

MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. Customary)

1991

Manufacturer	CHEVROLET MOTOR DIVISION GENERAL MOTORS CORPORATION	Vehicle Line	
Mailing Address	CHEVROLET-PONTIAC-CANADA GROUP ENGINEERING CENTER GENERAL MOTORS CORPORATION 30003 VAN DYKE WARREN, MICHIGAN 48090-9060	CAMARO	
		Issued	Revised
		DECEMBER, 1989	APRIL, 1990

Direct questions concerning these specifications to the manufacturer listed above.

The information contained herein is prepared, distributed by, and is solely the responsibility of the vehicle manufacturing company to whose products it relates. This specification form was developed by the vehicle manufacturing companies under the auspices of the Motor Vehicle Manufacturers Association of the United States, Inc.

The General Specifications herein are those in effect at date of compilation and are subject to change without notice or incurring obligation by the manufacturer.



Motor Vehicle Manufacturers Association
of the United States, Inc.

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MVMA Specifications

METRIC (U.S. Customary)

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NOTE:

1. This form uses both SI metric units and U.S. Customary units. The metric unit of measure is presented first, and the U.S. Customary unit follows in parentheses.
2. UNLESS OTHERWISE INDICATED:
 - a. Specifications apply to standard models without optional equipment. Significant deviations are noted.
 - b. Nominal design dimensions are used throughout these specifications.
 - c. All linear dimensions are in millimeters (inches), and all mass (weight) specs. are in kilograms (pounds).
3. The General Specifications herein are those in effect at date of compilation and are subject to change without notice or incurring obligation by the manufacturer.
4. Additional Vehicle Dimensions (based in part on SAE J1100 "Motor Vehicle Dimensions") may be available from the manufacturer.

MVMA Specifications

Vehicle Line CAMARO

Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Vehicle Origin

Design & development (company)	Chevrolet-Pontiac-GM of Canada
Where built (country)	U.S.A.
Authorized U.S. Sales marketing representative	Chevrolet Motor Division

o Vehicle Models

Model Description & Drive (FWD/RWD/AWD/4WD)*	Make, Vehicle Models, Series, Body Type (Mfr's Model Code)	No. of Designated Seating Positions (Front/Rear)	Max. Trunk/Cargo Load-Kilograms (Pounds)	EPA Fuel Economy (City/Hwy)
CAMARO				
2-Door Convertible (RWD)	1FP67	4 (2/2)	Not Available	
2-Door Coupe (RWD)	1FP67	4 (2/2)	45.4 (100)	
CAMARO Z28				
2-Door Convertible (RWD)	1FP67	4 (2/2)	Not Available	
2-Door Coupe (RWD)	1FP67	4 (2/2)	45.4 (100)	

* FWD - Front Wheel Drive RWD - Rear Wheel Drive AWD - All Wheel Drive 4WD - Four Wheel Drive

MVMA Specifications

Vehicle Line **CAMARO**

Model Year	1991	Issued	12-89	Revised(*)	4-90
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METRIC (U.S. Customary)
Power Teams

SAE J1349 Net bhp (brake hrspwr) and Net Torque corrected to 77 deg. F / 25 deg. C and 29.61 in. Hg/100 kPA atmos. press.

		A	B	C	D	
E N G I N E	Engine Code	LHO	LHO	L03	L03	
	Displacement Liters (cu. in.)	3.1 (191)	3.1 (191)	5.0 (305)	5.0 (305)	
	Induction system (FI, Carb, etc.)	Multi-Port Fuel Injection	Multi-Port Fuel Injection	Electronic Fuel Injection	Electronic Fuel Injection	
	Compression ratio	8.5:1	8.5:1	9.3:1	9.3:1	
	SAE Net at RPM	Power kW (bhp)	104 (140) @ 4400	104 (140) @ 4400	127 (170) @ 4000	127 (170) @ 4000
		Torque Newton meters (lb.ft.)	244 (180) @ 3600	244 (180) @ 3600	346 (255) @ 2400	346 (255) @ 2400
Exhaust Single, dual		Single	Single	Single	Single	
T R A N S	Transmission/ Transaxle	MB1 Manual Transmission 5-Speed	MD8 Automatic Transmission 4-Speed	M39 Manual Transmission 5-Speed	MD8 Automatic Transmission 4-Speed	
	Axle Ratio (std. first)	3.42	3.23	3.08	2.73	

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MVMA Specifications

Vehicle Line	CAMARO				
Model Year	1991	Issued	12-89	Revised(*)	4-90

METRIC (U.S. Customary)
Power Teams

SAE J1349 Net bhp (brake hspwr) and Net Torque corrected to 77 deg. F / 25 deg. C and 29.91 in. Hg/100 kPa atmos. press

		E	F	G	H	
E N G I N E	Engine Code	LB9	LB9	LB9	LB8	
	Displacement Liters (cu. in.)	5.0 (305)	5.0 (305)	5.0 (305)	5.7 (350)	
	Induction system (FI, Carb, etc.)	Multi-Port Fuel Injection	Multi-Port Fuel Injection	Multi-Port Fuel Injection	Multi-Port Fuel Injection	
	Compression ratio	9.3:1	9.3:1	9.3:1	9.3:1	
	SAE Net at RPM	Power kW (bhp)	157 (205) @ 4200	157 (205) @ 4200	172 (230) @ 4200	183 (245) @ 4400
		Torque Newton meters (lb.ft.)	386 (285) @ 3200	386 (285) @ 3200	407 (300) @ 3200	468 (345) @ 3200
Exhaust Single, dual		Single	Single	Dual	Dual	
T R A N S	Transmission/ Transaxle	M39 Manual Transmission 5-Speed	MD8 Automatic Transmission 4-Speed	MK6 Manual Transmission 5-Speed	MD8 Automatic Transmission 4-Speed	
	Axle Ratio (std. first)	3.08	2.73	3.42	3.23	

[illegible]

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*) 4-90

METRIC (U.S. Customary)

Engine Description

3.1 LITER V6 (181 CID)

Engine Code

MULTI-PORT FUEL INJECTION RPO LHO

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-chamber, etc.)	60 deg. V, Front, Longitudinal, OHV	
Manufacturer	C-P-C Group - G.M. Corporation	
No. of cylinders	6	
Bore	89mm (3.5 in.)	
Stroke	84mm (3.31 in.)	
Bore spacing (C/L to C/L)	111.76mm (4.40 in.)	
Cyl. block matl & mass kg (lbs.) (machined)	Cast Iron, 48.15 (107.0)	
Cylinder block deck height	224.0mm (9.0 in.)	
Cylinder block length	435.5mm (17.4 in.)	
Deck clearance (minimum) (above or below block)	0.15mm (.006 in.), Above	
Cyl. head material & mass kg (lbs.)	Cast Iron, 13.15 (29)	
Cylinder head volume (cu.cm.) (cu.in.)	51.35 (3.13)	
Cylinder liner material	Not Applicable	
Head gasket thickness (compressed)	1.02mm (.040 in.)	
Minimum combustion chamber total volume (cm. cu.) (cu. in.)	50.35 (3.07)	
Cyl. no. system (front to rear)*	L. Bank	2-4-6
	R. Bank	1-3-5
Firing order	1-2-3-4-5-6	
Intake manifold matl & mass kg (lbs)**	Inlet Plenum - Aluminum Alloy, 3.8 (8.4) Inlet Center Manifold - Aluminum Alloy, 2.4 (5.3) Inlet Lower Manifold - Aluminum Alloy, 3.2 (7.0)	
Exh. manifold matl & mass kg (lbs)**	Nodular Cast Iron, Wt. Of Manifold, Fire Wall Side 3.765 (8.283); Wt. Of Other Manifold, 2.630 (5.786)	
Knock sensor (yes/no)	Yes	
Fuel required unleaded, diesel, etc.	Unleaded	
Fuel antiknock index (R + M) / 2	87	
Engine mounts	Quantity	2
	Matl and type (elastomeric, hydroelastic, hydraulic damper, etc.)	Elastomeric
	Added isolation (sub-frame, crossmember, etc.)	
Total dressed engine mass (wt) dry***	Not Available	

Engine - Pistons

Material & mass, p (weight, oz.) - piston only	Aluminum Alloy, 388 (13.7)
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Engine Camshaft

Location	Cylinder Block	
Material & mass kg (weight, lbs.)	Cast Iron, 3.098 (6.83)	
Drive type	Chain/belt	Chain
	Width/pitch	18.75 x 9.375 mm (.75 x .375 in.)

*Rear of engine - drive takeoff. View from drive takeoff end to determine left & right side of engine.

**Finished state.

***Dressed engine mass (weight) includes the following:

MVMA Specifications

Vehicle Line	CAMARO			
Model Year	1991	Issued	12-89	Revised(*) 4-90

METRIC (U.S. Customary)

Engine Description
Engine Code

5.0 LITER V8 (305 CID)
ELECTRONIC FUEL INJECTION RPO L03

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-chamber, etc.)		90 deg. V, Front, Longitudinal
Manufacturer		C-P-C Group - G.M. Corporation
No. of cylinders		8
Bore		84.89 mm (3.74 in.)
Stroke		88.39 mm (3.48 in.)
Bore spacing (C/L to C/L)		111.8 mm (4.40 in.)
Cyl block matl & mass kg(lbs.)(machined)		Cast Iron, 88.674 (151.4)
Cylinder block deck height		229.4 mm (9.025 in.)
Cylinder block length		512.8 mm (20.19 in.)
Deck clearance (minimum) (above or below block)		.635 (.025) below
Cyl. head material & mass kg (lbs.)		Cast Iron, 19.800 (43.7)
Cylinder head volume (cu.cm.)(cu.in.)		55.2 +/- 2.2 (3.37 +/- 0.13)
Cylinder liner material		Not Applicable
Head gasket thickness (compressed)		.533 (.021)
Minimum combustion chamber total volume (cm. cu.)(cu. in.)		55.2 +/- 2.2 (3.37 +/- 0.13)
Cyl. no. system (front to rear)*	L. Bank	1-3-5-7
	R. Bank	2-4-6-8
Firing order		1-8-4-3-6-5-7-2
Intake manifold matl & mass kg (lbs.)**		Cast Aluminum, 6.900 (15.2)
Exh. manifold matl & mass kg (lbs.)**		Cast Iron, 4.345 (9.6) L.H., 3.800 (8.4) R.H.
Knock sensor (yes/no)		Yes
Fuel required unleaded, diesel, etc.		Unleaded
Fuel antiknock index (R + M) / 2		87
Engine mounts	Quantity	2
	Matl and type (elastomeric, hydroelastic, hydraulic damper, etc.)	Elastomeric
	Added isolation (sub-frame, crossmember, etc.)	
Total dressed engine mass (wt) dry***		275.1 kg. (606.5 lbs.) Auto. 290.8 kg. (641.1 lbs.) Man.

Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Aluminum Alloy, .645 (1.4)
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Engine Camshaft

Location		Cylinder Block Above Crankshaft
Material & mass kg (weight, lbs.)		Steel, 4.124 (9.1)
Drive type	Chain/belt	Chain
	Width/pitch	15.87mm (.625 in.) / 12.7mm (.500 in.)

*Rear of engine - drive takeoff. View from drive takeoff end to determine left & right side of engine.

**Finished state.

***Dressed engine mass (weight) includes the following:

All those items necessary to make the engine a complete ready-to-run unit.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*) 4-90

METRIC (U.S. Customary)

Engine Description
Engine Code

5.0 LITER V8 (305 CID)
TUNED PORT FUEL INJECTION RPO LB9

O ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-chamber, etc.)		90 deg. V, Front, Longitudinal
Manufacturer		C-P-C Group - G.M. Corporation
No. of cylinders		8
Bore		84.89 mm (3.74 in.)
Stroke		88.39 mm (3.48 in.)
Bore spacing (C/L to C/L)		111.8 mm (4.40 in.)
Cyl block matl & mass kg(lbs.) (machined)		Cast Iron, 68.674 (151.4)
Cylinder block deck height		229.4 mm (9.025 in.)
Cylinder block length		512.8 mm (20.19 in.)
Deck clearance (minimum) (above or below block)		.635 mm (.025 in.) Below
Cyl. head material & mass kg (lbs.)		Cast Iron, 19.800 (43.7)
Cylinder head volume (cu.cm.) (cu.in.)		55.2 +/- 2.2 (3.37 +/- 0.13)
Cylinder liner material		Not Applicable
Head gasket thickness (compressed)		.724 (.0285)
Minimum combustion chamber total volume (cm. cu.) (cu. in.)		55.2 +/- 2.2 (3.37 +/- 0.13)
Cyl. no. system (front to rear)	L. Bank	1-3-5-7
	R. Bank	2-4-6-8
Firing order		1-8-4-3-6-5-7-2
Intake manifold matl & mass kg (lbs.)**		Cast Aluminum, 6.117 (13.5)
Exh. manifold matl & mass kg (lbs.)**		Cast Iron, L.H. 4.460 (9.8), R.H. 3.800 (8.4)
Knock sensor (yes/no)		Yes
Fuel required unleaded, diesel, etc.		Unleaded
Fuel antiknock index (R + M) / 2		91
Engine mounts	Quantity	2
	Matl and type (elastomeric, hydroelastic, hydraulic damper, etc.)	Elastomeric
	Added isolation (sub-frame, crossmember, etc.)	
Total dressed engine mass (wt) dry***		282.4 kg. (623 lbs.) Auto. 297.9 kg. (657 lbs.) Man.

Engine - Pistons

Material & mass, g (weight, oz.) - piston only

Aluminum Alloy,
.645 (1.4)

Engine Camshaft

Location		In Block Above Crankshaft
Material & mass kg (weight, lbs.)		Steel, 4.200 (9.3)
Drive type	Chain/belt	Chain
	Width/pitch	15.976 (.625)/.5

*Rear of engine - drive takeoff. View from drive takeoff end to determine left & right side of engine.

**Finished state.

***Dressed engine mass (weight) includes the following:

All those items necessary to make the engine a complete ready-to-run unit.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*) 4-90

METRIC (U.S. Customary)

Engine Description

Engine Code

5.7 LITER V8 (350 CID)
TUNED PORT FUEL INJECTION RPO L98

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-chamber, etc.)	90 deg. V, Front, Longitudinal	
Manufacturer	C-P-C Group - G.M. Corporation	
No. of cylinders	8	
Bore	101.6 mm (4.00 in.)	
Stroke	88.4 mm (3.48 in.)	
Bore spacing (C/L to C/L)	111.8 mm (4.40 in.)	
Cyl block matl & mass kg(lbs.) (machined)	Cast Iron, 68.674 (151.5)	
Cylinder block deck height	229.4 mm (9.025 in.)	
Cylinder block length	506.2 mm (19.93 in.)	
Deck clearance (minimum) (above or below block)	.635 mm (.025 in.), Below	
Cyl. head material & mass kg (lbs.)	Cast Iron, 19.800 (43.7)	
Cylinder head volume (cu.cm.) (cu.in.)	55.9 (3.40)	
Cylinder liner material	Not Applicable	
Head gasket thickness (compressed)	.724 mm (.0285 in.)	
Minimum combustion chamber total volume (cm. cu.) (cu. in.)	75.47 (4.60) Combustion Chamber With Piston At Top Dead Center And All Components In Place Torqued To Specifications.	
Cyl. no. system (front to rear)*	L. Bank	1-3-5-7
	R. Bank	2-4-6-8
Firing order	1-8-4-3-6-5-7-2	
Intake manifold matl & mass kg (lbs.)**	Cast Aluminum, 6.117 (13.5)	
Exh. manifold matl & mass kg (lbs.)**	Cast Iron, L.H. 4.460 (9.8), R.H. 3.800 (8.4)	
Knock sensor (yes/no)	Yes	
Fuel required unleaded, diesel, etc.	Unleaded	
Fuel antiknock index (R + M) / 2	91	
Engine mounts	Quantity	2
	Matl and type (elastomeric, hydroelastic, hydraulic damper, etc.)	Elastomeric
	Added isolation (sub-frame, crossmember, etc.)	
Total dressed engine mass (wt) dry***	284.5 kg. (627 lbs.) Auto.	

Engine - Pistons

Material & mass, g (weight, oz.) - piston only	Impacted Cast Aluminum, .540 (1.2)
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Engine Camshaft

Location	In Cylinder Block "V" Above Crankshaft	
Material & mass kg (weight, lbs.)	Steel, 4.200 (9.3)	
Drive type	Chain/belt	Chain
	Width/pitch	15.876 (.625)/.5

*Rear of engine - drive takeoff. View from drive takeoff end to determine left & right side of engine.

**Finished state.

***Dressed engine mass (weight) includes the following:

All those items necessary to make the engine a complete ready-to-run unit.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description
Engine Code

3.1 LITER V6 (191 CID)
MULTI-PORT FUEL INJECTION RPO LHO

Engine - Valve System

Hydraulic lifters (std., opt., n.a.)	Standard
Valves	Number intake/exhaust 8/8
	Head O.D. intake/exhaust 43.64 mm (1.72 in.) / 38.20 mm (1.43 in.)

Engine - Connecting Rods

Material & mass kg., (weight, lbs.)*	Forged Steel, .582 (1.30) Full Assembly.
Length (axis centerline to centerline)	144.78 mm (5.7 in.)

Engine - Crankshaft

Material & mass kg., (weight, lbs.)*	Nodular Cast Iron, 17.9 (39.5)
End thrust taken by bearing (no.)	3
Length & number of main bearings	** 4 Bearings
Seal (material, one, two piece design, etc.)	Front Viton/Steel, One Piece
	Rear Viton/Steel, One Piece

Engine - Lubrication System

Normal oil pressure kPa (psi) @ eng rpm	345-450 (50-65) @ 2400
Type oil intake (floating, stationary)	Stationary
Oil filter sys. (full flow, part, other)	Full Flow
Capacity of oil case, less filter-refill-L (qt.)	Refill W/W.O. Filter 3.8 (4.0)

Engine - Diesel Information

(NOT APPLICABLE)

Diesel engine manufacturer	
Glow plug, current drain at 0 deg. F	
Injector Nozzle	Type Opening pressure kPa (psi)
Pre-chamber design	
Fuel injection pump	Manufacturer Type
Fuel inj. pump drive (belt, chain, gear)	
Supplementary vacuum source (type)	
Fuel heater (yes/no)	
Water separator, description (std., opt.)	
Turbo manufacturer	
Oil cooler-type (oil to engine coolant; oil to ambient air)	
Oil filter	

Engine - Intake System

(NOT APPLICABLE)

Turbo charger - manufacturer	
Super charger - manufacturer	
Intercooler	

* Finished State

** Standard Measurement For Width Only:

For 3.1L V6: #1,4 = 29.5mm (1.16 in.); #2,3 = 24.0mm (0.94 in.)

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Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*) 4-90

METRIC (U.S. Customary)

Engine Description

Engine Code

5.0 LITER V8 (305 CID)

ELECTRONIC FUEL INJECTION RPO L03

Engine - Valve System

Hydraulic lifters (std., opt., n.a.)		Standard
Valves	Number intake/exhaust	8/8
	Head O.D. intake/exhaust	46.74 (1.84) / 38.10 (1.50)

Engine - Connecting Rods

Material & mass kg., (weight, lbs.)*	Steel, .388 (.855)
Length (axes centerline to centerline)	144.78mm (5.7 in.)

Engine - Crankshaft

Material & mass kg., (weight, lbs.)*		Nodular Cast Iron, 23.360 (51.50)
End thrust taken by bearing (no.)		5
Length & number of main bearings		5
Seal (material, one, two piece design, etc.)	Front	Fluoroelastomer, One Piece, Lip Seal
	Rear	Fluoroelastomer, One Piece, Lip Seal

Engine - Lubrication System

Normal oil pressure kPa (psi) @ eng rpm	41 (6) @ 1000/124 (18) @ 2000/165 (24) @ 4000 (Hot)
Type oil intake (floating, stationary)	Stationary
Oil filter sys. (full flow, part, other)	Full Flow
Capacity of oil case, less filter-refill-L (qt.)	3.8 (4.0)

Engine - Diesel Information

(NOT APPLICABLE)

Diesel engine manufacturer		
Glow plug, current drain at 0 deg. F		
Injector Nozzle	Type	
	Opening pressure kPa (psi)	
Pre-chamber design		
Fuel injection pump	Manufacturer	
	Type	
Fueling, pump drive (belt, chain, gear)		
Supplementary vacuum source (type)		
Fuel heater (yes/no)		
Water separator, description (std., opt.)		
Turbo manufacturer		
Oil cooler-type (oil to engine coolant; oil to ambient air)		
Oil filter		

Engine - Intake System

(NOT APPLICABLE)

Turbo charger - manufacturer		
Super charger - manufacturer		
Intercooler		

* Finished State

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.0 LITER V8 (305 CID)
TUNED PORT FUEL INJECTION RPO LB9

Engine - Valve System

Hydraulic lifters (std., opt., n.a.)		Standard
Valves	Number intake/exhaust	8/8
	Head O.D. intake/exhaust	46.74 (1.84) / 38.10 (1.50)

Engine - Connecting Rods

Material & mass kg., (weight, lbs.)*	Steel, .388 (.85)
Length (axis centerline to centerline)	144.78mm (5.7 in.)

Engine - Crankshaft

Material & mass kg., (weight, lbs.)*	Nodular Cast Iron, 23.360 (51.50)	
End thrust taken by bearing (no.)	5	
Length & number of main bearings	5	
Seal (material, one, two piece design, etc.)	Front	Fluoroelastomer / One Piece, Lip Seal
	Rear	Fluoroelastomer / One Piece, Lip Seal

Engine - Lubrication System

Normal oil pressure kPa (psi) @ eng rpm	41 (6) @ 1000/124 (18) @ 2000/165 (24) @ 4000 (Hot) **
Type oil intake (floating, stationary)	Stationary
Oil filter sys. (full flow, part, other)	Full Flow
Capacity of c/case, less filter-refill-L (qt.)	3.8 (4.0)

Engine - Diesel Information

(NOT APPLICABLE)

Diesel engine manufacturer		
Glow plug, current drain at 0 deg. F		
Injector Nozzle	Type	
	Opening pressure kPa (psi)	
Pre-chamber design		
Fuel injection pump	Manufacturer	
	Type	
Fuel inj. pump drive (belt, chain, gear)		
Supplementary vacuum source (type)		
Fuel heater (yes/no)		
Water separator, description (std., opt.)		
Turbo manufacturer		
Oil cooler-type (oil to engine coolant; oil to ambient air)		
Oil filter		

Engine - Intake System

(NOT APPLICABLE)

Turbo charger - manufacturer		
Super charger - manufacturer		
Intercooler		

* Finished State

** 485-585 (70-85) @ 2000 With Manual Transmission.

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Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.7 LITER V8 (350 CID)
TUNED PORT FUEL INJECTION RPO L98

Engine - Valve System

Hydraulic lifters (std., opt., n.a.)	Standard
Valves	Number intake/exhaust 8/8
	Head O.D. intake/exhaust 49.28 (1.94) / 38.10 (1.50)

Engine - Connecting Rods

Material & mass kg., (weight, lbs.)*	Steel, .388 (.85)
Length (axis centerline to centerline)	144.78mm (5.7 in.)

Engine - Crankshaft

Material & mass kg., (weight, lbs.)*	Nodular Cast Iron, 23.360 (51.50)
End thrust taken by bearing (no.)	5
Length & number of main bearings	5
Seal (material, one, two piece design, etc.)	Front Fluroelastomer, One Piece, Lip Seal
	Rear Fluroelastomer, One Piece, Lip Seal

Engine - Lubrication System

Normal oil pressure kPa (psi) @ eng rpm	41 (6) @ 1000/124 (18) @ 2000/165 (24) @ 4000 (Hot)
Type oil intake (floating, stationary)	Stationary
Oil filter sys. (full flow, part. other)	Full Flow
Capacity of c/case, less filter-refill-L (qt.)	3.8 (4.0)

Engine - Diesel Information

(NOT APPLICABLE)

Diesel engine manufacturer	
Glow plug, current drain at 0 deg. F	
Injector	Type
Nozzle	Opening pressure kPa (psi)
Pre-chamber design	
Fuel in-	Manufacturer
jection pump	Type
Fuel inj. pump drive (belt, chain, gear)	
Supplementary vacuum source (type)	
Fuel heater (yes/no)	
Water separator, description (std., opt.)	
Turbo manufacturer	
Oil cooler-type (oil to engine coolant; oil to ambient air)	
Oil filter	

Engine - Intake System

(NOT APPLICABLE)

Turbo charger - manufacturer	
Super charger - manufacturer	
Intercooler	

* Finished State

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

3.1 LITER V6 (191 CID)
MULTI-PORT FUEL INJECTION RPO LHO

Engine - Cooling System

Coolant recovery system (std, opt, n.a.)		Standard		
Coolant fill location (rad., bottle)		Bottle, Coolant Recovery		
Radiator cap relief valve pressure kPa (psi)		103.4 (15)		
Circulation thermostat	Type (choke, bypass)	Bypass		
	Starts to open @ deg's C(F)	91 (195)		
Water Pump	Type (centrifugal, other)	Centrifugal		
	GPM 1000 pump rpm	15.5		
	Number of pumps	1		
	Drive (V-belt, other)	Single Belt Poly "V" Accessory Drive (Serpentine)		
	Bearing type	Sealed Ball-Roller		
	Impeller material	Cast Iron		
	Housing material	Aluminum		
By-pass recirculation type (inter., ext.)		Internal		
Cooling system capacity	With heater - L (qt.)	13.87 (14.66)		
	With air conditioner-L(qt.)	13.87 (14.66)		
	Opt. equip.specify-L(qt.)	--		
Water jackets full length of cyl(yes,no)		Yes		
Water all around cylinder (yes, no)		Yes		
Water jackets open at head face (yes,no)		No		
Radiator core	Std., A/C, HD	Auto	Standard	A/C
	Type (cross-flow, etc.)		Cross-Flow	
	Construction (fin & tube mechanical, braze, etc.)		Fin & Tube	
	Matl., mass kg (wgt.,lbs.)		Aluminum, High Efficiency Radiator	
	Width		667.5 mm	667.5 mm
	Height		437.8 mm	437.8 mm
	Thickness		23.5 mm	23.5 mm
	Fins per inch @		3.5 mm	3.5 mm
Radiator end tank material		Plastic		
Fan	Std., elec., opt.		Standard, Electric	
	Number of blades & type (flex, solid, material)		5, Plastic Solid	
	Diameter & projected width		423.0 (16.7)	
	Ratio(fan to crnshft.rev.)		Not Available	
	Fan cutout type		ECM Controlled	
	Drive type (direct, remote)		--	
	RPM at idle (elec.)		1900-2100	
	Motor rating/wattage(elec)		150W	
	Motor switch (type & location/elec.)		Part ECM	
	Switch point (temp.,/ pressure/elec.)		108 deg. C (226 deg. F)	
	Fan shroud (material)		Plastic (Integral Partial Shroud)	

@ - Distance Between Top Of Fins.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description
Engine Code

5.0 LITER V8 (305 CID)
ELECTRONIC FUEL INJECTION RPO L03

Engine - Cooling System

Coolant recovery system (std, opt, n.a.)		Standard	
Coolant fill location (rad., bottle)		Bottle, Coolant Recovery	
Radiator cap relief valve pressure kPa (psi)		103.4 (15.0)	
Circulation thermostat	Type (choke, bypass)	Choke	
	Starts to open @ deg's C(F)	90.6 (195)	
Water Pump	Type (centrifugal, other)	Centrifugal	
	GPM 1000 pump rpm	14 (Total Cooling System Flow)	
	Number of pumps	1	
	Drive (V-belt, other)	Single Belt Poly 'V' Accessory Drive (Serpentine)	
	Bearing type	Sealed Double Row Ball	
	Impeller material	Steel	
	Housing material	Cast Iron	
By-pass recirculation type (inter., ext.)		Internal	
Cooling system capacity	With heater - L (qt.)	16.4 (17.33)	
	With air conditioner-L(qt.)	17.01 (17.97)	
	Opt. equip. specify; L(qt.)	--	
Water jackets full length of cyl(yes,no)		Yes	
Water all around cylinder (yes, no)		Yes	
Water jackets open at head face (yes,no)		No	
Radiator core	Std., A/C, HD	Auto	Standard A/C
	Type (cross-flow, etc.)		
	Cross-Flow		
	Construction (fin & tube mechanical, braze, etc.)		
	Fin & Tube		
	Matl., mass kg (wgt., lbs.)		
	Aluminum, High Efficiency Radiator		
	Width	667.5 mm	667.5 mm
Fan	Height	437.8 mm	437.8 mm
	Thickness	23.5 mm	34.0 mm
	Fins per inch @	4.0 mm	2.5 mm
	Radiator end tank material		
	Plastic		
Fan	Std., elec., opt.	Standard	Optional
	Number of blades & type (flex, solid, material)		
	5 Plastic, Solid		
	Diameter & projected width		
	423.0 (16.7)		
	Ratio(fan to crnkshft.rev.)		
	Not Applicable		
	Fan cutout type		
	ECM Controlled		
	Drive type (direct, remote)		
Fan	--		
	RPM at idle (elec.)		
	1900-2100		
	Motor rating(wattage)(elec)		
	150W		
	Motor switch (type & location/elec.)		A/C Control Head & A/C Pressure Switch On Liquid Line
	Temp Switch Engine Cylinder Head		
Fan	Switch point (temp.,/ pressure/elec.)		
	223 deg. F		
Fan shroud (material)		Plastic (Integral Partial Shroud)	

@ - Distance Between Top Of Fins.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.0 LITER V8 (305 CID)
TUNED PORT FUEL INJECTION RPO LB9

Engine - Cooling System

Coolant recovery system (std, opt, n.a.)		Standard	
Coolant fill location (rad., bottle)		Bottle, Coolant Recovery	
Radiator cap relief valve pressure kPa (psi)		103.4 (15)	
Circulation thermostat	Type (choke, bypass)	Choke	
	Starts to open @ deg's C(F)	90.6 (185)	
Water Pump	Type (centrifugal, other)	Centrifugal	
	GPM 1000 pump rpm	12 (Total Cooling System Flow)	
	Number of pumps	1	
	Drive (V-belt, other)	Single Belt Poly V Accessory Drive (Serpentine)*	
	Bearing type	Sealed Double Row Ball	
	Impeller material	Steel	
	Housing material	Cast Iron	
By-pass recirculation type (inter., ext.)		Internal	
Cooling system capacity	With heater - L (qt.)	16.19 (17.11)	
	With air conditioner-L(qt.)	16.33 (17.26)	
	Opt. equip.specify-L(qt.)	--	
Water jackets full length of cycles,no		Yes	
Water all around cylinder (yes, no)		Yes	
Water jackets open at head face (yes,no)		No	
Radiator core	Std., A/C, HD	Standard	
	Type (cross-flow, etc.)	Cross-Flow	
	Construction (fin & tube mechanical, braze, etc.)	Fin & Tube	
	Matl., mass kg (wgt.,lbs.)	Aluminum, High Efficiency Radiator	
	Width	667.5 mm	
	Height	437.8 mm	
	Thickness	34.0 mm	
	Fins per inch @	2.5 mm	
Radiator end tank material		Plastic	
Fan	Std., elec., opt.	Standard	A/C
	Number of blades & type (flex, solid, material)	5, Plastic, Ring	
	Diameter & projected width	423.0 (16.7)	318.0 (12.5) - 2 Fans
	Ratio(fan to crnkshft.rev.)	Not Applicable	
	Fan cutout type	ECM Controlled	ECM (LH), Switch (RH)
	Drive type (direct, remote)	--	
	RPM at idle (elec.)	--	
	Motor rating(wattage)(elec)	150W	150W LH/RH
	Motor switch (type & location/elec.)	ECM	LH-ECM & A/C Pressure Switch RH-A/C Pressure Switch/ECM
	Switch point (temp.,/ pressure/elec.)	1800-2100	2100-2200
	Fan shroud (material)	Plastic (Integral Shroud)	Plastic (Unshrouded Ring)

@ - Distance Between Top Of Fins.

* - 21.36mm (0.84") Wide, 5.20mm (0.20") Thick With Uniform Dynamic Tensioner.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.7 LITER V8 (350 CID)

TUNED PORT FUEL INJECTION RPO L98

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Standard
Coolant fill location (rad., bottle)		Bottle, Coolant Recovery
Radiator cap relief valve pressure kPa (psi)		103.4 (15.0)
Circulation thermostat	Type (choke, bypass)	Choke
	Starts to open @ deg's C(F)	90.6 (195)
Water Pump	Type (centrifugal, other)	Centrifugal With Cast Aluminum Housing
	GPM 1000 pump rpm	13
	Number of pumps	1
	Drive (V-belt, other)	Single Belt Poly V Accessory Drive (Serpentine)*
	Bearing type	Sealed Double Row Ball
	Impeller material	Steel
	Housing material	Cast Iron
By-pass recirculation type (inter., ext.)		Internal
Cooling system capacity	With heater - L (qt.)	15.55 (16.43)
	With air conditioner-L(qt.)	15.55 (16.43)
	Opt. equip.specify-L(qt.)	--
Water jackets full length of cyl(yes,no)		Yes
Water all around cylinder (yes, no)		Yes
Water jackets open at head face (yes,no)		No
Radiator core	Std., A/C, HD	A/C, Standard
	Type (cross-flow, etc.)	Cross-Flow
	Construction (fin & tube mechanical, braze, etc.)	Fin & Tube
	Matl., mass kg (wgt., lbs.)	Aluminum Header, Tubes And Fins, Plastic Tanks
	Width	667.5 mm
	Height	437.8 mm
	Thickness	34.0 mm
	Fins per inch @	2.5 mm
Radiator end tank material		Plastic
Fan	Std., elec., opt.	Standard A/C
	Number of blades & type (flex, solid, material)	5-Blades, High Efficiency Curved Blades And Ring Shroud, Plastic
	Diameter & projected width	423.0 (16.7) 318.0 (12.5) - 2 Fans
	Ratio(fan to crnshft.rev.)	--
	Fan cutout type	ECM Controlled ECM (LH), Switch (RH)
	Drive type (direct, remote)	
	RPM at idle (elec.)	
	Motor rating(wattage)(elec)	150W 150W LH/RH
	Motor switch (type & location/elec.)	LH - ECM & A/C Pressure Switch RH - A/C Pressure Switch/ECM
	Switch point (temp.,/ pressure/elec.)	1900-2100 2100-2200
	Fan shroud (material)	Plastic (Integral Ring) Plastic (Unshrouded Ring)

@ - Distance Between Top Of Fins.

* - 21.36mm (0.84") Wide, 5.20mm (0.20") Thick With Uniform Dynamic Tensioner.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

3.1 LITER V6 (191 CID)
MULTI-PORT FUEL INJECTION RPO LHO

Engine - Fuel System

(See supplemental page for details of Fuel Inj, Supercharger, Turbocharger, etc. if used)

Induction type: carburetor, fuel injection system, etc.		Fuel Injection
Manufacturer		AC/Rochester Products
Carburetor no. of barrels		None
Idle A/F mix.		Preset-No Adjustment Provided
Fuel Injection	Point of inj. (no.)	Fuel Injectors At Inlet Ports (6)
	Constant, pulse, flow	Pulse
	Control (elec., mech.)	Electronic
	Sys. press. kPa (psi)	300 (43.5)
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	800 In Neutral
	Automatic	700 In Neutral, 650 In Drive
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water
Air cleaner type		Single Snorkel, Replaceable Paper Element
Fuel filter (type/location)		Replaceable Stainless Steel (With Paper Element) Located Near Fuel Tank
Fuel pump	Type (elec. or mech.)	Electric
	Location (eng., tank)	Fuel Tank
	Press. range kPa (psi)	Pressure Depends On Flow Rate And System Voltage
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	62.4 @ 350 (16.51 @ 50.8)

Fuel Tank

Capacity refill L (gallons)		58.7 (15.5)
Location (describe)		Rear Center
Attachment		Underbody Strap
Material & Mass kg (weight lbs.)		Steel 8.579 (18.9)
Filler pipe	Location & material	Left Rear Quarter, Steel
	Connection to tank	Solder
Fuel line (material)		Steel
Fuel hose (material)		Rubber
Return line (material)		Steel
Vapor line (material)		Steel
Extended range tank	Opt., n.a.	Not Available
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
Auxiliary tank	Opt., n.a.	Not Available
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
	Sictr switch or valve	"
	Separate fill	"

MVMA Specifications

Vehicle Line CAMARO
 Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description
 Engine Code

5.0 LITER V8 (305 CID)
 ELECTRONIC FUEL INJECTION RPO L03

Engine - Fuel System (See supplemental page for details of Fuel Inj. Supercharger, Turbocharger, etc. if used)

Induction type: carburetor, fuel injection system, etc.		Fuel Injection
Manufacturer		AC/Rochester Products
Carburetor no. of barrels		None
Idle A/F mix.		Preset - No Adjustment Provided
Fuel Injection	Point of inj. (no.)	Fuel Injection At Throttle Body (2)
	Constant, pulse, flow	Pulse
	Control (elec., mech.)	Electronic
	Sys. press. kPa (psi)	76 (11.0)
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	--
	Automatic	--
Intake manifold heat control (exhaust or water thermostatic or fixed)		Exhaust
Air cleaner type		Replaceable Paper Element, Single Snorkel
Fuel filter (type/location)		Replaceable Stainless Steel (With Paper Element) Located Near Fuel Tank
Fuel pump	Type (elec. or mech.)	Electric
	Location (eng., tank)	Fuel Tank
	Press. range kPa (psi)	Pressure Depends On Flow Rate And System Voltage
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	113 @ 83 (29.84 @ 12.0)

Fuel Tank

Capacity refill L (gallons)		58.7 (15.5)
Location (describe)		Rear Center
Attachment		Underbody Strap
Material & Mass kg (weight lbs.)		Steel 8.579 (18.9)
Filler pipe	Location & material	Left Rear Quarter, Steel
	Connection to tank	Solder
Fuel line (material)		Steel
Fuel hose (material)		Rubber
Return line (material)		Steel
Vapor line (material)		Steel
Extended range tank	Opt., n.a.	Not Available
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
Auxiliary tank	Opt., n.a.	Not Available
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
	Stict switch or valve	"
	Separate fill	"

MVMA Specifications

Vehicle Line CAMARO
 Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.0 LITER V8 (305 CID)
 TUNED PORT FUEL INJECTION RPO LB9

Engine - Fuel System

(See supplemental page for details of Fuel Inj. Supercharger, Turbocharger, etc. if used)

Induction type: carburetor, fuel injection system, etc.		Fuel Injection
Manufacturer		AC/Rochester Products
Carburetor no. of barrels		None
Idle A/F mix.		Preset - No Adjustment Provided
Fuel Injection	Point of inj. (no.)	Fuel Injection At Inlet Ports (8)
	Constant, pulse, flow	Pulse
	Control (elec., mech.)	Electronic
	Sys. press. kPa (psi)	300 (44)
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	--
	Automatic	--
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water
Air cleaner type		Replaceable Dual Paper Elements
Fuel filter (type/location)		Replaceable Stainless Steel (With Paper Element) Located Near Fuel Tank
Fuel pump	Type (elec. or mech.)	Electric
	Location (eng., tank)	Fuel Tank
	Press. range kPa (psi)	Pressure Depends On Flow Rate And System Voltage
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	93.3 @ 350 (24.65 @ 50.8)

Fuel Tank

Capacity refill L (gallons)		58.7 (15.5)
Location (describe)		Rear Center
Attachment		Underbody Strap
Material & Mass kg (weight lbs.)		Steel 8.579 (18.9)
Filler pipe	Location & material	Left Rear Quarter, Steel
	Connection to tank	Solder
Fuel line (material)		Steel
Fuel hose (material)		Rubber
Return line (material)		Steel
Vapor line (material)		Steel
Extended range tank	Opt., n.a.	Not Available
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
Auxiliary tank	Opt., n.a.	Not Available
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
	Sictr switch or valve	"
	Separate fill	"

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.7 LITER V8 (350 CID)

TUNED PORT FUEL INJECTION RPO L98

Engine - Fuel System (See supplemental page for details of Fuel Inj, Supercharger, Turbocharger, etc. if used)

Induction type: carburetor, fuel injection system, etc.		TPI - Tuned Port Fuel Injection
Manufacturer		AC/Rochester Products
Carburetor no. of barrels		None
Idle A/F mix		Preset - No Adjustment Provided
Fuel Injection	Point of inj. (no.)	Fuel Injection At Inlet Ports (8)
	Constant, pulse, flow	Pulse
	Control (elec., mech.)	Electronic - On Board Computer
	Sys. press. kPa (psi)	300 (43.5)
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	--
	Automatic	--
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water, Thermostat
Air cleaner type		Replaceable Dual Paper Element
Fuel filter (type/location)		Replaceable Stainless Steel (With Paper Element) Located Near Fuel Tank
Fuel pump	Type (elec. or mech.)	Electric
	Location (eng., tank)	Fuel Tank
	Press. range kPa (psi)	Pressure Depends On Flow Rate And System Voltage
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	93.3 @ 350 (24.65 @ 50.8)

Fuel Tank

Capacity refill L (gallons)		58.7 (15.5)
Location (describe)		Rear Center
Attachment		Underbody Strap
Material & Mass kg (weight lbs.)		Steel 8.579 (18.9)
Filler pipe	Location & material	Left Rear Quarter, Steel
	Connection to tank	Solder
Fuel line (material)		Steel
Fuel hose (material)		Rubber
Return line (material)		Steel
Vapor line (material)		Steel
Extended range tank	Opt., n.a.	Not Available
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
Auxiliary tank	Opt., n.a.	Not Available
	Capacity L (gallons)	"
	Location & material	"
	Attachment	"
	Sictr switch or valve	"
	Separate fill	"

MVMA Specifications

Vehicle Line CAMARO
 Model Year 1991 Issued 12-89 Revised(*) 4-90

METRIC (U.S. Customary)

Engine Description
 Engine Code

3.1 LITER V6 (191 CID)
 MULTI-PORT FUEL INJECTION RPO LHO

Vehicle Emission Control

AUTOMATIC

MANUAL

Exhaust Emission Control	Type (air injection, engine modifications, other)		Computer Command Control	
	Air Injection	Pump or pulse	Pump	
		Driven by	Belt	
		Air distribution (head, manifold, etc.,)	Exhaust Manifold	Catalytic Converter
		Point of entry	Exhaust Manifold	Catalytic Converter
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	ECM Controlled	
		Exhaust source	Exhaust Manifold	
		Point of exh.inj. (spacer, carb., manifold, other)	Inlet Manifold	
	Catalytic Converter	Type	Single Bed, Oxidizing & Reducing	Dual Bed Oxidizing & Reducing
		Number of	1	
		Location(s)	Beneath RF Underbody	
		Volume L (cu.in)	2.78 (170)	
		Substrate type	Monolith	
		Noble metal type	Platinum (Pt), Rhodium (Rh)	Plat.(Pt), Palad.(Pd), Rho.(Rh)
		Noble metal concentration (g/cu. cm.)	0.000838	0.001082
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction System	
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum	
	Discharges to (intake manifold, other)		Inlet Manifold	
	Air inlt(breather cap,other)		Air Inlet Duct	
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister	
		Carburetor	--	
Electronic System	Vapor storage provision		Canister	
	Closed loop (yes/no)		Yes	
	Open loop (yes/no)		No	

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single With Dual Tailpipes	
* Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass kg (weight lbs.)		1, Reverse Flow	
Resonator no. & type		None	
* Exhaust pipe	Branch o.d., wall thickness	(a)	
	Main o.d., wall thickness	(b)	
	Matl. & Mass kg (wght.lbs.)	See Notes 4.53 (10.0)	
Inter-mediate pipe	o.d. & wall thickness	Aluminum Coated Steel	
	Matl. & Mass kg (wght.lbs.)	57.15 x 1.09 mm (2.25 x 0.04 in.)	
* Tail pipe	o.d. & wall thickness	Aluminum Coated Steel	
	Matl. & Mass kg (wght.lbs.)	Aluminum Coated Steel, 3.231 (7.1)	

MVMA Specifications

METRIC (U.S. Customary)

SUPPLEMENTAL PAGE

Vehicle Line	CAMARO		
Model Year	1991	Issued	12-89
		Revised(*)	

NOTES:

- (a) Left Hand/Right Hand Branch - Stainless Steel Laminated; 50.8 x 0.76 Outer Tube, With 0.76 Thick Stainless Steel Inner Tube.
- (b) Stainless Steel Laminated; 57.15 x 0.76 Outer Tube With Stainless Steel Inner Tube 0.76 Thick.
- * Muffler And Tailpipe Unit 7.62 (16.8).

MVMA Specifications

Vehicle Line CAMARO
 Model Year 1991 Issued 12-89 Revised(*) 4-90

METRIC (U.S. Customary)

Engine Description

Engine Code

5.0 LITER V8 (305 CID)
 ELECTRONIC FUEL INJECTION RPO L03

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		Air Injection W/Computer Command Control
	Air Injection	Pump or pulse	Pump Vane
		Driven by	Serpentine Belt
		Air distribution (head, manifold, etc.,)	Exhaust Manifold And Catalytic Converter
		Point of entry	Exhaust Manifold
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Back Pressure Modulated
		Exhaust source	Manifold Exhaust Crossover
		Point of exh.inj. (spacer, carb., manifold, other)	Inlet Manifold
	Catalytic Converter	Type	Dual Bed (Oxidizing And Reducing)
		Number of	One
		Location(s)	Beneath RF Underbody
		Volume L (cu.in)	2.78 (170)
		Substrate type	Monolith
		Noble metal type	Platinum (Pt), Palladium (Pd), Rhodium (Rh)
		Noble metal concentration (g/cu. cm.)	
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction System
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum
	Discharges to (intake manifold, other)		Throttle Body
	Air inlet(breather cap,other)		Air Cleaner
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	Canister
	Vapor storage provision		Canister
Electronic System	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single With Dual Tailpipes
* Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass kg (weight lbs.)		1, Reverse Flow
Resonator no. & type		None
Exhaust pipe	Branch o.d., wall thickness	(a)
	Main o.d., wall thickness	(b)
	Matl. & Mass kg (wght.lbs.)	(See Notes) 4.07 (9.0)
* Intermediate pipe	o.d. & wall thickness	57.15 x 1.14 mm (2.25 x .045 in.)
	Matl. & Mass kg (wght.lbs.)	Aluminum Coated Steel
* Tail pipe	o.d. & wall thickness	63.5 x 1.07 mm (2.25 x 0.042 in.)
	Matl. & Mass kg (wght.lbs.)	Aluminum Coated Steel

SEE ATTACHED NOTES

MVMA Specifications

METRIC (U.S. Customary)

SUPPLEMENTAL PAGE

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

NOTES:

- (a) Left Hand/Right Hand Branch - Stainless Steel Laminated; 50.8 x 0.76 Outer Tube, With 0.76 Thick Stainless Steel Inner Tube.
- (b) Stainless Steel Laminated; 57.15 x 0.76 Outer Tube With Stainless Steel Inner Tube 0.76 Thick.
- * Muffler And Tailpipe Unit 8.732 (19.3).

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.0 LITER V8 (305 CID)
TUNED PORT FUEL INJECTION RPO LB9

Vehicle Emission Control

Single Converter (Without N10)

Dual Converters (With N10)

Exhaust Emission Control	Type (air injection, engine modifications, other)		Air Injection W/Computer Command Control	
	Air injection	Pump or pulse	Air Pump	
		Driven by	Belt	
		Air distribution (head, manifold, etc.,)	Exhaust Manifold And Catalytic Converter	
		Point of entry	Exhaust Manifold	
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Back Pressure Modulated Controlled Flow	
		Exhaust source	Manifold	
		Point of exh.inj. (spacer, carb., manifold, other)	Inlet Manifold	
	Catalytic Converter	Type	Dual Bed, Oxidizing & Reducing	
		Number of	1	2
		Location(s)	Beneath RF Underbody	
		Volume L (cu.in.)	2.78 (170)	
		Substrate type	Monolith	
		Noble metal type	Platinum (Pt), Palladium (Pd), Rhodium (Rh)	
		Noble metal concentration (g/cu. cm.)	0.001096	
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction System	
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum	
	Discharges to (intake manifold, other)		Intake Manifold	
	Air int.(breather cap, other)		Throttle Body	
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister	
		Carburetor	--	
	Vapor storage provision		Canister	
Electronic System	Closed loop (yes/no)		Yes	
	Open loop (yes/no)		No	

Engine - Exhaust System

Single Converter (Without N10)

Dual Converters (With N10)

Type (single, single with cross-over, dual, other)		Single With Dual Tailpipes	
* Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass kg (weight lbs.)		1, Reverse Flow	
Resonator no. & type		None	
Exhaust pipe	Branch o.d., wall thickness	(a)	(c)
	Main o.d., wall thickness	(b)	(d)
	Matl. & Mass kg (wght.lbs.)	4.07 (9.0)	15.68 (34.6)
* Intermediate pipe	o.d. & wall thickness	57.15 x 1.14mm (2.25 x .045 in.)	69.85 x 1.40mm (2.75 x 0.05 in.)
	Matl. & Mass kg (wght.lbs.)	Aluminum Coated Steel	
* Tail pipe	o.d. & wall thickness	63.5 x 1.07 mm (2.25 x .04 in.)	
	Matl. & Mass kg (wght.lbs.)	Aluminum Coated Steel	

* Muffler & tailpipe unit 8.845 (19.5).

(SEE FOOTNOTES ON PAGE 7.5).

MVMA Specifications

METRIC (U.S. Customary)

SUPPLEMENTAL PAGE

Vehicle Line	CAMARO		
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-
- (a) Laminated - Stainless Steel Outer Pipe, 63.5 x 1.016 (2.5 x 0.04), Steel Inner Pipe.
 - (b) Laminated - Stainless Steel Outer Pipe, 76.2 x 1.016 (3.0 x 0.04), Steel Inner Pipe.
 - (c) 57.15 x 1.37 Thickwall Stainless Steel.
 - (d) 63.5 x 1.37 Thickwall Stainless Steel.
- W-Tube 69.85 x 1.37 Thickwall Stainless Steel.

NOTE: The Exhaust Pipe Has Two Converters In Each Branch Of The Pipe.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

5.7 LITER V8 (350 CID)

Engine Code

TUNED PORT FUEL INJECTION RPO L98

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		Air Injection W/Computer Command Control
	Air Injection	Pump or pulse	Air Pump
		Driven by	Belt
		Air distribution (head, manifold, etc.,)	Exhaust Manifold And Catalytic Converter
		Point of entry	Exhaust Manifold
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Back Pressure Modulated Controlled Flow
		Exhaust source	Manifold
		Point of exh.inj. (spacer, carb., manifold, other)	Inlet Manifold
	Catalytic Converter	Type	Dual Bed, Oxidizing & Reducing
		Number of	2
		Location(s)	Beneath RF Underbody
		Volume L (cu.in.)	2.78 (170)
		Substrate type	Monolith
		Noble metal type	Platinum (Pt), Palladium (Pd), Rhodium (Rh)
		Noble metal concentration (g/cu. cm.)	0.001096
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction System
	Energy source (manifold vacuum, carburetor, other)		Manifold Vacuum
	Discharges to (intake manifold, other)		Intake Manifold
	Air inlet (breather cap, other)		Throttle Body
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	--
	Vapor storage provision		Canister
Electronic System	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

Engine - Exhaust System

Dual Converters (With N10)

Type (single, single with cross-over, dual, other)		Single With Dual Tailpipes
* Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass kg (weight lbs.)		1, Reverse Flow
Resonator no. & type		None
Exhaust pipe	Branch o.d., wall thickness	(a)
	Main o.d., wall thickness	(b)
	Matl. & Mass kg (wght.lbs.)	15.68 (34.6)
* Intermediate pipe	o.d. & wall thickness	69.85 x 1.40 mm (2.75 x 0.05 in.)
	Matl. & Mass kg (wght.lbs.)	Aluminum Coated Steel
* Tail pipe	o.d. & wall thickness	63.5 x 1.07 mm (2.25 x .04 in.)
	Matl. & Mass kg (wght.lbs.)	Aluminum Coated Steel

(a) 57.15 x 1.37 Thickwall Stainless Steel.

(b) 63.5 x 1.37 Thickwall Stainless Steel. W-Tube 69.85 x 1.37 Thickwall Stainless Steel.

* Muffler & Tailpipe Unit 8.845 (19.5).

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

3.1 LITER V6 (191 CID)
MULTI-PORT FUEL INJECTION RPO LHO

Transmissions/Transaxle (Std., Opt., N.A.)

Manual 3-speed (manufacturer/country)	Not Available
Manual 4-speed (manufacturer/country)	Not Available
Manual 5-speed (manufacturer/country)	Standard
Automatic (manufacturer/country)	Optional
Auto. overdrive (manufacturer/country)	Optional

Manual Transmission/Transaxle (MBI)

Number of forward speeds		5
Gear ratios	1st	4.03
	2nd	2.37
	3rd	1.50
	4th	1.00
	5th	0.76
	Reverse	3.76
Synchronous meshing (specify gears)		All Forward Gears
Shift lever location		Floor
Trans. case mat'l. & mass kg (lbs)*		Aluminum
Lubricant	Capacity L (pt.)	2.8 (5.9)
	Type recommended	Dexron II

Clutch (Manual Transmission)

Clutch manufacturer		Belleville
Clutch type (dry, wet; single, multiple disc)		Dry Disc
Linkage (hyd., cable, rod, lever, other)		Hydraulic
Max. pedal effort (nom. spring load) N (lbs.)	Depressed	130
	Released	
Assist (spring, power/percent, nominal)		None
Type pressure plate springs		Diaphragm
Total spring load (nominal) N (lbs.)		5750 (1293)
Clutch facing	Facing mfr. & mat'l. coding	Valeo/F202
	Facing mat'l. & construction	Non-Asbestos
	Rivets per facing	16
	Outside x inside dia. (nom.)	232.0 x 155.0 mm (9.125 x 6.125 in.)
	Total eff. area sq cm(sq in)	234.0 (36.28)
	Thickness (pressure plate side/fly wheel side)	3.2/3.2
	Rivet depth (pressure plate side/fly wheel side)	1.1 mm (.043 in.)
Engagement cushion method		Driven Plate Wave Spoke Springs
Release bearing type & method lub.		Self Centering Angular Contact Ball Bearing Pre-Packed And Sealed
Torsional damping method, springs, hysteresis		Coil Springs With Non-Metal Friction Control

* Includes shift linkage, lubricant, and clutch housing. If other specify.

MVMA Specifications

Vehicle Line CAMARO

Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.0 LITER V8 (305 CID)

ELECTRONIC FUEL INJECTION RPO L03

Transmissions/Transaxle (Std., Opt., N.A.)

Manual 3-speed (manufacturer/country)	Not Available
Manual 4-speed (manufacturer/country)	Not Available
Manual 5-speed (manufacturer/country)	Standard
Automatic (manufacturer/country)	Optional
Auto. overdrive (manufacturer/country)	Optional

Manual Transmission/Transaxle

(M39)

Number of forward speeds		5
Gear ratios	1st	2.95
	2nd	1.94
	3rd	1.34
	4th	1.00
	5th	0.63
	Reverse	2.76
Synchronous meshing (specify gears)		All Forward Gears
Shift lever location		Floor
Trans. case mat'l. & mass kg (lbs)*		Aluminum
Lubricant	Capacity L (pt.)	2.8 (5.9)
	Type recommended	Dexron II

Clutch (Manual Transmission)

Clutch manufacturer		Belleville
Clutch type (dry, wet; single, multiple disc)		Dry Disc
Linkage (hyd., cable, rod, lever, other)		Hydraulic
Max. pedal effort (nom. spring load) N (lbs.)	Depressed	150
	Released	
Assist (spring, power/percent, nominal)		None
Type pressure plate springs		Diaphragm
Total spring load (nominal) N (lbs.)		7750 (1742)
Clutch facing	Facing mfr. & mat'l. coding	Valeo/F202
	Facing mat'l. & construction	Non-Asbestos
	Rivets per facing	18
	Outside x inside dia. (nom.)	254.0 x 165.0 mm (10.0 x 6.5 in.)
	Total eff. area sq cm (sq in.)	293.0 (45.43)
	Thickness (pressure plate side/fly wheel side)	3.45/3.45
	Rivet depth (pressure plate side/fly wheel side)	1.1 mm (.043 in.)
	Engagement cushion method	Driven Plate Wave Spoke Springs
Release bearing type & method lub.		Self Centering Angular Contact Ball Bearing Pre-Packed And Sealed
Torsional damping method, springs, hysteresis		Coil Springs With Non-Metal Friction Control

* Includes shift linkage, lubricant, and clutch housing. If other specify.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description
Engine Code

5.0 LITER V8 (305 CID)
TUNED PORT FUEL INJECTION RPO LB9

Transmissions/Transaxle (Std., Opt., N.A.)

Manual 3-speed (manufacturer/country)	Not Available
Manual 4-speed (manufacturer/country)	Not Available
Manual 5-speed (manufacturer/country)	Standard
Automatic (manufacturer/country)	Optional
Auto. overdrive (manufacturer/country)	Optional

Manual Transmission/Transaxle

(M39)

(MK6)

Number of forward speeds		5	5
Gear ratios	1st	2.95	2.75
	2nd	1.94	1.94
	3rd	1.34	1.34
	4th	1.00	1.00
	5th	0.63	0.73
	Reverse	2.76	2.76
Synchronous meshing (specify gears)		All Forward Gears	
Shift lever location		Floor	
Trans. case mat'l. & mass kg (lbs)*		Aluminum	
Lubricant	Capacity L (pt.)	2.8 (5.9)	
	Type recommended	Dexron II	

Clutch (Manual Transmission)

Clutch manufacturer	Belleville	
Clutch type (dry, wet; single, multiple disc)	Dry Disc	
Linkage (hyd., cable, rod, lever, other)	Hydraulic	
Max. pedal effort (nom. spring load) N (lbs.)	Depressed	150
	Released	
Assist (spring, power/percent, nominal)	None	
Type pressure plate springs	Diaphragm	
Total spring load (nominal) N (lbs.)	7750 (1742)	
Clutch facing	Facing mfr. & mat'l. coding	Valeo/F202
	Facing mat'l. & construction	Non-Asbestos
	Rivets per facing	18
	Outside x inside dia. (nom.)	267.0 x 165.0 mm (10.5 x 6.5 in.)
	Total eff. area sq cm (sq in)	346.0 (53.6)
	Thickness (pressure plate side/fly wheel side)	3.45/3.45
	Rivet depth (pressure plate side/fly wheel side)	1.1 mm (.043 in.)
	Engagement cushion method	Driven Plate Wave Spoke Springs
Release bearing type & method lub.	Self Centering Angular Contact Ball Bearing Pre-Packed And Sealed	
Torsional damping method, springs, hysteresis	Coil Springs With Non-Metal Friction Control	

* Includes shift linkage, lubricant, and clutch housing. If other specify.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*) _____

METRIC (U.S. Customary)

Engine Description
Engine Code

5.7 LITER V8 (305 CID)
TUNED PORT FUEL INJECTION RPO L88

Transmissions/Transaxle (Std., Opt., N.A.)

Manual 3-speed (manufacturer/country)	Not Available
Manual 4-speed (manufacturer/country)	"
Manual 5-speed (manufacturer/country)	"
Automatic (manufacturer/country)	Standard
Auto. overdrive (manufacturer/country)	Standard

Manual Transmission/Transaxle (NOT AVAILABLE)

Number of forward speeds		
Gear ratios	1st	
	2nd	
	3rd	
	4th	
	5th	
	Reverse	
Synchronous meshing (specify gears)		
Shift lever location		
Trans. case mat'l. & mass kg (lbs)*		
Lubricant	Capacity L (pt.)	
	Type recommended	

Clutch (Manual Transmission) (NOT AVAILABLE)

Clutch manufacturer		
Clutch type (dry, wet; single, multiple disc)		
Linkage (hyd., cable, rod, lever, other)		
Max. pedal effort (nom. spring load) N (lbs.)	Depressed	
	Released	
Assist (spring, power/percent, nominal)		
Type pressure plate springs		
Total spring load (nominal) N (lbs.)		
Clutch facing	Facing mfr. & matl. coding	
	Facing matl. & construction	
	Rivets per facing	
	Outside x inside dia. (nom.)	
	Total eff. area [sq cm sq in]	
	Thickness (pressure plate side/fly wheel side)	
	Rivet depth (pressure plate side/fly wheel side)	
	Engagement cushion method	
Release bearing type & method lub.		
Torsional damping method, springs, hysteresis		

* Includes shift linkage, lubricant, and clutch housing. If other specify.

MVMA Specifications

Vehicle Line CAMARO
 Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description
 Engine Code

3.1 LITER V6 (191 CID)
 MULTI-PORT FUEL INJECTION RPO LHO

Automatic Transmission/Transaxle

Trade Name		700-R4
Type and special features (describe)		4-Speed Automatic Torque Converter with Clutch
Gear selector	Location (column, floor, other)	On Floor Console
	Ltr./No. designation (e.g. PRND21)	P-R-N-D-D-2-1
	Shift interlock (yes, no, describe)	
Gear ratios	1st	3.06
	2nd	1.63
	3rd	1.00*
	4th	0.70*
	Reverse	2.29
Max. upshift speed - drive range [km/h (mph)]		1-2 = 61 (38), 2-3 = 111 (69)
Max. kickdown speed - drive range [km/h (mph)]		3-2 = 105 (65), 2-1 = 50 (31)
Min. overdrive speed [km/h (mph)]		72 (45)
Torque converter	Number of elements	3
	Max. ratio at stall	2.15
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245 (9.65)
	Capacity factor "K"	1.60
Lubricant	Capacity (refill L (pt.))	4.5 (9.5)
	Type recommended	GM Dexron II
Oil cooler (std., opt., N.A., internal, external, air, liquid)		Standard, Integral With Radiator
Trans. mass [kg (lbs)] & case matl.**		Aluminum, 71.7 (158.1)

* Torque Converter Clutch In 3rd & 4th Gears.

All Wheel / 4 Wheel Drive

(NOT APPLICABLE)

Desc. & type (part-time, full-time, 2/4 shift while moving, mech., elect., chain/gear, etc.)		
Transfer case	Manufacturer and model	
	Type and location	
Low-range gear ratio		
System disconnect (describe)		
Center differential	Type (bevel, planetary, w or w/o viscous bias, torsen, etc.)	
	Torque split (% frt/rear)	

* Input speed / square root of torque.

** Dry weight including torque converter. If other, specify.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.0 LITER V8 (305 CID)
ELECTRONIC FUEL INJECTION RPO L03

Automatic Transmission/Transaxle

(See Power Teams for Transmission Usage)

Trade Name		'700-R4'	'200-4R'
Type and special features (describe)		4-Speed Automatic Torque Converter With Planetary Gears	
Gear selector	Location (column, floor, other)	Steering Column	
	Ltr./No. designation (e.g. PRND21)	P-R-N-D-D-2-1	
	Shift interlock (yes, no, describe)		
Gear ratios	1st	306	2.74
	2nd	1.63*	1.57
	3rd	1.00*	1.00*
	4th	0.70*	0.67*
	Reverse	2.29	2.07
Max. upshift speed - drive range km/h (mph)		1-2 = 60 (37.5) 2-3 = 108 (67)	Not Available
Max. kickdown speed - drive range km/h (mph)		3-2 = 100 (62) 2-1 = 45 (28)	"
Min. overdrive speed km/h (mph)		67 (41.5)	"
Torque converter	Number of elements	3	
	Max. ratio at stall	5.8:1	Not Available
	Type of cooling (air, liquid)	Liquid	
	Nominal diameter:	298 (11.75)	
	Capacity factor "K"		
Lubricant	Capacity refill L (pt.)	3.0 (8.3)	
	Type recommended	Dexron II	
Oil cooler (std., opt., N.A., internal, external, air, liquid)		Standard, Integral With Radiator	
Trans. mass kg (lbs) & case matl. "		Aluminum	

All Wheel / 4 Wheel Drive

(NOT AVAILABLE)

Desc. & type (part-time, full-time, 2/4 shift while moving, mech., elect., chain/gear, etc.)		
Transfer case	Manufacturer and model	
	Type and location	
Low-range gear ratio		
System disconnect (describe)		
Center differential	Type (bevel, planetary, w or w/o viscous bias, torsen, etc.)	
	Torque split(% frt/rear)	

* Input speed / square root of torque.

" Dry weight including torque converter. If other, specify.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.0 LITER V8 (305 CID)

TUNED PORT FUEL INJECTION RPO LB9

Automatic Transmission/Transaxle

Trade Name		700-R4
Type and special features (describe)		4-Speed Automatic Torque Converter With Clutch
Gear selector	Location (column, floor, other)	Floor Console
	Ltr./No. designation (e.g. PRND21)	P-R-N- D -D-2-1
	Shift interlock (yes, no, describe)	
Gear ratios	1st	3.06
	2nd	1.63
	3rd	1.00*
	4th	0.70*
	Reverse	2.29
Max. upshift speed - drive range (km/h (mph))		1-2 = 66 (41), 2-3 = 122 (76)
Max. kickdown speed - drive range (km/h (mph))		3-2 = 116 (72), 2-1 = 63 (39)
Min. overdrive speed (km/h (mph))		66 (41)
Torque converter	Number of elements	3
	Max. ratio at stall	2.15
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	298 (11.75)
	Capacity factor "K"	115
Lubricant	Capacity (refill L(pt.))	4.7 (10.0)
	Type recommended	GM Dexron II
Oil cooler (std., opt., N.A., internal, external, air, liquid)		Standard Integral With Radiator
Trans. mass (kg(lbs)) & case matl.**		Aluminum, 74.2 (163.5)

* Torque Converter Clutch In 3rd & 4th Gears.

All Wheel / 4 Wheel Drive

(NOT APPLICABLE)

Desc. & type (part-time, full-time, 2/4 shift while moving, mech., elect., chain/gear, etc.)		
Transfer case	Manufacturer and model	
	Type and location	
Low-range gear ratio		
System disconnect (describe)		
Center differential	Type (bevel, planetary, w or w/o viscous bias, torsen, etc.)	
	Torque split(% frt/rear)	

* Input speed / square root of torque.

** Dry weight including torque converter. If other, specify.

MVMA Specifications

Vehicle Line CAMARO
 Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.7 LITER V8 (350 CID)
 TUNED PORT FUEL INJECTION RPO L98

Automatic Transmission/Transaxle

Trade Name		700-R4
Type and special features (describe)		4-Speed Automatic Torque Converter with Clutch
Gear selector	Location (column, floor, other)	Floor Console
	Ltr./No. designation (e.g. PRND21)	P-R-N-D-D-2-1
	Shift interlock (yes, no, describe)	
Gear ratios	1st	3.06
	2nd	1.63
	3rd	1.00*
	4th	0.70*
	Reverse	2.29
Max. upshift speed - drive range [km/h (mph)]		1-2 = 63 (39), 2-3 = 125 (78) 3-4 = 187 (125)
Max. kickdown speed - drive range [km/h (mph)]		3-2 = 104 (65), 2-1 = 57 (35)
Min. overdrive speed [km/h (mph)]		65 (41)
Torque converter	Number of elements	3
	Max. ratio at stall	1.91
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	298 (11.75)
	Capacity factor "K"	100
Lubricant	Capacity (refill L(pt.))	4.7 (10.0)
	Type recommended	GM Dexron II
Oil cooler (std., opt., N.A., internal, external, air, liquid)		Standard Integral With Radiator
Trans. mass [kg(lbs)] & case matl.**		Aluminum, 74.2 (163.5)

* Torque Converter Clutch in 3rd & 4th Gears.

All Wheel / 4 Wheel Drive

(NOT APPLICABLE)

Desc. & type (part-time, full-time, 2/4 shift while moving, mech., elect., chain/gear, etc.)		
Transfer case	Manufacturer and model	
	Type and location	
Low-range gear ratio		
System disconnect (describe)		
Center differential	Type (bevel, planetary, w or w/o viscous bias, torsen, etc.)	
	Torque split(% frt/rear)	

* Input speed / square root of torque.

** Dry weight including torque converter. If other, specify.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

3.1 LITER V8 (191 CID)

MULTI-PORT FUEL INJECTION RPO LHO

Axle Ratio and Tooth Combinations

AUTOMATIC - MD8

MANUAL - MB1

Axle ratio (or overall top gear ratio)		3.23 (2.26)	3.42 (2.60)
Ring gear o.d.		7.625 in.	7.625 in.
No. of teeth	Pinion	13	12
	Ring gear	42	41

Rear Axle Unit

Description		Salisbury/Beam Housing
Limited slip differential (type)		Not Applicable
Drive pinion	Type	Hypoid
	Offset	1.50
No. of differential pinions		2
Pinion/differential	Adjustment (shim, etc.)	Shim
	Bearing adjustment	Shim
Driving wheel bearing (type)		Cylindrical Roller Direct On Shafts, Drawn Cup
Lubricant	Capacity L (pt.)	1.66
	Type recommended	GL-5 Gear Lubricant

Propeller Shaft - Rear Wheel Drive

Manufacturer Type (straight tube, tube-in-tube, internal-external damper, etc.)			Saginaw Division Straight Tube W/Internal Damper	
Outer diam. x length* x wall thickness	Manual 3-speed transmission		Not Applicable	
	Manual 4-speed transmission		Not Applicable	
	Manual 5-speed transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)	
	Overdrive		Not Available	
	Automatic transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)	
Inter- mediate bearing	Type (plain, anti-friction)		Not Applicable	
	Lub. (fitting, prepack)		Not Applicable	
Slip yoke	Type		Splined	
	Number of teeth		27	
	Spline o.d.		29.84 mm (1.174 in.)	
Universal joints	Make and mfg. no.	Front	Saginaw Division	
		Rear	Saginaw Division	
	Number used		2	
	Type (ball and trunnion, cross)		Cross	
	Rr. attach(u-bolt,clamp,etc)		Strap & Bolts	
	Bearing	Type (plain, anti-friction)	Anti-Friction	
		Lubrication (fitting, prepack)	Prepacked	
Drive taken through (torque tube, arms or springs)			Propeller Shaft Assembly	
Torque taken through (torque tube, arms or springs)			Torque Arm Assembly	

* Centerline to centerline of universal joints, or to centerline of attachment.

* 70mm (2.75 in) Dia. Aluminum Shaft Replaces Base Steel Shaft Where Necessary For Weight Reduction.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.0 LITER V8 (305 CID)
THROTTLE BODY INJECTION RPO L03

Axle Ratio and Tooth Combinations

AUTOMATIC - MD8

MANUAL - M39

Axle ratio (or overall top gear ratio)		2.73 (1.91)	3.08 (1.94)
Ring gear o.d.		7.625	7.625
No. of teeth	Pinion	15	13
	Ring gear	41	40

Rear Axle Unit

Description		Salisbury/Bearn Housing
Limited slip differential (type)		Not Applicable
Drive pinion	Type	Hypoid
	Offset	1.50
No. of differential pinions		2
Pinion/differential	Adjustment (shim, etc.)	Shim
	Bearing adjustment	Shim
Driving wheel bearing (type)		Cylindrical Roller Direct On Shafts, Drawn Cup
Lubricant	Capacity L (pt.)	1.66
	Type recommended	GL-5 Gear Lubricant

Propeller Shaft - Rear Wheel Drive

Manufacturer Type (straight tube, tube-in-tube, internal-external damper, etc.)			Saginaw Division Straight Tube W/Internal Damper	
Outer diam. x length* x wall thickness	Manual 3-speed transmission		Not Applicable	
	Manual 4-speed transmission		Not Applicable	
	Manual 5-speed transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)	
	Overdrive		Not Available	
	Automatic transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)	
Inter- mediate bearing	Type (plain, anti-friction)		Not Applicable	
	Lub. (fitting, prepack)		Not Applicable	
Slip yoke	Type		Splined	
	Number of teeth		27	
	Spline o.d.		29.84 mm (1.174 in.)	
Universal joints	Make and mfg. no.	Front	Saginaw Division	
		Rear	Saginaw Division	
	Number used		2	
	Type (ball and trunnion, cross)		Cross	
	Rr. attach (u-bolt, clamp, etc.)		Strap & Bolts	
	Bearing	Type (plain, anti-friction)	Anti-Friction	
		Lubrication (fitting, prepack)	Prepacked	
Drive taken through (torque tube, arms or springs)			Propeller Shaft Assembly	
Torque taken through (torque tube, arms or springs)			Torque Arm Assembly	

* Centerline to centerline of universal joints, or to centerline of attachment.

* 70mm (2.75 in) Dia. Aluminum Shaft Replaces Base Steel Shaft Where Necessary For Weight Reduction.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.0 LITER V8 (305 CID)

TUNED PORT FUEL INJECTION RPO LB9

Axle Ratio and Tooth Combinations

		AUTOMATIC - MD8	MANUAL - M39	MANUAL - MK6
Axle ratio (or overall top gear ratio)		2.73 (1.91)	3.08 (1.94)	3.42 (2.50)
Ring gear o.d.		7.625	7.625	7.625
No. of teeth	Pinion	15	13	12
	Ring gear	41	40	41

Rear Axle Unit

Description		Salisbury/Beam Housing
Limited slip differential (type)		Cone Clutch
Drive pinion	Type	Hypoid
	Offset	1.50
No. of differential pinions		2
Pinion/differential	Adjustment (shim, etc.)	Shim
	Bearing adjustment	Shim
Driving wheel bearing (type)		Cylindrical Roller Direct On Shafts, Drawn Cup
Lubricant	Capacity L (pt.)	1.66
	Type recommended	GL-5 Gear Lubricant

Propeller Shaft - Rear Wheel Drive

Manufacturer Type (straight tube, tube-in-tube, internal-external damper, etc.)			Saginaw Division Straight Tube W/Internal Damper	
Outer diam. x length* x wall thickness	Manual 3-speed transmission		Not Applicable	
	Manual 4-speed transmission		Not Applicable	
	Manual 5-speed transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)	
	Overdrive		Not Available	
	Automatic transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)	
Inter- mediate bearing	Type (plain, anti-friction)		Not Applicable	
	Lub. (fitting, prepack)		Not Applicable	
Slip yoke	Type		Splined	
	Number of teeth		27	
	Spline o.d.		29.84 mm (1.174 in.)	
Universal joints	Make and mfg. no.		Front	Saginaw Division
			Rear	Saginaw Division
	Number used		2	
	Type (ball and trunnion, cross)		Cross	
	Rr. attach(u-bolt, clamp, etc)		Strap & Bolts	
	Bearing	Type (plain, anti-friction)	Anti-Friction	
		Lubrication (fitting, prepack)	Prepacked	
Drive taken through (torque tube, arms or springs)			Propeller Shaft Assembly	
Torque taken through (torque tube, arms or springs)			Torque Arm Assembly	

* Centerline to centerline of universal joints, or to centerline of attachment.

* 70mm (2.75 in) Dia. Aluminum Shaft Replaces Base Steel Shaft Where Necessary For Weight Reduction.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

5.7 LITER V8 (350 CID)
TUNED PORT FUEL INJECTION RPO L98

Axle Ratio and Tooth Combinations

Axle ratio (or overall top gear ratio)		3.23 (2.26)
Ring gear o.d.		7.625
No. of teeth	Pinion	13
	Ring gear	42

Rear Axle Unit

Description		Salisbury/Beam Housing
Limited slip differential (type)		Cone Clutch
Drive pinion	Type	Hypoid
	Offset	1.50
No. of differential pinions		2
Pinion/differential	Adjustment (shim, etc.)	Shim
	Bearing adjustment	Shim
Driving wheel bearing (type)		Cylindrical Roller Direct On Shafts, Drawn Cup
Lubricant	Capacity L (pt.)	1.66
	Type recommended	GL-5 Gear Lubricant

Propeller Shaft - Rear Wheel Drive

Manufacturer Type (straight tube, tube-in-tube, internal-external damper, etc.)			Saginaw Division Straight Tube W/Internal Damper	
Outer diam. x length* x wall thickness	Manual 3-speed transmission		Not Applicable	
	Manual 4-speed transmission		Not Applicable	
	Manual 5-speed transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)	
	Overdrive		Not Available	
	Automatic transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)	
Inter- mediate bearing	Type (plain, anti-friction)		Not Applicable	
	Lub. (fitting, prepack)		Not Applicable	
Slip yoke	Type		Splined	
	Number of teeth		27	
	Spline o.d.		29.84 mm (1.174 in.)	
Universal joints	Make and mfg. no.		Front	Saginaw Division
			Rear	Saginaw Division
	Number used		2	
	Type (ball and trunnion, cross)		Cross	
	Rr. attach(u-bolt, clamp, etc)		Strap & Bolts	
	Bearing	Type (plain, anti-friction)	Anti-Friction	
		Lubrication (fitting, prepack)	Prepacked	
Drive taken through (torque tube, arms or springs)			Propeller Shaft Assembly	
Torque taken through (torque tube, arms or springs)			Torque Arm Assembly	

* Centerline to centerline of universal joints, or to centerline of attachment.

* 70mm (2.75 in) Dia. Aluminum Shaft Replaces Base Steel Shaft Where Necessary For Weight Reduction.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Body Type And/Or

Engine Displacement

ALL

Suspension - General Including Electronic Controls

Car leveling	Std./opt./not avail.	Not Applicable
	Manual/automatic control	"
	Type (air/hydraulic)	"
	Primary/assist spring	"
	Rear only/e wheel leveling	"
	Single/dual rate spring	"
	Single/dual ride heights	"
Shock absorber damping controls	Provision for jacking	Jacking Provisions On Rocker Panels
	Standard/option/not avail.	Not Applicable
	Manual/automatic control	"
	Number of damping rates	"
	Type of actuation (manual/electric motor/air, etc.)	"
	s e n s o r s	"
	Lateral acceleration	"
Shock absorber (front & rear)	Deceleration	"
	Acceleration	"
	Road surface	"
	Type	Direct, Double Acting, Hydraulic
	Make	Delco
Shock absorber (front & rear)	Piston diameter	32mm V-6; 35mm V-8 Front/ 25mm RS & Base Z28; 32mm Z28, Rear
	Rod diameter	25mm Front; 12.5mm Rear

Suspension - Front

Type and description		Independent W/Coil Springs, Modified MacPherson Strut
Travel*	Full jounce	75.0mm RS; 57.0mm RS W/16" Tire, Z28
	Full rebound	104.0 mm (4.90 in)
Spring	Type (coil, leaf, other & matl)	Coil, Steel
	Insulators (type & matl)	Rubber (Top)
	Size (coil design height & i.d.)	260 x 103.0; 2490 x 15 mm (10.2 x 4.06; 98 x .59 in)
	Spring rate N/mm (lb./in.)	64 N/mm RS & Base Z28; 96 N/mm Z28
	Rate @ wheel N/mm (lb./in)	Spring Rate x (2.455)
Stabilizer	Type (link, inkless, frmless)	Link
	Material & bar diameter	30mm Solid, RS; 34mm Hollow, Base Z28 & 16" Tire RS, 36mm Hollow Z28; Steel

Suspension - Rear

Type and description		Salisbury Axle W/Torque Arm, ICA, Track Bar, Coil Springs
Travel*	Full jounce	87.0 mm (3.4 in.)
	Full rebound	118.0 mm (4.6 in.)
Spring	Type (coil, leaf, other & matl)	Coil-Steel
	Size (length x width, coil design height & i.d.)	254.0 x 102.6; 2709 x 12.0 mm (10 x 4.03; 27.9 x .472 in)
	Spring rate N/mm (lb/in)	18/25 Variable Coil (103.0) RS; 23.0 (131.5) Z28 & F-41 Base
	Rate @ wheel N/mm (lb/in)	0.96 x Spring Rate
	Insulators (type & material)	Rubber Isolated
	If leaf	No. of leaves
		Shackle (comp or tens)
Stabilizer	Type (link, inkless, frmless)	Link
	Material & bar diameter	18mm RS, 21mm RS W/16" Tire & Base Z28, 23mm Z28; Steel
Track bar (type)		"U" Section W/Rubber Bushings

* Define load condition:

MVMA Specifications

METRIC (U.S. Customary)

Body Type And/Or

Engine Displacement

Brakes - Service

Vehicle Line **CAMARO**

Model Year **1991** Issued **12-89** Revised(*)

SPORT COUPE

Z28

Description			Single Caliper; Disc Front/ Duo-Servo Drum Rear Disc Optional Front/Rear (RPO J65)		
Manufacturer and brake type (std., opt., n.a.)		Front (disc or drum)	Disc		
		Rear (disc or drum)	Drum; Disc Optional For IROC-Z		
Valving type(prop, delay, metering, other)			Proportioning, Failure Warning		
Power brake (std., opt., n.a.)			Standard		
Booster type(rmt, intgrl, vac., hyd., etc.)			Tandem Vacuum		
Vacuum	Source (inline, pump, etc.)		Inline		
	Reservoir (volume cu. in.)		None		
	Pump-type		"		
Traction Control	Operational speed range		"		
	Type engine intervention		"		
Anti-lock device	Front/rear (std., opt., n.a.)		"		
	Manufacturer		"		
	Type (electronic, mech.)		"		
	Number sensors or circuits		"		
	No. anti-lock hyd. circuits		"		
	Integral or add-on system		"		
	Yaw control (yes, no)		"		
	Hydraulic power source		"		
Effective area sq. cm. (sq. in.)*			615.5 (95.4) Total		
Gross Lng area sq. cm. (sq. in.)*(F/R)			691.6 (107.2) Total		
Swept area sq. cm. (sq. in.)*(F/R)			1985.1 (307.7) Total		
Rotor	Outer working diameter		F/R	F/267.0 mm (10.5 in.), R/296.0 mm (11.65 in.)	
	Inner working diameter		F/R	F/171.5 mm (6.75 in.), R/211.0 mm (8.31 in.)	
	Thickness		F/R	F/26.2 mm (1.03 in.), R/20.0 mm (0.79 in.)	
	Matl & type (vented/sld)		F/R	Cast Iron, Vented F/R	
Drum	Diameter & width		F/R	241.0 mm (9.5 in.), 50.8 mm (2.0 in.)	
	Type and material		F/R	Cast Iron Finned (Aluminum For Selected Applications)	
Wheel cylinder bore			F/R	F/64 mm (2.5 in.); R/19 mm (0.75 in.) Drum; 40.5 mm (1.6 in.) Disc	
Master cylinder		Bore/stroke	F/R	Bore: 24.0 mm (0.94 in.)	
Pedal arc ratio			3.25:1		
Line pressure at 445 N (100 lb.) pedal load kPa (psi)			--		
Lining clearance			F/R	Self-Adjusting/Self-Adjusting	
Brake lining	Front wheel	Bonded or riveted		Riveted; 8	
		Rivet size		5.3 x 7.92 mm (.210 x .312 in.)	
		Manufacturer		Bendix	
		Lining code ****		7161A	
		Material		Semi-Metallic	
		****	Pri. or out-brd	125.0 x 48.4 x 11.04 mm (4.92 x 1.91 x 0.435 in.)	
		Size	Sec. or in-brd	125.0 x 48.4 x 10.55 mm (4.92 x 1.91 x 0.415 in.)	
		Shoe thcknss.(no lng)		O/B3.42 mm (0.135 in.); IB 4.85 mm (0.191 in.)	
	Rear wheel	Bonded or riveted		Riveted 10 Primary, 12 Secondary (Drum); Molded (Disc)	
		Manufacturer		Inland	
		Lining code ****		IN 4035/4050 HB33	
		Material			
		****	Pri. or out-brd	192.5x50.8x4.98 (7.58 x 2.0 x 0.196)/125.0x48.4x11.04 (4.92x1.91x0.435)	
		Size	Sec. or in-brd	249.6x50.8x6.75 (9.83 x 2.0 x 0.266)/125.0x48.4x10.55 (4.92x1.91x0.415)	
		Shoe thcknss (no lng)		Drum 1.98 mm (0.078 in.); Disc OB/4.0 mm (0.16 in.), IB/5.5 mm (0.21 in.)	

* Excludes rivet holes, grooves, chamfers, etc.

** Includes rivet holes, grooves, chamfers, etc.

*** Total swept area for four brakes. (Drum brake: Widest lining contact width for each brake x its contact circum.) (Disc brake: Square of Outer Working Dia. - Square of inner Working Dia. X Pi/2 for each brake.)

**** Size for drum brakes includes length x width x thickness.

***** Manufacturer I.D., catalog for formulation designation and coefficient of friction classification.

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Body Type And/Or

Engine Displacement

Brakes - Service

HEAVY DUTY (OPTIONAL RPO 1LE)

Description			Front & Rear H/D Disc Brakes (Optional RPO 1LE)		
Manufacturer and brake type (std., opt., n.a.)	Front (disc or drum)		Disc		
	Rear (disc or drum)		Disc		
Valving type(prop, delay, metering, other)			Remote Proportioning Front/Rear Split		
Power brake (std., opt., n.a.)			Standard		
Booster type(rmt, intgrl, vac., hyd., etc.)			200 mm (7.87 in.) Tandem Vacuum		
Vacuum	Source (inline, pump, etc.)		Engine		
	Reservoir (volume cu. in.)		Not Applicable		
	Pump-type		"		
Traction Control	Operational speed range		"		
	Type engine intervention		"		
Anti-lock device	Front/rear (std., opt., n.a.)		"		
	Manufacturer		"		
	Type (electronic, mech.)		"		
	Number sensors or circuits		"		
	No. anti-lock hyd. circuits		"		
	Integral or add-on system		"		
	Yaw control (yes, no)		"		
	Hydraulic power source		"		
Effective area sq. cm. (sq. in.)*			717 (111.1)		
Gross Lng area sq. cm. (sq. in.)**(F/R)			792 (122.9)		
Swept area sq. cm. (sq. in.)**(F/R)			2980.74 (462.02)		
Rotor	Outer working diameter	F/R	F 301.25 mm (11.86 in.) R 296.0 mm (11.65 in.)		
	Inner working diameter	F/R	F 197.40 mm (7.77 in.) R 211.0 mm (8.31 in.)		
	Thickness	F/R	F 26.20 mm (1.03 in.) R 20.0 (0.79 in.)		
	Matl & type (vented/sld)	F/R	Cast Iron Vented		
Drum	Diameter & width	F/R	Not Applicable		
	Type and material	F/R	"		
Wheel cylinder bore			F 2 x 38 mm (1.50 in.) R 40.5 mm (1.59 in.)		
Master cylinder	Bore/stroke	F/R	24.0 mm (0.94 in.)		
Pedal arc ratio			3.25:1		
Line pressure at 445 N (100 lb.) pedal load kPa (psi)			--		
Lining clearance		F/R	Self-Adjusting		
Brake lining	Front wheel	Bonded or riveted		Integrally Molded	
		Rivet size		Not Available	
		Manufacturer		Japan Brake Industries	
		Lining code *****		CP26	
		Material		Semi-Metallic	
		*****	Pri. or out-brd	53.2 sq. cm. x 9.5 mm (8.25 sq. in. x .37 in.) Area x Thickness	
		Size	Sec. or in-brd	53.2 sq. cm. x 9.5 mm (8.25 sq. in. x .37 in.) Area x Thickness	
		Shoe thickness (no lng)		IB 6.0mm (.24 in.) OB 6.0 mm (.24 in.)	
	Rear wheel	Bonded or riveted		Integrally Molded	
		Manufacturer		Japan Brake Industries	
		Lining code *****		HB33	
		Material		Semi-Metallic	
		*****	Pri. or out-brd	28.4 sq. cm. x 8.2 mm (4.4 sq. in. x .32 in.) Area x Thickness	
		Size	Sec. or in-brd	28.4 sq. cm. x 8.2 mm (4.4 sq. in. x .32 in.) Area x Thickness	
		Shoe thickness (no lng)		IB 5.5 mm (.21 in.) OB 4.0 mm (.16 in.)	

* Excludes rivet holes, grooves, chamfers, etc. ** Includes rivet holes, grooves, chamfers, etc.
 **** Total swept area for four brakes. (Drum brake: Widest lining contact width for each brake x its contact circum.)
 (Disc brake: Square of Outer Working Dia. - Square of inner Working Dia. X $\pi/2$ for each brake.)
 **** Size for drum brakes includes length x width x thickness.
 **** Manufacturer I.D., catalog for formulation designation and coefficient of friction classification.

MVMA Specifications

Vehicle Line CAMARO

Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Body Type And/Or
Engine Displacement

SPORT COUPE

228

Tires And Wheels (Standard)

Tires	Size (load range, ply)		P215/65R-15	P215/65R-15 (+)
	Type (bias, radial, etc.)		Steel Belted Radial	
	Inflation pressure (cold) for recommended max. vehicle load	Front kPa (psi)	205 (30)	240 (35)
		Rear kPa (psi)	205 (30)	240 (35)
	Rev/mile-at 70 km/h(45mph)		498	605
Wheels	Type & material		Cast Aluminum	
	Rim (size & flange type)		15 x 7	
	Wheel offset		8.0	
	Attachment	Type (bolt, stud)	Stud	
		Circle diameter	120.7 mm (4.75 in.)	
Spare	Tire and wheel		15x4T125/70D15 (Except With G80 Axle)	
	Storage position & location (describe)		Vertically Adjacent To R.H. Quarter Panel	

Tires And Wheels (Optional)

Tire size (load range, ply)	P245/50ZR16 * (+)
Type (bias, radial, steel, nylon, etc.)	Steel Belted Radial
Wheel (type & material)	Cast Aluminum
Rim (size, flange type and offset)	16 x 8, Front: 0, Rear: 16
Tire size (load range, ply)	
Type (bias, radial, steel, nylon, etc.)	
Wheel (type & material)	
Rim (size, flange type and offset)	
Tire size (load range, ply)	
Type (bias, radial, steel, nylon, etc.)	
Wheel (type & material)	
Rim (size, flange type and offset)	
Tire size (load range, ply)	
Type (bias, radial, steel, nylon, etc.)	
Wheel (type & material)	
Rim (size, flange type and offset)	
Spare tire and wheel size	
(if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)	14x5; P195/75D14 (Inflatable) Used With G80 Axle And 15 Road Tire 15x5; P195/75D15 (Inflatable) Used With 16 in. Road Tire

Brakes - Parking

Type of control		Hand Lever Application - Push Button Release - Self-Adjusting
Location of control		Right Side Of Floor Console
If separate from service brakes	Type(internal or external)	--
	Drum diameter	--
	Lining size (length x width x thickness)	--

(*) Directional Tread. (+) Non "All Season" Tires.

MVMA Specifications

Vehicle Line CAMARO
 Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Body Type And/Or
 Engine Displacement

SPORT COUPE

Z28

Steering

Manual (std., opt., n.a.)			Not Available		
Power (std., opt., n.a.)			Standard		
Adjustable steering wheel/ column (tilt, telescope, other)	Type		Tilt - 5 Position		
	Manufacturer		Saginaw Division		
	(std., opt., n.a.)		Standard		
Wheel diameter ** (W9) SAE J1100	Manual		Not Available		
	Power		368 mm (14.5 in.)		
Turning diameter m (ft.)	Out-side front	Wall to wall (l. & r.)	12.59 (41.3)	12.95 (42.5)	
		Curb to curb (l. & r.)	11.73 (38.5)	12.28 (40.3)	
	In-side rear	Wall to wall (l. & r.)	Not Available		
		Curb to curb (l. & r.)	"		
Scrub Radius *			"		
Manual	Gear	Type	"		
		Manufacturer		"	
		Ratios	Gear	"	
			Overall	"	
	No. wheel turns(stop to stop)		"		
Power	Type (coaxial,elec.hyd.,etc.)		Hydraulic		
	Manufacturer		Saginaw Division		
	Gear	Type	Recirculating Ball		
		Ratios	Gear	14:1	12.7:1
			Overall	15.4:1	14:1
	Pump (drive)		Belt		
	No. wheel turns(stop to stop)		2.57	2.14	
Linkage	Type		Parallelogram		
	Location (front or rear of wheels, other)		Front		
	Tie Rods (one or two)		2		
Steering axis	Inclination at camber (deg.)		Not Available		
	Bear-ings (type)	Upper	Ball Stud		
		Lower	Ball Stud		
		Thrust	None		
Steering spindle/knuckle & joint type			Steering Knuckle With Spherical Joints		

* The horizontal distance in the front elevation between wheel centerline and kingpin (ball joint) axis at ground.

** See Page 22.

o MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

Body Type And/Or
Engine Displacement

ALL

Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	5.0 (+/-) .5
		Camber (deg.)	0.3 (+/-) .5
		Toe-in outside track - mm (in.)	0.0 (+/-) 0.2
	Service reset*	Caster (deg.)	#
		Camber (deg.)	"
		Toe-in - mm (in.)	"
	Periodic M.V. inspection	Caster (deg.)	"
		Camber (deg.)	"
		Toe-in - mm (in.)	"
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	Not Applicable
		Toe-in outside track - mm (in.)	
	Service reset*	Camber (deg.)	"
		Toe-in - mm (in.)	"
	Periodic M.V. inspection	Camber (deg.)	"
		Toe-in - mm (in.)	"

* Indicates pre-set, adjustable, trend set or other.

Same Caster, Camber & Toe Alignment For Sport Coupe & IROC-Z At Check, Reset, And Inspection

o Electrical - Instruments and Equipment

Speedometer	Type (analog, digital, std., opt.)	
	Trip odometer (std., opt., n.a.)	
Head-up display	Std., opt., not avail.	
	Type - Secondary, Opto-electronic	
	Speedometer	Digital
	Status/warn. indicators - Turn signals, high beam, low fuel, check gauges	
	Brightness control	Day/night mode, adj.
EGR maintenance indicator		Not Available
Charge indicator	Type	Electric Gauge
	Warning device (light, audible)	Not Available
Temperature indicator	Type	Electric Gauge
	Warning device	Not Available
Oil pressure indicator	Type	Electric Gauge
	Warning device	Not Available
Fuel indicator	Type	Electric Gauge With Pointer
	Warning device	Not Available
Wind-shield wiper	Type (standard)	Two Speed-Manual Control-Fluidic (Wet Arm)
	Type (optional)	Intermittent
	Blade length	454.4 mm (18 in.)
	Swept area - sq cm (sq in)	5792 (898.0)
Wind-shield washer	Type (standard)	Manual Control
	Type (optional)	Not Available
	Fluid level indicator	"
Rear window wiper, wiper/washer (std., opt., n.a.)		"
Horn	Type	Vibrator
	Number used	2
Other		Tachometer Standard. Upshift Teltale On Manual Transmission. Check Engine, Headlamp High Beam, Turn Signals, Brake Warning Light, Fasten Seat Belts, Security, SIR

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description
Engine Code

3.1 LITER V6 (191 CID)
MULTI-PORT FUEL INJECTION RPO LHO

Electrical - Supply System

Battery	Manufacturer	Delco Remy
	Model, std., (opt.)	75-525
	Voltage	12
	Amps at 0 deg F cold crnk	525
	Minutes-reserve capacity	90
	Amps/hrs. - 20 hr. rate	--
	Location	Engine Compartment Left Front
Alternator	Manufacturer	Delco Remy
	Rating(idle/max rpm drive)	100 Amps (36 Amps At Idle)
	Ratio (alt. crank/rev.)	2.75:1
	Output at idle (rpm, park)	
	Optional (type & rating)	None
Regulator	Type	Micro Circuit Units, Integral With Alternator

Electrical - Starting System

Motor	Manufacturer	Delco Remy
	Curr. dr. -29 (-20) deg C(F)	325
	Power rating kw (hp)	1.4 (1.9)
Motor drive	Engagement type	Positive Shift Solenoid
	Pinion engages from (front, rear)	
		Rear

Electrical - Ignition System

Type	Electronic (std, opt, n.a.)	Standard
	Other (specify)	High Energy Ignition
Coil	Manufacturer	Delco Remy
	Model	Separate
	Current	Engine stopped-A
		Engine idling - A
Spark plug	Manufacturer	AC/Rochester Products
	Model	R43TS
	Thread (mm)	14 x 1.25
	Tightening torque Newton meters (lb. ft.)	9-20 (7-15)
	Gap	1.14mm (.045 in.)
	Number per cylinder	1
Distributor	Manufacturer	Delco Remy
	Model	10455016

Electrical - Suppression

Locations & type	Internal Alternator Capacitor, Non-Metallic High-Tension Ignition Cables, Resistor Spark Plugs, Ignition Coil By-Pass Capacitor, Internal AC Blower Motor By-Pass Capacitor & A/C Compression Diode, With Radio Provisions; Engine To Dash Panel Ground Strap, And On "Heater Only" Blower Motors And Coax Capacitor.
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MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description
Engine Code

5.0 LITER V8 (305 CID)
ELECTRONIC FUEL INJECTION RPO L03

Electrical - Supply System

Battery	Manufacturer	Delco Remy
	Model, std., (opt.)	75.525 (Man.) 75-570 (Auto.)
	Voltage	12
	Amps at 0 deg F cold crnk	525 Base
	Minutes-reserve capacity	90 Base
	Amps/hrs. - 20 hr. rate	--
	Location	Engine Compartment
Alternator	Manufacturer	Delco Remy
	Rating (idle/max. rpm)	100 Amps (36 Amps At Idle)
	Ratio (alt. crank/rev.)	3.0:1
	Output at idle (rpm, park)	
	Optional (type & rating)	None
Regulator	Type	Micro Circuit Units, Integral With Alternator

Electrical - Starting System

Motor	Manufacturer	Delco Remy
	Curr.dr. -29 (-20) deg C(F)	420
	Power rating kw (hp)	2.3 (3.1)
Motor drive	Engagement type	Positive Shift Solenoid
	Pinion engages from (front, rear)	
		Rear

Electrical - Ignition System

Type	Electronic (std, opt, n.a.)	--
	Other (specify)	High Energy Ignition, (H.E.I.)
Coil	Manufacturer	Delco Remy
	Model	Separate
	Current	Engine stopped-A 0
		Engine idling - A 1
Spark plug	Manufacturer	AC
	Model	R45TS
	Thread (mm)	14 x 1.25
	Tightening torque Newton meters (lb. ft.)	9-20 (7-15)
	Gap	0.89 (0.035)
	Number per cylinder	1
Distributor	Manufacturer	Delco Remy
	Model	1103460

Electrical - Suppression

Locations & type	Internal Alternator Capacitor, Non-Metallic High-Tension Ignition Cables, Resistor Spark Plugs, Ignition Coil By-Pass Capacitor, Internal AC Blower Motor By-Pass Capacitor & A/C Compression Diode, With Radio Provisions; Hood Grounding Clip, Engine To Dash Panel Ground Strap, Fuse Block Capacitor And On "Heater Only" Blower Motors And Coax Capacitor.
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MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description
Engine Code

5.0 LITER V8 (305 CID)
TUNED PORT FUEL INJECTION RPO LB9

Electrical - Supply System

Battery	Manufacturer	Delco Remy
	Model, std., (opt.)	75.525 (Man.) 75-570 (Auto.)
	Voltage	12
	Amps at 0 deg F cold crnk	525 (a), 570 (b)
	Minutes-reserve capacity	75 (a), 90 (b)
	Amps/hrs. - 20 hr. rate	--
	Location	Engine Compartment Right Front
Alternator	Manufacturer	Delco Remy
	Rating (idle/max. rpm)	105 Amps (42 Amps At Idle)
	Ratio (alt. crank/rev.)	3.14:1
	Output at idle (rpm, park)	
	Optional (type & rating)	None
Regulator	Type	Micro Circuit Units, Integral With Alternator

Electrical - Starting System

Motor	Manufacturer	Delco Remy
	Curr. dr. -29 (-20) deg C(F)	305
	Power rating kw (hp)	1.9 (2.5)
Motor drive	Engagement type	Positive Shift Solenoid
	Pinion engages from (front, rear)	Rear

Electrical - Ignition System

Type	Electronic (std, opt, n.a.)	--
	Other (specify)	High Energy Ignition, (H.E.I.)
Coil	Manufacturer	Delco Remy
	Model	Remote Mounted
	Current	Engine stopped-A 0.5
		Engine idling - A 1.0
Spark plug	Manufacturer	AC
	Model	R45TS
	Thread (mm)	M14 x 1.25 SAE
	Tightening torque Newton meters (lb. ft.)	9-20 (7-15)
	Gap	0.89 (0.035")
	Number per cylinder	1
Distributor	Manufacturer	Delco Remy
	Model	1103698

Electrical - Suppression

Locations & type	Internal Alternator Capacitor, Non-Metallic High-Tension Ignition Cables, Resistor Spark Plugs, Ignition Coil By-Pass Capacitor, Internal AC Blower Motor By-Pass Capacitor & A/C Compression Diode, With Radio Provisions; Engine To Dash Panel Ground Strap, Fuse Block Capacitor And On "Heater Only" Blower Motors And Coax Capacitor.
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MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

5.7 LITER V8 (350 CID)

Engine Code

TUNED PORT FUEL INJECTION RPO L98

Electrical - Supply System

Battery	Manufacturer	Delco Remy
	Model, std., (opt.)	75 - 630
	Voltage	12
	Amps at 0 deg F cold crnk	630
	Minutes-reserve capacity	90
	Amps/hrs. - 20 hr. rate	--
	Location	Engine Compartment Right Front
Alternator	Manufacturer	Delco Remy
	Rating (idle/max. rpm)	105 Amps (42 Amps At Idle)
	Ratio (alt. crank/rev.)	3.14:1
	Output at idle (rpm, park)	
	Optional (type & rating)	None
Regulator	Type	Micro Circuit Units, Integral With Alternator

Electrical - Starting System

Motor	Manufacturer	Delco Remy
	Curr.dr. -28 (-20) deg C(F)	305
	Power rating kw (hp)	2.3 (3.1)
Motor drive	Engagement type	Positive Shift Solenoid
	Pinion engages from (front, rear)	
		Rear

Electrical - Ignition System

Type	Electronic (std, opt, n.a.)		--
	Other (specify)		High Energy Ignition, (H.E.I.)
Coil	Manufacturer		Delco Remy
	Model		Remote Mounted
	Current	Engine stopped-A	0.5
		Engine idling - A	1.0
Spark plug	Manufacturer		AC
	Model		R45TS
	Thread (mm)		M14 x 1.25 SAE
	Tightening torque Newton meters (lb. ft.)		9-20 (7-15)
	Gap		0.89 (0.035")
	Number per cylinder		1
Distributor	Manufacturer		Delco Remy
	Model		1103698

Electrical - Suppression

Locations & type	Internal Alternator Capacitor, Non-Metallic High-Tension Ignition Cables, Resistor Spark Plugs, Ignition Coil By-Pass Capacitor, Internal AC Blower Motor By-Pass Capacitor & A/C Compression Diode, With Radio Provisions; Hood Grounding Clip, Engine To Dash Panel Ground Strap, Fuse Block Capacitor And On "Heater Only" Blower Motors And Coax Capacitor.
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MVMA Specifications

Vehicle Line CAMARO
 Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Body Type

ALL

Body

Structure	Full Unitized Steel Construction. Cowl, Roof, Underbody And Body Panels Welded To Form Body Shell. Bolt-In Front Suspension Crossmember. Doors, Roof, Hood And Hatch Lid Double Panel Construction.
Bumper System Front - Rear	Body Color Soft Fascia, Honeycomb Absorber And Heavy Gauge Reinforcement Used Front And Rear.
Anti-Corrosion Treatment	Galvanized Metals, Zinc Rich Primers, Wax Coating And Other Corrosion Resistant Materials Used Throughout

Body - Miscellaneous Information

Type of finish (lacquer, enamel, other)		High Solids Acrylic Enamel Base Coat/Clear Coat
Hood	Material & mass	Steel
	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	Gas Strut Assist
	Release control (int., ext.)	Internal
Trunk lid	Material & mass	Steel
	Type (counterbalance, other)	Convertible Only (a)
	Internal release control (elec., mech., n.a.)	Convertible Only. Mechanical Release
Hatch-back lid	Material & mass	Glass/Steel
	Type (counterbalance, other)	Dual Gas Struts - Electric Final Closure Standard
	Internal release control (elec., mech., n.a.)	Electric Release Optional
Tailgate	Material & mass	Not Applicable
	Type (drop, lift, door)	"
	Internal release control (elec., mech., n.a.)	"
Vent window control (crank, friction, pivot, power)	Front	Not Available
	Rear	"
Window regulator type (cable, tape, flex, drive, etc.)	Front	Sector Drive
	Rear	Sector Drive
Seat cushion type (e.g., 60/40, bucket, bench, wire, foam, etc.)	Front	Bucket Molded Foam Pad
	Rear	"
	3rd seat	--
Seat back type (e.g., 60/40, bucket, bench, wire, foam, etc.)	Front	Reclining Bucket Molded Foam Pad
	Rear	Folding Bench. Split Back Optional Molded Foam Pad
	3rd seat	--
		(a) Convertible Folding Top Manual Standard. No Power Option

MVMA Specifications

Vehicle Line CAMARO
 Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Body Type

ALL

Restraint System

Seating Position			Left	Center	Right
Active	Type & description (lap & shoulder belt, lap belt, etc.)	First seat	Lap and Shoulder Belt		Lap & Shoulder Belt
		Second seat	Lap & Shoulder Belt		Lap & Shoulder Belt
	Standard/optional	Third seat			
Passive	Type & description (air bag, motorized-2-point belt, fixed belt, knee bolster, manual-lap belt)	First seat			
		Second seat			
	Standard/optional	Third seat			

Glass	SAE Ref No	COUPE	CONVERTIBLE
Windshield glass exposed surface area sq. cm. (sq. in.)	S1	8000.4 (1395.0)	
Side glass exposed surface area sq. cm. (sq. in.) - total 2- sides	S2	6519.8 (1010.6)	
Backlight glass exposed surface area sq. cm. (sq. in.)	S3	6232.0 (966.0)	3844.1 (598.8)
Total glass exposed surface area sq. cm. (sq. in.)	S4	21752.2 (3371.6)	19364.3 (3001.4)
Windshield glass (type)		Curved - Laminated Plate	
Side glass (type)		Curved - Tempered Plate	
Backlight glass (type)		Curved - Tempered Plate	Vinyl

Headlamps

Description - sealed beam, halogen, replaceable bulb, etc.	Sealed Beam - Four Lamp System
Shape	Rectangular
Lo-beam type (2A1, 2B1, 2C1, etc.)	2A
Quantity	2
Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.)	1A
Quantity	2

Frame

Type and description (separate frame, unitized frame, partially-unitized frame)	Full Integral Body Frame, Includes Bolted On Front Suspension Crossmember.
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MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Body Type

ALL

Convenience Equipment (standard, optional, n.a.)

Air conditioning (manual, auto, temp control)		Optional - Manual Control
Clock (digital, analog)		Digital, In Radio
Compass / thermometer		Not Available
Console (floor, overhead)		Floor Standard, Overhead Not Available
Defroster, elec. backlight		Optional (Not Available On Convertible)
Electronic	Diagnostic monitor (integrated, individual)	Not Available
	Instrument cluster (list instruments)	Tachometer, Speedometer, Trip Odometer, Fuel, Oil Pressure*, Temp, Volt, Seat Belt Warning, Engine Warning, Inflatable Restraint Warning
	Keyless entry	Not Available
	Tripminder (avg. spd. fuel)	"
	Voice alert (list items)	"
	Other	"
Fuel door lock (remote, key, electric)		Not Available
Lamps	Auto head on/off delay, dimming	"
	Cornering	"
	Courtesy (map, reading)	Standard (Under Dash); Dual Lighted Mirror Opt.-Std. On Conv.
	Door lock, ignition	Not Available
	Engine compartment	Standard
	Fog	Standard ZR8, Not Available On Sport Coupe
	Glove compartment	Standard (Compartment In Floor Console)
	Trunk	Standard
	Illuminated entry system (list lamps, activation)	Not Available
	Other	
Mirrors	Day / night (auto, man.)	Standard - Manual
	L.H. (remote, pwr., heated)	Remote Standard, Power Optional - Not Heated.
	R.H. (convex, rmt, pwr, htd)	Manual Standard, Power Optional. Both Convex - Not Heated.
	Visor vanity (RH/LH illum.)	RH, Non-Illuminated: NA Sport Coupe; Std. Z28
Navigation system (describe)		
Prkg. brake-auto release (warn. light)		Hand Release, Warning Light Standard

Radio Options:

* Full Gauge Package Standard.

MVMA Specifications

Vehicle Line CAMARO
 Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Engine Description

Engine Code

ALL

Convenience Equipment (standard, optional, n.a.)

Power equipment	Deck lid(release, pull down)		Opt. - Electric, Door Locks And Rear Hatch Release
	Door locks (manual, auto., describe system)		Manual - Standard Electric - Optional
	Seats	2 - 4 - 6 way, etc.	Optional 6-Way Power Driver's Seat
		Reclining(R.H., L.H.)	Reclining Both Front Seats
		Memory (R.H., L.H., preset, recline)	Not Available
		Support (lumbar, hip, thigh, etc.)	"
		Heated (R.H., L.H., other)	"
	Side windows		Optional
	Vent windows		Not Available
	Rear windows		"
Radio systems	Antenna (location, whip, w/shield, power)		R. F. Fender Fixed Mast Standard
	Stan.	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	AM/FM Stereo W/Seek, Scan & Digital Clock
	Opt.		Electronically Tuned AM/FM Stereo Radio W/Seek-Scan, Stereo Cassette Tape W/Search And Repeat, And Digital Clock W/Extended Range Sound System. Delco/Bose Gold Series Electronically Tuned AM/FM Stereo Radio W/Seek-Scan, Stereo Cassette Tape And Digital Clock W/Extended Range Sound System. Electronically Tuned AM/FM Stereo Radio W/Seek-Scan, Compact Disc Player And Digital Clock W/Extended Range Sound System.
	Speaker (number, location)		Four-Two In Instrument Panel, Two In Roof Sail Pan Convertible In Quarter Sidewalls
	Roof: open air or fixed (flip-up, sliding, "T")		"T" Type, Optional
Speed control device		Cruise Control, Optional	
Speed warn. dev. (light, buzzer, etc.)		Not Available	
Tachometer (rpm)		Standard	
Telephone system (describe)		Not Available	
Theft deterrent system		Lock Mounted On Steering Column; Locks Steering Wheel, Transmission, Shift Lever And Ignition. Electronic System (VATS II) Standard	

o Trailer Towing

Towing capable	Yes / No	
Engine/transmission/axle	Std / Opt	
Tow class (I, II, III)*	Std / Opt	
Max. gross trailer wgt. (lbs.)	Std / Opt	
Max. trailer tongue load (lbs.)	Std / Opt	
Towing package available	Yes / No	

* Class I - 2,000 lbs. Class II - 3,500 lbs. Class III - 5,000 lbs.

MVMA Specifications

Vehicle Line **CAMARO**

Model Year **1991** Issued **12-89** Revised(*) **4-90**

METRIC (U.S. Customary)

Vehicle Dimensions

See Key Sheets for definitions

All dimensions to ground are for comparative purposes only. Dimensions are to be shown for all base body models of each vehicle line. SAE Ref. no. refers to the definition published in SAE Recommended Practice J1100 "Motor Vehicle Dimensions," unless otherwise specified.

Body Type

ALL

Width

SAE Ref. No.

Tread (front)	W101	1525 (60.0)
Tread (rear)	W102	1548 (60.9)
Vehicle width	W103	1840 (72.4)
Body width at Sg RP (front)	W117	1830 (72.0)
Vehicle width (front doors open)	W120	3939 (155.1)
Vehicle width (rear doors open)	W121	--
Tumble-home (deg.)	W122	31.5
Outside mirror width	W410	1849 (72.8)

Length

Wheelbase	L101	2566 (101.0)
Vehicle length	L103	4891 (192.6)
Overhang (front)	L104	1192 (46.9)
Overhang (rear)	L105	1133 (44.6)
Upper structure length	L123	2669 (105.1)
Rear wheel C/L 'X' coordinate	L127	4138 (163.0)

Height **

Passenger distribution (front/rear)	PD1,2,3	2-2	**
Trunk/cargo load			**
Vehicle height	H101	1279 (50.4)	
Cowl point to ground	H114	904 (35.6)	
Deck point to ground	H138	915 (36.0)	
Rocker panel-front to ground	H112	210 (8.3)	
Rocker panel-rear to ground	H111	197 (7.8)	
Windshield slope angle (deg.)	H122	62.0	
Backlight slope angle (deg.)	H121	71.0	

Ground Clearance **

Front bumper to ground	H102	347 (13.7)
Rear bumper to ground	H104	329 (13.0)
Bumper to ground front at curb mass (wt.)	H103	359 (14.1)
Bumper to ground rear at curb mass (wt.)	H105	344 (13.5)
Angle of approach (deg.)	H106	12.2
Angle of departure (deg.)	H107	18.8
Ramp breakover angle (deg.)	H147	13.4
Axle differential to ground (front/rear)	H153	172 (6.7)
Min. running ground clearance	H156	148 (5.8)
Location of min. run. grd. clear.		Front Crossmember

** All Vehicle Height And Ground Clearance Are Made Using EPA Loaded Vehicle Weight, Loading Conditions.

EPA Loaded Vehicle Weight is the Base Vehicle Weight Plus All Coolant and Fluids Necessary For Operation Plus 100% Of The Fuel Capacity, Plus The Weight Of All Options And Accessories Which Weigh Three Pounds Or More And Which Are Sold On At Least 33% Of The Car Line, Plus Two Occupants.

All linear dimensions are in millimeters (inches).

MVMA Specifications

Vehicle Line CAMARO

Model Year 1991 Issued 12-89 Revised(*) 4-90

METRIC (U.S. Customary)

Vehicle Dimensions

See Key Sheets for Definitions

Body Type

ALL

○ Front Compartment

SAE Ref. No.

SpRP front, 'X' coordinate	L31	3050 (124.0)
Effective head room	H81	940 (37.0) Coupes, 942 (37.1) Convertible
Max. eff. leg room (accelerator)	L34	1092 (43.0) Coupes, 1089 (42.8) Convertible
SpRP to heel point	H30	181 (7.1)
SpRP to heel point	L53	911 (35.9)
Back angle (deg.)	L40	26.5
Hip angle (deg.)	L42	88.0
Knee angle (deg.)	L44	133.0
Foot angle (deg.)	L46	87.0
Design H-point front travel	L17	182 (7.6)
Normal driving & riding seat track trvl.	L23	171 (6.7)
Shoulder room	W3	1469 (57.8) Coupes, 1488 (58.6) Convertible
Hip room	W5	1428 (56.2) Coupes, 1342 (52.8) Convertible
*** Upper body opening to ground	H50	--
Steering wheel maximum diameter*	W9	368 (14.5)
Steering wheel angle (deg.)	H18	18.0
Accel. heel pt. to steer. whl. cntr	L11	Not Available
Accel. heel pt. to steer. whl. cntr	H17	"
Undepressed floor covering thickness	H67	16 (0.6)

Front Compartment Int. Dim. Are Measured With The Seating Ref. Pt.

(SpRP) mm Forward And mm Upward of Rearmost Position.

○ Rear Compartment

SpRP point couple distance	L50	668 (26.3)
Effective head room	H83	905 (35.6) Coupes, 918 (36.1) Convertible
Min. effective leg room	L51	733 (28.9) Coupes, 719 (28.3) Convertible
SpRP (second to heel)	H31	183 (7.2)
Knee clearance	L48	-15 (-0.6)
Shoulder room	W4	1430 (56.3) Coupes, 1222 (48.1) Convertible
Hip room	W6	1087 (42.8) Coupes, 1116 (43.9) Convertible
*** Upper body opening to ground	H51	--
Back angle (deg.)	L41	28.0
Hip angle (deg.)	L43	68.0
Knee angle (deg.)	L45	66.5
Foot angle (deg.)	L47	116.5
Depressed floor covering thickness	H73	18 (0.7)

Luggage Compartment

Usable luggage capacity L (cu. ft.)	V1	350 (12.4)	132 (5.2) Convertible
*** Lifter height	H195	881 (34.7)	

Interior Volumes (EPA Classification)

Vehicle class		Sub-Compact
Interior volume index (cu. ft.)**		96.6
Trunk / cargo index (cu. ft.)		12.4

* See page 14.

** Includes passenger and trunk / cargo index - see definition page 32.

*** EPA Loaded Vehicle Weight, Loading Conditions

All Linear Dimensions Are In Millimeters (Inches).

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Vehicle Dimensions

See Key Sheets for Definitions

Body Type

ALL

Station Wagon - Third Seat

SAE Ref. No.

(NOT APPLICABLE)

Seat facing direction	SD1	
SgRP couple distance	L85	
Shoulder room	W85	
Hip Room	W88	
Effective leg room	L86	
Effective head room	H88	
SgRP to heel point	H87	
Knee clearance	L87	
Back angle	L88	
Hip angle	L89	
Knee angle	L90	
Foot angle	L91	

Station Wagon - Cargo Space

(NOT APPLICABLE)

Cargo length (open front)	L200	
Cargo length (open second)	L201	
Cargo length (closed front)	L202	
Cargo length (closed second)	L203	
Cargo length at belt (front)	L204	
Cargo length at belt (second)	L205	
Cargo width (wheelhouse)	W201	
Rear opening width at floor	W203	
Opening width at belt	W204	
Min. rear opening width above belt	W205	
Cargo height	H201	
Rear opening height	H202	
* Tailgate to ground height	H250	
Front seat back to load floor height	H197	
Cargo volume index cu. m (cu. ft.)	V2	
Hidden cargo vol. index cu. m (cu. ft.)	V4	
Cargo volume index-rear of 2-seat	V10	

Hatchback - Cargo Space

Cargo length at front seatback height	L208	895 (35.2)
Cargo length at floor (front)	L209	1556 (61.3)
Cargo length at second seatback height	L210	610 (24.0)
Cargo length at floor (second)	L211	845 (33.3)
Front seatback to load floor height	H197	355 (14.0)
Second seatback to load floor height	H198	242 (9.5)
Cargo volume index cu. m (cu. ft.)	V3	879 (31.0)
Hidden cargo vol. index cu. m (cu. ft.)	V4	--
Cargo volume index-rear of 2-seat	V11	350 (12.4)

* EPA Loaded Vehicle Weight, Loading Conditions

All Linear Dimensions Are in Millimeters (Inches).

MVMA Specifications

Vehicle Line CAMARO
Model Year 1991 Issued 12-89 Revised(*)

METRIC (U.S. Customary)

Body Type

ALL

Vehicle Fiducial Marks

Fiducial Mark Number*		Define Coordinate Location
Front		X - Fiducial Mark To Vertical Zero Grid Line - Front Measured Horizontally, From The Zero Grid Line To The Front Fiducial Mark Located On Top Of The Front Seat Adjuster Mounting Bolt.
		Y - Fiducial Mark To Centerline Of Car - Front, Width Measurement Made From Centerline Car To Fiducial Mark Located On Top Of The Front Seat Adjuster Mounting Bolt.
		Z - Fiducial Mark To Horizontal Zero Grid Line - Front, Measured Vertically From Zero Grid Line To Front Fiducial Mark Located On Top Of The Front Seat Adjuster Mounting Bolt.
Rear		X - Fiducial Mark To Vertical Zero Grid Line - Rear, Measured Horizontally From The Zero Grid Line To Rear Fiducial Mark Located On The Rail (Compartment Pan - Longitudinal).
		X - Fiducial Mark To Centerline Of Car - Rear, Width Measurement Made From Centerline Of Car To Fiducial Mark Located On The Rail (Compartment Pan - Longitudinal).
		Z - Fiducial Mark To Horizontal Zero Grid Line - Rear, Measured Vertically From The Zero Grid Line to Rear Fiducial Mark Located On The Rail (Compartment Pan - Longitudinal).
Fiducial Mark Number		
Front	W21*	540 (21.3)
	L54*	688 (27.1)*
	H81*	-32 (-1.3)#
	H181*	296 (11.7)
	** H183*	284 (11.2)
Rear	W22*	548 (21.6)
	L85*	2815 (110.8)*
	H82*	96 (3.8)#
	H182*	417 (16.4)
	** H184*	407 (16.0)
		* Vertical Base Grid 2000 mm Line # Horizontal Base Grid 500 mm Line

* Reference - SAE Recommended Practice, J182, Motor Vehicle Fiducial Marks.

** EPA Loaded Vehicle Weight, Loading Conditions.

All Linear Dimensions Are In Millimeters (Inches).

o MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line CAMARO

Model Year	1991	Issued	12-89	Revised(*)	4-90
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[illegible]

* Reference - SAE J1100 Motor vehicle dimensions, curb weight definition.

Refer to ETWC code legend below for test weight class.

ETWC LEGEND

A	1000	I	2000	Q	3000	4000	Z	4000
B	1123	J	2123	R	3123	4250	Y	4250
C	1250	K	2250	S	3250	4500	AA	4500
D	1375	L	2375	T	3375	4750	BB	4750
E	1500	M	2500	U	3500	5000	CC	5000
F	1625	N	2625	V	3625	5250	DD	5250
G	1750	O	2750	W	3750	5500	EE	5500
H	1875	P	2875	X	3875	5750	FF	5750

^{***} Shipping Mass (weight) = Curb Weight Less:

35 (77)

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line CAMARO

Model Year 1991 Issued 12-89 Revised(*) 4-90

		Optional Equipment Differential Mass (weight)*			
Code	Equipment	MASS, kg. (lb.)			Remarks Restrictions, Requirements
		Front	Rear	Total	
AC3	Power Seat, 6-Way (Driver's Side Only)	1.6 (3.5)	2.0 (4.4)	3.6 (7.9)	
AM9	Split Back, Fold Down Rear Seat	-.4 (-.9)	-1.2 (-2.6)	-1.6 (-3.5)	
AU3	Power Door Locks - Electric	.8 (1.8)	1.0 (2.2)	1.8 (4.0)	
A31	Power Windows - Electric	1.2 (2.6)	1.0 (2.2)	2.2 (4.8)	
A90	Lock Release - Liftback Electric	.2 (0.4)	.4 (0.9)	.6 (1.3)	Not Available Convertible
B34	Mats, Front Floor - Color-Keyed Carpet	.8 (1.8)	.4 (0.9)	1.2 (2.6)	
B35	Mats, Rear Floor - Color-Keyed Carpet	.4 (0.9)	.4 (0.9)	.8 (1.8)	
B48	Deluxe Luggage Compartment Trim	0 (0)	.4 (.9)	.4 (.9)	
B84	Moldings - Body Side	.2 (0.4)	.4 (0.9)	.6 (1.3)	
CC1	Roof - Removable Hatch Panels - Glass	5.8 (12.8)	9.6 (21.2)	15.4 (34.0)	Includes Storage Bag And Attaching Hardware
CD4	Windshield Washer And Wiper (Pulse System)	.2 (0.4)	0 (0)	.2 (0.4)	Optional
C49	Defogger - Rear Window (Electric)	0 (0)	.4 (0.9)	.4 (0.9)	

* Also see Engine - General Section for dressed engine mass (weight).

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line

CAMARO

Model Year

1991

Issued

12-89

Revised(*)

4-90

		Optional Equipment Differential Mass (weight)*			
Code	Equipment	MASS, kg. (lb.)			Remarks Restrictions, Requirements
		Front	Rear	Total	
C60	Air Conditioning (Manual Control)	16.8 (36.9)	2.2 (4.8)	19.0 (41.7)	With RPO LH0 Engine Sport Coupe
		18.0 (39.6)	1.4 (3.0)	19.4 (42.6)	With RPO LB9 & MD8
		19.4 (42.8)	1.6 (3.5)	21.0 (46.3)	With RPO LO3 & MD8
		18.0 (39.7)	1.4 (3.0)	19.4 (42.7)	
		19.4 (42.8)	1.6 (3.6)	21.0 (46.3)	
DE1	Sunshade - Back Window	-.6 (-1.3)	9.0 (19.8)	8.4 (18.5)	
D34	Visor Vanity Mirror - Passenger Side	.2 (0.4)	0 (0)	.2 (0.4)	
DG7	Sport Mirrors - Electric. Remote Control R.H. & L.H. Controls On L.H. Door Panel	.4 (0.9)	.2 (0.4)	.6 (1.3)	
D42	Rear Compartment Cargo Area Cover	-.4 (-0.9)	2.4 (5.3)	2.0 (4.4)	Not Available Convertible
F41	Ride And Handling Suspension System	.4 (0.9)	.4 (0.9)	.8 (1.8)	
G80	Limited Slip Rear Axle	0 (0)	2.0 (4.4)	2.0 (4.4)	
J65	Power 4-Wheel Disc Brakes	0 (0)	14.0 (30.8)	14.0 (30.8)	IROC-Z With L98 Only

* Also see Engine - General Section for dressed engine mass (weight).

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line **CAMARO**

Model Year **1991** Issued **12-89** Revised(*) **4-90**

		Optional Equipment Differential Mass (weight)*			
Code	Equipment	MASS, kg. (lb.)			Remarks Restrictions, Requirements
		Front	Rear	Total	
KC4	Engine Oil Cooler	3.2 (7.0)	-4 (-0.9)	2.8 (6.1)	
K34	Cruise Control - Three Mode With Resume Feature	2.4 (5.3)	0 (0)	2.4 (5.3)	All Models Except LHO
	(Available On Manual Or Automatic Transmissions)	2.0 (4.4)	0 (0)	2.0 (4.4)	With LHO
LB9	5.0 Liter V8 (305 CID)	68.4 (150.5)	7.8 (17.2)	76.2 (167.7)	Z28 With M39/MK6
		63.8 (140.4)	6.4 (14.1)	70.2 (154.5)	Z28 With MD8
LO3	5.0 Liter V8 (305 CID)	70.2 (154.8)	2.2 (4.8)	72.4 (159.7)	RS With M39
		53.4 (117.7)	1.8 (4.0)	55.2 (121.7)	RS With MD8
L98	5.7 Liter V8 (350 CID)	68.0 (149.6)	6.8 (15.0)	74.8 (164.6)	Z28 With MD8
M39	5-Speed Manual Transmission	-4 (-0.9)	0 (0)	-4 (-0.9)	
MD8	Automatic Transmission Overdrive	12.8 (28.2)	4.4 (9.7)	17.2 (37.9)	With LHO-V6 Engine, With RS
		31.8 (70.0)	10.0 (22.0)	41.8 (92.0)	With Convertible
		31.4 (69.2)	10.0 (22.0)	41.4 (91.2)	With LO3-V8 Engine, RS

* Also see Engine - General Section for dressed engine mass (weight).

MVMA Specifications

METRIC (U.S. Customary)

Vehicle Line	CAMARO			
Model Year	1991	Issued	12-89	Revised(*) 4-90

		Optional Equipment Differential Mass (weight)*			
Code	Equipment	MASS, kg. (lb.)			Remarks Restrictions, Requirements
		Front	Rear	Total	
MD8	Automatic Transmission Overdrive	31.4 (69.2)	10.0 (22.0)	41.4 (91.2)	With LB9 & L98 V8 Engines, Z28 Only
N10	Dual Exhaust	-2 (-0.4)	2.0 (4.4)	1.8 (4.0)	
N33	Steering Column - Tilt	.8 (1.8)	.2 (0.4)	1.0 (2.2)	
TR9	Lamp Group	.2 (0.4)	0 (0)	.2 (0.4)	
T96	Fog Lamps (W/Z04)	1.6 (3.5)	-2 (-0.4)	1.4 (3.1)	
UA1	Battery - Heavy Duty	0.2 (0.4)	0 (0)	0.2 (0.4)	LH0/L03
		2.2 (4.9)	-0.4 (-0.9)	1.8 (4.0)	LB9
UL5	Radio - Delete	-2.0 (-4.4)	-.6 (-1.3)	-2.6 (-5.7)	
UN6	Extended Range Sound System AM/FM Stereo Radio, Clock, Cassette, ETR	0 (0)	0 (0)	0 (0)	Optional
UQ4	Audio System - BOSE Speakers	2.0 (4.4)	4.0 (8.8)	6.0 (13.2)	
UU8	Extended Range Sound System AM/FM Stereo Cass.Tape, Dolby Sound, Digital Clock, ETR	0.6 (1.3)	0.2 (0.4)	0.8 (1.7)	Optional Except Convertible
U1C	Extended Range Sound System AM/FM Stereo Radio, Compact Disc, Clock, ETR	.8 (1.8)	.4 (0.9)	1.2 (2.7)	

* Also see Engine - General Section for dressed engine mass (weight).

METRIC (U.S. Customary)

Vehicle Line

CAMARO

Model Year

1991

Issued

12-89

Revised(*)

4-90

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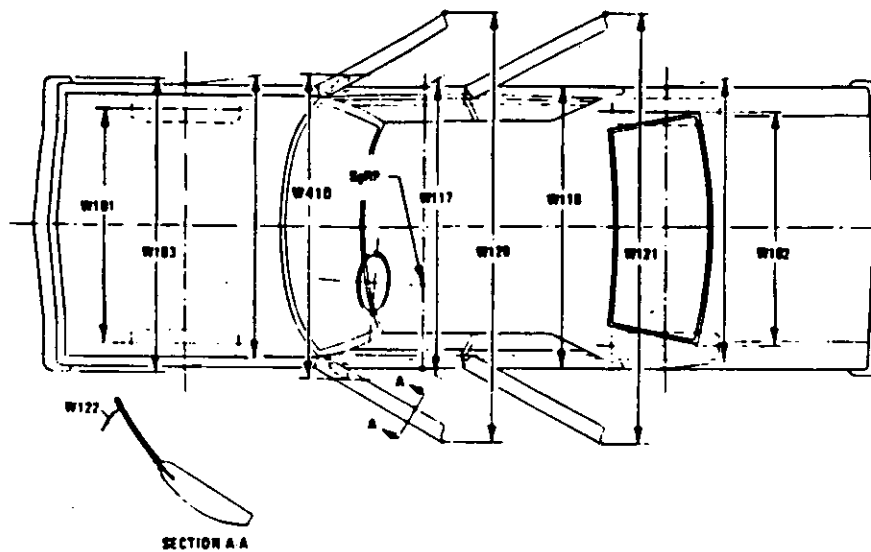
* Also see Engine - General Section for dressed engine mass (weight).

MVMA Specifications

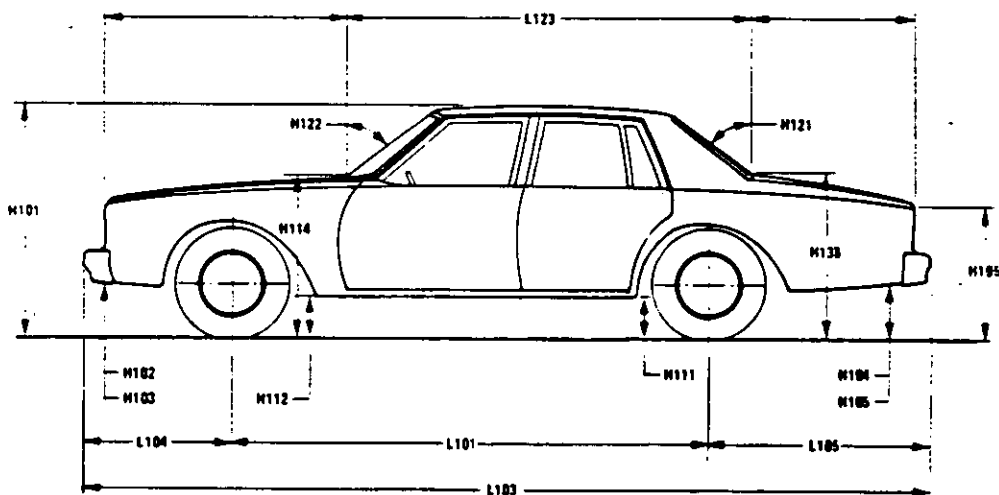
METRIC (U.S. Customary)

Exterior Vehicle And Body Dimensions – Key Sheet

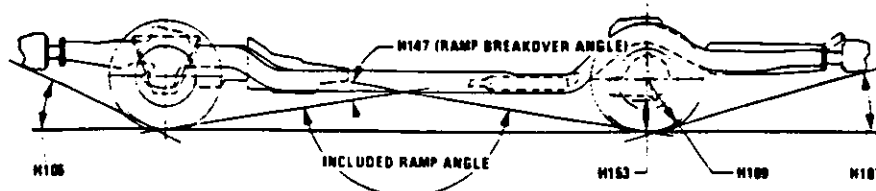
Exterior Width



Exterior Length & Height



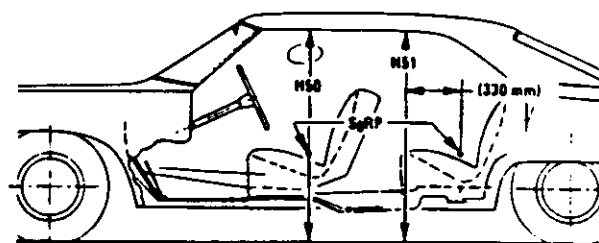
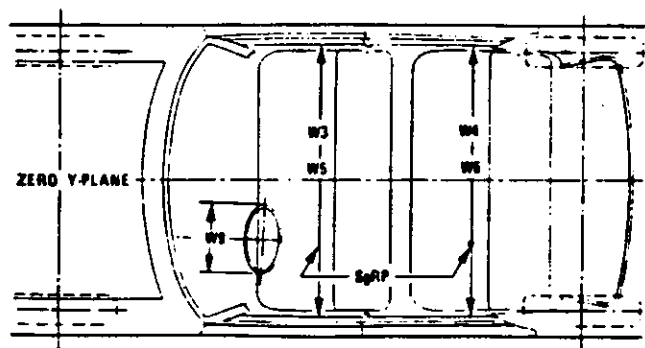
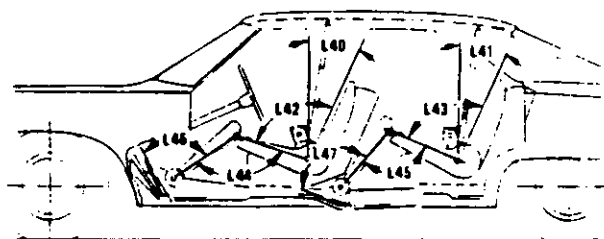
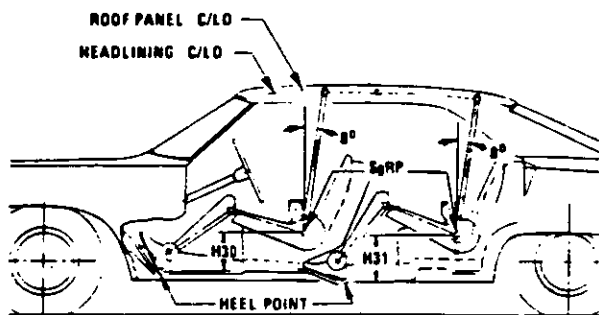
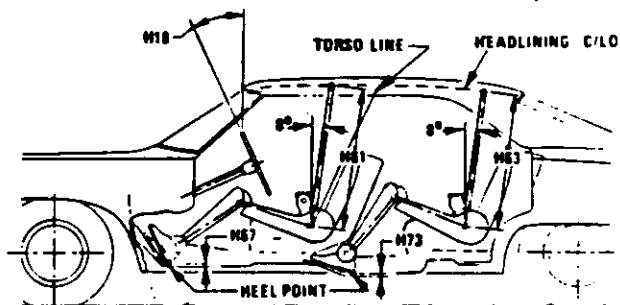
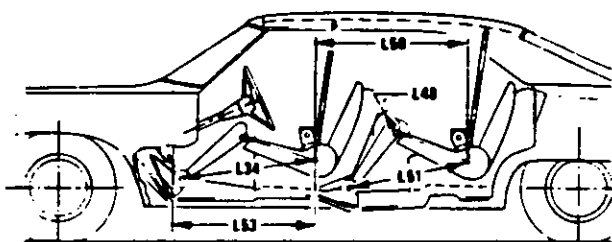
Exterior Ground Clearance



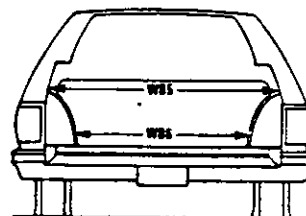
MVMA Specifications Form

METRIC (U.S. Customary)

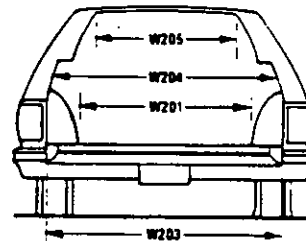
Interior Vehicle And Body Dimensions - Key Sheet



METRIC (U.S. Customary)



Technical drawing of a vehicle side profile. Dimensions are indicated by arrows and labels: L204 (overall length), L205 (length to rear window), M201 (height to rear window top), M202 (height to roof peak), M203 (height to rear window top from ground), L203 (length to rear wheel center), L201 (length to rear bumper), L200 (overall length to rear bumper), M200 (height to rear bumper top), and M250 (height to rear bumper top from ground).



Technical drawing of a car body side profile. Dimensions shown include L200 (wheelbase), L210 (rear overhang), M107 (height to rear window line), M108 (height to rear wheel center), and L211 (total length).

MVMA-91

MVMA Specifications

METRIC (U.S. Customary)

Exterior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

Seating Reference Point

SEATING REFERENCE POINT means the manufacturer's design reference point which –

- (a) Establishes the rearmost normal design driving or riding position of each designated seating position in a vehicle;
- (b) Has coordinates established relative to the design vehicle structure;
- (c) Simulates the position of the pivot center of the human torso and thigh; and
- (d) Is the reference point employed to position the two dimensional templates described in SAE Recommended Practice J826, "Devices for Use in Defining and Measuring Vehicle Seating Accommodations."

Width Dimensions

- W101 TREAD – FRONT. The dimension measured between the tire centerlines at the ground.
- W102 TREAD – REAR. The dimension measured between the tire centerlines at the ground. In case of dual wheels, the dimension will be measured to the centerline of tire and wheel assemblies.
- W103 VEHICLE WIDTH. The maximum dimension measured between the widest point on the vehicle, excluding exterior mirrors, flexible mud flaps, marker lamps, but including bumpers, moldings, sheet metal protrusions or dual wheels, if standard equipment.
- W117 BODY WIDTH AT SgRP – FRONT. The dimension measured laterally between the widest points on the body at the SgRP-front, excluding door handles, applied moldings, or appliques.
- W120 VEHICLE WIDTH – FRONT DOORS OPEN. The dimension measured between the widest point on the front doors in maximum hold-open position.
- W121 VEHICLE WIDTH – REAR DOORS OPEN. The dimension measured between the widest point on the rear doors in maximum hold-open position. For vehicles with a rear door on only one side, this dimension is to the zero "Y" plane.
- W122 TUMBLE – HOME. STRAIGHT SIDE GLASS. The angle measured from a vertical to the outside surface of the front door glass at the SgRP "X" plane.
CURVED SIDE GLASS. The angle measured from a vertical to a chord extending from the upper DLO to the lower DLO at the outside surface of the front door glass at the front SgRP "X" plane.
- W410 OUTSIDE MIRROR WIDTH. The dimension between the widest point on the outside mirrors. The standard right and left mirror adjusted for normal driving will be shown unless otherwise noted. When only one outside mirror is standard, the dimension will be to the zero "Y" plane.

Length Dimensions

- L101 WHEELBASE (WB). The dimension measured longitudinally between front and rear wheel centerlines. In case of dual rear axles, the dimension shall be to the midpoint of the centerlines of the rear wheels.
- L103 VEHICLE LENGTH. The maximum dimension measured longitudinally between the foremost point and the rearmost point on the vehicle, including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.
- L104 OVERHAND – FRONT. The dimension measured longitudinally from the centerline of the front wheels to the foremost point on the vehicle including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.
- L105 OVERHANG – REAR. The dimension measured longitudinally from the centerline of the rear wheels; or in the case of dual rear axles, the dimension shall be the midpoint of the centerlines of the rear wheels, to the rearmost point on the vehicle including rear bumpers, bumper guards, tow hooks and rub strips, if standard equipment.

- L123 UPPER STRUCTURE LENGTH. The dimension measured longitudinally from the cowl point to the deck point.

- L127 REAR WHEEL CENTERLINE "X" COORDINATE or in the case of dual rear axles, the coordinate shall be the midpoint of the distance between the rear axle centerlines.

Height Dimensions

- H101 VEHICLE HEIGHT. The dimension measured vertically from the highest point on the vehicle body to ground.
- H111 ROCKER PANEL – REAR TO GROUND. The dimension measured vertically from the bottom of the rocker or side quarter panel at the front of the rear wheel opening, excluding flanges, to ground.
- H112 ROCKER PANEL – FRONT TO GROUND. The dimension measured vertically from the foremost point on the bottom of the rocker panels, excluding flanges, to ground.
- H114 COWL POINT TO GROUND. Measured at zero "Y" plane.
- H121 BACKLIGHT SLOPE ANGLE. The angle between the vertical reference line and the surface of backlight at vehicle zero "Y" plane. For curve backlight, the angle is to chord of backlight arc from lower DLO to upper DLO.
- H122 WINDSHIELD SLOPE ANGLE. The angle between the vertical reference line and a chord of the windshield arc running from the lower DLO to the upper DLO at the vehicle zero "Y" plane. In the case of wrap over glass, the angle to be measured will be formed by a chord 457 mm (18.0 in.) long drawn from the lower DLO to the intersecting point on the windshield.
- H138 DECK POINT TO GROUND. Measured at zero "Y" plane.
- H109 STATIC LOAD – TIRE RADIUS – REAR. Specified by the manufacturer in accordance with composite TIRE SECTION STANDARD.

Ground Clearance Dimensions

- H102 FRONT BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the front bumper to ground, including bumper guards, if standard equipment.
- H103 FRONT BUMPER TO GROUND – CURB MASS (WT.). Measured in the same manner as H102.
- H104 REAR BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the rear bumper to ground, including bumper guards, if standard equipment.
- H105 REAR BUMPER TO GROUND – CURB MASS (WT.). Measured in the same manner as H104.
- H106 ANGLE OF APPROACH. The angle measured between a line tangent to the front tire static loaded radius arc and the initial point of structural interference forward of the front tire to ground. The limiting structural component shall be designated.
- H107 ANGLE OF DEPARTURE. The angle measured between a line tangent to the rear tire static loaded radius arc and the initial point structural interference rearward of the rear tire to ground. The limiting component shall be designated.
- H147 RAMP BREAKOVER ANGLE. The angle measured between two lines tangent to the front and rear tire static loaded radius and intersecting at a point on the underside of the vehicle which defines the largest ramp over which the vehicle can roll.
- H153 REAR AXLE DIFFERENTIAL TO GROUND. The minimum dimension measured from the rear axle differential to ground.
- H156 MINIMUM RUNNING GROUND CLEARANCE. The minimum dimension measured from the sprung vehicle to ground. Specify location.

MVMA Specifications

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

Glass Areas

- S1 Windshield area.
- S2 Side windows area. Includes the front door, rear door, vents, and rear quarter windows on both sides of the vehicle.
- S3 Backlight areas.
- S4 Total area. Total of all areas (S1 + S2 + S3).

Fiducial Mark Dimensions

Fiducial Mark – Number 1

- L54 "X" coordinate.
- W21 "Y" coordinate.
- H81 "Z" coordinate.
- H161 Height "Z" coordinate to ground at curb weight.
- H163 Height "Z" coordinate to ground.

Fiducial Mark – Number 2

- L55 "X" coordinate.
- W22 "Y" coordinate.
- W82 "Z" coordinate.
- H162 Height "Z" coordinate to ground at curb weight.
- H164 Height "Z" coordinate to ground.

Front Compartment Dimensions

- L11 ACCELERATOR HEEL POINT TO STEERING WHEEL CENTER. The dimension measured horizontally from the AHP to the intersection of the steering column centerline and a plane tangent to the upper surface of the steering wheel rim.
- L17 DESIGN H-POINT – FRONT TRAVEL. The dimension measured horizontally between the design H-point – front in the foremost and rearmost seat track positions. (See SAE J1100)
- L23 NORMAL DRIVING AND RIDING SEAT TRACK TRAVEL. The dimension measured horizontally between a point on the design H-point travel line from the SgRP to the displaced point on the design H-point travel line with the seat moved to the foremost seat position, but not to include seat track travel used for purposes other than normal driving and riding positions. (See SAE J1100).
- L31 SgRP – FRONT. "X" COORDINATED.
- L34 MAXIMUM EFFECTIVE LEG ROOM – ACCELERATOR. The dimension measured along a line from the ankle pivot center to the SgRP – front plus 254 mm (10.0 in.) measured with right foot on the undepressed accelerator pedal. For vehicles with SgRP to heel (H30) greater than 18 in., the accelerator pedal may be depressed as specified by the manufacturer. If the accelerator is depressed, the manufacturer shall place foot flat on pedal and note the depression of the pedal.
- L-40 BACK ANGLE – FRONT. The angle measured between a vertical line through the SgRP – front and the torso line. If the seatback is adjustable, use the normal driving and riding position specified by the manufacturer.
- L-42 HIP ANGLE – FRONT. The angle measured between torso line and thigh centerline.
- L44 KNEE ANGLE – FRONT. The angle measured between thigh centerline and lower leg centerline measured on the right leg.
- L46 FOOT ANGLE – FRONT. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the bare foot flesh line measured on the right leg. Ref SAE J826.
- L53 SgRP – FRONT TO HEEL. The dimension measured horizontally from the SgRP – front to the accelerator heel point.
- W3 SHOULDER ROOM – FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP – front at height between the belt line and 254 mm (10.0 in.) above the SgRP – front, excluding the door assist strap and attaching parts.

- W5 HIP ROOM – FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP – front within 25 mm (1.0 in.) below and 76 mm (3.0 in.) above the SgRP – front and 76 mm (3.0 in.) fore and aft of the SgRP – front.
- W9 STEERING WHEEL MAXIMUM OUTSIDE DIAMETER. Define if other than round.
- H7 ACCELERATOR HEEL POINT TO THE STEERING WHEEL CENTER. The dimension measured vertically from the AHP – front to the intersection of the steering column centerline to a plane tangent to the upper surface of the steering wheel rim.
- H18 STEERING WHEEL ANGLE. The angle measured from a vertical to the surface plane of the steering wheel.
- H30 SgRP – FRONT TO HEEL. The dimension measured vertically from the SgRP – front to the accelerator heel point.
- H50 UPPER BODY OPENING TO GROUND – FRONT. The dimension measured vertically from the trimmed body opening to the ground on the SgRP – front "X" plane.
- H61 EFFECTIVE HEADROOM – FRONT. The dimension measured along a line 8 deg. rear of vertical from the SgRP – front to the headlining plus 102 mm (4.0 in.).
- H67 FLOOR COVERING THICKNESS – UNDEPRESSED – FRONT. The dimension measured vertically from the surface of the undepressed floor covering to the underbody sheet metal at the accelerator heel point.

Rear Compartment Dimensions

- L-41 BACK ANGLE – SECOND. The angle measured between a vertical line through the SgRP – second and the torso line.
- L43 HIP ANGLE – SECOND. The angle measured between torso line and thigh centerline.
- L45 KNEE ANGLE – SECOND. The angle measured between thigh centerline and lower leg centerline.
- L47 FOOT ANGLE – SECOND. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the three-dimensional devices bare foot flesh line (Reference J826).
- L48 KNEE CLEARANCE – SECOND. The minimum dimension measured from the knee pivot center to the back of the front seatback minus 51 mm (2.0 in.).
- L50 SgRP COUPLE DISTANCE – SECOND. The dimension measured horizontally from the driver SgRP – front to the SgRP – second.
- L51 MINIMUM EFFECTIVE LEG ROOM – SECOND. The dimension measured along a line from the ankle pivot center to the SgRP – second plus 254 mm (10.0 in.).
- W4 SHOULDER ROOM – SECOND. The minimum dimension measured laterally between door or quarter trimmed surfaces on the "X" plane through the SgRP – second at height between 254-406 mm (10.0-16.0 in.) above the SgRP – second, excluding the door assist straps and attaching parts.
- W6 HIP ROOM – SECOND. Measured in the same manner as W5.
- H31 SgRP – SECOND TO HEEL. The dimension measured vertically from the SgRP – second to the two dimensional device heel point on the depressed floor covering.
- H51 UPPER BODY OPENING TO GROUND – SECOND. The dimension measured vertically from the trimmed body opening to the ground on the "X" plane 330 mm (13.0 in.) forward of the SgRP – second.
- H63 EFFECTIVE HEAD ROOM – SECOND. The dimension measured along a line 8 deg. rear of vertical from the SgRP to the headlining, plus 102 mm (4.0 in.).
- H73 FLOOR COVERING – DEPRESSED – SECOND. The dimension measured vertically from the heel point to the underbody sheet metal.

MVMA Specifications

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet Dimensions Definitions

Luggage Compartment Dimensions

V1 USABLE LUGGAGE CAPACITY - Total of volumes of individual pieces of standard luggage set plus H-boxes stowed in the luggage compartment in accordance with the procedure described in paragraph 8.2 of SAE-J1100a.

Interior Volumes (EPA Classification)

The Interior Volume Index is listed for each body style except two seaters. The Interior Volume Index estimates the space in a car. It is based on four measurements - head room, shoulder room, hip room, and leg room - for the front and rear seats, plus trunk capacity. The Interior Volume Index is an estimate of the size of the passenger compartment.

The Trunk/Cargo Index is an estimate of the size of the trunk/cargo space. In station wagons and hatchbacks it is an estimate of the space behind the second seat.

Station Wagon - Third Seat Dimensions

- L85 SgRP COUPLE DISTANCE - THIRD. The dimension measured horizontally from the SgRP - second to the SgRP - third.
- L86 EFFECTIVE LEG ROOM - THIRD. The dimension measured along a line from the ankle pivot center to the SgRP - third plus 254 mm (10.0 in.).
- L87 KNEE CLEARANCE - THIRD. The minimum dimension from the knee pivot center to the back of second seatback minus a constant of 51 mm (2.0 in.). With rear-facing third seat, dimension is measured to closure.
- L88 BACK ANGLE - THIRD. Measured in the same manner as L41.
- L89 HIP ANGLE - THIRD. Measured in the same manner as L43.
- L90 KNEE ANGLE - THIRD. Measured in the same manner as L45.
- L91 FOOT ANGLE - THIRD. Measured in the same manner as L47.
- W85 SHOULDER ROOM - THIRD. Measured in the same manner as W4.
- W86 HIP ROOM - THIRD. Measured in the same manner as W5.
- H86 EFFECTIVE HEAD ROOM - THIRD. The dimension, measured along a line 8 deg. from the SgRP - third to the headlining rear of vertical plus a constant of 102 mm (4.0 in.).
- H87 SgRP - THIRD TO HEEL POINT.
- SD1 SEAT FACING DIRECTION - THIRD.

Station Wagon - Cargo Space Dimensions

- L200 CARGO LENGTH - OPEN - FRONT. The minimum dimension measured longitudinally from the back of the front seatback at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the open tailgate or cargo surface if the rear closure is a conventional door type tailgate at the zero "Y" plane.
- L201 CARGO LENGTH - OPEN - SECOND. The dimension measured longitudinally from the back of the second seatback at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the open tailgate or cargo floor surface if the rear closure is a conventional door type tailgate, at the zero "Y" plane.

L202 CARGO LENGTH - CLOSED - FRONT. The minimum dimension measured horizontally from the back of the front seat at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.

L203 CARGO LENGTH - CLOSED - SECOND. The dimension measured horizontally from the back of the second seat at the height of the undeepressed floor covering to the rearmost point on the undeepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.

L204 CARGO LENGTH AT BELT - FRONT. The minimum dimension measured horizontally from the back of the front seatback at the seatback top to the foremost normal surface of the closed tailgate or inside surface of the cab backpanel at the height of the belt, on the zero "Y" plane.

L205 CARGO LENGTH AT BELT - SECOND. The minimum dimension measured horizontally from the back of the second seatback at the seatback top to the foremost normal surface of the closed tailgate at the height of the belt, on the zero "Y" plane.

W201 CARGO WIDTH - WHEELHOUSE. The minimum dimension measured laterally between the trimmed wheelhousings at floor level. For any vehicle not trimmed, measure to the sheet metal.

W203 REAR OPENING WIDTH AT FLOOR. The minimum dimension measured laterally between the limiting interferences of the rear opening at floor level.

W204 REAR OPENING WIDTH AT BELT. The minimum dimension measured laterally between the limiting interferences of the rear opening at belt height or top of pick up box.

W205 REAR OPENING WIDTH ABOVE BELT. The minimum dimension measured laterally between the limiting interferences of the rear opening above the belt height.

H197 FRONT SEATBACK TO LOAD FLOOR HEIGHT. The dimension measured vertically from the horizontal tangent to the top of the seatback to the undeepressed floor covering.

H201 CARGO HEIGHT. The dimension measured vertically from the top of the undeepressed floor covering to the headlining at the rear wheel "X" coordinate on the zero "Y" plane.

H202 REAR OPENING HEIGHT. The dimension measured vertically from the top of the undeepressed floor covering to the upper trimmed opening on the zero "Y" plane with rear door fully open.

H250 TAILGATE TO GROUND CURB MASS (WT.). The dimension measured vertically from the top of the undeepressed floor covering on the lowered tailgate to ground on the zero "Y" plane.

V2 STATION WAGON

Measured in inches:

$$\frac{W4 \times H201 \times L204}{1728} = \text{ft}^3$$

Measured in mm:

$$\frac{W4 \times H201 \times L204}{10^9} = \text{m}^3 \text{ (cubic meter)}$$

MVMA Specifications

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

V4 HIDDEN LUGGAGE CAPACITY – REAR OF FRONT SEAT.
The total volumes of individual pieces of one set of standard luggage stowed in any hidden cargo area below the load floor rear of the front seat.

V5 TRUCKS AND MPV'S WITH OPEN AREA.
Measured in inches:

$$\frac{L506 \times W505 \times H503}{1728} = \text{ft}^3$$

Measured in mm:

$$\frac{L506 \times W505 \times H503}{10^6} = \text{m}^3 \text{ (cubic meter)}$$

V6 TRUCKS AND MPV'S WITH CLOSED AREA.

Measured in inches:

$$\frac{L204 \times W500 \times H505}{1728} = \text{ft}^3$$

Measured in mm:

$$\frac{L204 \times W500 \times H505}{10^6} = \text{m}^3 \text{ (cubic meter)}$$

V8 HIDDEN LUGGAGE CAPACITY – REAR OF SECOND SEAT. The total volume of individual pieces of one set of standard luggage stowed in any hidden cargo area below the load floor rear of the second seat.

V10 STATION WAGON CARGO VOLUME INDEX.

Measured in inches:

$$\frac{H201 \times L205 \times \frac{W4 - W201}{2}}{1728} = \text{ft}^3$$

Measured in mm:

$$\frac{H201 \times L205 \times \frac{W4 - W201}{2}}{10^6} = \text{m}^3 \text{ (cubic meter)}$$

Hatchback – Cargo Space Dimensions

All hatchback cargo dimensions are to be taken with the front seat in full down and rear position, and the rear seat folded down. The hatchback door is in the closed position. (For electronically adjusted seats, see the manufacturer's specifications for Design "H" Point).

L208 CARGO LENGTH AT FRONT SEATBACK HEIGHT. The minimum horizontal dimension from the "X" plane tangent to the rearmost surface of the driver's seatback to the inside limiting interference of the hatchback door on the vehicle zero "Y" plane.

L209 CARGO LENGTH AT FLOOR – FRONT – HATCHBACK. The minimum horizontal dimension measured at floor level from the rear of the front seatback to the normal limiting interference of the hatchback door on the vehicle zero "Y" plane.

L210 CARGO LENGTH AT SECOND SEATBACK HEIGHT – HATCHBACK. The minimum dimension measured from the "X" plane tangent to the rearmost surface of second seatback or the load floor which is stowed at least one half of the H198 dimension height above the rear load floor, to the rearmost inside limiting interference on the zero "X" plane.

L211 CARGO LENGTH AT FLOOR – SECOND HATCHBACK. The minimum horizontal dimension measured at floor level from the rear of the second seatback or load floor panel to the normal limiting interference of the hatchback door on the vehicle zero "Y" plane.

H197 FRONT SEATBACK TO LOAD HEIGHT. The dimension measured vertically from the horizontal tangent to the top of the seatback to the undepressed floor covering.

H198 SECOND SEATBACK TO LOAD FLOOR HEIGHT: The dimension measured vertically from the second seatback to the undepressed floor covering.

V3 HATCHBACK.

Measured in inches:

$$\frac{\frac{L208 + L209}{2} \times W4 \times H197}{1728} = \text{ft}^3$$

Measured in mm:

$$\frac{\frac{L208 + L209}{2} \times W4 \times H197}{10^6} = \text{m}^3 \text{ (cubic meter)}$$

V4 HIDDEN LUGGAGE CAPACITY – REAR OF FRONT SEAT. The total volumes of individual pieces of one set of standard luggage stowed in any hidden cargo area below the load floor rear of the front seat.

V11 HATCHBACK CARGO VOLUME INDEX. Usable luggage (one (1) stand and luggage set) below floor:

Measured in inches:

$$\frac{\frac{L210 - L211}{2} \times W4 \times H198}{1728} = \text{ft}^3$$

Measured in mm:

$$\frac{\frac{L210 - L211}{2} \times W4 \times H198}{10^6} = \text{m}^3 \text{ (cubic meter)}$$

MVMA Specifications

METRIC (U.S. Customary)

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