

ED.  
BOOK

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-118  
Relating to Certification of New Motor Vehicles

GENERAL MOTORS CORPORATION

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Sections 43100, 43102, 43103, and 43835; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Orders G-45-3 and G-45-4;

IT IS ORDERED AND RESOLVED: That General Motors Corporation exhaust emission control systems for 1978 model-year passenger cars are certified for the vehicles described below:

Engine Family: 840E2LU  
Engine: 231 CID  
Transmission: 4- and 5-speed manual, 3-speed automatic  
Exhaust Emission Control Systems: Air Injection, Early Fuel Evaporation, Exhaust Gas Recirculation, Oxidation Catalyst

Models and Engine Codes as listed in attachment.

The following are the recommended values to be listed on the window decal required by California Assembly-Line Test Procedures for 1978 model-year vehicles:

<u>Engine Family</u>	<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per Mile</u>	<u>Nitrogen Oxides Grams per Mile</u>
840E2LU	0.37	7.6	1.0

BE IT FURTHER RESOLVED: That the above models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" (13 California Administrative Code, Section 2290) for the aforementioned model year, or have been granted a temporary exemption from the aforementioned "Specifications" by Executive Order AA-6 series.

BE IT FURTHER RESOLVED: That the above models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Gasoline-powered Motor Vehicles except Motorcycles".

GENERAL MOTORS CORPORATION

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(Page 2 of 2)

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

The Department of Motor Vehicles, the California Highway Patrol, and the Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California, this 26 day of August, 1977.

  
G. C. Hass, Chief  
Vehicle Emissions Control Division

1978 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET-GM FORMAT

Manufacturer GENERAL MOTORS CORPORATION Executive Order No. A-6-118 Page 1

Engine Family 840E2LU Engine (CID) 231

ABBREVIATIONS

Distributor

C-Centrifugal Advance  
 V-Vacuum Advance  
 VR-Vacuum Retard  
 HEI-High Energy Ignition  
Fuel System  
 EFI  
 nV-nVenturi Carburetor

Exhaust Emission Control

AI-Air Injection  
 CAI-Catalyst Air Injection  
 EFI-Electronic Fuel Injection  
 EGR-Exhaust Gas Recirculation  
 EM-Engine Modification  
 EFE-Early Fuel Evaporation

ESAC-Electronic Spark  
 Advance Control

OC-Oxidation Catalyst

PAI-Pulse Air Injection

TC-Turbo Charged

TWC-Three Way Catalyst  
 (Feedback Control)

Division	Basic Body Trim	Body Type	Division	Basic Body Trim	Body Type
1		<u>Chevrolet</u>	2		<u>Pontiac</u>
A-T	19	Malibu Notchback Sedan	A-F	19	Grand LeMans Sedan
-W	19	Malibu Classic Sedan	-D	19	LeMans Sedan
-W	27	Malibu Classic Notchback Coupe	-F	27	Grand LeMans Coupe
-T	27	Malibu Notchback Coupe	-D	27	LeMans Coupe
-W	35	Malibu Classic Station Wagon	-F	35	Grand LeMans Safari Station Wagon
-T	35	Malibu Station Wagon	-D	35	LeMans Safari Station Wagon
-Z	37	Monte Carlo Sport Coupe	B-E	37	Catalina Coupe
-W	80	El Camino Pick-up Delivery	L	69	Catalina Sedan
H-R	07 <sup>m</sup>	Monza 2+2 Sport Hatchback Coupe	F S	87	Firebird
-M	07 <sup>m</sup>	Monza 2+2 Hatchback Coupe	-T	87	Esprit
-M	15 <sup>m</sup>	Monza Station Wagon	G-JA	37	Grand Prix
-M	27 <sup>m</sup>	Monza Coupe	H-M	07 <sup>m</sup>	Sunbird Sport Hatchback Coupe
-R	27 <sup>m</sup>	Monza Sport Coupe	-M	15 <sup>m</sup>	Sunbird Sport Safari Station Wagon
-M	77 <sup>m</sup>	Monza "S" Hatchback Coupe	-E	27 <sup>m</sup>	Sunbird Coupe
			-M	27 <sup>m</sup>	Sunbird Sport Coupe
			X Y	17	Phoenix Hatchback Coupe
			Y	27	Phoenix Coupe
			Z	27	Phoenix LJ Coupe
			Y	69	Phoenix Sedan
			Z	69	Phoenix LJ Sedan

Issued: 102477. Names corrected for 1H 07 & 1HM27; models 1HM15 & 77, 2HM15 added by RC 84-42; Olds models moved to page 2, on 111877.

1978 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET-GM FORMAT

Manufacturer GENERAL MOTORS CORPORATION Executive Order No. A-6-118 Page 2

Engine Family 840E2LU Engine (CID) 231

Division	Basic Body Trim	Body Type	Division	Basic Body Trim	Body Type
3	<u>Oldsmobile</u>		4	<u>Buick</u>	
A-J	09	Cutlass Salon Brougham Sedan	A-E	09	Century Special Sedan
G	09	Cutlass Salon Sedan	-H	09	Century Custom Sedan
-H	35	Cutlass Cruiser	-L	09	Century Limited Sedan
-M	47	Cutlass Supreme Brougham Coupe	-E	35	Century Wagon
-K	47	Cutlass Calais Coupe	-M	47	Regal Limited Coupe
-R	47	Cutlass Supreme Coupe	-J	47	Regal Coupe
-J	87	Cutlass Salon Brougham Coupe	-E	87	Century Special Coupe
-G	87	Cutlass Salon Coupe	-G	87	Century Sport Coupe
B N	37	Delta 88 Royale Coupe	-H	87	Century Custom Coupe
M	37	Delta 88 Holiday Coupe	-L	87	Century Limited Coupe
L	37	Delta 88 Coupe	B P	37	LeSabre Custom Coupe
N	69	Delta 88 Royale Sedan	N	37	LeSabre Coupe
L	69	Delta 88 Sedan	P	69	LeSabre Custom Sedan
H-D	07	Starfire SX	N	69	LeSabre Sedan
-T	07	Starfire	H-S	07	Skyhawk
X B	17	Omega Hatchback Coupe	-T	07	Skyhawk "S"
-B	27	Omega Coupe	X-C	17-	Skylark Custom Hatchback
E	27	Omega Brougham Coupe	B	17-	Skylark Hatchback
-E	69	Omega Brougham Sedan	C	27-	Skylark Custom Coupe
-B	69	Omega Sedan	B	27-	Skylark Coupe
			-W	27	Skylark "S"
			C	69-	Skylark Custom Sedan
			B	69-	Skylark Sedan
			5	<u>GMC</u>	
			A W	80	Caballero Pick-up Delivery

Issued: 102477. Olds models moved from page 1, on 111877.

1978 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET - GM FORMAT

Passenger Cars

Manufacturer: General Motors Corporation

Executive Order No. A-6-118 Pg. 3

Engine Family 84QE2LU Engine (CID) 231 Transm. \_\_\_\_\_

Exhaust Emission Control System AI, EGR, OC, FEE +10% (A/C) Yes  No

Eng. Code	Air Cond.	Distrib. Type HEI, C, V Mfgr. Part No.	Fuel System 2V Mfgr. Part No.	EGR System Part No. Service	Inertia Wt. Class	Divisions	Basic Body	Trim	Body Type	Trans- mission	Tune-up Label & Page No.	Rev. Notes
1, 1A ,1B	W	Delco 1110731	Rochester 17058446	17056199 No Service	4000	234 234	B B		37 69	A-3	NE 4	A C
2, 2A ,2B	W or W/O		17058444		3500	3 4 3	X X X	B W B	27 27 69		ND 4	A, C C B
	W/O				4000	234 234	B B		37 69			
	W or W/O					2	F		87			
						234 2 3 4 2 4 3	X X X X X X	ZY E CB E	17 27 27 27 69 69			C B

Comments Some models have special road load HP settings. See page one for abbreviations.

Date of Issue 102477 Revisions: A. Eng. Codes 1A & 2A added by RC 84-79; B. 3XB69 was 4000 lb., 4XB27 was 3500 lb. before RC 84-85 on 102677. Eng. Codes 4 thru 6A moved to pg. 3A on 111877. C. Eng. Codes 1B, 2B added by RC 84-164, model 2XY27 was 3500 lb. before correction, on 031378.

1978 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET - GM FORMAT

Passenger Cars

Manufacturer: General Motors Corporation

Executive Order No. A-6-118 Pg. 3A

Engine Family 840E2LU Engine (CID) 231 Transm. \_\_\_\_\_

Exhaust Emission Control System AI, EGR, OC, EFE +10% (A/C) Yes  No

Eng. Code	Air Cond.	Distrib. Type HEI C, V Mfgr. Part No.	Fuel System 2V Mfgr. Part No.	EGR System Part No. Service	Inertia Wt. Class	Divisions	Basic Body	Trim	Body Type	Trans- mission	Tune-up Label. & Page No.	Rev. Notes
4, 4A ,4B	W or W/O	Delco 1110731	17058448	17056191 No Service	3500	1234	H		07	A-3	XK 5	A, D B, D  B
						12	H		15			
5, 5A ,5B		1110732	17058447	17056190	3500	12	H		07	M-4,5		A, E D  B B, E E
						12	H		15			
						1	H		27 77			
6, 6A ,6B		1110731	17058448	17056463		34	A		09	A-3	ND 4	A, D D C
						12	A		19			
						12	A		27			
						1234	A		35			
						1	A		37			
34	A		47									
1 5	A		80									
34	A		87									
					2	G		37				

Comments Some models have special road load HP settings. See page one for abbreviations.

Date of Issue 111877 Revisions: A. Eng. Codes 4A, 5A, & 6A, added by RC-84-79, on 102677. Eng. Codes 4 thru 6A moved from pg. 3; B. Models 1HM15 & 77, 2HM15 added by RC-84-42; C. Models 12A 27 added to correct omission, on 111877. D. Eng. Codes 4B, 5B, 6B added by RC 84-164, XK tune-up label replaced ND for H bodies, 031378. E. Model 1H 77 with M-5 transm. was 3000 lb. before correction, on 072178.

1978 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET - GM FORMAT

Passenger Cars

Manufacturer: General Motors Corporation

Executive Order No. A-6-118 Pg. 3A

Engine Family 840E2LU Engine (CID) 231 Transm. \_\_\_\_\_

Exhaust Emission Control System AI, EGR, OC, EFE +10% (A/C) Yes  No

Eng. Code	Air Cond.	Distrib. Type HEI C, V Mfgr. Part No.	Fuel System 2V Mfgr. Part No.	EGR System Part No. Service	Inertia Wt. Class	Divisions	Basic Body	Trim	Body Type	Trans- mission	Tune-up Label & Page No.	Rev. Notes
4, 4A ,4B	W or W/O	Delco 1110731	17058448	17056191 No Service	3500	1234	H		07	A-3	XK 5	A, D B, D B
						12	H		15			
5, 5A ,5B		1110732	17058447	17056190	3000	1	H		77	M-5		A, B D
						1234	H		07	M-4,5	B	
						12	H		15			
						1	H		77	M-4		B
6, 6A ,6B		1110731	17058448	17056463		34	A		09	A-3	ND 4	A, D D C
						12	A		19			
						12	A		27			
						1234	A		35			
						1	A		37			
						34	A		47			
						1 5	A		80			
						34	A		87			
						2	G		37			

Comments Some models have special road load HP settings. See page one for abbreviations.


Date of Issue 111877 Revisions: A. Eng. Codes 4A, 5A, & 6A, added by RC-84-79, on 102677. Eng. Codes 4 thru 6A moved from pg. 3; B. Models 1HM15 & 77, 2HM15 added by RC-84-42; C. Models 12A 27 added to correct omission, on 111877. D. Eng. Codes 4B, 5B, 6B added by RC 84-164, XK tune-up label replaced ND for H bodies, 031378

*in cover 072078*


Passenger Cars

Manufacturer: General Motors Corporation

Executive Order No. A-6-118 Pg. 4

<b>ND</b> 231 CU. IN. 840E2LU 8BCV	<b>VEHICLE EMISSION CONTROL INFORMATION</b> GENERAL MOTORS CORPORATION	 TIMING MARK	<b>CATALYST</b> EGR - EFE - RAIR LOW ALTITUDE CERTIFICATION		<b>TRANSMISSION</b>	
			TIMING (°B.T.D.C. @RPM)	15° @800	15° @800	AUTO
MAKE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE OPEN, AIR CLEANER ON, AND AIR CONDITIONING OFF. PLUG DISCONNECTED VACUUM FITTINGS AND/OR HOSES.			<b>SPARK PLUG</b>		TYPE	R45TX
			GAP	.080	.080	
SET PARKING BRAKE AND BLOCK WHEELS 1. DISCONNECT EVAPORATIVE PURGE HOSE TO VAPOR CANISTER. 2. DISCONNECT AND PLUG DISTRIBUTOR VACUUM HOSE TO CARB. AND EGR HOSE TO EGR VALVE. 3. SET TIMING AT SPECIFIED RPM. DISCONNECT THROTTLE SOLENOID WIRE (WHERE APPLICABLE). RECONNECT DISTRIBUTOR ADVANCE HOSE. 4. ADJUST CARBURETOR SPEED SCREW TO SPECIFIED RPM. 5. RECONNECT SOLENOID WIRE. MANUALLY EXTEND SOLENOID SCREW AND ADJUST TO SPECIFIED RPM. (WHERE APPLICABLE) 6. RECONNECT CANISTER, AND EGR HOSES. (SEE SERVICE MANUAL AND MAINTENANCE SCHEDULE II FOR ADDITIONAL INFORMATION)			CARB. SCREW (RPM)		800 (DRIVE)	800 (NEUT)
			SOLENOID SCREW (RPM)		800 (DRIVE)	800 (NEUT)
			IDLE MIXTURE SCREWS ARE PRESET AND CAPPED AT FACTORY - <b>DO NOT</b> BREAK CAPS - ADJUSTMENT DURING TUNE-UP IS NOT RECOMMENDED. FOR MAJOR REPAIR, ADJUSTING MIXTURE SETTING BY OTHER THAN APPROVED SERVICE MANUAL PROCEDURE MAY VIOLATE FEDERAL AND/OR CALIFORNIA OR OTHER STATE LAWS.			
			PART NO. 1259984			

THIS VEHICLE CONFORMS TO U. S. EPA, AND CALIFORNIA, REGULATIONS APPLICABLE TO 1978 MODEL YEAR NEW MOTOR VEHICLES.

<b>NE</b> 231 CU. IN. 840E2LU 8BCV	<b>VEHICLE EMISSION CONTROL INFORMATION</b> GENERAL MOTORS CORPORATION	 TIMING MARK	<b>CATALYST</b> EGR - EFE - RAIR LOW ALTITUDE CERTIFICATION		<b>TRANSMISSION</b>	
			TIMING (°B.T.D.C. @RPM)	15° @800	AUTOMATIC	
MAKE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE OPEN, AIR CLEANER ON, AND WHERE APPLICABLE, AIR CONDITIONING OFF. PLUG DISCONNECTED VACUUM FITTINGS AND/OR HOSES.			<b>SPARK PLUG</b>		TYPE	R45TX
			GAP	.080	.080	
SET PARKING BRAKE AND BLOCK WHEELS 1. DISCONNECT EVAPORATIVE PURGE HOSE TO VAPOR CANISTER. 2. DISCONNECT AND PLUG DISTRIBUTOR VACUUM HOSE TO CARB. AND EGR HOSE TO EGR VALVE. 3. SET TIMING AT SPECIFIED R.P.M. RECONNECT DISTRIBUTOR ADVANCE HOSE. 4. ADJUST CARBURETOR SPEED SCREW TO SPECIFIED R.P.M., IN DRIVE. 5. ON AIR CONDITIONING CARS - AFTER COMPLETING ABOVE ADJUSTMENTS, A/C ON, DISCONNECT ELECTRICAL CONNECTOR AT A/C COMPRESSOR CLUTCH AND ADJUST SOLENOID (ENERGIZED) SCREW TO SPECIFIED R.P.M., IN DRIVE, RECONNECT ELECTRICAL CONNECTOR. 6. RECONNECT CANISTER, AND EGR VALVE HOSES. (SEE SERVICE MANUAL AND MAINTENANCE SCHEDULE II FOR ADDITIONAL INFORMATION)			CARB. SCREW (RPM)		800 (DRIVE)	800 (DRIVE)
			SOLENOID SCREW (RPM)		676 (DRIVE)	
			IDLE MIXTURE SCREWS ARE PRESET AND CAPPED AT FACTORY - <b>DO NOT</b> BREAK CAPS - ADJUSTMENT DURING TUNE-UP IS NOT RECOMMENDED. FOR MAJOR REPAIR, ADJUSTING MIXTURE SETTING BY OTHER THAN APPROVED SERVICE MANUAL PROCEDURE MAY VIOLATE FEDERAL AND/OR CALIFORNIA OR OTHER STATE LAWS.			
			PART NO. 1259985			
THIS VEHICLE CONFORMS TO U. S. EPA, AND CALIFORNIA, REGULATIONS APPLICABLE TO 1978 MODEL YEAR MOTOR VEHICLES.						



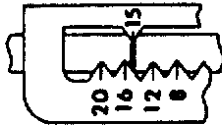
**XK**  
231 CU. IN.  
840E2LU  
8BCV

**VEHICLE EMISSION CONTROL INFORMATION**



GENERAL MOTORS CORPORATION

TIMING MARK



**SET PARKING BRAKE AND BLOCK DRIVE WHEELS.**

MAKE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE. CHOKE OPEN, AIR CLEANER ON, AND AIR CONDITIONING OFF. PLUG DISCONNECTED VACUUM FITTINGS AND/OR HOSES.

1. DISCONNECT EVAPORATIVE PURGE HOSE TO VAPOR CANISTER.
2. DISCONNECT AND PLUG DISTRIBUTOR VACUUM HOSE TO CARB. AND EGR HOSE TO EGR VALVE.
3. SET TIMING AT SPECIFIED RPM. RECONNECT DISTRIBUTOR ADVANCE HOSE.
4. DISCONNECT THROTTLE SOLENOID WIRE (WHERE APPLICABLE). ADJUST CARBURETOR SPEED SCREW TO SPECIFIED RPM.
5. RECONNECT SOLENOID WIRE. MANUALLY EXTEND SOLENOID SCREW AND ADJUST TO SPECIFIED RPM. (WHERE APPLICABLE).
6. RECONNECT CANISTER, AND EGR HOSES.

**CATALYST**

EGR-EFE-RAIR  
LOW ALTITUDE CERTIFICATION

TIMING (°B.T.D.C. @ RPM)	TYPE	TRANSMISSION	
	GAP (IN.)	AUTOMATIC	MANUAL
SPARK PLUG		15° @ 600	15° @ 800
CARB. SCREW (RPM)		R46TSX	R46TSX
SOLENOID SCREW (RPM)		0.060	0.060
		600 (DR)	600 (N)
		---	800 (N)

**NOTE** IDLE MIXTURE SCREWS ARE PRESET AND CAPPED AT FACTORY — DO NOT BREAK CAPS — ADJUSTMENT DURING TUNE UP IS NOT RECOMMENDED

FOR MAJOR REPAIR, ADJUSTING MIXTURE SETTING BY OTHER THAN APPROVED SERVICE MANUAL PROCEDURE MAY VIOLATE FEDERAL AND OR CALIFORNIA OR OTHER STATE LAWS

SEE SERVICE MANUAL AND MAINTENANCE SCHEDULE II FOR ADDITIONAL INFORMATION

PRINTED IN U.S.A.

THIS VEHICLE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1978 MODEL YEAR NEW MOTOR VEHICLES.

PT. NO. 476358