

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-355
Relating to Certification of New Motor Vehicle Heavy-Duty 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 1986 model-year heavy-duty diesel engines have shown compliance with the optional transient test procedure and standards and are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating greater than 8500 pounds:

<u>Engine Family</u>	<u>Displacement Cubic Inches (Liters)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
GGM08.2DAB0	500 (8.2)	Engine Modification (Diesel Injection - Direct)
GGM0552FWG1	552 (9.0)	Throttle Delay (Turbocharger) (Aftercooler) (Diesel Injection - Direct)

Engine models and codes are listed on attachments.

The following are the certification emission values for these engine families:

<u>Engine Family</u>	<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Nitrogen Oxides gm/bhp-hr</u>
GGM08.2DAB0	0.8	3.6	4.8
GGM0552FWG1	0.9	3.6	4.3

BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2036).

GENERAL MOTORS CORPORATION

EXECUTIVE ORDER A-6-355
(Page 2 of 2)

Engines 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.

Executed at El Monte, California this 2nd day of December, 1985.

Bob Cross for
K. D. Drachand, Chief
Mobile Source Division

1986 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer GENERAL MOTORS CORPORATION

Engine Family GGM0552FWG1 CID (Liter)-Type 552 (9.0) - V6

ECS (Special Features) Throttle Delay or Fuel Modulator, Aftercooler, MFI (DID), TC

Engine Model (Engine Code)	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP and RPM	Fuel Rate at Maximum HP mm ³ /stroke	Label Ident.
6V-92TA	NA	9E65/9S65 GMC 5229970/5226165	240@2100	71.5	23500996
		9E70/9S70 GMC 5229975/5226135	260@2100	77.0	
		9F80/9S80 GMC 5226080/5226515	270@2100	78.5	
		9F85 GMC 5226085	320@2100	88.2	
		9F90 GMC 5226090	340@2100	93.2	
		9F90 CP GMC 5226090	300@2100	80.9	
		9F90 GMC 5226090(1)	325 @ 2100	81.7	
		9F90 GMC 5226090(1)	304 @ 1800	81.7	
		9F85 GMC 5226085(1)	306 @ 2100	77.7	
		9F85 GMC 5226085(1)	284 @ 1800	77.7	

ISSUED: 11-11-85

REVISED: (1) Added new configurations by RC #14 on 02-05-86
(reference letter MH-6R017).

0186N/14N

1986 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer GENERAL MOTORS CORPORATION

Engine Family GGMO552FWG1 CID (Liter)-Type 552 (9.0) - V6

ECS (Special Features) Throttle Delay or Fuel Modulator, Aftercooler, MFI (DID), TC

Engine Model (Engine Code)	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP and RPM	Fuel Rate at Maximum HP mm ³ /stroke	Label Ident.
6V-92TA	NA	9E65/9S65 GMC 5229970/5226165	240@2100	71.5	23500996
		9E70/9S70 GMC 5229975/5226135	260@2100	77.0	
		9F80/9S80 GMC 5226080/5226515	270@2100	78.5	
		9F85 GMC 5226085	320@2100	88.2	
		9F90 GMC 5226090	340@2100	93.2	
		9F90 CP GMC 5226090	300@2100	80.9	
		9F90 GMC 5226090(1)	325 @ 2100	81.7	
		9F90 GMC 5226090(1)	304 @ 1800	81.7	

SUED: 11-11-85

REVISED: (1) Added new configurations by RC #14 on 02-05-86
(reference letter MH-6R017).

1986 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer GENERAL MOTORS CORPORATION
 Engine Family GGMO552FWG1 CID (Liter)-Type 552 (9.0) - V6
 ECS (Special Features) Throttle Delay or Fuel Modulator, Aftercooler, MFI (DID), TC

Engine Model (Engine Code)	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP and RPM	Fuel Rate at Maximum HP mm ³ /stroke	Label Ident.
6V-92TA	NA	9F85 GMC 5226085(1)	306 @ 2100	77.7	23500996
		9F85 GMC 5226085(1)	284 @ 1800	77.7	
		9F85 GMC 5226085(2)	308 @ 1950	89.5	
		9F80 GMC 5226495(3)	300 @ 2100	82.7	

ISSUED: 11-11-85

REVISED: (1) Added new configurations by RC #14 on 02-05-86 (reference letter MH-6R017). (2) Added new configurations by RC #17 on 02-21-86 (reference letter MH-6R020). (3) Added new configurations by RC #25 on 06-30-86 (reference letter MH-6R034).

0186N/14N

1986 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer GENERAL MOTORS CORPORATION
 Engine Family GGM08.2DAB0 CID (Liter)-Type 500 (8.2) - V8
 ECS (Special Features) EM (DID), MFI

Engine Model (Engine Code)	Fuel Injection Pump Mfr.	Injector Mfr.	Maximum Rated HP and RPM	Fuel Rate at Maximum HP	Label Ident.
	Part Number	Part Number		mm ³ /stroke	
V8-8.2	NA	4B55 GMC 5226175	165@2800	54.9	23500741
		4B45 GMC 5226055	145@2800	48.5	

ISSUED: 11-11-85

REVISED:

ENGINE MODEL 6V-92TA JMAC

Injector Size	HP @ RPM (SAE Gross)	Fuel/Cycle		Torque (SAE Gross)	Fuel/Cycle		Idle Speed (Min RPM)	Turbo Part #	Blower Part #	Basic Injector Timing (°BIC)	Air Cleaner Restriction Max (in. H2O)	Exhaust Back Pressure Max (in. Hg)	Intake System Max Air Flow (lbs/hr)	Air Box Pressure		Governor Type
		mm ³ /Max BHP	Stroke (lbs/hr)		mm ³ /Max Torque	Stroke (lbs/hr)								Min (in. Hg)	Max (in. Hg)	
9F85*	320 @ 2100	88.2	123.2	950 @ 1200	98.3	78.4	500(1)	8927028	8926407	6	20	2.5	4614	37.0	47.0	Limiting Speed
9F85*	300 @ 1950	89.5	116.1	950 @ 1200	98.3	78.4	700(2)			7		2.3	4550	35.8	43.8	
9F90*	340 @ 2100	93.2	130.2	1000 @ 1200	103.3	82.4				7		2.5	4722	39.2	49.2	
9F90*	300 @ 1800	95.8	114.7	1000 @ 1200	103.3	82.4				7		2.0	4505	32.5	42.5	
9F90*	300 @ 2100	80.9	113.0	1000 @ 1200	103.3	82.4				7		2.5	4462	39.2**	49.2**	LSCP
9F90*	270 @ 1800	82.1	98.3	1000 @ 1200	103.3	82.4				7		2.0	4202	32.5**	42.5**	LSCP

* Data for California engines.
 ** At full horsepower.

- (1) With fuel modulator
- (2) With throttle delay

Emission Control System: Throttle Delay or Fuel Modulator and Aftercooler

Speed derates are available for the above injectors between the maximum and minimum horsepower listed above.

ISSUED: 11-11-85
 0185M

REV. NO.: 003

ENGINE SUMMARY
ENGINE MODEL 6V-92TA

Injector Size	HP @ RPM (SAE Gross)	Fuel/Cycle		Torque @ RPM (SAE Gross)	Fuel/Cycle		Idle Speed (Min RPM)	Turbo Part #	Blower Part #	Basic Injector Timing (°BTC)	Air Cleaner Restriction Max (in. H2O)	Exhaust Back Pressure Max (in. Hg)	Intake System Max Air Flow (lbs/hr)	Air Box Pressure Rated HP (in. Hg)	Max HP (in. Hg)	Governor Type
		mm ³ /Stroke	(lbs/hr)		mm ³ /Stroke	(lbs/hr)										
9F88*	306 @ 2100	87.1	121.7	917 @ 1200	97.4	77.7	700	8923051	8923497	6	20	3.0	5133	45.2	55.2	Limiting Speed
9F85*	284 @ 1800	89.3	106.9	917 @ 1200	97.4	77.7				6			4484	33.9	43.9	
9F90*	325 @ 2100	92.1	128.6	958 @ 1200	102.4	81.7				7			5242	47.5	57.5	
9F90*	304 @ 1800	94.3	112.9	958 @ 1200	102.4	81.7				7			4614	35.8	45.8	

Emission Control System: Throttle Delay or Fuel Modulator and Aftercooler
Speed derates are available for the above injectors between the maximum and minimum horsepowers listed above.

* Data for California engines.

ISSUED: 002
0185N/18M

REV. NO.:

GGM0552FWG1

AG 355