State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-107
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 General Motors Corporation 1978 model-year gasoline-powered engines in heavy-duty motor vehicles with a manufacturer's gross vehicle weight rating greater than 8500 pounds are certified for the engine families, codes and models described below:

Families	Engine Size (CID)	Exhaust Emission Control System
GM 112A	292	Engine Modification
GM 113T	350 and 400	Air Injection
GM 114	366 and 427	Air Injection and Engine Modification
GM 115	454	Air Injection and Exhaust Gas Recirculation
GM 317	403	Engine Modification

Models and Engine Codes as listed in attachment.

Section 43200, Part 5, Division 26 of the California Health and Safety Code requires that the manufacturer affix a decal to the side window to the rear of the driver or, if there is no such window on the driver's side, to the windshield of the motor vehicle.

The decal shall display the applicable model year heavy-duty engine exhaust emission standards and the following recommended values:

Engine Family	HC + NOx gm/bhp-hr	CO gm/bhp-hr	HC gm/bhp-hr	NOx gm/bhp-hr
GM112A		16	0.6	5.2
GM113T		20	0.7	7.1
GM114		24	0.8	5.4
GM115		16	0.9	7.3
GM317		6	0.6	5.7

Engines 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 12 day of August, 1977.

G. C. Hass, Chief
Vehicle Emissions Control Division

1978 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY GASOLINE ENGINES

Manufacturer General Motors Corporation Executive Order No. A-6-107 Page 1

Engine Family 112A, 113T, 114, 115, 317 Engine (CID) See below Calibration

Emission Control System AI-113T, 114, 115; EGR-115; EM-112A, 114, 317

Engine				Distributor	Fuel System		EGR System	Tune-Up Specifications	
Family	Model	CID	Code	Type HEI, C,V Mfgr. Part No.	Type	Mfgr. Part No.	Part No. Service*	Label	Page No.
112A	L25	292	4	Delco 1110721	1V	ROCHESTER 17058308, 309,358,359	N.A.	ZD	2
113T	LS9 LF4	350 400	1 2 3 4	1103250	4V	17058513,15 17058514 17058529 17058525			
	GMT	350	5 6	1103251	2V	17058420,24 17058423		2025148	3
114	L86 L43	366 427	2 4 6	1103241	4V	2011493 2011494 2011496		2025150	
115	LF8	454	2	1103240	4V	17058512	17050064 I-500 HRS.	ZD	2
317	403	403	2	1103309	4V	17058559	N.A.	HX	4

Comments

Date of Issue 081577. Label CD corrected to ZD (2 Places) on 112177.

Abbreviation

Distributor
C-Centrifugal Advance
V-Vacuum Advance
VR-Vacuum Retard
EI-Electronic Ignition

Exhaust Emission Control System
AI-Air Injection
EGR-Exhaust Gas Recirculation
EM-Engine Modification
OC-Oxidation Catalyst

*Service
I-Inspect, repair, replace as needed
R-Replace

1978 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY GASOLINE ENGINES

Manufacturer General Motors Corporation Executive Order No. A-6-107 Page 2

Engine Family 112A, 113T, 114, 115, 317

ZD

ENGINE EXHAUST EMISSION CONTROL INFORMATION

GENERAL MOTORS CORPORATION

GM

MAKE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE FULL OPEN, AIR CLEANER INSTALLED AND AIR CONDITIONING OFF UNLESS OTHERWISE INDICATED. SET PARKING BRAKE AND BLOCK DRIVE WHEELS. PUT TRANSMISSION IN PARK OR NEUTRAL FOR ALL SETTINGS. (1) DISCONNECT FUEL TANK HOSE TO VAPOR CANISTER. (2) DISCONNECT AND PLUG VACUUM HOSE AT DISTRIBUTOR. SET IGNITION TIMING AT SPECIFIED RPM. UNPLUG AND RECONNECT VACUUM HOSE AT DISTRIBUTOR. (3) ADJUST IDLE MIXTURE BY THE LEAN DROP PROCEDURE AS REQUIRED. (4) ADJUST IDLE SPEED ONLY WITH AIR COND. ON, IF SO EQUIPPED, EXCEPT FOR 454 CU. IN. (5) DISCONNECT AND PLUG VACUUM HOSE AT EGR VALVE (454 CU. IN. ONLY). ADJUST FAST IDLE SPEED WITH LEVER ON HIGH STEP OF CAM. UNPLUG AND RECONNECT VACUUM HOSE TO EGR VALVE WHEN SETTING IS COMPLETED. (6) RECONNECT FUEL TANK HOSE TO VAPOR CANISTER.

FAMILY	ENG. DISP.	EMISSION CONTROL	IDLE RPM	TIMING	FAST IDLE RPM	SPARK PLUG GAP (IN.)	LEAN DROP IDLE MIXTURE	VALVE LASH
112A	292	CCS	600	8° BTC	2400	0.035	700-600 RPM	HYD.
113T	350	AIR	700	2° BTC	1600	0.060	800-700 RPM	HYD.
113T	400	AIR	700	2° BTC	1600	0.045	770-700 RPM	HYD.
115	454	AIR-EGR	700	8° BTC	1700	0.045	750-700 RPM	HYD.

ENGINE DISPLACEMENT AND EMISSION FAMILY FOR THIS VEHICLE ARE NOTED ON OTHER ENGINE EXHAUST EMISSION CONTROL INFORMATION LABEL.

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 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 FOR ADDITIONAL INFORMATION.

FUEL REQUIREMENTS — USE 91 OCTANE OR HIGHER

PRINTED IN U.S.A.

THIS ENGINE CONFORMS TO U.S. ENVIRONMENTAL PROTECTION AGENCY, AND [redacted] CALIFORNIA, REGULATIONS APPLICABLE TO ~~1977~~ 1978 MODEL YEAR GASOLINE-FUELED HEAVY DUTY ENGINES.

PT. NO. ~~460481~~ 473413

Issued: 081577. Label CD corrected to ZD. Obsolete label HX removed; see pg. 4 for new HX label, 112177.

1978 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY GASOLINE ENGINES

Manufacturer General Motors Corporation Executive Order No. A-6-107 Page 3

Engine Family 112A, 113T, 114, 115, 317

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ENGINE EXHAUST EMISSION CONTROL INFORMATION
GENERAL MOTORS CORPORATION

GM

ENGINE	GM 113T 350 CID
IDLE SPEED	600 RPM
IGN. TIMING	4° BTDC
SPARK PLUG GAP	0.035 IN.
VALVE LASH	HYDRAULIC

MAKE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, AIR CLEANER ON, AIR CONDITIONING ON, AND TRANSMISSION IN NEUTRAL.

SET PARKING BRAKE AND BLOCK DRIVE WHEELS

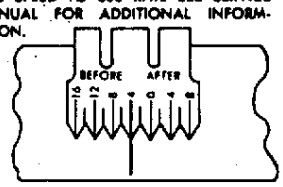
1. DISCONNECT FUEL TANK HOSE ON VAPOR CANISTER.
2. SET TIMING AT SPECIFIED IDLE SPEED.
3. ADJUST IDLE SCREW TO SPECIFIED IDLE SPEED
4. RECONNECT CANISTER HOSES.

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 approved procedures may violate Federal and/or California or other state laws.

FUEL REQUIREMENTS-USE 91 OCTANE OR HIGHER

PRINTED IN U.S.A.

IF IDLE MIXTURE ADJUSTMENT IS REQUIRED, ADJUST MIXTURE SCREWS TO HIGHEST IDLE SPEED AND SET IDLE SCREW TO 675 RPM. THEN, TURN IN MIXTURE SCREWS EQUALLY TO REDUCE IDLE SPEED TO 600 RPM. SEE SERVICE MANUAL FOR ADDITIONAL INFORMATION.



THIS ENGINE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1978 MODEL YEAR GASOLINE FUELED HEAVY DUTY ENGINES.

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ENGINE EXHAUST EMISSION CONTROL INFORMATION
GENERAL MOTORS CORPORATION

GM

ENGINE	GM 114 366/427 CID
IDLE SPEED	700 RPM
IGN. TIMING	8° BTDC
SPARK PLUG GAP	0.060 IN.
VALVE LASH	HYDRAULIC

MAKE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, AIR CLEANER ON, AIR CONDITIONING OFF, AND TRANSMISSION IN NEUTRAL.

SET PARKING BRAKE AND BLOCK DRIVE WHEELS

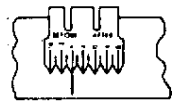
1. DISCONNECT FUEL TANK HOSE ON VAPOR CANISTER.
2. SET TIMING AT SPECIFIED IDLE SPEED.
3. ADJUST IDLE SCREW (ENERGIZED SOLINOID) TO SPECIFIED IDLE SPEED
4. RECONNECT CANISTER HOSES.

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 approved procedures may violate Federal and/or California or other state laws.

FUEL REQUIREMENTS-USE 91 OCTANE OR HIGHER

PRINTED IN U.S.A.

IF IDLE MIXTURE ADJUSTMENT IS REQUIRED, ADJUST MIXTURE SCREWS TO HIGHEST IDLE SPEED AND SET IDLE SCREW TO 750 RPM FOR 366, OR 775 RPM FOR 427. THEN, TURN IN MIXTURE SCREWS EQUALLY TO REDUCE IDLE SPEED TO 700 RPM. SEE SERVICE MANUAL FOR ADDITIONAL INFORMATION.



THIS ENGINE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1978 MODEL YEAR GASOLINE FUELED HEAVY DUTY ENGINES.

"where applicable" deleted from label footnotes 112177.

Issued: 081577.

1978 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET - GM FORMAT

Manufacturer: General Motors Corporation Executive Order No. A-6-107 Pg. 4

HX
GM 307 FAMILY
403 CU. IN.-CCS
4 BBL CARB.

GM

PRINTED IN U.S.A.

PART NO. 561115

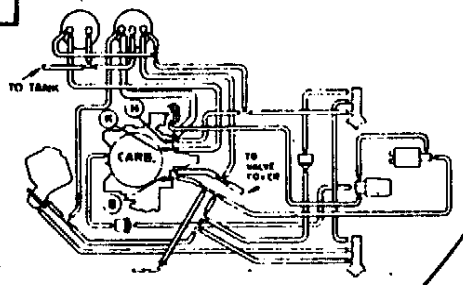
ENGINE EXHAUST EMISSION CONTROL INFORMATION
GENERAL MOTORS CORPORATION

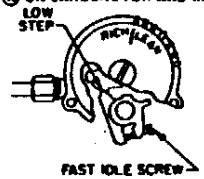
ENGINE SPECIFICATIONS		
TIMING (BTDC @ RPM)		12° @ 2000 (IN PARK)
SPARK PLUGS	GAP	.080 IN.
	TYPE	AC R46SX
CARBURETOR SCREW		600 RPM (IN DRIVE)
FAST IDLE SCREW		900 RPM (IN PARK)
CHOKE SETTING		3 N.R.
VALVE LASH		HYDRAULIC
FUEL REQUIREMENTS		91 OCTANE OR HIGHER

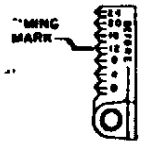
SET PARKING BRAKE AND BLOCK DRIVE WHEELS

MAKE ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE OPEN AND AIR CONDITIONING OFF.

1. REMOVE AIR CLEANER AND PLUG INTAKE MANIFOLD VACUUM SOURCE.
2. DISCONNECT VACUUM HOSES FROM PORT (B) (H) AND CANISTER PURGE HOSE FROM PORT (K) ON CARBURETOR AND PLUG PORTS.
3. SET TIMING AT SPECIFIED RPM, IN PARK.
4. ADJUST FAST IDLE SCREW TO SPECIFIED RPM ON LOW STEP OF CAM, IN PARK.
5. RECONNECT HOSE TO PORT (B) ON CARBURETOR.
6. ADJUST CARB. IDLE SPEED SCREW TO SPECIFIED RPM, IN DRIVE.
7. SET CLEARANCE BETWEEN THROTTLE LEVER ACTUATOR AND CARBURETOR THROTTLE LEVER TO .020 INCH, IN PARK.
8. RECONNECT VACUUM HOSE TO PORT (H) AND CANISTER PURGE HOSE TO PORT (K) ON CARBURETOR AND INSTALL AIR CLEANER.







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 PROCEDURE MAY VIOLATE FEDERAL AND/OR CALIFORNIA OR OTHER STATE LAWS.

SEE SERVICE MANUAL AND MAINTENANCE SCHEDULE FOR ADDITIONAL INFORMATION

THIS ENGINE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1978 MODEL YEAR GASOLINE-FUELED HEAVY DUTY ENGINES.

Issued: 112177.

E. O. A-6-107
S. D. Sheet 4