

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-368  
Relating to Certification of New Motor Vehicles

GENERAL MOTORS CORPORATION

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; 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 1987 model-year General Motors Corporation exhaust emission control systems are certified as described below for gasoline-powered passenger cars:

| <u>Engine Family</u> | <u>Displacement<br/>Cubic Inches (Liters)</u> | <u>Exhaust Emission Control Systems<br/>(Special Features)</u>                                  |
|----------------------|---|---|
| H2G3.8V8XEB7         | 181/231 (3.0/3.8)                             | Exhaust Gas Recirculation<br>Three-Way Catalyst with Closed Loop<br>(Electronic Fuel Injection) |

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The following are the emission standards for this engine family:

| <u>Hydrocarbons<br/>Grams per Mile</u> | <u>Carbon Monoxide<br/>Grams per Mile</u> | <u>Nitrogen Oxides<br/>Grams per mile</u> |
|--|---|---|
| 0.41                                   | 7.0                                       | 0.7                                       |

The following are the certification emission values for this engine family:

| <u>Hydrocarbons<br/>Grams per Mile</u> | <u>Carbon Monoxide<br/>Grams per Mile</u> | <u>Nitrogen Oxides<br/>Grams per Mile</u> |
|--|---|---|
| 0.20                                   | 2.2                                       | 0.5                                       |

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

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" (Title 13, California Administrative Code, Section 2290) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high altitude requirements and highway emission standards as stipulated in "California Exhaust Emission Standards and Test Procedures for 1981 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles".


BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Tune-Up Label Specifications" (Title 13, California Administrative Code, Section 1965) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2035 et seq.).

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

The Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 16<sup>th</sup> day of May, 1986.

  
K. D. Drachand, Chief  
Mobile Source Division

1987 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer General Motors Corporation Executive Order No. A-6-368 Page 1

Engine Family H2G3.8V8XE7 Evaporative Family 7B0-2D

Engine CID (Liters) - Type 231 (3.8) - V6 181 (3.0) - V6

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance  
 EEC-Electronic Engine Control  
 EI-Electronic Ignition  
 ESAC-Electronic Spark Advance Control  
 VA-Vacuum Advance  
 VR-Vacuum Retard

Exhaust Emissions Control System

AIP-Air Injection-Pump  
 AIV-Air Injection-Valve  
 CL-Closed Loop  
 EGR-Exhaust Gas Recirculation  
 EM-Engine Modification  
 OC-Oxidation Catalyst System  
 TR-Thermal Reactor  
 TWC-Three Way Catalyst System

Headings

AIR COND-Air Conditioning  
 BB-Basic Body  
 BT-Body Type  
 DI-Diesel Injection  
 DIN-Diesel Injector Nozzles  
 DIV-Division  
 ECM-Electronic Control Module  
 ETW-Equivalent Test Weight  
 TLC-Tune-Up Label Code  
 TNS-Transmission  
 TM-Trim

Fuel System

CFI,CL,DID,DIP,EFI,MFI  
 nV-nVenturi Carburetor  
 VV-Variable Venturi

Special Features

CCV-Combustion Chamber Valve  
 CFI-Central Fuel Injection  
 DID-Diesel Injection-Direct  
 DIP-Diesel Injection-Prechamber  
 EFI-Electronic Fuel Injection  
 IC-Intercooler  
 MFI-Mechanical Fuel Injection  
 TC-Turbocharger

| <u>DIV</u> | <u>BB</u> | <u>TM</u> | <u>BT</u> | <u>MODEL NAME</u>            | <u>DIV</u> | <u>BB</u> | <u>TM</u> | <u>BT</u> | <u>MODEL NAME</u>                   |
|------------|-----------|-----------|-----------|------------------------------|------------|-----------|-----------|-----------|-------------------------------------|
| 2          |           |           |           | PONTIAC                      | 3          |           |           |           | OLDSMOBILE                          |
|            | H         | X         | 69        | Bonneville Sedan             |            | C         | W         | 11        | Ninety-Eight Regency Brougham Coupe |
|            |           | Z         | 69        | Bonneville LE Sedan          |            |           |           | 69        | Ninety-Eight Regency Brougham Sedan |
|            | N         | E         | 27        | Grand Am Coupe               |            |           | X         | 69        | Ninety-Eight Rengency Sedan         |
|            |           | V         | 27        | Grand Am LE Coupe            |            | E         | Z         | 57        | Toronado Brougham Coupe             |
|            |           |           | 69        | Grand Am LE Sedan            |            | H         | N         | 37        | Delta 88 Royale Coupe               |
|            | W         |           | 27        | Grand Am SE Coupe            |            |           |           | 69        | Delta 88 Royale Sedan               |
|            |           |           | 69        | Grand Am SE Sedan            |            |           | Y         | 37        | Delta 88 Royale Brougham Coupe      |
| 3          |           |           |           | OLDSMOBILE                   |            |           |           | 69        | Delta 88 Royale Brougham Sedan      |
|            | A         | J         | 19        | Cutlass Ciera Sedan          |            |           |           | 27        | Calais Coupe                        |
|            |           |           | 35        | Cutlass Cruiser              |            | N         | F         | 69        | Calais Sedan                        |
|            |           |           | 37        | Cutlass Ciera S Coupe        |            |           |           | 27        | Calais Supreme Coupe                |
|            | M         |           | 19        | Cutlass Ciera Brougham Sedan |            |           | T         | 27        | Calais Supreme Sedan                |
|            |           |           | 35        | Cutlass Brougham Cruiser     |            |           |           | 69        | Calais Supreme Sedan                |
|            |           |           | 37        | Cutlass Ciera SL Coupe       |            |           |           |           |                                     |

DRIVE AXLE: Front Wheel Drive

ISSUED:

REVISIONS:

0523Q

## 1987 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer General Motors Corporation Executive Order No. A-6-368 Page 2Engine Family H2G3.8V8XEB7 Evaporative Family 7B0-2DEngine CID (Liters) - Type 231 (3.8) - V6

| <u>DIV</u> | <u>BB</u> | <u>TM</u> | <u>BT</u> | <u>MODEL NAME</u>              | <u>DIV</u> | <u>BB</u> | <u>TM</u> | <u>BT</u> | <u>MODEL NAME</u> |
|------------|-----------|-----------|-----------|--------------------------------|------------|-----------|-----------|-----------|-------------------|
| 4          |           |           |           | BUICK                          |            |           |           |           |                   |
|            | A         | H         | 19        | Century Custom Sedan           |            |           |           |           |                   |
|            |           |           | 27        | Century Custom Coupe           |            |           |           |           |                   |
|            |           |           | 35        | Century Custom Wagon           |            |           |           |           |                   |
|            |           | L         | 19        | Century Limited Sedan          |            |           |           |           |                   |
|            |           |           | 27        | Century Limited Coupe          |            |           |           |           |                   |
|            |           |           | 35        | Century Estate Wagon           |            |           |           |           |                   |
|            | C         | F         | 69        | Electra T Type 4 Dr Sedan      |            |           |           |           |                   |
|            |           | W         | 11        | Electra Park Avenue 2 Dr Sedan |            |           |           |           |                   |
|            |           |           | 69        | Electra Park Avenue 4 Dr Sedan |            |           |           |           |                   |
|            |           | X         | 69        | Electra Limited 4 Dr Sedan     |            |           |           |           |                   |
|            | E         | Z         | 57        | Riviera Coupe                  |            |           |           |           |                   |
|            | H         | H         | 37        | LeSabre Coupe                  |            |           |           |           |                   |
|            |           |           | 69        | LeSabre Sedan                  |            |           |           |           |                   |
|            |           | P         | 37        | LeSabre Custom Coupe           |            |           |           |           |                   |
|            |           |           | 69        | LeSabre Custom Sedan           |            |           |           |           |                   |
|            |           | R         | 37        | LeSabre Limited Coupe          |            |           |           |           |                   |
|            |           |           | 69        | LeSabre Limited Sedan          |            |           |           |           |                   |
|            | N         | C         | 69        | Skylark Custom Sedan           |            |           |           |           |                   |
|            |           | D         | 69        | Skylark Limited Sedan          |            |           |           |           |                   |
|            |           | J         | 27        | Somerset Custom Coupe          |            |           |           |           |                   |
|            |           | M         | 27        | Somerset Limited Coupe         |            |           |           |           |                   |

DRIVE AXLE: Front Wheel Drive

ISSUED:

REVISIONS: Model 4CF69 added by RC 72-011 on 05-19-86.

0523Q/53Q

1987 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
GASOLINE-FUELED PASSENGER CARS

Manufacturer General Motors Corporation Executive Order No. A-6-368 Page 2

Engine Family H2G3.8V8XEB7 Exhaust Emission Control System CL (EFI) EGR-TWC

| ENG.<br>CID | ENG.<br>CODE | AIR<br>COND | ECM<br>PART NO. | RAIL &<br>INJECTOR   |          | EGR VALVE<br>PART NO. | ETW      | DIV    | B T      |     | BT  | TNS  | TLC                       | REV.<br>NOTES           |                            |      |   |
|-------------|--------------|-------------|-----------------|----------------------|----------|-----------------------|----------|--------|----------|-----|-----|------|---------------------------|-------------------------|----------------------------|------|---|
|             |              |             |                 | PART NO.             | PART NO. |                       |          |        | B        | M   |     |      |                           |                         |                            |      |   |
| 181         | 7            | W &<br>WO   | 16053664        | 25525040<br>25526958 | 17085910 | 3000                  | 234<br>3 | N<br>N | 27<br>69 | A-3 | NGK |      |                           |                         |                            |      |   |
|             |              |             |                 |                      |          |                       |          |        |          |     |     | 3125 | 2 4                       | N                       | 69                         |      |   |
|             |              |             |                 |                      |          |                       |          |        |          |     |     |      |                           |                         |                            |      |   |
| 231         | 1            | W &<br>WO   | 16053694        | 25525639<br>25526959 | 17086704 | 3250                  | 4        | A      | 27       | A-4 | NGI |      |                           |                         |                            |      |   |
|             |              |             |                 |                      |          |                       |          |        |          |     |     | 3375 | 34<br>3                   | A<br>A                  | 19<br>37                   |      |   |
|             |              |             |                 |                      |          |                       |          |        |          |     |     | 3500 | 34                        | A                       | 35                         |      |   |
|             |              |             |                 |                      |          |                       |          |        |          |     |     | 3625 | 34<br>34                  | C<br>C                  | 11<br>69                   | NGJ, | A |
|             |              |             |                 |                      |          |                       |          |        |          |     |     | 3500 | 3<br>3                    | H<br>H N                | 37<br>69                   | A    |   |
|             |              |             |                 |                      |          |                       |          |        |          |     |     | 3625 | 34<br>4<br>34<br>2 4<br>3 | C<br>H<br>C<br>H<br>H Y | 11<br>37<br>69<br>69<br>69 |      |   |
|             |              |             |                 |                      |          |                       |          |        |          |     |     | 3500 | 3<br>3                    | H<br>H N                | 37<br>69                   | A    |   |
|             |              |             |                 |                      |          |                       |          |        |          |     |     | 3625 | 34<br>4<br>34<br>2 4<br>3 | C<br>H<br>C<br>H<br>H Y | 11<br>37<br>69<br>69<br>69 |      |   |
|             |              |             |                 |                      |          |                       |          |        |          |     |     | 3500 | 3<br>3                    | H<br>H N                | 37<br>69                   | A    |   |
|             |              |             |                 |                      |          |                       |          |        |          |     |     | 3625 | 34                        | C                       | 11                         | NGK  |   |
| 5           |              |             | 16053724        |                      |          | 3625                  | 34       | E      | 57       |     | NGK |      |                           |                         |                            |      |   |
|             |              |             |                 |                      |          |                       |          |        |          |     |     |      |                           |                         |                            |      |   |
| 6           |              |             | 16061494        |                      |          | 3625                  | 34       | E      | 57       |     |     |      |                           |                         |                            |      |   |

Comments: See page one for abbreviations and evaporative emission family identification  
Please refer to manufacturer's HP lists for correct dyno test HP settings  
based on model and equipment.

SUED:

REVISIONS: A. Engine codes 2A, 3A and 4A added by RC 72-003  
on 04-09-86.

0523Q/53Q

1987 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
GASOLINE-FUELED PASSENGER CARS

Manufacturer General Motors Corporation Executive Order No. A-6-368 Page 3

Engine Family H2G3.8V8XEB7 Exhaust Emission Control System CL (EFI) EGR-TWC

| ENG.<br>CID | ENG.<br>CODE | AIR<br>COND | ECM<br>PART NO. | RAIL &<br>INJECTOR<br>PART NO.   | EGR VALVE<br>PART NO. | ETW  | DIV      | B<br>B | T<br>M | BT       | TNS | TLC  | REV.<br>NOTES |
|-------------|--------------|-------------|-----------------|----------------------------------|-----------------------|------|----------|--------|--------|----------|-----|------|---------------|
| 181         | 7            | W &<br>WO   | 16053664        | 25525040<br>25526958<br>25529475 | 17085910              | 3000 | 234<br>3 | N<br>N |        | 27<br>69 | A-3 | NGK  | B             |
|             |              |             |                 |                                  |                       | 3125 | 2 4      | N      |        | 69       |     |      |               |
| 231         | 1            | W &<br>WO   | 16053694        | 25525639                         | 17086704              | 3250 | 4        | A      |        | 27       |     |      | C             |
|             | 1A           |             | 16067004        | 25526959                         |                       |      |          |        |        |          |     |      | D             |
|             | 1B           |             | 16063504        | 25529476                         |                       | 3375 | 34       | A      |        | 19       |     |      | E             |
|             | 1C           |             | 16078954        |                                  |                       |      | 3        | A      |        | 37       |     |      | G             |
|             | 1D           |             | 16081254        |                                  |                       | 3500 | 34       | A      |        | 35       |     |      |               |
|             | 2, 2A        | W           | 16053704        |                                  |                       | 3625 | 34       | C      |        | 11       |     | NGJ, | A             |
|             | 2B           |             | 16067014        |                                  |                       |      | 34       | C      |        | 69       |     | NGK  | C             |
|             | 2C           |             | 16073494        |                                  |                       |      |          |        |        |          |     |      | D             |
|             | 2D           |             | 16078964        |                                  |                       |      |          |        |        |          |     |      | E             |
|             | 2E           |             | 16081264        |                                  |                       |      |          |        |        |          |     |      | G             |
|             | 3, 3A        |             | 16061504        |                                  |                       | 3500 | 3        | H      |        | 37       |     |      | A             |
|             | 3B           |             | 16067024        |                                  |                       |      |          |        |        |          |     |      | C             |
|             | 3C           |             | 16073084        |                                  |                       |      |          |        |        |          |     |      | D             |
|             | 3D           |             | 16078974        |                                  |                       | 3625 | 34       | C      |        | 11       |     |      | E             |
|             | 3E           |             | 16081274        |                                  |                       |      | 4        | H      |        | 37       |     |      | G             |
|             |              |             |                 |                                  |                       |      | 34       | C      |        | 69       |     |      |               |
|             |              |             |                 |                                  |                       |      | 234      | H      |        | 69       |     |      | F             |

Comments: See page one for abbreviations and evaporative emission family identification  
Please refer to manufacturer's HP lists for correct dyno test HP settings  
based on model and equipment.

ISSUED: 05-16-86

REVISIONS: A. Engine codes 2A, 3A and 4A added by RC 72-003 on 04-07-86. B. Optional rail & injector P/N added by RC 72-004 on 04-15-86. C. Engine codes 1A, 2B, 3B, 4B, 5A and 6A added by RC 72-012 on 05-21-86. D. Engine codes 1B, 2C, 3C, 4C, 5B and 6B added by RC 72-082 on 10-07-86. E. Engine codes 1C, 2D and 3D added by RC 72-117 on 01-13-87. F. Model 3HN69 increased ETW to 3625 by RC 72-141 on 03-20-87. G. Engine codes 1D, 2E and 3E added by RC 72-149.

1987 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
GASOLINE-FUELED PASSENGER CARS

Manufacturer General Motors Corporation Executive Order No. A-6-368 Page 4

Engine Family H2G3.8V8XEB7 Exhaust Emission Control System CL (EFI) EGR-TWC

| ENG. CID | ENG. CODE   | AIR COND  | ECM PART NO.    | RAIL & INJECTOR PART NO. | EGR VALVE PART NO. | ETW         | DIV         | B B        | T M      | BT        | TNS        | TLC         | REV. NOTES |          |
|----------|-------------|-----------|-----------------|--------------------------|--------------------|-------------|-------------|------------|----------|-----------|------------|-------------|------------|----------|
| 231      | <u>4.4A</u> |           | <u>16053684</u> | <u>25525639</u>          | <u>17086704</u>    | <u>3500</u> | <u>3</u>    | <u>H</u>   |          | <u>37</u> | <u>A-3</u> | <u>NGJ,</u> | <u>A</u>   |          |
|          | <u>4B</u>   |           | <u>16067034</u> | <u>25526959</u>          |                    |             |             |            |          |           |            | <u>NGK</u>  | <u>C</u>   |          |
|          | <u>4C</u>   |           | <u>16071694</u> | <u>25529476</u>          |                    |             |             |            |          |           |            |             | <u>D</u>   |          |
|          | <u>4D</u>   |           | <u>16078984</u> |                          |                    | <u>3625</u> | <u>34</u>   | <u>C</u>   |          | <u>11</u> |            |             | <u>E</u>   |          |
|          | <u>4E</u>   |           | <u>16081284</u> |                          |                    |             |             | <u>4</u>   | <u>H</u> | <u>37</u> |            |             | <u>G</u>   |          |
|          |             |           |                 |                          |                    |             |             | <u>34</u>  | <u>C</u> |           | <u>69</u>  |             |            |          |
|          |             |           |                 |                          |                    |             |             | <u>234</u> | <u>H</u> |           | <u>69</u>  |             |            | <u>F</u> |
|          |             | <u>5</u>  |                 | <u>16053724</u>          |                    |             | <u>3625</u> | <u>34</u>  | <u>E</u> |           | <u>57</u>  |             | <u>NGK</u> |          |
|          |             | <u>5A</u> |                 | <u>16067044</u>          |                    |             |             |            |          |           |            |             |            | <u>C</u> |
|          |             | <u>5B</u> |                 | <u>16074444</u>          |                    |             |             |            |          |           |            |             |            | <u>D</u> |
|          |             | <u>5C</u> |                 | <u>16078994</u>          |                    |             |             |            |          |           |            |             |            | <u>E</u> |
|          |             | <u>6</u>  |                 | <u>16061494</u>          |                    |             | <u>3625</u> | <u>34</u>  | <u>E</u> |           | <u>57</u>  |             |            |          |
|          |             | <u>6A</u> |                 | <u>16067054</u>          |                    |             |             |            |          |           |            |             |            | <u>C</u> |
|          |             | <u>6B</u> |                 | <u>16074454</u>          |                    |             |             |            |          |           |            |             |            | <u>D</u> |
|          |             | <u>6C</u> |                 | <u>16079004</u>          |                    |             |             |            |          |           |            |             |            | <u>E</u> |

Comments: See page one for abbreviations and evaporative emission family identification  
Please refer to manufacturer's HP lists for correct dyno test HP settings  
based on model and equipment.

ISSUED: 05-16-86

REVISIONS: A. Engine codes 2A, 3A and 4A added by RC 72-003 on 04-07-86. C. Engine codes 1A, 2B, 3B, 4B, 5A and 6A added by RC 72-012 on 05-21-86. D. Engine codes 1B, 2C, 3C, 4C, 5B and 6B added by RC 72-082 on 10-07-86. E. Engine codes 4D, 5C and 6C added by RC 72-117 on 01-13-87. F. Model 3HN69 increased ETW to 3625 by RC 72-141 on 03-20-87. G. Engine code 4E added by RC 72-149.