State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-156
Relating to Certification of New Motor Vehicle Engines

GENERAL MOTORS CORPORATION

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

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

IT IS ORDERED AND RESOLVED: That the following General Motors Corporation 1979 model-year gasoline engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating greater than 8500 pounds:

Engine Family	Displacement Cubic Inches	Exhaust Emission Control Systems (Special Features)
GM 112	292	Air Injection
GM 113	350, 400	Air Injection
GM 114	366, 427, 454	Air Injection
GM 115	454	Air Injection

Engine Models and Codes as listed on attachments.

Section 43200, Part 5, Division 26 of the California Health and Safety Code requires that the engine manufacturer furnish a decal with each engine sold or delivered to a vehicle manufacturer. The decal shall display the applicable model year heavy-duty engine exhaust emission standards and the following certification emission values:

Engine Family	Hydrocarbons gm/bhp-hr	Carbon Monoxide gm/bhp-hr	Nitrogen Oxides gm/bhp-hr	Hydrocarbons + Nitrogen Oxides gm/bhp-hr
GM 112	0.1	16	5.5	
GM 113	0.9	22	6.9	
GM 114	0.6	14	6.9	
GM 115	0.5	21	5.6	

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

GENERAL MOTORS CORPORATION

EXECUTIVE ORDER A-6-156
(Page 2 of 2)

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 25th day of August, 1978.

G C Hass by A D Drachand

G. C. Hass, Chief
Vehicle Emissions Control Division

1979 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer GENERAL MOTORS CORPORATION Executive Order No. A-6-156 Page 1

Engine Family See Below Engine (CID) See Below

ABBREVIATIONS

Ignition System
CA-Centrifugal Advance
EI-Electronic Ignition
ESAC
VA-Vacuum Advance
VR-Vacuum Retard

Fuel System
EFI, MFI
nV-nVenturi Carburetor
VV-Variable Venturi

Exhaust Emissions Control System
AI-Air Injection
CCAV-Comb. Chamber Air Valve
EFI-Electronic Fuel Injection
EGR-Exhaust Gas Recirculation
EM-Engine Modification

ESAC-Electronic Spark Advance Control
MFI-Mechanical Fuel Injection

OC-Oxidation Catalyst
PAI-Pulse Air Injection
TC-Turbo Charged
TR-Thermal Reactor
TWC-Three Way Catalyst (Feedback Control)
WOC-Warm-up Oxidation Catalyst

Engine Family	Displacement (CID)
GM 112	292
GM 113	350,400
GM 114	366,427,454
GM 115	454

Issued:082878.

E.O. #A 6 - 156

1979 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY GASOLINE ENGINES

Manufacturer General Motors Corporation Page 2

Engine Family GM 112 Engine (CID) 292 Calibration

Emission Control System AI

Engine Models/ Code (CID)	Ign. Sys. EI Dist. Part No.	Fuel System Carb. Part No.	EGR Valve Part No.	Tune-up Specifications (1) Basic Timing (2) Idle Mixture (3) Idle Speed	Page No.
L25/1	CA/VA 1110753	1V 17059009 17059309 17059359	None	See Label No. 14007821 " Code YH	6

Date of Issue - 082878.

E.O. #A 6 - 156

1979 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY GASOLINE ENGINES

Manufacturer General Motors Corporation Page 3

Engine Family GM 113 Engine (CID) 350/400 Calibration

Emission Control System AI

Engine Models/ Code (CID)	Ign. Sys. Dist. Part No.	Fuel System Carb. Part No.	EGR Valve Part No.	Tune-up Specifications (1) Basic Timing (2) Idle Mixture (3) Idle Speed	Page No.
LS9/1 (350)	CA/VA 1103375	4 V 17059213 17059215 17059513 17059515	None	See Label No. 14009058 " Code UK	6
LF4/2 (400)	CA/VA 1103375	4 V 17059229 17059529	None	See Label No. 14009060 " Code UN	6
LF5/3 (350)	CA 1103378	2 V 17059120 17059127 17059420 17059424	None	See Label No. 2036341(CA) and Label No. 2046579	7 8
LF5/4 (350)	CA 1103378	2 V 17059126 17059423	None	See Label No. 2036341(CA) and Label No. 2046579	7 8

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1979 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY GASOLINE ENGINES

Manufacturer General Motors Corporation Page 4

Engine Family GM 114 Engine (CID) 366/427/454 Calibration

Emission Control System AI

Engine Models / Code (CID)	Ign. Sys. Dist. Part No.	Fuel System Carb. Part No.	EGR Valve Part No.	Tune-up Specifications (1) Basic Timing (2) Idle Mixture (3) Idle Speed	Page No.
L86/1 (366)	CA 1103377	4 V 2030971 2030972 2030973 2030974	None	See Label No. 2036341(CA) and Label No. 2046580	7 9
L43/2 (427)	CA 103377	4 V 2030975 2030976	None	See Label No. 2036341(CA) and Label No. 2046580	7 9
L42/3 (454)	CA 1103377	4 V 2033097 2033099	None	See Label No. 2036341(CA) and Label No. 2046580	7 9

Date of Issue - 082878

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1979 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY GASOLINE ENGINES

Manufacturer General Motors Corporation Page 5

Engine Family GM 115 Engine (CID) 454 Calibration 1

Emission Control System AI

Engine Models / Code	Ign. Sys. Dist. Part No.	Fuel System Carb. Part No.	EGR Valve Part No.	Tune-up Specifications (1) Basic Timing (2) Idle Mixture (3) Idle Speed	Page No.
LF8/1	CA/VA 1103376	4 V 17059212 17059512	None	See Label No. 14007830 " Code YW	10

Date of Issue - 082878

1979 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET - GM FORMAT

Manufacturer: General Motors Corporation Executive Order No. A-6-156 Pg. 6

YH — ENGINE EXHAUST EMISSION CONTROL INFORMATION

GENERAL MOTORS CORPORATION

SET PARKING BRAKE AND BLOCK DRIVE WHEELS. MAKE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE FULL OPEN, AIR CLEANER INSTALLED AND AIR CONDITIONING OFF. PUT TRANSMISSION IN PARK OR NEUTRAL FOR ALL SETTINGS. (1) DISCONNECT AND PLUG VACUUM HOSE AT DISTRIBUTOR. SET IGNITION TIMING AT IDLE RPM. UNPLUG AND RECONNECT VACUUM HOSE AT DISTRIBUTOR. (2) DISCONNECT AND PLUG CANISTER PURGE HOSE AT VAPOR CANISTER. (3) ADJUST IDLE MIXTURE BY LEAN DROP PROCEDURE IF REQUIRED. (4) ADJUST IDLE SPEED TO SPECIFIED RPM. (5) ADJUST THROTTLE RETURN CONTROL SPEED TO SPECIFIED RPM. (6) ADJUST FAST IDLE SPEED WITH LEVER ON HIGH STEP OF CAM. (7) UNPLUG AND RECONNECT CANISTER PURGE HOSE TO VAPOR CANISTER.

ENGINE FAMILY	ENG. DISP.	EMISSION CONTROL	IDLE RPM	TIMING	FAST IDLE RPM	SPARK PLUG GAP (IN.)	LEAN DROP IDLE MIXTURE	THROTTLE RETURN CONTROL RPM	VALVE LASH
112	4.9 LITRE (292 CU. IN.)	AIR	700	8° BTC	2400	0.035	775 700 RPM	1500	HYD.

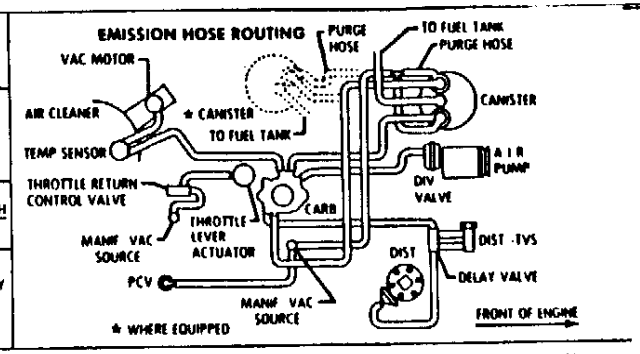
DATE OF MANUFACTURE FOR THIS ENGINE IS NOTED ON OTHER ENGINE EXHAUST EMISSION CONTROL INFORMATION LABEL

NOTE: IDLE MIXTURE SCREW IS PRESET AND CAPPED AT FACTORY. EITHER REMOVING MIXTURE SCREW CAP OR BREAKING THE TAB THEREON AND ALTERING THE MIXTURE SETTING BY OTHER THAN APPROVED PROCEDURES MAY VIOLATE FEDERAL AND/OR CALIFORNIA OR OTHER STATE LAWS. IF ADJUSTMENT IS REQUIRED, MIXTURE MAY BE RESET USING LEAN DROP METHOD PER SERVICE MANUAL.

SEE SERVICE MANUAL AND MAINTENANCE SCHEDULE FOR ADDITIONAL INFORMATION FUEL REQUIREMENTS — USE 91 OCTANE OR HIGHER

PRINTED IN U.S.A.

THIS ENGINE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1979 MODEL YEAR NEW HEAVY DUTY GASOLINE ENGINES.



PT. NO. 14007821

UK — ENGINE EXHAUST EMISSION CONTROL INFORMATION

GENERAL MOTORS CORPORATION

SET PARKING BRAKE AND BLOCK DRIVE WHEELS. MAKE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE FULL OPEN, AIR CLEANER INSTALLED AND AIR CONDITIONING OFF. PUT TRANSMISSION IN PARK OR NEUTRAL FOR ALL SETTINGS. (1) DISCONNECT AND PLUG VACUUM HOSE AT DISTRIBUTOR. SET IGNITION TIMING AT IDLE RPM. UNPLUG AND RECONNECT VACUUM HOSE AT DISTRIBUTOR. (2) DISCONNECT AND PLUG CANISTER PURGE HOSE AT VAPOR CANISTER. (3) ADJUST IDLE SPEED TO SPECIFIED RPM. (4) ADJUST THROTTLE RETURN CONTROL SPEED TO SPECIFIED RPM. (5) ADJUST FAST IDLE SPEED WITH LEVER ON HIGH STEP OF CAM. (6) UNPLUG AND RECONNECT CANISTER PURGE HOSE TO VAPOR CANISTER.

ENGINE FAMILY	ENG. DISP.	EMISSION CONTROL	IDLE RPM	TIMING	FAST IDLE RPM	SPARK PLUG GAP (IN.)	THROTTLE RETURN CONTROL RPM	VALVE LASH
113	5.7 LITRE (350 CU. IN.)	AIR	700	4° BTC	1900	0.045	1600	HYD.

DATE OF MANUFACTURE FOR THIS ENGINE IS NOTED ON OTHER ENGINE EXHAUST EMISSION CONTROL INFORMATION LABEL

NOTE: IDLE MIXTURE SCREWS ARE PRESET AND SEALED AT FACTORY. PROVISION FOR ADJUSTMENT DURING TUNE UP IS NOT PROVIDED. FOR MAJOR REPAIR, ADJUSTING MIXTURE SETTING BY OTHER THAN APPROVED SERVICE MANUAL PROCEDURE MAY VIOLATE FEDERAL AND/OR CALIFORNIA OR OTHER STATE LAWS. IF ADJUSTMENT IS REQUIRED, MIXTURE MAY BE RESET USING THE BEST IDLE MIXTURE METHOD PER SERVICE MANUAL.

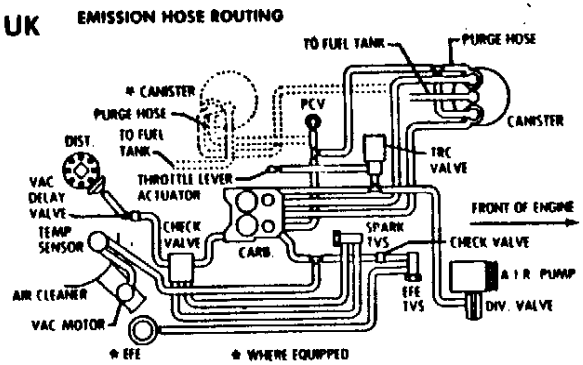
SEE SERVICE MANUAL, MAINTENANCE SCHEDULE AND EMISSION HOSE ROUTING LABEL FOR ADDITIONAL INFORMATION. FUEL REQUIREMENTS — USE 91 OCTANE OR HIGHER

PRINTED IN U.S.A.

THIS ENGINE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1979 MODEL YEAR NEW HEAVY DUTY GASOLINE ENGINES

PT. NO. 14009058

UK



UN — ENGINE EXHAUST EMISSION CONTROL INFORMATION

GENERAL MOTORS CORPORATION

SET PARKING BRAKE AND BLOCK DRIVE WHEELS. MAKE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE FULL OPEN, AIR CLEANER INSTALLED AND AIR CONDITIONING OFF. PUT TRANSMISSION IN PARK OR NEUTRAL FOR ALL SETTINGS. (1) DISCONNECT AND PLUG VACUUM HOSE AT DISTRIBUTOR. SET IGNITION TIMING AT IDLE RPM. UNPLUG AND RECONNECT VACUUM HOSE AT DISTRIBUTOR. (2) DISCONNECT AND PLUG CANISTER PURGE HOSE AT VAPOR CANISTER. (3) ADJUST IDLE SPEED TO SPECIFIED RPM. (4) ADJUST THROTTLE RETURN CONTROL SPEED TO SPECIFIED RPM. (5) ADJUST FAST IDLE SPEED WITH LEVER ON HIGH STEP OF CAM. (6) UNPLUG AND RECONNECT CANISTER PURGE HOSE TO VAPOR CANISTER.

ENGINE FAMILY	ENG. DISP.	EMISSION CONTROL	IDLE RPM	TIMING	FAST IDLE RPM	SPARK PLUG GAP (IN.)	THROTTLE RETURN CONTROL RPM	VALVE LASH
113	6.6 LITRE (400 CU. IN.)	AIR	700	4° BTC	1900	0.045	1600	HYD.

DATE OF MANUFACTURE FOR THIS ENGINE IS NOTED ON OTHER ENGINE EXHAUST EMISSION CONTROL INFORMATION LABEL

NOTE: IDLE MIXTURE SCREWS ARE PRESET AND SEALED AT FACTORY. PROVISION FOR ADJUSTMENT DURING TUNE UP IS NOT PROVIDED. FOR MAJOR REPAIR, ADJUSTING MIXTURE SETTING BY OTHER THAN APPROVED SERVICE MANUAL PROCEDURE MAY VIOLATE FEDERAL AND/OR CALIFORNIA OR OTHER STATE LAWS. IF ADJUSTMENT IS REQUIRED, MIXTURE MAY BE RESET USING THE BEST IDLE MIXTURE METHOD PER SERVICE MANUAL.

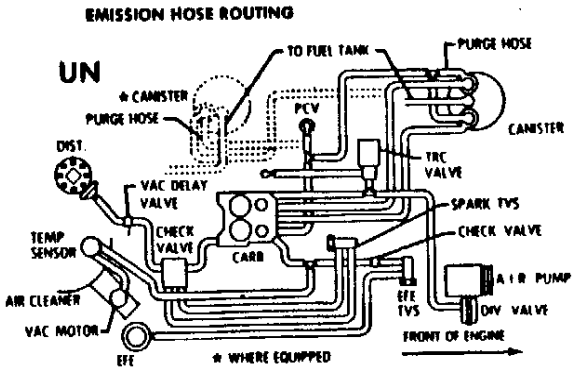
SEE SERVICE MANUAL, MAINTENANCE SCHEDULE AND EMISSION HOSE ROUTING LABEL FOR ADDITIONAL INFORMATION. FUEL REQUIREMENTS — USE 91 OCTANE OR HIGHER

PRINTED IN U.S.A.

THIS ENGINE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1979 MODEL YEAR NEW HEAVY-DUTY GASOLINE ENGINES.

PT. NO. 14009060

UN



E.O. A-6-156 S.D. Sheet 6
Eng. Fam. GM 112, 113

Issued: 082878

1979 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET - GM FORMAT

Manufacturer: General Motors Corporation Executive Order No. A-6-156 Pg. 7

CA | ENGINE EXHAUST EMISSION CONTROL INFORMATION
GENERAL MOTORS CORPORATION | GM | A. I. R. SYSTEM

FAMILY DISPL. DATE OF MFR.

GM [ ] CU. IN. [ ]

SET PARKING BRAKE AND BLOCK DRIVE WHEELS, MAKE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE FULL OPEN, AIR CLEANER INSTALLED, TRANSMISSION IN NEUTRAL, AND AIR CONDITIONING OFF, EXCEPT 350. TURN AIR CONDITIONING ON IF EQUIPPED. (1) SET TIMING AT 700 RPM. (2) ADJUST IDLE STOP (SOLENOID ENERGIZED ON 366, 427, AND 454 ENGINES) TO SPECIFIED IDLE RPM. SEE SERVICE MANUAL AND MAINTENANCE SCHEDULE FOR ADDITIONAL INFORMATION.

GM ENGINE FAMILY	CU. IN. DISPL.	LITRE DISPL.	IDLE RPM	TIMING	SPARK PLUG GAP	SPARK PLUG TYPE	VALVE LASH
113	350	5.7	700	4°BTDC	0.045	AC R44T	HYD
114	366	6.0	700	8°BTDC	0.045	AC R43T	HYD
114	427	7.0	700	8°BTDC	0.045	AC R42T	HYD
114	454	7.4	700	8°BTDC	0.045	AC R42T	HYD

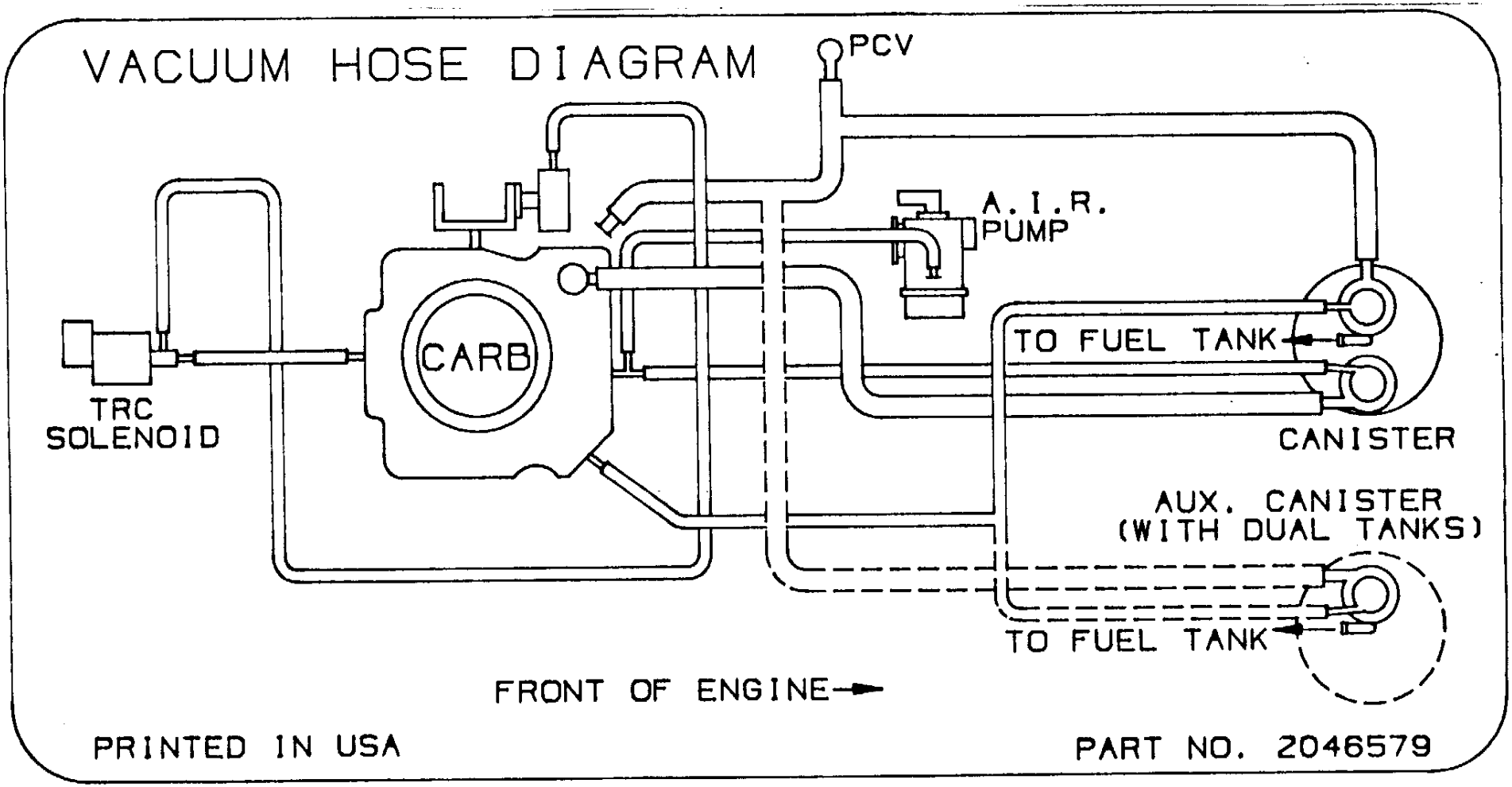
NOTE: IDLE MIXTURE SCREWS ARE PRESET AND CAPPED AT FACTORY. EITHER REMOVING MIXTURE SCREW CAPS OR BREAKING THE TABS THEREON AND ALTERING THE MIXTURE SETTING BY OTHER THAN RECOMMENDED PROCEDURES MAY VIOLATE FEDERAL AND/OR CALIFORNIA OR OTHER STATE LAWS. IF ADJUSTMENT IS REQUIRED, MIXTURE MAY BE RESET USING METHOD DESCRIBED IN SERVICE MANUAL.

FUEL REQUIREMENTS-USE 91 OCTANE OR HIGHER

PRINTED IN U.S.A. THIS ENGINE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1979 MODEL YEAR GASOLINE FUELED HEAVY DUTY ENGINES. PT. NO. 2036341

1979 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET - GM FORMAT

Manufacturer: General Motors Corporation Executive Order No. A-6-156 Pg. 8



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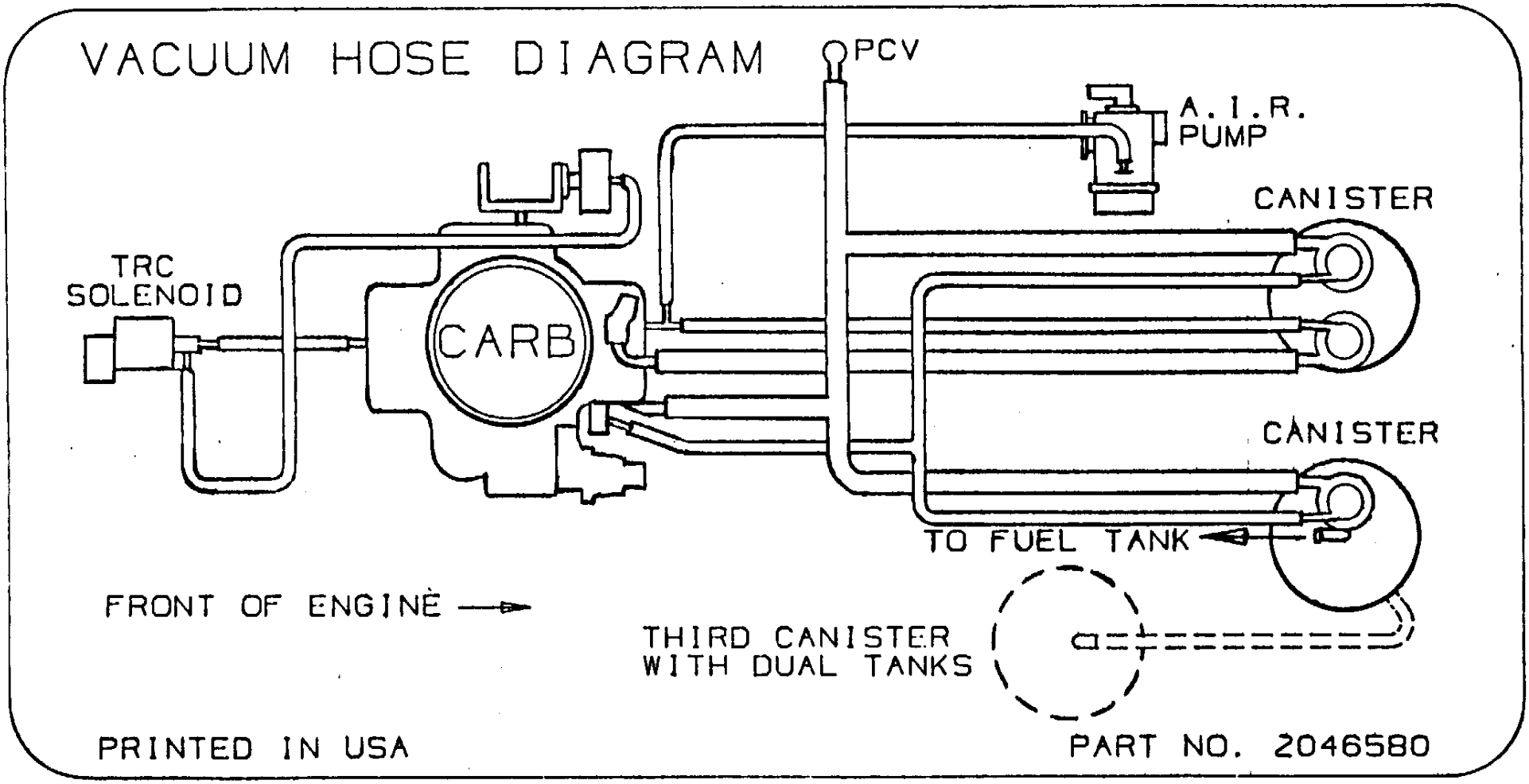
082878

1979 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET - GM FORMAT

Manufacturer: General Motors Corporation Executive Order No. A-6-156 Pg. 9



Issued: 082878.

1979 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET - GM FORMAT

Manufacturer: General Motors Corporation Executive Order No. A-6-156 Pg. 10

YW

ENGINE EXHAUST EMISSION CONTROL INFORMATION

GENERAL MOTORS CORPORATION

SET PARKING BRAKE AND BLOCK DRIVE WHEELS. MAKE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE FULL OPEN, AIR CLEANER INSTALLED AND AIR CONDITIONING OFF. PUT TRANSMISSION IN PARK OR NEUTRAL FOR ALL SETTINGS. (1) DISCONNECT AND PLUG VACUUM HOSE AT DISTRIBUTOR. SET IGNITION TIMING AT IDLE RPM. UNPLUG AND RECONNECT VACUUM HOSE AT DISTRIBUTOR. (2) DISCONNECT AND PLUG CANISTER PURGE HOSE AT VAPOR CANISTER. (3) ADJUST IDLE SPEED TO SPECIFIED RPM. (4) ADJUST THROTTLE RETURN CONTROL SPEED TO SPECIFIED RPM. (5) ADJUST FAST IDLE SPEED WITH LEVER ON HIGH STEP OF CAM. (6) UNPLUG AND RECONNECT CANISTER PURGE HOSE TO VAPOR CANISTER.

ENGINE FAMILY	ENG. DISP. 7.4 LITRE	EMISSION CONTROL	IDLE RPM	TIMING	FAST IDLE RPM	SPARK PLUG GAP (IN.)	THROTTLE RETURN CONTROL RPM	VALVE LASH
115	(454 CU. IN.)	AIR	700	4° BTC	1900	0.045	1500	HYD.

DATE OF MANUFACTURE FOR THIS ENGINE IS NOTED ON OTHER ENGINE EXHAUST EMISSION CONTROL INFORMATION LABEL.

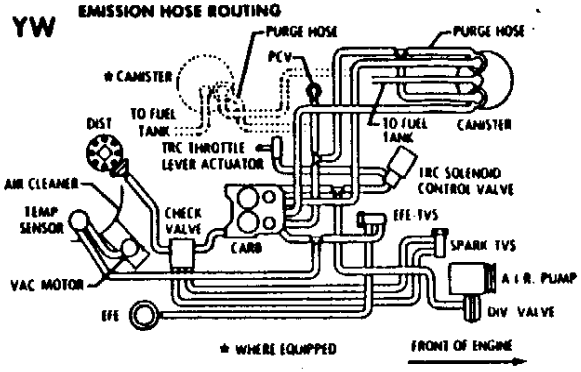
NOTE: IDLE MIXTURE SCREWS ARE PRESET AND SEALED AT FACTORY. PROVISION FOR ADJUSTMENT DURING TUNE UP IS NOT PROVIDED. FOR MAJOR REPAIR, ADJUSTING MIXTURE SETTING BY OTHER THAN APPROVED SERVICE MANUAL PROCEDURE MAY VIOLATE FEDERAL AND/OR CALIFORNIA OR OTHER STATE LAWS. IF ADJUSTMENT IS REQUIRED, MIXTURE MAY BE RESET USING THE BEST IDLE MIXTURE METHOD PER SERVICE MANUAL.

SEE SERVICE MANUAL, MAINTENANCE SCHEDULE AND EMISSION HOSE ROUTING LABEL FOR ADDITIONAL INFORMATION. FUEL REQUIREMENTS — USE 91 OCTANE OR HIGHER

PRINTED IN U.S.A. THIS ENGINE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1979 MODEL YEAR NEW HEAVY-DUTY GASOLINE ENGINES. PT. NO. 14007830

YW

EMISSION HOSE ROUTING



2" X 9 1/4" - 2 pc. Label

E.O. A-6-156 S. D. Sheet 10
Eng. Fam. GM 115

Issued:082878.