E.O. 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:

Engine Family	Hydrocarbons Grams per Mile	Carbon Monoxide Grams per Mile	Nitrogen Oxides Grams per Mile
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".

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

for 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		
1			Chevrolet	
	A-T	19	Malibu Notchback	Sedan
	-W	19	Malibu Classic	Sedan
	-W	27	Malibu Classic Notchback	Coupe
	-T	27	Malibu Notchback	Coupe
	-W	35	Malibu Classic Station Wagon	
	-T	35	Malibu Station Wagon	
	-Z	37	Monte Carlo Sport Coupe	
	-W	80	El Camino Pick-up Delivery	
	H-R	07	Monza 2+2 Sport Hatchback	Coupe
	-M	07	Monza 2+2 Hatchback	Coupe
	-M	15	Monza Station Wagon	
	-M	27	Monza	Coupe
	-R	27	Monza Sport	Coupe
	-M	77	Monza "S" Hatchback	Coupe

Division	Basic Body Trim	Body Type		
2			Pontiac	
	A-F	19	Grand LeMans	Sedan
	-D	19	LeMans	Sedan
	-F	27	Grand LeMans	Coupe
	-D	27	LeMans	Coupe
	-F	35	Grand LeMans Safari Station Wagon	
	-D	35	LeMans Safari	Station Wagon
	B-L	37	Catalina	Coupe
	L	69	Catalina Sedan	
	F-S	87	Firebird	
	-T	87	Esprit	
	G-J	37	Grand Prix	
	H-M	07	Sunbird Sport Hatchback	Coupe
	-M	15	Sunbird Sport Safari Station Wagon	
	-E	27	Sunbird	Coupe
	-M	27	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, on111877.

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	
3			Oldsmobile
	A-J	09	Cutlass Salon Brougham Sedan
	G	09	Cutlass Salon Sedan
	-H	35	Cutlass Cruiser
	-M	47	Cutlass Supreme Brougham Coupe
	-K	47	Cutlass Calais Coupe
	-R	47	Cutlass Supreme Coupe
	-J	87	Cutlass Salon Brougham Coupe
	-G	87	Cutlass Salon Coupe
	B N	37	Delta 88 Royale Coupe
	M	37	Delta 88 Holiday Coupe
	L	37	Delta 88 Coupe
	N	69	Delta 88 Royale Sedan
	L	69	Delta 88 Sedan
	H-D	07	Starfire SX
	-T	07	Starfire
	X B	17	Omega Hatchback Coupe
	-B	27	Omega Coupe
	E	27	Omega Brougham Coupe
	E	69	Omega Brougham Sedan
	-B	69	Omega Sedan

Division	Basic Body Trim	Body Type	
4			Buick
	A-E	09	Century Special Sedan
	-H	09	Century Custom Sedan
	-L	09	Century Limited Sedan
	-E	35	Century Wagon
	-M	47	Regal Limited Coupe
	-J	47	Regal Coupe
	-E	87	Century Special Coupe
	-G	87	Century Sport Coupe
	-H	87	Century Custom Coupe
	-L	87	Century Limited Coupe
	B P	37	LeSabre Custom Coupe
	N	37	LeSabre Coupe
	P	69	LeSabre Custom Sedan
	N	69	LeSabre Sedan
	H-S	07	Skyhawk
	-T	07	Skyhawk "S"
	X-C	17	Skylark Custom Hatchback
	B	17	Skylark Hatchback
	C	27	Skylark Custom Coupe
	B	27	Skylark Coupe
	-W	27	Skylark "S"
	C	69	Skylark Custom Sedan
	B	69	Skylark Sedan
5			GMC
	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, 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
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 12 12 1	H H H H		07 15 27 77	A-3	XK 5	A,D B,D B
5, 5A ,5B		1110732	17058447	17056190								A,E D
					3500	1234 12 12 1	H H H H		07 15 27 77	M-4,5		 B B,E
												E
6, 6A ,6B		1110731	17058448	17056463		34 12 12 1234 1 34 1 5 34	A A A A A A A A		09 19 27 35 37 47 80 87	A-3	ND 4	A,D D C
						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 12 12 1	H H H H		07 15 27 77	A-3	XK 5	A,D B,D B
5, 5A ,5B		1110732	17058447	17056190	3000	1	H		77	M-5		A,B D
					3500	1234 12 12	H H H		07 15 27	M-4,5		 B
						1	H		77	M-4		B
6, 6A ,6B		1110731	17058448	17056463		34 12 12 1234 1 34 1 5 34	A A A A A A A A		09 19 27 35 37 47 80 87	A-3	ND 4	A,D D C
						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.

on corr^n 072078

ND
231 CU. IN.
840E2LU
8BCV

VEHICLE EMISSION CONTROL INFORMATION
GENERAL MOTORS CORPORATION

TIMING MARK

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

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)

CATALYST EGR-EFE-RAIR LOW ALTITUDE CERTIFICATION		TRANSMISSION	
		AUTO	MANUAL
TIMING (°B.T.D.C. @RPM)		15° @600	15° @600
SPARK PLUG	TYPE	R45TSX	R45TSX
	GAP	.060	.060
CARB. SCREW (RPM)		600(DRIVE)	600 (NEUT)
SOLENOID SCREW (RPM)			800 (NEUT)

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.

PART NO. 1259984

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

NE
231 CU. IN.
840E2LU
8BCV

VEHICLE EMISSION CONTROL INFORMATION
GENERAL MOTORS CORPORATION

TIMING MARK

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.

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)

CATALYST EGR-EFE-RAIR LOW ALTITUDE CERTIFICATION		TRANSMISSION
		AUTOMATIC
TIMING (°B.T.D.C. @RPM)		15° @600
SPARK PLUG	TYPE	R45TSX
	GAP	.060
CARB. SCREW (RPM)		600 (DRIVE)
SOLENOID SCREW (RPM)		670 (DRIVE)

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.

PART NO. 1259985

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

Issued 102477. Blurred labels replaced by clear labels on 111877.

XK
231 CU. IN.
840E2LU
88CV

VEHICLE EMISSION CONTROL INFORMATION

GENERAL MOTORS CORPORATION

CATALYST

EGR-EFE-RAIR
LOW ALTITUDE CERTIFICATION

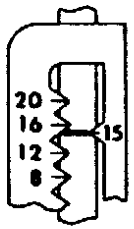
		TRANSMISSION	
		AUTOMATIC	MANUAL
TIMING (°B.T.D.C. @ RPM)		15° @ 600	15° @ 800
SPARK PLUG	TYPE	R46TSX	R46TSX
	GAP (IN.)	0.060	0.060
CARB. SCREW (RPM)		600 (DR)	600 (N)
SOLENOID SCREW (RPM)		——	800 (N)

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.

TIMING MARK



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

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