehicles. The emission control system portion of said AQP device has been modified to meet the 1966-1970 NOx control system requirements.

It is requested that approval of the application be granted at the January 17th meeting of the Air Resources Board. This action will allow Air Quality Products to distribute '66-70 devices in time for the 1 February implementation date

of NOx control in Riverside County.

SYSTEM DESCRIPTION

The Air Quality Products, Inc. NOx emission control system for 1966-1970 used vehicles is included in its "PURE POWER" High Performance Ignition and Emission Control device for 1966-1970 vehicles. The "PURE POWER" device includes two distinct systems. The "Emission Control System" controls emissions through selective control of ignition timing, which includes control of the vacuum spark advance mechanism and electronic timing regulation. The "High Performance Ignition System" is a high voltage capacitive discharge ignition system which is designed to improve performance and fuel economy and increase the durability of vehicle spark plugs and ignition points. These two systems, the "Emission Control System" and the "High Performance Ignition System" are packaged in a single housing, which is installed in the vehicle engine compartment.

The "Emission Control System" includes a solenoid valve which is employed to selectively regulate the vacuum advance. In operation, the valve causes the vacuum advance mechanism to be disconnected at engine speeds above 900 RPM, and reconnected at vehicle speeds above approximately 65 MPH. The ignition timing is electronically retarded an additional two degrees from manufacturers specifications by an electronic timing computer which controls ignition signals. This retard function is gradually released with increased engine speed and normal timing is restored above 65 MPH.

The "High Performance Ignition System" includes a high voltage transformer which increases the primary ignition

voltage. This voltage is stored in a high voltage capacitor and discharged through the spark plugs at the proper time.

Enclosed is a copy of the installers handbook. A copy of this booklet is included in each kit. The installation is accomplished in four basic steps. Pre-installation vehicle checks, installation preparation, installation, and test. Each of these steps are fully described and illustrated. The booklet also includes a discussion on the theory of operation. The booklet is essentially the same as that which is supplied with the '55-'65 "PURE POWER" kits (the modifications are shown in red). Thousands of installations have been accomplished in the field using these procedures with a minimum of problems. After installation, the handbook is then given to the customer to be kept with the vehicle for future information.

COMPLIANCE WITH EMISSION STANDARDS

Vehicles were tested in accordance with the applicable test procedures. TABLE I and TABLE II (enclosed) delineate the emission data measured before and after installation of "PURE POWER" on a fleet of vehicles, engine displacement classes (B-F), representative of the vehicle population for which accreditation application is being made. Four vehicles per class were evaluated for each of the five classes.

The vehicles were adjusted to manufacturers specification for idle CO, dwell and timing. The absence of miss-fires was verified. The vehicles were then emission tested by the 1973 CVS federal hot-cycle at baseline and a diluted mass sample was taken at 60 mph cruise. The "PURE POWER" device was then

installed and the CVS and 60 mph cruise tests were again run. Emission data from the baseline and equipped vehicles are given in TABLE II. The CVS emission tests are measured in grams per mile, while the 60 mph cruise results is given in parts per million. TABLE I, shows the percentage reduction of each emission, for each test, by test vehicle, by engine class and for the entire fleet.

Application for accreditation is made for all vehicles in engine classes B through F (140 cubic inch engine displacement or larger), with the following vehicles to be exempted:

- (1) All vehicles having an engine displacement less than 140 cubic inches.
- (2) All vehicles with engines having no vacuum spark advance.
- (3) All vehicles with engines having no centrifugal advance.
- (4) All vehicles with four cylinder engines.
- (5) All vehicles with six volt ignition systems.
- (6) All vehicles with positive ground electrical systems.
- (7) All vehicles with engines which include factory installed distributors containing a magnetic or optical pick-up primary timing pulse for ignition initiation.

COMPLIANCE WITH GENERAL STANDARDS

1. Noxious or toxic emissions/Safety

- A. The device, in its operation, will not cause the emission of any noxious or toxic matter into the ambient air that is not emitted by the motor vehicle

engine without the device.

- B. Safety The device does not have operational or failure modes which would result in any unsafe condition which would endanger the motor vehicle, its occupants or persons or property in close proximity to the vehicle, beyond those which may occur in an unequipped vehicle.

2. Hydrocarbon, Carbon Monoxide, Aldehydes, or Hydrocarbon Reactivity.

- A. Hydrocarbon, Carbon Monoxide. There is no increase in HC, CO emissions resulting from operation of the device. Tests conducted on twenty vehicles using CVS hot-start procedures indicate an average reduction of HC of 23% and a CO reduction of 10%. Measurements at 60 mph cruise conditions on the same vehicles showed an HC reduction of 42%, CO of 22%.

B. Aldehydes/Hydrocarbon Reactivity

(Information to be supplied at a later date.)

3. Adverse effects on Vehicle Performance

Extensive driveability testing was accomplished on the 1955-1965 vehicle emission control system prior to accreditation. However, the system when installed on a 1966-1970 vehicle is configured to disconnect the vacuum advance until vehicle speeds exceed 65 mph; where the '55-'65 configuration restores vacuum at speeds in excess of 35 mph. This new configuration may result in reduced 20-50 mph crowd rates on some vehicles. This effect is not detectable by the average driver and not

considered adverse. Furthermore, the Air Resources Board has found acceptable the driveability of other devices which disconnect vacuum spark advance to reduce emissions.

4. Device Durability. Data accumulated during accreditation testing for 1955-1965 model year vehicles installation, included durability data for eight vehicles which accumulated 25,000 system equipped test miles each. Four of the test vehicles have continued in operation and have now accumulated approximately 45,000 miles each of system equipped operation. To date, approximately 5,000 systems have been installed and are in operation on customer vehicles.

Although no known customer owned vehicles have exceeded 50,000 miles, test results of 5,000 hour bench tests (approximately equivalent to 150,000 miles) conducted in the laboratory indicate a mean mileage between failure of 98,000 miles. The system has a warrantee against defects in material and workmanship for six months and also has a warrantee on a prorata basis for 24 months. It is estimated that a system in normal operation will have an expected useful life of at least 50,000 miles of operation.

5. Marketing/Distribution. Air Quality Products, Inc. has established a dealer network of approximately 1,000 authorized installation stations. These stations are served directly by Air Quality Products. Some dealers

operate in a jobber capacity and sell to other authorized dealers in addition to their normal business. Each dealer enters into a Dealership Agreement with Air Quality in which they agree to maintain a level of competency (copy of Agreement attached). A field representative staff is maintained to provide technical training and warrantee wervice to the dealers. Each mechanic receives a certificate of completion (enclosed) when he has demonstrated to the field representative that he is competent in installation of the system.

6. Device Effectiveness Accreditation test procedures reveal that a 46% average reduction in NOx is obtained with system equipped vehicles. This reduction demonstrates that the system is more effective than the least effective device of those currently accredited and therefore, is in compliance with the general standards. The device is also effective at 60 mph.

7. Device Costs

Statutory Criteria - Section 39177.3(a) Health & Safety Code. The Air Quality Product device is a two-part system which includes a "High Performance Ignition System" and an "Emission Control System". The Emission Control System portion of the device, including installation costs will not exceed Thirty Five (\$35.00) Dollars. The installed cost of the High Performance Ignition System portion of the device shall not exceed Fifty (\$50.00) Dollars. The High Performance Ignition System, however, is not separable from the Emission Control System portion of the device. Therefore, if a person wishes to

purchase the Emission Control System he must also purchase the High Performance Ignition System. However, Section 39177.3(a) should not preclude accreditation of an emission control system, which capability is a portion of a larger more purposeful device, so long as the emission control system portion does not exceed Thirty Five (\$35.00) Dollars. This is particularly true because there are now available three accredited devices which cost less than Thirty Five (\$35.00) Dollars, because each device includes only an emission control system.

8. Device Maintenance Costs

Section 39177.3(b) Health & Safety Code. The device requires no maintenance for the life of the device.

9. Device Maintenance

There is no required maintenance for the expected useful life of the device. However, all information related to the operation and installation of the device is included in the installers handbook which accompanies each kit. The installers are instructed to leave this handbook with the purchaser.

10. Protection of Public Interest

In order to protect the public interest, Section 39177.1 Health & Safety Code requires an agreement by the manufacturer to cross license or allow the State to establish a fair and reasonable device price in the event that only a single device is accredited.

The public currently has available three accredited devices from which to choose, that will cost no more than Thirty Five (\$35.00) Dollars which should adequately

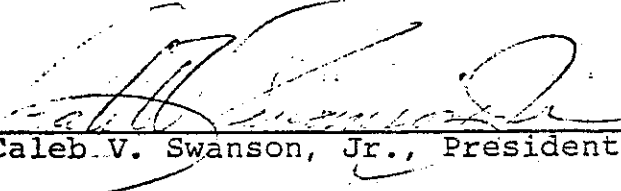
protect the public from an optional device which be-
cause of its additional performance features costs more
than Thirty Five (\$35.00) Dollars.

In fact, the public interest will be best served in a
mandatory program by providing them with an accredited
device option which includes additional equipment which
restores vehicle performance and improves durability
while controlling NOx to within State standards.

We hereby agree to comply with any request of the
Executive Officer pursuant to provisions III, A, (G), (H), and
(I). of Air Resources Board's test procedures.

Your early attention to this application is earnestly
requested.

Air Quality Products, Inc.

By 
Caleb V. Swanson, Jr., President

CVS, Jr.:mcr

enclosures

TABLE I - EMISSION REDUCTION

VEHICLE NO.	YEAR	MAKE	DISP.	CLASS	PERCENTAGE REDUCTION					
					1973 C V S (Hot)			60 MPH CRUISE		
					HC	CO	NOx	HC	CO	NOx
305	1967	Datsun	80	A	1	(7)	42	5	9	40
306	1969	Toyota	116	A	24	29	28	24	53	28
CLASS A VEHICLE AVERAGE										
313	1970	Ford	200	B	15	23	50	42	2	46
318	1966	Ford	200	B	16	14	35	4	0	8
319	1969	Rambler	199	B	28	9	34	62	65	48
326	1966	Dodge	170	B	(2)	14	45	24	(31)	47
CLASS B VEHICLE AVERAGE					15	16	38	36	35	38
308	1967	Rambler	232	C	38	40	60	40	(7)	43
309	1966	Chevrolet	250	C	22	(25)	47	(2)	(17)	15
312	1970	Ford	250	C	68	31	62	81	91	80
327	1970	Dodge	225	C	35	40	37	60	45	70
CLASS C VEHICLE AVERAGE					40	20	51	46	22	49
310	1967	Ford	289	D	26	(11)	52	58	(10)	71
316	1966	Chevrolet	283	D	15	9	43	37	5	53
321	1968	Rambler	290	D	16	11	53	62	41	70
330	1966	Dodge	273	D	16	18	52	33	(11)	64
CLASS D VEHICLE AVERAGE					19	7	50	43	12	65
315	1969	Ford	302	E	22	1	48	57	(18)	62
320	1968	Chevrolet	327	E	22	4	30	47	20	49
322	1969	Chevrolet	350	E	26	4	55	40	35	24
329	1968	Plymouth	318	E	16	7	45	13	2	55
CLASS E VEHICLE AVERAGE					22	7	46	40	14	45
302	1968	Ford	390	F	4	21	40	31	0	61
317	1968	Buick	400	F	20	2	53	23	2	51
323	1966	Dodge	383	F	30	1	60	53	85	71
328	1970	Rambler	390	F	36	27	47	49	25	56
CLASS F VEHICLE AVERAGE					23	9	46	40	30	59
FLEET AVERAGE					23	10	46	42	22	51

TABLE II - EMISSION DATA FLEET

DATA TV NO.	GRAM/MILE 1973 CVS			PPM 60 MPH-CVS			GRAM/MILE 1973 CVS			PPM 60 MPH-CVS		
	HC	CO	NOx	HC	CO	NOx	HC	CO	NOx	HC	CO	NOx
	3.58	73.60	0.57	286	4207	76	3.54	78.98	0.33	271	3841	46
306	1.47	32.34	3.70	128	408	487	1.11	23.08	2.66	97	190	353
CLASS A VEHICLE AVERAGE												
313	2.36	14.97	6.14	418	217	699	2.00	11.50	3.10	241	212	379
318	1.94	27.70	3.38	206	369	411	1.63	23.87	2.21	198	369	380
319	1.79	16.21	3.45	269	1335	329	1.29	14.77	2.28	103	471	170
326	2.68	11.30	5.10	251	307	446	2.50	8.89	3.53	191	402	235
CLASS B VEHICLE AVERAGE												
	2.19	17.55	4.52	286	557	471	1.86	14.76	2.78	183	364	291
308	2.46	14.07	4.76	203	244	658	1.53	8.39	1.92	122	262	373
309	1.81	19.03	5.79	185	998	832	1.41	23.70	3.05	189	1166	709
312	1.71	12.46	5.77	207	189	560	0.55	8.63	2.19	40	17	112
327	1.89	19.63	6.06	217	1406	720	1.23	11.74	3.84	86	775	220
CLASS C VEHICLE AVERAGE												
	1.97	16.30	5.60	203	709	693	1.18	13.12	2.75	109	555	354
310	5.34	38.64	3.14	501	539	483	3.95	42.76	1.50	209	592	142
316	4.01	49.52	2.82	432	2678	385	3.41	45.27	1.60	271	2540	181
321	4.10	29.05	4.14	333	1287	521	3.47	25.84	1.96	128	762	154
	4.53	42.96	4.11	289	282	449	3.78	35.31	1.96	194	313	161
CLASS D VEHICLE AVERAGE												
	4.50	40.04	3.55	389	1197	460	3.65	37.29	1.76	201	1052	160
315	3.57	14.84	5.09	405	251	410	2.79	14.77	2.64	171	297	155
320	4.48	64.31	3.52	495	1354	471	3.50	61.72	2.49	264	1079	241
322	3.96	54.41	6.07	290	1438	652	2.83	47.45	2.65	175	930	495
329	3.25	35.48	6.28	355	2300	527	2.74	32.94	3.46	309	2264	238
CLASS E VEHICLE AVERAGE												
	3.82	42.26	5.24	386	1336	515	2.97	39.22	2.81	230	1143	282
302	2.81	25.27	4.02	346	963	475	2.70	20.04	2.40	239	960	187
317	3.22	39.00	5.96	324	1955	565	2.59	38.18	3.66	248	1985	278
323	2.88	29.43	4.58	450	1820	412	2.01	29.07	1.85	213	281	118
328	3.37	12.83	5.69	355	1413	493	2.17	9.40	3.00	181	1053	218
CLASS F VEHICLE AVERAGE												
	3.07	26.63	5.06	369	1538	486	2.37	24.17	2.73	220	1070	200
FLEET AVERAGE												
	3.11	28.56	4.79	327	1067	525	2.41	25.71	2.57	189	837	257

EXHIBIT "B"

PURE POWER (1966-70) TIMING CONTROL

Figure I diagrams the timing control characteristics of the PURE POWER system for 1966-70 vehicles. The timing control consists of two elements -- electronic retard and selective advance modulation.

The electronic retard is determined by the timing control module which is inserted into the bottom of the unit before installation. A 2 degree (red) module, which is the smallest increment available, is used for all 1966-70 vehicles. This 2 degrees of retard affects the vehicle timing until the engine speed is accelerated to approximately 3000 rpm, at which time the 2 degrees is removed, rendering no electronic retard contribution to the vehicle timing. Upon deceleration from above 3000 rpm, the 2 degrees of retard is restored at approximately 2800 rpm (7% Hysteresis) and is operative for all engine speeds below 2800 rpm.

The vacuum advance function operates normally on acceleration from idle to approximately 1000 rpm (1000 ± 100 rpm), at which point it is inhibited, totally. However, since all vehicles of concern have ported spark, most vehicles will have no vacuum exposed to the advance unit, from the carburetor below 1000 rpm. In a small percentage of vehicles, a partial vacuum will be exposed to the vacuum advance diaphragm for about 100 rpm. However, this partial vacuum is rarely sufficient to initiate motion in the advance unit. The contribution to the vehicle timing, provided by the vacuum advance unit below 1000 rpm, is essentially zero. The vacuum advance remains inhibited, above 1000 rpm, until the vehicle engine accelerates to approximately 3000 rpm (3000 ± 200 rpm), at which time the vacuum advance is restored for

engine speeds above that point, Upon deceleration from engine speeds above 3000 rpm, the vacuum advance is again inhibited at an engine speed of approximately 2800 rpm. It remains inhibited until the engine decelerates to approximately 700 rpm when the device valve allows the normal vacuum advance function to be resumed. Since the vehicle has ported spark, no change to the vacuum advance will occur.

The two switching levels (1000 rpm and 3000 rpm) are adjusted simultaneously by a potentiometer which is set during the functional test, at the time of manufacture of the device. The hysteresis levels (2800 and 700) are controlled by fixed components, inherent in the device design. There are no adjustments required by the mechanic at the time of installation, to control the vacuum advance modulation switching points.

--- Total Advance
(Vacuum + Retard)

NOTE: No Centrifugal Advance Shown.

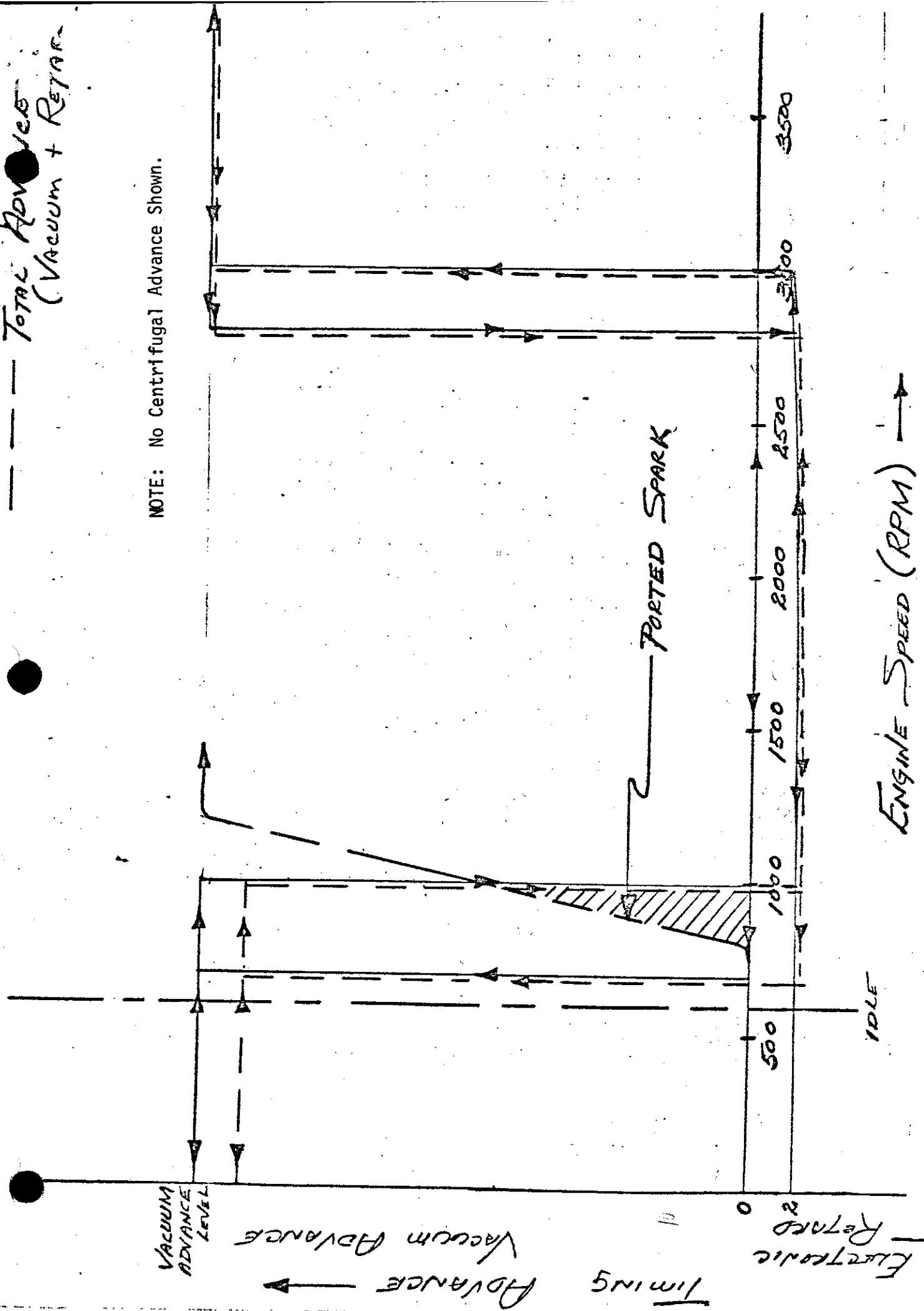


FIGURE I - POPE - POWER (1911-74) Timing Curve Diagram

EXHIBIT "C"

EMISSION DATA SUMMARY

Air Quality Products

VIN	Baseline						Device					
	1973 CVS GRAM/MILE			60 MPH-PPM			1973 CVS GRAM/MILE			60 MPH-PPM		
	HC	CO	NOx	HC	CO	NOx	HC	CO	NOx	HC	CO	NOx
313	2.36	14.97	6.14	418	217	699	2.00	11.50	3.10	241	212	379
318	1.94	27.70	3.38	206	369	411	1.63	23.87	2.21	198	369	380
319	1.79	16.21	3.45	269	1335	329	1.29	14.77	2.28	103	471	170
326	2.68	11.30	5.10	251	307	446	2.50	8.89	3.53	191	402	235
Class B Vehicle Average												
	2.19	17.55	4.52	286	557	471	1.86	14.76	2.78	183	364	291
Class C												
308	2.46	14.07	4.76	203	244	658	1.53	8.39	1.92	122	262	373
309	1.81	19.03	5.79	185	998	832	1.41	23.70	3.05	189	1166	709
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316	4.01	49.52	2.82	432	2678	385	3.41	45.27	1.60	271	2540	181
321	4.10	29.05	4.14	333	1287	521	3.47	25.84	1.96	128	762	154
330	4.53	42.96	4.11	289	282	449	3.78	35.31	1.96	194	313	161
Class D Vehicle Average												
	4.50	40.04	3.55	389	1197	460	3.65	37.29	1.76	201	1052	160
Class E												
315	3.57	14.84	5.09	405	251	410	2.79	14.77	2.64	171	297	155
320	4.48	64.31	3.52	495	1354	471	3.50	61.72	2.49	264	1079	241
322	3.96	54.41	6.07	290	1438	652	2.83	47.45	2.65	175	930	495
329	3.25	35.48	6.28	355	2300	527	2.74	32.94	3.46	309	2264	238
Class E Vehicle Average												
	3.82	42.26	5.24	386	1136	515	2.97	39.22	2.81	230	1143	282
Class F												
302	2.81	25.27	4.02	346	963	475	2.70	20.04	2.40	239	960	187
317	3.22	39.00	5.96	324	1955	565	2.59	38.18	3.66	248	1985	278
323	2.88	29.43	4.58	450	1820	412	2.01	29.07	1.85	213	281	118
328	3.37	12.83	5.69	355	1413	493	2.17	9.40	3.00	181	1053	218
Class F Vehicle Average												
	3.07	26.63	5.06	369	1538	486	2.37	24.17	2.73	220	1070	200
Fleet Average												
	3.11	28.56	4.79	327	1067	525	2.41	25.71	2.57	189	837	257
Average % Reduction with Device												
							23	10	46	42	22	51

EXHIBIT "D"

AIR QUALITY PRODUCTS INC.

950 NORTH MAIN STREET
ORANGE, CALIFORNIA 92667

(714) 532-6727

March 2, 1973

Mr. John Maga
Air Resources Board
1025 "P" Street
Sacramento, California 95814

SUBJECT: IDENTIFICATION MARKINGS ON THE AIR QUALITY PRODUCTS
1966 - 1970 EXHAUST EMISSION CONTROL DEVICE

Dear Mr. Maga:

We have been contacted by your staff with regard to our plans for the identification and marking of the AQP control device when modified to a 1966 - 1970 configuration. The following is submitted for your information.

All PURE POWER exhaust emission control devices manufactured and distributed by Air Quality Products, Inc. subsequent to ARB executive order exempting PURE POWER equipped vehicles for installation on 1966 - 1970 vehicles will be modified per AQP application for accreditation dated January 8, 1973.

The modification involves installation of additional electronic components which act to disconnect vehicle vacuum advance control until vehicle speeds of approximately 65 mph are exceeded. The device when modified, will be clearly labeled to identify that the modification has been accomplished. Also the box the device is packaged in will contain an appropriate label.

The label on the device will be of a bright green color and be approximately seven inches long by one inch wide. The label will be inserted under the clear plastic cover on the side which is placed in the "up" position at time of

Mr. John Maga
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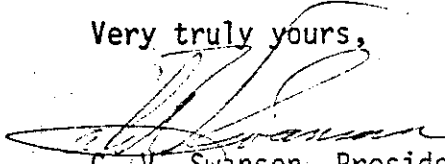
installation. The location inside the plastic cover will insure protection of the label against oil, grease, dirt, etc. and subsequent damage. Also, this location will be readily visible to inspecting authorities. Wording on the label will refer to the fact that the device is modified to be installed on 1966 - 1970 vehicles, and will include a statement referring to the appropriate executive order which permits installation.

As previously mentioned, all devices will be manufactured in the 1966 - 1970 configuration. When the device is installed on a 1955 - 1965 vehicle, a part is removed, per installation instructions, from the bottom of the device by the mechanic. To assist the mechanic in not forgetting to remove this part, and to also insure that he does not remove this part when installing on a 1966 - 1970, an additional label will be provided.

This label is also bright green in color and is approximately three inches long by 1/2 inch wide and will protrude substantially beyond the unit when installed --- and clearly indicate that the part has not been removed. The wording on the label will say to remove the part for 1955 - 1965 installations.

In addition to reminding the mechanic to remove or not remove the part, whichever the case may be, the label provides an inspection indicator for enforcing officials. We feel that this labeling plan is adequate to insure correct installation of the device.

Very truly yours,


C. V. Swanson, President
AIR QUALITY PRODUCTS, INC.

CVS:jw