# MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

**METRIC (U.S. Customary)** 

1989

Manufacturer	Chevrolet Motor Division General Motors Corporation	Vehicle Line	
Mailing Address	Chevrolet-Pontiac-Canada Group Engineering Center General Motors Corporation	CAMARO	
	30003 Van Dyke	Issued	Revised
	Warren, MI 48090-9060	June, 1988	September, 1988

Direct questions concerning these specifications to the manufacturer listed above.

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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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**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) specifications 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.

**METRIC (U.S. Customary)** 

\_\_\_ Issued \_\_\_\_6\_88 \_\_\_\_ Revised (e) \_\_\_0\_88

Power Teams (Indicate whether standard or optional)

SAE J1349 Net bhp (brake horsepower) and net torque corrected to 77°F/25° C and 29.61 in. Hg/100 kPa atmospheric pressure.

	ENGINE						E		<u>T</u>
SERIES AVAILABILITY	Code	Displ. Liters	induction (FI, CARB/	Compr.	SAE Net	Torque	ĥaus	TRANSMISSION/ TRANSAXLE	AXLE RATIO (std. first)
	Code	(in <sup>3</sup> )	BBL, etc.)	Ratio	kW (bhp)	N • m (lb. ft.)	S/D*		
Base - All Except IROC-Z	LB8	V6 2.8	MFI **	8.9:1	101 (135)	217 (160)	s	Man. 5-Spd. (MB1) Base	3.42
Avail - All	L03	(173)			0 4900	0 3900		Auto `700-R4 (MD8) Avail	3.42
Except IROC-Z	LU3	V8 5.0 (305)	EFI ***	9.3:1	(170)	346 (255)	S	Man. 5-Spd. (M39) Base	3.08
<u>Base - IROC-Z</u> Availl - IROC-Z	₹EB9 \	, V8	TPI	9.3:1	@ 4400	2400	_	Auto `700-R4' (MD8) Avail	2.73
		5.0 (305)	6	3.3.1	(220) 4400	393 (290) @ 3200	S	Man.5-Spd. (M39) Base	3.08
					145 (195) @ 4000	400 (295) @ 2800	<b>S</b>	Auto `700-R4′ (MD8) Avail	2.73
	Mar.	_	:		172 (230) @ 4600	407 (300) @ 3200	D	(Man. 5-Spd. (MK6) Avail	3.45
Avail - IROC-Z	L98	V8 5.7 (350)	TPI @	9.3:1		447 (330) @ 3200	S	Auto `700-R4' (MD8) Base	2.77
	ı				179 (240) @ 4400	468 (345) @ 3200	D	Auto `700-R4' (MD8) Avail	3.27
** - Multi-Por *** - Electroni @ - Tuned Por	c Fuel I	Iniectida	ı l	·					·

<sup>\*</sup> Single / Dual

**METRIC (U.S. Customary)** 

Vehicle Line	CAMARO						
Model Year	1989	lssued	6-88	Revised	( <b>•</b> ) _	9-88	

 $\varnothing$  Vehicle Origin

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

 $\emptyset$  Vehicle Models

Anucia Models				
Model Description & Drive (FWD/RWD/AWD/4WD)*	Introduction Date	Make, Vehicle Models, Series, Body Type (Mfgr's Model Code)	No. of Designated Seating Positions (Front/Rear)	Max. Trunk/Cargo Load-Kilograms (Pounds)
RALLY SPORT				
2-Door Coupe (RWD)		1FP87	4 (2/2)	45.4 (100.1)
RALLY SPORT				
2-Door Convertible	(RWD)	1FP67	4 (2/2)	N/A

N/A = Not Available

FWD - Front Wheel Drive

RWD - Rear Wheel Drive 4WD - Four Wheel Drive

AMVM	<b>Specifications Fo</b>	rm	Vehicle Line _ Model Year	<u>CAMARO</u>		6 00		
	U.S. Customary)		Model Year	1989	issued _	6-88	Revised (•)	
Engine Descri	iption/Carb.	2.8 Liter V6 (173 CID) (2.8 Multi Port FI) RPO LB8						
ENGINE - (	GENERAL	LLZ.O FIL	III POPL	-11 <u>KPO</u>	LB8			
		Τ						
flat, location, fro transverse, long	tion (inline, V, angle, ont, mid, rear, pludinal, sohc, dohc, ge, pre-camber, etc.)	60°V -	Front - La	madtudi				
Manufacturer		Chevrol	<u>Front - Lo</u>	<u>my i cua i</u>	naı	<del></del>		
No. of cylinders		6	<u> </u>	<del></del>				
Bore	<del></del>	+	(3.50)					
Stroke		•	2.99)	<del></del> ,-			<u> </u>	
Bore spacing (C	C/L to C/L)		4.40)	<del></del>				
	naterial & mass kg (lbs.) (machined)		on 41.731	(91.9)	· · · · · · · · · · · · · · · · · · ·			
Cylinder block d		224 (8.		/21.27				
Cylinder block le	<u>×</u>		17 11			<del></del>		
Deck clearance (above or below	(minimum)		0047) Belo	N.4			<del></del>	
Cylinder head m	naterial & mass kg (lbs.)		on 11.227		=		<del></del>	
Cylinder head v			UII 11.22/	(44.0)				
Cylinder liner ma			licable					
Head gasket this		THUL MAD	<u> </u>				<del>_</del>	
(compressed)	UNI IDSI	.838 (.	033)					
Minimum combu total volume (cn		51.546	(2.029)@					
Cyl. no. system	L. Bank	1-3-5				· · · · · · · · · · · · · · · · · · ·		
(front to rear)*	R. Bank	2-4-6						
Firing order		1-2-3-4	-5-6				<del>-</del>	
Intake manifold	material & mass [kg (lbs.)]**		uminum/2.3	370 (5.1	) ctr. 3	3.810 (8	.4) Iwr	
Exhaust manifol	d material & mass [kg (ibs.)]**	Cast Ir	on/3.610 (	8.0) RH	2.425	(5.3)	Н	
Fuel required un	nleaded, diesel, etc.	Unleade				<del></del>	······································	
Fuel antiknock is	ndex (A + M) + 2	87	<del>-</del>					
	Number							
Engine mounts	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.		v					
mounts	Added isolation (sub-frame, crossmember, etc.)	-		,				
Total dressed er	ngine mass (wt) dry***	195.7 (	431.4) Aut	0. 206	1456 1	\ Man		
Engine – Pi	istons			we EUU.	<del>- 134U-</del>	J. Hall.		
Material & mass (weight, oz.) - pi		Aluminu	m alloy/ 4	67 (1.0)	<b>L</b> .			
Engine – Ca	amshaft							
Location		In bloc	k above cr	ankshafi				
Material & mass	kg (weight, lbs.)							
		Cast ir	on/3.098 (	6.83)				
Drive type	Chain / belt	Chain	,	•				

Width / pitch

19.4/60.9

<sup>\*</sup> Rear of engine - drive takeoff. View from drive takeoff end to determine left & right side of engine.

<sup>\*\*</sup> Finished state.

<sup>\*\*\*</sup> Dressed engine mass (weight) includes the following:

<sup>&</sup>lt;sup>®</sup> - Piston at TDC, spark plug and valves in place, and cylinder head torques to specifications.

<sup>\*\*</sup> All those items necessary to make engine a complete ready-to-run unit.

	Specifications Fo	Model Year 1989 Issued 6-88 Revised (•)
METRIC (	U.S. Customary)	
Engine Descri	Intlan Mark	5.0 Liter V8 (305 CID)
Engine Code	spoots cere.	(Electronic Fuel Injection) RPO 103
ENGINE -	GENERAL	A CONTRACT OF THE PARTY OF THE
Type & descript	tion (inline, V, angle,	
flat, location, fro	ont, mid, rear,	90°V
transverse, long ohv. hemi, wedo	pitudinal, sohc, dohc, ge, pre-camber, etc.)	Front
	0, p. 0 == 1.00., 0.0.,	Longitudinal
Manufacturer		Chevrolet
No. of cylinders		8
Bore		94.89 (3.74)
Stroke		88.39 (3.48)
Bore specing (C	:/L to C/L)	111.8 (4.40)
	naterial & mass kg (lbs.) (machined)	Cast alloy iron 68.674 (151.4)
Cylinder block d	<del></del>	229.4 (9.025)
Cylinder block le	······································	512.8 (20.19)
Deck clearance	<del></del>	TANK
(above or below		.635 (.025) below
Cylinder head m	naterial & mass kg (lbs.)	Cast alloy iron 19.800 (43.7)
Cylinder head vo		(43.7)
Cylinder liner ma	<del></del>	Not Applicable
Head gasket thic		HIGH WANTICANIC
(compressed)	- · - <del>* ·</del>	.533 (.021)
Minimum combu	istion chamber	1.000 (.041)
total volume (cm		55.2 (+/- 2.2)
Cyl. no. system	L. Bank	1-3-5-7
(front to rear)*	R. Bank	2-4-6-8
Firing order		1-8-4-3-6-5-7-2
	material & mass [kg (lbs.)]**	
	d material & mass [kg (lbs.)]**	
	leaded, diesel, etc.	Cast iron 4.345 (9.6) L.H., 3.800 (8.4) R.H.
	ndex (R + M) + 2	Unleaded 87
TO WITHINGTON P	Number	0/
Engine mounts	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.	
	Added isolation (sub-frame, crossmember, etc.)	
fotal dressed en	gine mass (wt) dry***	275.1 (606.5) Auto. 290.8 (641.1) Man.
Engine – Pi	stons	
viaterial & mass.	a	Aluminum
weight, oz.) - pis		1.645 (1.4)
	<del></del>	1.045 (1.4)
Engine – Ca	mshaft	
ocation		In block above crankshaft
vaterial & mass i	kg (weight, lbs.)	
aterial & mass kg (weight, lbs.)		Step 1 4 124 (0 1)

Chain

15.976 (6.25)/.5

Drive type

Chain / belt

Width / pitch

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

<sup>\*</sup> Rear of engine - drive takeoff. View from drive takeoff end to determine left & right side of engine.

<sup>\*\*</sup> Finished state.

<sup>\*\*\*</sup> Dressed engine mass (weight) includes the following:

MVMA	Specifications Fo	rm	Vehicle Line	<u> Camaro</u>	·		
		<b>/#</b> # # # #	Model Year	1989	lssued _	6-88	Revised (•)
METRIC (U.S. Customary)							
Engine Descrip	ption/Carb.	5.0 Lite	r V8 (305	CID)			· · · · · · · · · · · · · · · · · · ·
Engine Code		(Tuned f	Port Fuel	<u>Injećti</u>	on) RPO	I RQ	
ENGINE - G	ENERAL			-	•		
Type & description	on (intine, V, angle,					-	<del></del>
flat, location, from	nt, mid, rear, itudinal, soho, doho,	90°V					
	e, pre-camber, etc.)	Front					
		Longitud	linal				
Manufacturer		Chevrole	<u>t                                     </u>				
No. of cylinders		8					
Bore		94.89 (3	1.74)				
Stroke		88.39 (3	.48)				
Bore spacing (C	<del></del>	111.8 (4	40)				
	aterial & mass kg (lbs.) (machined)	Cast Iro	n/68.674	(151.4)			
Cylinder block de	<del></del>	229 (9.0	25)				
Cytinder block le	ngth	512.8 (2	0.19)				
Deck clearance (		Ì	•				<u> </u>
above or below	<u> </u>	.635 (.0	25) below				
Cylinder head ma	aterial & mass kg (lbs.)	Cast Iro	n/19.800	(43.7)			
Cylinder head vo	lume (cm³)		•				
Cylinder tiner ma	terial	Not Appl	icable				
Head gasket thic (compressed)	kness	.533 (.0				. <del>.</del>	
Minimum combu total volume (cm		55.2 (+/					
Cyl. no. system	L. Bank	1-3-5-7	<del>,</del>				
(front to rear)*	R. Bank	2-4-6-8					
iring order			6-5-7-2				
ntake manifold n	naterial & mass [kg (lbs.)]**.		minum/6.1	17 /13	51		
Exhaust manifold	rnaterial & mass [kg (lbs.)]**	Cast Iro	n/L H 4	460 /0	R) DH	2 900 /	0.41
Fuel required unl	eaded, diesel, etc.	Unleaded		*** (***	<del>-//                                   </del>	<del>-3.000 (</del>	(0.4)
uel antiknock in	dex (R + M) + 2	91					
	Number				<del></del>		
Engine mounts	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.						
	Added isolation (sub-frame, crossmember, etc.)						
l'otal dressed en	gine mass (wt) dry***	282.4.16	22.6) Auto	297	1 (656 7	\ Man	
Engine – Pi	stons						
Material & mass, g (weight, oz.) - piston only		Aluminum	/_645_(1.4	4)			
Engine – Ca	emshaft		,				
Location		In block	above cra	ankshaft			
Material & mass	kg (weight, (bs.)		200 (9.3)				
Drive type	Chain / belt	Chain					
	Width / pitch	15 076 /	6251 / F				

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

<sup>\*</sup> Rear of engine - drive takeoff. View from drive takeoff end to determine left & right side of engine.

<sup>\*\*</sup> Finished state.

<sup>\*\*\*</sup> Dressed engine mass (weight) includes the following:

MVMA	Specifications Fo	Vehicle Line <u>CAMARO</u>
	Specifications Fe	Model Year1989 Issued <u>6-88</u> Revised (e)
METRIC (	U.S. Customary)	
Engine Descri Engine Code	ption/Cerb.	5.7 Liter V8 (350 CID) Tuned Port Fuel Injection (TPI) RPO L98
ENGINE - G	BENERAL	THE TAX AND COUNTY OF THE COUN
Type & description	on (inline, V, angle,	
flat, location, from		90 <b>·V</b>
ohv, hemi, wedg	e, pre-camber, etc.)	Front Longitudinal
Manufacturer	<u> </u>	Chevrolet
No. of cytinders		8
Bore		101.6 (4.00)
Stroke		88.4 (3.48)
Bore spacing (C	/L to C / L)	111.8 (4.40)
	aterial & mass kg (lbs.) (machined)	Cast Iron/68.674 (151.5)
Cylinder block de		229.2 (9.025)
Cylinder block le	ngth	506.2 (19.93)
Deck clearance ( (above or below		
Culinder bood me	aterial & mass kg (lbs.)	1.025 below
Cylinder head vo		Cast Iron/19.800 (43.7)
		Not Applicable
Cylinder liner ma	·	Not Applicable
Head gasket thic (compressed)	kness	.021
Minimum combus total volume (cm		75.47 Combustion chamber with piston at top dead center and all components in place torqued to specifications.
Cyl. no. system	L. Bank	1-3-5-7
(front to rear)*	R. Bank	2-4-6-8
Firing order		1-8-4-3-6-5-7-2
Intake manifold m	naterial & mass [kg (lbs.)]**	Cast Aluminum/6.117 (13.5)
Exhaust manifold	rnaterial & mass [kg (lbs.)]**	Iron 4.460 (9.8) L.H., 3.800 (8.4) R.H.
Fuel required uni-	eaded, diesel, etc.	Unleaded
Fuel antiknock in	dex (R + M) + 2	91
	Number	
Engine mounts	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.	
,	Added isolation (sub-frame, crossmember, etc.)	
Total dressed end	gine mass (wt) dry***	284.5 (627.3) auto.
Engine – Pis		
Material & mass,		
weight, oz.) - piston only		Impacted cast aluminum, .645 (1.4)
Engine – Ca	mshaft	
ocation		In cylinder block "V" above crankshaft
Material & mass k	kg (weight, lbs.)	Steel 4.200 (9.3)
Orive type	Chain / bett	Chain
	Width / pitch	15.976 (.625)/.5

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

<sup>\*</sup> Rear of engine - drive takeoff. View from drive takeoff end to determine left & right side of engine.

<sup>\*\*</sup> Finished state.

<sup>\*\*\*</sup> Dressed engine mass (weight) includes the following:

MVM/	A Specifications	Vehicle Line <u>CAMARO</u> Model Year <u>1989</u> Issued <u>6-88</u> Revised (*) <u>9-88</u>
	(U.S. Customary)	Model Year <u>1989</u> Issued <u>6-88</u> Revised (•) <u>9-88</u>
MIE : : !!	(C.G. Costonialy)	
	eription/Carb.	2.8 Liter V6 (173 CID)
Engine Cod	le .	(2.8 Multi-Port FI) RPO LB8
Engine -	Valve System	
Hydraulic lifte	ers (std., opt., NA)	Standard
	Number intake / exhaust	6/6
Valves	Head O.D. intake / exhaust	43.64 (1.72)/36.20 (1.43)
Engine -	Connecting Rods	
	ass [kg., (weight, lbs.))*	Steel .399 (0.9)
Length (axes		144.78
	7 C (0-C) /////	144.70
Engine -	Crankshaft	
Material & ma	ass [kg., (weight, lbs.)]*	Nodular cast iron 14.170 (31.24)
	ken by bearing (no.)	3
Length & nun	mber of main bearings	4
Seal (materia	al, one, two Front	Fluoroelastomer, one-piece, lip seal
piece design,		Fluoroelastomer, one-piece, lip seal
Engine -	Lubrication System	
	essure [kPa (psi) at engine rpm]	345-448 (50-65) @ 1200
	te (floating, stationary)	Stationary
	ern (full flow, part, other)	Full-flow
	/case, less filter-refill-L (qt.)	3.8 (4.0)
	Diesel Information	
	manufacturer	Not
Glow plug, cu	urrent drain at 0°F	Applicable
Injector Nozzle	Type	
	Opening pressure [kPa (psi)]	
Pre-chamber	<del></del>	
Fuel in- ection pump	Manufacturer	
	1 1/20	<del>-</del>
	pump drive (belt, chain, gear) ry vacuum source (type)	
Fuel heater (y	<del></del>	
Water separa	itor, description	
(std., opt.) Turbo manufa	poturar	
,	e (oil to engine coolant;	
oil to ambient		
Oil filter		
Engine –	Intake System	
Turbo charge	r - manufacturer	Not
Super charge	er - manufacturer	Applicable
Intercooler		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

<sup>\*</sup>Finished State

Intercooler

MVM	A Specifications	Vehicle Line <u>CAMARO</u>
		Model Year 1989 Issued 6-88 Revised (e) 9-88
METRI	C (U.S. Customary)	
Engine De Engine Co	acription/Carb. de	5.0 Liter V8 (305 CID) (Electronic Fuel Injection) RPO 103
Engine -	- Valve System	The state of the s
Hydraulic lif	ters (std., opt., NA)	Standard
	Number intake / exhaust	Standard 8/8
Valves .	Head O.D. intake / exhaust	46.74 (1.84)/38.10 (1.50)
Engine -	- Connecting Rods	
	nass [kg., (weight, lbs.)]*	Steel/.388 (0.85)
Length (axe	e€ to•) mm	144.78
Engine -	- Crankshaft	
Material & m	nass [kg., (weight, lbs.)]*	Nodular cast iron/23.360 (51.50)
	aken by bearing (no.)	5
	mber of main bearings	5
Seal (materi	F	Fluoroelastomer, one-piece, lip seal
piece design	n, etc.) Rear	Fluoroelastomer, one-piece, lip seal
Engine -	Lubrication System	The season of th
Normal oil pi	ressure [kPa (psi) at engine rpm]	345-448 (50-65) @ 2000
Type oil inta	ke (floating, stationary)	Stationary
Oil filter syst	em (full flow, part, other)	Full-flow
Capacity of c	c/case, less filter-refill-L (qt.)	4.5 (5.0)
Engine –	Diesel Information	·
Diesel engin	e manufacturer	Not
Glow plug, c	urrent drain at 0°F	Applicable
Injector	Туре	
nózzle	Opening pressure (kPa (psi))	
Pre-chamber	design	
Fuel in-	Manufacturer	
jection pump	1,350	
Fuel injection	pump drive (belt, chain, gear)	
Supplementa	ry vacuum source (type)	
Fuel heater (	yes/no)	
Water separa (std., opt.)	utor, description	
Turbo manufa	acturer	
Oil cooler-typ oil to ambient	e (oil to engine coolant; air)	
Oil filter	· · · · · · · · · · · · · · · · · · ·	
Engine -	Intake System	
	r - manufacturer	Not
	r - manufacturer	Applicable
Intermoder		- appricants

<sup>\*</sup>Finished State

-BAV/BA	A Cassifications	F	Vehicle Line_	<u>CAMARO</u>				
IAI A IAI	A Specifications	rorm	Model Year	1989	Issued _	6-88	Revised (*)	.9-288
METRIC	C (U.S. Customary)							
Engine De Engine Co	scription/Carb. de		er V8 (305 Port Fuel I		RPO L	.B9		<del></del>
Engine -	- Vaive System							
Hydraulic lif	ters (std., opt., NA)	Standard						<u>'</u>
Valves	Number intake / exhaust	8/8						
	Head O.D. intake / exhaust	46.74 (1	<u>.84), 38,1</u>	0 (1.50)		. <u> </u>		
Engine -	- Connecting Rods							
	nass (kg., (weight, lbs.))*	Stee1/.3	88 (0.85)	-		·		
Length (axe	s€ to•) mm	144.78						
Engine -	- Crankshaft							-
Material & n	nass [kg., (weight, lbs.)]*	Nodular	Cast Iron/	23,360 (5)	1.501			
End thrust to	aken by bearing (no.)	5	REVIII		******			
Length & nu	mber of main bearings	5						<del></del>
Seal (materi	al, one, two Front	Fluoroel	astomer, o	ne-piece.	lip s	eal		
piece design	n, etc.) Rear	<u>  Fluoroel</u>	astomer, o	ne-piece.	lip s	eal		
Engine -	- Lubrication System							
Normal oil p	ressure [kPa (psi) at engine rpm]	345-450	(50-65) 0	2000 with	Auto.	Trans.	*	
	ke (floating, stationary)	Stationa	ry					
	em (full flow, part, other)	Full-flo						
Capacity of	c/case, less filter-refill-L (qt.)	4.5 (5.0	)	<del></del>				
Engine -	- Diesel Information							
Diesel engin	e manufacturer	Not				•		
Glow plug, c	urrent drain at 0°F	Applicab	le					
Injector	Туре							
nozzle	Opening pressure [kPa (psi)]					· · · · · · · · · · · · · · · · · · ·		
Pre-chambe	r design				•			
Fuel in-	Manufacturer							
jection pump	1.700							
	n pump drive (belt, chain, gear)	ļ					-	
	ary vacuum source (type)							
Fuel heater	(yes/no)			<del> </del>				
Water separ (std., opt.)	ator, description							
Turbo manu	facturer			·				·
Oil cooler-typoil to ambier	pe (oil to engine coolant; nt air)		_					
Oil filter	<u> </u>	<del>                                     </del>	·					<u> </u>
	· · · · · · · · · · · · · · · · · · ·	<u> </u>		· · · · · · · · · · · · · · · · · · ·			· · -	·
Engine -	Intake System		~					
	Intake System	Not	<del>-</del>	·				
Turbo charg	er - manufacturer er - manufacturer	Not Applicab	10	· · · · · · · · · · · · · · · · · · ·				

<sup>\*</sup>Finished State

<sup>\* 485-585 (70-85) @ 2000</sup> with Manual Transmission

#### **CAMARO** Vehicle Line **MVMA Specifications Form** Model Year 1989 issued \_\_\_\_ 5=88 Revised (e) \_\_.9 ±.88 **METRIC (U.S. Customary)** 5.7 Liter V8 (350 CID) Engine Description/Carb. Engine Code Tuned Port Fuel Injection (TPI) RPO L98 Engine - Valve System Standard Hydraulic lifters (std., opt., NA) 878 Number intake / exhaust Valves 49.28 (1.94)/38.10 (1.50) Head O.D. intake / exhaust **Engine - Connecting Rods** Material & mass (kg., (weight, lbs.))\* Steel -.388 (0.85) O Length (axes € to €) mm 144.78 Engine - Crankshaft Material & mass [kg., (weight, lbs.)]\* Nodular Cast <u>Iron - 23.360 (51.5)</u> End thrust taken by bearing (no.) 5 Length & number of main bearings Fluoroelastomer, Front Seal (material, one, two piece design, etc.) one-piece. lip seal Rear Fluoroelastomer. one-piece, lip seal **Engine – Lubrication System** Normal oil pressure [kPa (psi) at engine rpm] 485-585 (70-85) @ 2000

# Capacity of c/case, less filter-refill-L (qt.) Engine — Diesel Information

Type oil intake (floating, stationary)

Oil filter system (full flow, part, other)

Diesel engine	manufacturer	Not	
Glow plug, current drain at 0°F		Applicable	
Injector	Туре		
nózzle	Opening pressure [kPa (psi)]		
Pre-chamber	design		
Fuel in-	Manufacturer		
jection pump	Туре		
Fuel injection	pump drive (belt, chain, gear)		
Supplemental	y vacuum source (type)		
Fuel heater (y	es/no)		
Water separat (std., opt.)	tor, description		
Turbo manufa	cturer		
Oil cooler-type oil to ambient	e (oil to engine coolant; air)		<del>-</del>
Oil filter			

Full-flow (including engine oil cooler)

Stationary

4.5 (5.0)

#### Engine - Intake System

Turbo charger - manufacturer	Not	
Super charger - manufacturer	Applicable	
Intercooler		

<sup>\*</sup>Finished State

Vehicle Line \_\_\_CAMARO \_\_\_\_\_ Issued \_\_\_\_\_\_ Revised (e) \_\_\_\_

#### **METRIC (U.S. Customary)**

Engine Description/Carb. Engine Code 2.8 Liter V6 (173 CID)
(2.8 Multi-Port FI) RPO LB8

**Engine - Cooling System** 

Engine -	- Cooling System	
Coolant rec	overy system (std., opt., n.a.)	Standard
Coolant fill i	ocation (rad., bottle)	Bottle, coolant recovery
Radiator ca	p relief valve pressure [kPa (psi)]	103.4 (15)
Circulation	Type (choke, bypass)	Bypass
thermostat	Starts to open at *C (*F)	91°C (195°F)
	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	15.5
	Number of pumps	One
Water	Drive (V-belt, other)	Single belt poly'V' accessory drive (serpentine)
pump	Bearing type	Sealed ball-roller
	Impeller material	Cast Iron
	Housing material	Aluminum
By-pass rec	irculation [type (inter,. ext.)]	Interna!
Cooling	With heater-L(qt.)	12.18 (12.87) Auto, 12.28 (12.98) Man.
system capacity	With air condL(qt.)	12.20 (12.89) Auto, 12.10 (12.79) Man.
Capacity	Opt. equipment (specify-L(qt.))	
Water jacke	ts full length of cyl. (yes, no)	Yes
Water all arc	ound cylinder (yes, no)	Yes
Water jacke	ts open at head face (yes, no)	No
	Std., A/C, HD AUT	Std. A/C
	Type (cross-flow, etc.)	Cross-flow
Radiator	Construction (fin & tube mechanical, braze, etc.)	Fin & Tube
core	Material, mass [kg (wgt, lbs.)]	Aluminum, high efficiency radiator
•	Width	599.5 599.5
	Height	437.8 437.8
	Thickness	23.5 23.5
	Fins per inch	4.0 3.0
Radiator end	tank material	Plastic
	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 crankshaft rev.)	Not available
Fan	Fan cutout type	ECM controlled
es f	Drive type (direct, remote)	7.0
	RPM at idle (elec.)	
	Motor rating (wattage) (elec.)	150
	Motor switch (type & location) (elec.)	Part ECM
	Switch point (temp., pressure) (elec.)	1900-2100
	Fan shroud (material)	Plastic

<sup>@ -</sup> Distance between top of fins.

**CAMARO** Vehicle Line 1989 6-88 Model Year\_ Issued Revised (\*)

#### **METRIC (U.S. Customary)**

5.0 Liter V8 (305 CID) Engine Description/Carb. Engine Code (Electronic Fuel Injection) RPO LO3

Coolant rec	overy system (std., opt., n.a.)	Standard				
Coolant fill I	ocation (rad., bottle)	Bottle, coolant recovery				
Rediator ca	p relief valve pressure [kPa (psi)]	103.4 (15)				
Sirculation	Type (choke, bypass)	Choke				
hermostat	Starts to open at °C (°F)	90.6°C (195°F)				
	Type (centrifugal, other)	Centrifugal				
	GPM 1000 pump rpm	14 (Total cooling system flow)				
	Number of pumps	Une				
Water pump	Drive (V-belt, other)	Single belt poly 'V' accessory drive (serpentine)				
	Bearing type	Sealed double row ball				
	Impeller material	Steel				
	Housing material	Cast Iron				
y-pass rec	irculation [type (inter,. ext.)]	Internal				
cooling	With heater-L(qt.)	15.52 (16.40)				
ystem apacity	With air condL(qt.)	15.90 (16.80)				
<del></del> _	Opt. equipment [specify-L(qt.)]					
Vater jacke	is full length of cyl. (yes, no)	Yes				
Vater all arc	ound cylinder (yes, no)	Yes				
Vater jacket	ts open at head face (yes, no)	. No				
•	Std., A/C, HD	Std. A/C or HD AC & HD				
	Type (cross-flow, etc.)	Cross Flow				
ladiator	Construction (fin & tube mechanical, braze, etc.)	Fin & Tube .				
ore	Material, mass [kg (wgt, lbs.)]	Aluminum, high efficiency radiator				
	Width	667.5 667.5				
~	Height :	437.8 437.8				
	Thickness	23.5 23.5				
	Fins per inch	* 2.5				
adiator end	I tank material	Plastic				
•	Std., elec., opt.	Std. Opt.				
•	Number of blades & type (flex, solid, material)	5, Plastic, 5, Plastic, solid solid				
	Diameter & projected width	423.0 (16.7) 423.0 (16.7)				
_	Ratio (fan to crankshaft rev.)	Not Applicable				
in ,	Fan cutout type	ECM controlled				
	Drive type (direct, remote)					
	RPM at idle (elec.)					
••	Motor rating (wattage) (elec.)	150				
	Motor switch (type & location) (elec.)	Temp switch engine cylinder head				
•	Switch point (temp., pressure) (elec.)	1900-2100				
	Fan shroud (material)	Plastic				

 $<sup>^{\</sup>circ}$  - Distance between top of fins. \* - 4.0 with manual trans.

<sup>3.5</sup> with auto. trans.

Vehicle Line CAMARO

Model Year | Line | CAMARO | Line | Line | CAMARO | Line | Line

# METRIC (U.S. Customary)

Engine Description/Carb.

5.0 LTR V8(305 CID) RP0 LB9 | 5.7 LTR V8(350 CID) RP0L98
Tuned Port Fuel Injection | Tuned Port Fuel Injection

		Chandand
	very system (std., opt., n.a.)	Standard
	exation (rad., bottle)	Bottle, coolant recovery
Radiator cap	relief valve pressure [kPa (pai)]	103.4 (15)
Circulation thermostat	Type (choke, bypass)	Choke
mermostat	Starts to open at °C (°F)	90.6°C (195°F)
	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	12 (Total cooling system flow)
	Number of pumps	One
Vater	Drive (V-belt, other)	Single belt poly 'V' accessory drive (serpentine)*
oump	Bearing type	Sealed double row ball
	Impeller material	Steel
	Housing material	Cast Iron
3y-pass recir	rculation [type (inter,. ext.)]	Internal
Cooling	With heater-L(qt.)	16.78 (17.7)
ystem apacity	With air condL(qt.)	16.28 (17.2)
apecity	Opt. equipment [specify-L(qt.)]	••
Vater jacket:	s full length of cyl. (yes, no)	Yes
Vater all aro	und cylinder (yes, no)	Yes
Vater jacket	s open at head face (yes, no)	No
<u></u>	\$td., A/C, HD	Standard
	Type (cross-flow, etc.)	Cross flow
adiator	Construction (fin & tube mechanical, braze, etc.)	Fin & Tube
ore	Material, mass [kg (wgt, lbs.)]	Aluminum, high efficiency radiator
	Width	667.5
	Height	437.8
	Thickness	34.0
	Fins per inch	2.5
Radiator end	tank material	Plastic
	Std., elec., opt.	Standard A/C
	Number of blades & type (flex, solid, material)	5, plastic, solid
	Diameter & projected width	423.0 (16.7) - 2 fans 318.0 (12.5) - 2 fans
	Ratio (fan to crankshaft rev.)	Not Applicable
an '	Fan cutout type	ECM controlled
	Drive type (direct, remote)	
	RPM at idle (elec.)	••
	Motor rating (wattage) (elec.)	150 RT & LT
	Motor switch (type & location) (elec.)	Temp. switch engine cylinder head
	Switch point (temp., pressure) (elec.)	2100-2200 RT & LT
	Fan shroud (material)	Plastic Plastic

<sup>@ -</sup> Distance between top of fins.

<sup>\* - 21.36</sup>mm (0.84") wide, 5.20mm (0.20") thick with uniform dynamic tensioner.

MVM	A Specification:	s Form Vehicle Line <u>CAMARO</u>						
•	-	Model Year 989 Issued 69 Revised 6						
METRIC	(U.S. Customary)							
Engine Des	scription/Carb.	2.8 Liter V6 (173 CID)						
Engine Cod		(2.8 Multi-Port FI) RPO LB8						
Engine -	Fuel System (See supple	emental page for details of Fuel Injection, Supercharger, Turbocharger, etc. if used)						
Induction typ	e: carburetor, fuel							
injection syst		Fuel Injection						
Manufacture	r	-Rochester Products						
Carburetor n	o. of barrels	None						
Idle A/F mix.		Preset - No adjustment provided						
	Point of injection (no.)	Euel injection at inlet ports						
Fuel injection	Constant, pulse, flow	l Dulas						
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Control (electronic, mech.)	ECM						
	System pressure [kPa (psi)]	300 (45)						
ldle spdrpm	Manual							
(spec. neutral or		*fen-						
drive and propane if	Automatic	4-						
used)		-						
Intake manifo	old heat control (exhaust							
	nostatic or fixed)	Water						
Air cleaner ty	ре	Dual Elements						
Fuel filter (typ	e/location)	••						
Fuel	Type (elec. or mech.)	Electric						
pump	Location (eng., tank)	Fuel Tank						
	Pressure range (kPa (psi)]	350 (50.8)						
5	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))							
Fuel Tank	<u> </u>							
Capacity [refil	I L (gallons)}	58.7 (15.5)						
Location (desi	cribe)	Rear center						
Attachment		Underbody strap						
Material & Ma	ss [kg (weight lbs)]	Steel 8.579 (18.9)						
	Location & material	Left rear quarter						
pipe	Connection to tank	Solder						
Fuel line (material)		Steel						
Fuel hose (material)		Rubber						
Return line (m	eaterial)	Steel						
Vapor line (ma	aterial)	Steel						
_	Opt., n.a.	Not Available						
Extended range	Capacity [L (gallons)]	NUL-AVAITADIB						
range tank	Location & material	11						
Ţ	Attachment	n e						

Auxiliary tank

Opt., n.a.

Attachment

Separate fill

Capacity [L (gallons)]

Selector switch or valve

Location & material

Not Available

H

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MI A IM	A Specification	s rorm	Vehicle Line CAMARO Model Year 1989	Issued6-88	<b>5</b>
METRIC	(U.S. Customary)		IMOOSI TOO	ISSUEG	Revised (•)
	<b>(</b>				
Engine Des	scription/Carb.		V8 (305 CID)		
Engine Cod	10	<u>(Electroni</u>	<u>ic Fuel Injection)</u>	RPO LO3	
Engine -	Fuel System (See suppl	emental page for deta	ails of Foel Injection, Supercharge	r. Turbocharger etc. if used)	
Induction typ	e: carburetor, fuel		•	,	
injection syst	tem, etc.	Fuel Injec	rtion		
Manufacture		Rochester	Products		
Carburetor ne	o. of barrels	None	1100000	<del></del>	
Idle A/F mix.			o adjustment prov	ided	
	Point of injection (no.)		tion at inlet por		
Fuel injection	Constant, pulse, flow	Pulse	TOTAL DE TITLE POT		
4	Control (electronic, mech.)	ECM			
	System pressure [kPa (psi)]		· · · · · · · · · · · · · · · · · · ·		
Idle spdrpm	Manual				
(spec. neutral or			· · · · · · · · · · · · · · · · · · ·		<del></del>
drive and propane if	Automatic		<del>-</del> <u></u>		
used)		1	<u> </u>		
Intake manifo or water them	old heat control (exhaust mostatic or fixed)				
Air cleaner typ	pe	Replaceabl	e element, single	snorkal	
Fuel filter (typ	e/location)		o oromenty bringing	JIIOI KCT	
	Type (elec. or mech.)	Electric			
Fuel pump	Location (eng., tank)	Fuel tank		<u> </u>	
	Pressure range [kPa (psi)]	14.5-31.0	(2.1-4.5)		
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))				
Fuel Tank				<del></del>	
Capacity (refill	L (gallons)]	58.7 (15.5	3)		
Location (desc	cribe)	Rear cente			
Attachment		Underbody			
Material & Mas	ss [kg (weight lbs)]	Steel 8.76			<del></del>
Filler	Location & material		quarter		
pipe	Connection to tank	Solder	ANGI DEI	<u> </u>	
Fuel line (mate		Steel			
Fuel hose (ma	terial)	Rubber			
Return line (ma	aterial)	Steel			
Vapor line (ma	iterial)	Steel			
	Opt., n.a.	Not Availa	hle	<del></del>	<del>_</del>
Extended Fange	Capacity (L (gallons))	IN TAXALLA	W16		
range tank	Location & material	II.			
	Attachment	li I			
	Opt., n.a.	11			
	Capacity [L (gallons)]	n			
Auxiliary tank	Location & material	11			
	Attachment	11		<del></del>	
<u> </u>	Selector suitob or unbig				

Separate fill

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	MVM/	A Specification:	s Form	Vehicle Line	CAMARO 1989	-	₀ <b>.6-88</b>		
	METRIC	(U.S. Customary)		· Model Year <u></u>		issued _	310-00	_ Revised (•) _	<del></del>
		eription/Carb.		V8 (305 CI		RPO LBS	9		
	Engine -	Fuel System (See supple	emental page for detail	ls of Fuel Injection, Su	ipercharger, Ti	urbocharger, e	etc. if used)		
	Induction typ injection syst	e: carburetor, fuel iem, etc.	Fuel Inje	ction				412	
٠.	Manufacture	T	Bosch						
Ø	Carburetor no. of barrels		None				<del></del>		
ļ	Idle A/F mix.		Preset -	no adjustme	nt prov	ided			
	_	Point of injection (no.)		ction at in					
	Fuel Injection	Constant, pulse, flow	Pulse					·	
		Control (electronic, mech.)	ECM				<del>" </del>	· · · · · · · · · · · · · · · · · · ·	
_		System pressure [kPa (psi)]	300 (44)						
	idle spdrpm	Manual					-		<u></u>
	(spec. neutral or								
	drive and propane if	Automatic				·			·
	used)			<u> </u>					
(	ntake manifo or water them	old heat control (exhaust mostatic or fixed)							
_	Air cleaner type		Replaceab	le dual ele	ments				
f	uel filter (type / location)								
Ø	a)	Type (elec. or mech.)	Electric						
	oump	Location (eng., tank)	Fuel Tank						
~		Pressure range [kPa (psi)]	350 (50.8	)					
Ø		Flow rate at regulated pressure (L (gal) / hr @ kPa (psi))						<del></del> :	
<u> </u>	uel Tank	<b>.</b>				, <u> </u>			
C	Capacity [refile	L (gallons)]	58.7 (15.	5)			<del></del>		
_	ocation (des		Rear cent				· ·	<u> </u>	<del></del>
Ā	ttachment		Underbody						<del></del>
ī	Aaterial & Ma	ss [kg (weight lbs)]		79 (18.9)		<del></del>	·	<u> </u>	
	iller	Location & material	Left rear						
	ipe	Connection to tank	Solder	4441.001					
F	uel line (mate	erial)	Steel						
F	uel hose (ma	sterial)	Rubber						
R	leturn line (m	aterial)	Steel					<del></del>	
V	apor line (ma	iterial)	Steel						
		Opt., n.a.	Not Avail	able					
	xtended [	Capacity [L (gallons)]	lt .						
te	ange Ink	Location & material **	II				·		
	[	Attachment	21						
_	. 7	Opt., n.a.	91				·		
-		Capacity [L (gallons)]	11						<del></del>
	uxiliary [ ink	Location & material	Ħ					· · · · · · · · · · · · · · · · · · ·	
	. [	Attachment	н						
••	T	Selector switch or valve	11						

Separate fill

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MVMA	A Specifications	Form Vehicle Line CAMARO					
•	-	Model Year 1989 Issued 6-88 Revised (*)					
MEIRIC	(U.S. Customary)						
Engine Des Engine Cod	cription/Carb. e	5.7 Liter V8 (350 CID) Tuned Port Fuel Injection (TPI) RPO 198					
Engine -	Fuel System (See supple	mental page for details of Fuel Injection, Supercharger, Turbocharger, etc. if used)					
		The state of the s					
Induction type injection systematical injection in the injection	e: carburetor, fuel em, etc.	_TPI - Tuned Port Fuel Injection					
Manufacturer		Bosch					
Carburetor no	<del></del>	None					
Idle A/F mix.	,						
10.01.01	Point of injection (no.)	Preset - no adjustment provided					
Fuel	Constant, pulse, flow	Fuel injectors at inlet ports					
injection	Control (electronic, mech.)	Pulse					
	<del></del>	Electronic - on board computer					
idie spdrpm	System pressure [kPa (psi)]  Manual	255 (37)					
(spec.	manuai						
neutral or drive and							
propane if	Automatic						
used)							
	eld heat control (exhaust mostatic or fixed)	Water, thermostat					
Air cleaner typ	pe	Replaceable paper dual element					
Fuel filter (typ	e / location)	The same of the sa					
×	Type (elec. or mech.)	Electric					
Fuel	Location (eng., tank)	Fuel tank					
<b>FF</b>	Pressure range [kPa (psi)]	350 (50.8)					
ð	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))						
Fuel Tank	t	1					
Capacity [refil	L (gallons)]	58.7 (15.5)					
Location (des	cribe)	Rear center					
Attachment		Underbody strap					
Material & Ma	ss [kg (weight lbs)]	Steel 8.579 (18.9)					
Filler	Location & material	Left rear quarter					
pipe	Connection to tank	Solder					
Fuel line (mate	erial)	Steel					
Fuel hose (ma		Rubber					
Return line (m	naterial)	Steel					
Vapor line (ma	aterial)	Steel					
	Opt., n.a.	Not Available					
Extended '	Capacity [L (gallions)]	NUL AVAITABLE					
range tank	Location & material	II					
	Attachment	11					
	Opt., n.a.	11					
•		tt					
Auxiliary	Capacity (L (gallons))						
tank	Location & material	#					
ŀ	Attachment	"					
ļ	Selector switch or valve	n					
	Separate fill	11					

Vehicle Line <u>CAMARO</u>

Model Year 1989 Issued <u>6.88</u> Revised (e) 9.88

**METRIC (U.S. Customary)** 

Engine	Description/Carb.
Engine	Code

2.8 Liter V6 (173 CID)
(2.8 Multi Port FI) RPO LB8

		_
Vehicle	<b>Emission</b>	Control

	Type (air in modification	jection, engine ns, other)	Computer Compand Control
	Pump or pulse		Computer Command Control
		Driven by	Pump - manual transmission only Belt
	Air Injection	Air distribution (head, manifold, etc.)	Exhaust Manifold
		Point of entry	Exhaust Manifold
Exhaust	Exhaust	Type (controlled flow, open orifice, other)	Back Pressure Modulated Controlled Flow
Emission Control	Gas Recircula-	Exhaust source	Manifold Exhaust Crossover
Control	tion	Point of exhaust injection (spacer, carburetor, manifold, other)	Inlet Manifold
		Туре	Single Bed, Oxidizing & Reducing
		Number of	One State 121119 & Reducting
		Location(s)	Beneath RF underbody
	Catalytic	Volume [L (in³)]	2.78 (170)
	Converter	Substrate type	Monolith
		Noble metal type	Platinum/Rhodium
		Noble metal concentration (g/cm³)	0.000838
	Type (ventilates to atmosphere, induction system, other)		Induction_system
Crankcase Emission	Energy source (manifold vacuum, carburetor, other)		Manifold vacuum
Control	Discharges (to intake manifold, other)		Inlet manifold
· <u> </u>	Air inlet (bre	ather cap, other)	Air Inlet Duct
Evapora-	Vapor vente	d to Fuel tank	Canister
tive Emission	canister, oth	ner) Carburetor	
Control	Vapor stora	ge provision	Canister
Electronic	Closed loop	(yes/no)	Yes
system	Open loop (	yes/no)	No

#### Engine - Exhaust System

Type (single dual, other)	e, single with cross-over,	Single with dual tailpines		
Muffler no. &	& type (reverse flow, straight thru, sonator) Material & Mass [kg (weight lbs)]	One Reverse flow		
Resonator n	no. & type	*(See below)		
Francis	Branch o.d., wall thickness	@(See_below)		
Exhaust pipe	Main o.d., wall thickness	Stainless Steel		
*	Material & Mass [kg (weight lbs)]	63.5 X 1.58 (2.5 X 0.06)		
Inter- mediate	o.d. & wall thickness	Aluminum coated steel		
pipe	Material & Mass [kg (weight lbs)]	57.15 x 1.09 (2.25 x 0.04)		
	o.d. & wall thickness	Aluminum coated steel		
pipe	Material & Mass [kg (weight lbs)]	Aluminum coated steel 3 231 (7 1)		

<sup>\*</sup> Outer Pipe 57.15X1.02 (2.25 x 0.04), Inner Pipe 50.08x0.086 (2.0x.003)\* (2.5 (0.1) air gap between pipes).

(2.15 (0.08) air gap between pipes. \*\* Muffler & Tail Pipe Unit 7.620 (16.8)

<sup>©</sup> Outer Pipe 63.5x1.02 (2.5x0.04), Inner Pipe 57.15x0.086 (2.25x0.003)

**METRIC (U.S. Customary)** 

Engine Description/Carb. Engine Code 5.0 Liter V8 (305 CID) (Electronic Fuel Injection) RPO LO3

	Type (air in modification	ection, engine s, other)	Air injection with Computer Command Control
		Pump or pulse	Vane Pump
	ł	Driven by	V-Belt
	Air Injection	Air distribution (head, manifold, etc.)	Exhaust manifold and catalytic converter
	<u></u>	Point of entry	Exhaust manifold
Exhaust	Exhaust	Type (controlled flow, open orifice, other)	Back Pressure Modulated
Emission Control	Gas Recircula- tion	Exhaust source Point of exhaust injection (spacer, carburetor, manifold, other)	Manifold Exhaust Crossover Inlet Manifold
		Туре	
=		Number of	Dual Bed, Oxidizing & Reducing One
		Location(s)	
	Catalytic	Volume [L (in <sup>3</sup> )]	Beneath RF underbody 2.78 (170)
	Converter	Substrate type	2.78 (170) Monolith
		Noble metal type	Platinum/Palladium/Rhodium
		Noble metal concentration (g/cm³)	0.001096
	Type (ventilates to atmosphere, induction system, other)		Induction system
Crankcase Emission	Energy soul vacuum, ca	ce (manifold buretor, other)	Manifold vacuum
Control	Discharges manifold, ot	(to intake her)	Throttle body
	Air inlet (bre	ather cap, other)	Air Cleaner
Evapora-	Vapor vente (crankcase.	1.00.10.11	Canister
Emission	canister, oth		Canister
Control	Vapor stora		Canister
Electronic	Closed loop	<del></del>	Yes
system	Open loop (	yes/no)	No ·

#### Engine - Exhaust System

Type (single dual, other)	e, single with cross-over,	Single with dual tailnines
Muffler no. ★separate re	& type (reverse flow, straight thru, sonator) Material & Mass [kg (weight lbs)]	One. Reverse flow
Resonator	no. & type	None
	Branch o.d., wall thickness	(a)
Exhaust pipe	Main o.d., wall thickness	(h)
	Material & Mass [kg (weight lbs)]	(See Notes) 5.069 (11.2)
*Inter-	o.d. & wall thickness	57.15 x 1.14 (2.25) x .045)
mediate pipe	Material & Mass [kg (weight lbs)]	Aluminum coated steel
*Tail	o.d. & wall thickness	63.5 x 1.07 (2.5 x 0.042)
pipe	Material & Mass [kg (weight lbs)]	Aluminum coated steel

SEE ATTACHED NOTES

Vehicle Line <u>CAMARO</u>

Model Year <u>1989</u> Issued <u>6-88</u> Revised (e)

METRIC (U.S. Customary) SUPPLEMENTAL PAGE

#### NOTES:

(a) Left hand branch - Stainless steel; outer 57.15 x 1.02 (2.25 x 0.04), inner 50.8 x 0.86 (2.0 x 0.003) with 2.155 (0.085) air gap between pipes. Right hand branch - Laminated; stainless steel outer tube, 50.8 x 0.86 (2.0 x 0.003), with steel inner tube

(2.0 x 0.003), with steel inner tube. (b) Stainless steel; outer 63.5 x 1.02 (2.5 x 0.04), inner 57.15 x 0.86 (2.25 x 0.003) with 2.155 (0.085 air gap between pipes).....

\* Muffler & tail pipe unit 8.732 (19.3)

Vehicle Line \_\_\_CAMARO Model Year # 1989 \_\_Issued \_\_\_\_\_96-88 Revised (e) = 9 = 88

**METRIC (U.S. Customary)** 

Engine Description/Carb. Engine Code

5.0 LTR V8(305 CID) RPO LB9 5.7 LTR V8(350 CID) RPO L98 (Tuned Port Fuel Injection) (Tuned Port Fuel Injection)

#### **Vehicle Emission Control**

	Type (air in modification	jection, eng ns, other)	ine	Air injection w/computer command control
	-	Pump or	pulse	Air pump
		Driven by	,	Belt
	Air Injection	Air distrib (head, m	oution anifold, etc.)	Exhaust manifold and catalytic converter
	L	Point of e	entry	Exhaust manifold
Exhaust	Exhaust	Type (cor open orifi	ntrolled flow, ice, other)	Back Pressure Modulated Controlled Flow
Emission Control	Gas Recircula-	Exhaust a	source	Manifold
OCTION .	tion	Point of e (spacer, or manifold,	exhaust injection carburetor, other)	Inlet_Manifold
		Туре		Dual bed, Oxidizing & Reducing
		Number o	of	One
		Location(	s)	Beneath RF underbody
	Catalytic	Volume [1	L (in <sup>3</sup> )]	2.78 (170)
	Converter	Substrate type		Monolith
		Noble me	rtal type	Platinum/Palladium/Rhodium
<u> </u>		Noble me concentra	etal ation (g/cm³)	0.001096
	Type (ventilates to atmosphere, induction system, other)		osphere,	Induction system
Crankcase Emission	Energy source (manifold vacuum, carburetor, other)		ld her)	Manifold vacuum
Control	Discharges manifold, ot	Discharges (to intake manifold, other)		Intake manifold
	Air inlet (breather cap, other)		other)	Throttle Body
Evapora-	Vapor vente	d to	Fuel tank	Canister
tive Emission	canister, oth	ner)	Carburetor	
Control	Vapor stora	ge provision	n T	Canister
Electronic	Closed loop	(yes/no)		Yes
system	Open loop (	yes/no)		No
Engine -	Exhaust \$	System		
Type (single, dual, other)	single with cro	oss-over, -		
	type (reverse	flow, straigh	nt thru, rg (weight lbs))	Single with dual tailpipes
		al & Mass [k	(g (weight lbs))	One, Reverse flow
Resonator no				None
Exhaust	Branch o.d.			(a)
pipe	Main o.d., w		s	(b)
		4 II		

(See Notes) 6.124 (13.5)

63\_5 x 1.07 (2.25 x .04)

Aluminum coated steel

Aluminum coated steel

69.85 x 1.40 (2.75 x 0.05)

(a) Laminated - Stainless steel outer pipe,  $63.5 \times 1.016$  (2.5 x 0.04), steel inner pipe. (b) Laminated - Stainless steel outer pipe,  $76.2 \times 1.016$  (3.0 x 0.04), steel inner pipe. Muffler & tail pipe unit 8.845 (19.5).

\*Inter-

\*<sub>Tail</sub>

pipe

mediate pipe

Material & Mass [kg (weight lbs)]

Material & Mass [kg (weight lbs)]

Material & Mass [kg (weight lbs)]

o.d. & wall thickness

o.d. & wall thickness

MVM	A Specification	s Form	Wehicle Line_ Model Year_	CAMARO	lear root	C 00 ·	_ Revised (*)	
METRI	C (U.S. Customary)	•	mvvo: 10d/		TESUECI .	VO-88	nevised (*)	
Engine De Engine Co	escription/Carb. ode	2.8 Lite	ter V6 (173 CID) Port FI RPO LB8					
Transm	issions/Transaxie (Std.,				- "-			
Manual 3-s	peed (manufacturer/country)	Not Avai	ilahla					
	peed (manufacturer/country)		lable				<del></del>	
	peed (manufacturer/country)	Standard					***************************************	
	manufacturer/country)							
	overdrive (manufacturer/country)	Optional			•••			
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Optional						
Manual	Transmission/Transaxie	(MBI)					• .	
Number of t	orward speeds	5						
	1st	4.03		-			<del>,</del>	
	2nd	2.37				<u> </u>	<del></del>	·····
	3rd	1.50		····				
Gear ratios	4th	1.00		· · · · · · · · · · · · · · · · · · ·				
,	5th	0.76				-	· · · · · · · · · · · · · · · · · · ·	
	Reverse	3.76						
Synchronou	is meshing (specify gears)		ard gears				· ···	
Shift lever lo	ocation	Floor	aru years					
Trans. case	mat'l. & mass kg (lbs)*	Aluminum						
	Capacity [L (pt.)]							_
Lubricant	Type recommended	Dextron	.87 pts.)			<del>.</del>		
Clutch (1	Manual Transmission)							
			<del></del>					
Clutch manufacturer		Bellevil						
Clutch type (dry, wet; single, multiple disc)  Linkage (hydraulic, cable, rod, lever, other)		Dry disc Hydrauli						
Max. pedal (		130n	<u> </u>					
max. pedal ( spring load,	new) N (lbs) Released	Laun						
Assist (sprin	g, power/percent, nominal)	None						
	re plate springs	Diaphrag						
	load (nominal, new) N (lbs)	5750 (12)				·		
	Facing mfgr. & material coding							
	Facing material & construction	Valeo/F2	· <del>-</del>	<u></u>			<del></del> -	
•	Rivets per facing	Non-asbe	stos	. ,		. =		
	1 11 Anna hai saosiiA	16						

Coil springs with non-metal friction control \* Includes shift linkage, lubricant, and clutch housing. If other specify.

Sel:

Outside x inside dia. (nominal)

Thickness (pressure plate side/ fly wheel side)

Rivet depth (pressure plate side/ fly wheel side) Engagement cushion method

Total eff. area [cm²(in.²)]

Release bearing type & method lub.

Torsional damping method, springs, hysteresis

Clutch facing

232.0 x 155.0 (9.125 x 6.125)

Driven plate wave spoke springs

centering angular contact ball bearing pre packed and sealed

234.0 (35.28)

		CITICATIONS	harm .	Vehicle Line_				
	in Obe	cifications	FOIII	Model Year	1989	_ lssued	6-88	Revised (e)
METRI	IC (U.S. C	ustomary)	, •					.,
Engine D	escription/Ca	<u> </u>	F O Liton	V8 (305 C	TD)			
Engine C		, ,		ic Fuel In		RPO LOS	ł	
T	deeleT-	, O bed Alvance	•	**	<del>Jer crun)</del>	AFU IU.	<u> </u>	
Transm	IISSIONS/II	ansaxie (Std., O	Pt., N.A.)			<del></del>		
	speed (manufac	<del></del>	Not Avail					
	speed (manufac		Not Avail	ahle	<del> </del>			
	speed (manufac		Standard_	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		
	(manufacturer/	ufacturer/country)	_Optional_	<del></del>	<del> </del>			
- Autoritation	Overcine (man	ulacture//country)	_Optional_					· · · · · · · · · · · · · · · · · · ·
Manual	Transmis	sion/Transaxie	(M39)	. <del>"II.</del>			-	· · · · · · · · · · · · · · · · · · ·
Number of	forward speed	s	5		·			
	1 st		2.95					
	2nd		1.94					
Gear	3rd		1.34					
ratios	4th		1 00	<del> </del>				
	5th		0.63					
Cb	Reverse		2.75	<del></del>			<del></del>	
Shift lever le	us meshing (sp	ecny gears)	All forwar	rd gears		<del> </del>		<u> </u>
		ka (lhe)*	_Floor					
Trans. case mat'l. & mass kg (lbs)*								
TIELIS. CESC			_Aluminum_					
Lubricant	Capacity [I	(pt.)]	Aluminum 3.25L (6.1	87 pts.)				
	Capacity [L	(pt.)]	* * *	87 pts.)				
	Capacity [L	(pt.)]	* * *	87 pts.)				
	Capacity [L	(pt.)]	* * *	87 pts.)				
Lubricant	Capacity [L	(pt.)]	* * *	87 pts.)				
Lubricant	Capacity [L	. (pt.)] nmended	* * *					
Lubricant  Clutch (	Capacity [L	. (pt.)] nmended	3.25L (6.1					
Clutch (Clutch man	Capacity [L Type recor	nmended ansmission)	3.25L (6.					
Clutch (Clutch maniculated type Linkage (hy.	Capacity [L Type recor	e, multiple disc) Depressed	3.25L (6.1					
Clutch (Clutch maniculate type Linkage (hymax. pedal spring load,	Capacity [L Type recor Manual Translater (dry, wet; single refraulic, cable, in effort (norm, , new) N (lbs)	e, multiple disc)  Depressed Released	Belleville Dry disc Hydraulic					
Clutch (Clutch maniculated type Linkage (hymax. pedal apring load, Assist (spring load)	Capacity [L Type recor Manual Translaturer (dry, wet; single draulic, cable, in effort (nom., new) N (lbs)	ansmission)  e, multiple disc) rod, lever, other) Depressed Released ent, nominal)	Belleville Dry disc Hydraulic 150n					
Clutch (Clutch maniculate type Linkage (hyi Max. pedal apring load, Assist (aprin	Capacity [L Type recor Manual Transfacturer (dry, wet; single rdraulic, cable, in effort (nom., new) N (lbs)	ansmission)  e, multiple disc) rod, lever, other)  Depressed Released ent, nominal)	Belleville Dry disc Hydraulic 150n None Diaphragm	e				
Clutch (Clutch maniculate type Linkage (hyi Max. pedal apring load, Assist (aprin	Capacity [L Type recor Manual Transfacturer (dry, wet; single retrort (nom., new) N (lbs) ng, power/perce ure plate spring load (nominal,	ansmission)  e, multiple disc) rod, lever, other)  Depressed Released ent, nominal) s new) N (lbs)	Belleville Dry disc Hydraulic 150n None Diaphragm 7750 (1742	2)				
Clutch (Clutch maniculate type Linkage (hyi Max. pedal apring load, Assist (aprin	Capacity [to Type record Manual Transfecturer (dry. wet; single reford (norm., new) N (lbs) and, power/percure plate spring load (nominal, Facing mfg	e, multiple disc) rod, lever, other) Depressed Released Pent, nominal) s new) N (lbs) r, & material coding	Belleville Dry disc Hydraulic 150n None Diaphragm 7750 (1742)	2)				
Clutch (Clutch maniculate type Linkage (hyi Max. pedal apring load, Assist (aprin	Capacity [to Type record Manual Translatacurer (dry. wet; single draulic, cable, in effort (nom., new) N (lbs) and, power/perceure plate spring toad (nominal, Facing mfg Facing mat	e, multiple disc) rod, lever, other) Depressed Released ent, nominal) s new) N (lbs) r. & material coding erial & construction	Belleville Dry disc Hydraulic 150n None Diaphragm 7750 (1742) Valeo/F202	2)				
Clutch (Clutch maniculate type Linkage (hyi Max. pedal apring load, Assist (aprin	Capacity [to Type record Type	e, multiple disc) rod, lever, other) Depressed Released ent, nominal) s new) N (lbs) r. & material coding erial & construction acing	Belleville Dry disc Hydraulic 150n None Diaphragm 7750 (1742 Valeo/F203 Non-asbest	2) 2) 2 tos				
Clutch (Clutch maniculate type Linkage (hyi Max. pedal apring load, Assist (aprin	Capacity [to Type record Type	e, multiple disc) rod, lever, other) Depressed Released ent, nominal) s new) N (lbs) r. & material coding erial & construction acing sside dia. (nominal)	Belleville Dry disc Hydraulic 150n  None Diaphragm 7750 (1742 Valeo/F203 Non-asbest 18 254.0 x 1	2) 2 tos	x 6.5)			
Clutch (Clutch maniculated type Linkage (hy) Max. pedal spring load, Assist (sprin Type pressured type pressured type Clutch	Capacity [to Type record Manual Transitacturer (dry, wet; single draulic, cable, in effort (norm, new) N (lbs) (lb	e, multiple disc)  e, multiple disc)  od, lever, other)  Depressed  Released  ent, nominal)  s  new) N (lbs)  r. & material coding erial & construction acing side dia. (nominal) ea [cm²(in.²)]	Belleville Dry disc Hydraulic 150n None Diaphragm 7750 (1742 Valeo/F203 Non-asbest	2) 2 tos	x 6.5)			
Clutch (Clutch maniculate type Linkage (hyi Max. pedal apring load, Assist (aprin	Capacity [to Type record Manual Transitacturer (dry, wet; single draulic, cable, in effort (norm, new) N (lbs) (lb	ansmission)  e. multiple disc) rod, lever, other)  Depressed Released ent, nominal) s new) N (lbs) r. & material coding refial & construction acing reside dia. (nominal) rea [cm²(in.²)] pressure plate side/	Belleville Dry disc Hydraulic 150n None Diaphragm 7750 (174: Valeo/F20: Non-asbes: 18 254.0 x 1: 293.0 (45	2) 2 tos	x 6.5)			
Clutch (Clutch manicular Clutch type Linkage (hy. Max. pedal spring load, Assist (spring Type press.) Total spring	Capacity [to Type record Type	e, multiple disc) e, multiple disc) od, lever, other) Depressed Released ent, nominal) s new) N (lbs) r. & material coding erial & construction acing uside dia. (nominal) ea [cm²(in.²)] pressure plate side/ de) (pressure plate side/	Belleville Dry disc Hydraulic 150n  None Diaphragm 7750 (1742 Valeo/F203 Non-asbest 18 254.0 x 1	2) 2 tos	x 6,5)			
Clutch (Clutch manicular Clutch type Linkage (hy. Max. pedal spring load, Assist (spring Type press.) Total spring	Capacity [to Type record Type	e, multiple disc) rod, lever, other)  Depressed Released ent, nominal) s new) N (lbs) r. & material coding erial & construction acing aside dia. (nominal) ea [cm²(in.²)] pressure plate side/ de) (pressure plate side/ de)	Belleville Dry disc Hydraulic 150n None Diaphragm 7750 (174: Valeo/F20: Non-asbes: 18 254.0 x 1: 293.0 (45	2) 2 tos	x 6.5)			
Clutch (Clutch maniculated type Linkage (hyimax, pedal apring load, Assist (apring Type pressured type pressure	Capacity [to Type record Type	e, multiple disc) e, multiple disc) rod, lever, other) Depressed Released ent, nominal) s new) N (lbs) r. & material coding erial & construction acing side dia. (nominal) ea [cm²(in.²)] pressure plate side/ de) (pressure plate side/ de)	Belleville Dry disc Hydraulic 150n  None Diaphragm 7750 (1742 Valeo/E202 Non-asbest 18 254.0 x 10 293.0 (45 3.45/3.45	2) 2 tos 65.0 (10.0	poke spr	ings		packed and seal

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

MVM	IA Specificatio	ns Form	Vehicle Line	CAMARO	<del></del>	<del></del>	
	• .		Model Year	1989	_ issued	6-88	_ Revised (•)
METRI	IC (U.S. Customary)	·					
		5.0 131.6	er V8 (305 C	Thy			<del></del>
Engine C	escription/Cerb. ode	(Tuned I	ort Fuel In	iection)	RPO I RO		
_				300010117	111 0 200		
Transm	nissions/Transaxie (Std						
Manual 3-s	speed (manufacturer/country)	Not Avai					···
Manual 4-s	speed (manufacturer/country)	Not Ava					
	speed (manufacturer/country)	Standard					
	(manufacturer/country)	Optiona					
Automatic	overdrive (manufacturer/country)	Optiona	<u> </u>				
Manual	Transmission/Transax	le (M39)			<del> </del>	(MK6)	
Number of	forward speeds	5	· · · · · · · · · · · · · · · · · · ·		7	,5° 3	
<del></del>	1st	2.95	··· • • • • • • • • • • • • • • • • • •	<del></del>		2:75	
	2nd	1.94	· <del></del>			17949	
_	3rd	1.34	-	·	(	1.34	
Gear ratios	4th	1.00				-1°:00)	<del></del>
	5th	0.63				0.747	
	Reverse	2.76			₹	2.75-	-
<del></del>	us meshing (specify gears)		ard gears				
Shift lever I		Floor					
Trans. case	e mat'i. & mass kg (lbs)*	Aluminum					
Lubricant	Capacity [L (pt.)]		.87 pts.)				
×	Type recommended	5W-30			<u> </u>		
)							
Clutch (	Manual Transmission)						
Clutch man	ufacturer	Bellevil	1e				
Clutch type	(dry, wet; single, multiple disc)	Dry disc	· · ·			<del></del>	· · · · · · · · · · · · · · · · · · ·
Linkage (hy	draulic, cable, rod, lever, other)	Hydrauli		· · · · · · · · · · · · · · · · · · ·			
Max. pedal	effort (nom. Depressed	150n				<del></del>	
	, new) N (lbs) Released					- <del></del>	
Assist (sprin	ng, power/percent, nominal)	None				·	·
	re plate springs	Diaphrag					· · · · · · · · · · · · · · · · · · ·
Total spring	load (nominal, new) N (lbs)	7750 (17					
	Facing mfgr. & material coding						
	Facing material & construction		<u>stos</u>				
r	Rivets per facing	18	177 4 0 0 0 0				
	Outside x inside dia. (nominal	26/.U X	165.0 (10.5	x 6.5)		···	
Clutch	Total eff. area [cm²(in.²)]		3.6)				
tacing	Thickness (pressure plate side fly wheel side)	3.45/3.4	5				
	Rivet depth (pressure plate side)	1.1 mm					
-	Engagement cushion method		late wave sp	oke spri	nas		<u> </u>
Release bea	tring type & method lub. Se	If centering	angular cor	tact bal	Tbearin	g pre-i	packed and sealed
Torsional da	mping method, springs, hysteresi	s Coil spr	ings with no	n-metal	friction	contr	ol
	-		<del></del>		****		

<sup>\*</sup> Includes shift linkage, lubricant, and clutch housing. If other specify.

MVMA Specifications Form			Vehicle Line Model Year	CAMARO 1989	Issued	6-88	_ Revised (e)
METRI	C (U.S. Customary)		100000				
Engine De Engine Co	scription/Carb. de		5.7 Liter V8 (305 CID) (Tuned Port Fuel Injection) RPO 198				
Transm	issions/Transaxie (Std., O	pt., N.A.)					
Manual 3-s	peed (manufacturer/country)	Not Avai	lahle				
Manual 4-s	peed (manufacturer/country)	11 (	7	<del></del>			
Manual 5-s	peed (manufacturer/country)	n ı		<del></del> -		<del></del>	
Automatic (	manufacturer/country)	Standard		· · · · · · · · · · · · · · · · · · ·		<del></del>	
Automatic o	verdrive (manufacturer/country)	Standard					
Manual	Transmission/Transaxie	<del></del>			- '	<u>-</u>	
Number of f	orward speeds				·		
	1st					·	
	2nd		<u> </u>			•	
	3rd		-				<del></del>
Gear ratios	4th	Not				,	
	5th	Available	•		-		· · · · · · · · · · · · · · · · · · ·
	Reverse		·-· ·- ·- ·- ·- ·- ·- ·- ·- ·- ·- ·- ·-				
Synchronou	s meshing (specify gears)						
Shift lever to	cation						
Trans. case	mat'i. & mass kg (lbs)*						
	Capacity [L (pt.)]						···
Lubricant	Type recommended		<del></del>	<del></del>	-		
	Manual Transmission)						
Clutch manu							•
	(dry, wet; single, multiple disc)	N - 4	·				-
	draulic, cable, rod, lever, other)	Not				· · · · · · · · · · · · · · · · · · ·	
Max. pedal : spring load.	and Miller	Available	<u> </u>			·····	
	g, power/percent, nominal)		<del></del>				
	re plate springs		<del></del> .		<del></del>		
	load (nominal, new) N (lbs)				<del></del>		
i otal spinig			<del></del>				
	Facing mfgr. & material coding		<del></del>				
1	Facing material & construction  Rivets per facing		<del></del>				
			<del></del>				
	Outside x inside dia. (nominal)  Total eff. area [cm²(in.²)]			<del></del>			
Clutch scing	Thickness (pressure plate side/ fly wheel side)						
•			<del></del>	<del></del>			<del> </del>
	Rivet depth (pressure plate side/ fly wheel side)						
	fly wheel side)  Engagement cushion method		<del></del> -	·	<del></del>		<del></del> .
Release bea	fly wheel side)						

<sup>\*</sup> Includes shift linkage, lubricant, and clutch housing. If other specify.

**CAMARO** Vehicle Line\_ Model Year \_\_\_\_\_1989 Issued \_\_\_\_\_6488 Revised (\*)

#### **METRIC (U.S. Customary)**

Engine Description/Carb. Engine Code

2.8 Liter V6 (173 CID) (2.8 Multi Port FI) RPO LB8

#### **Automatic Transmission/Transaxie**

Trade name	<u> </u>	4-Speed Automatic				
Type and sp	pecial features (describe)	Torque converter with clutch 700-R4				
0-1	Location	On floor console				
Selector	Ltr./No. designation	P-R-N- D -D-2-1				
	1st	3.06				
Gear	2nd	1,63				
ratios	3rd	1.00*				
	4th	0.70*				
	Reverse	2,29				
***	speed - drive range [km/h (mph)]	1-2=61(38), 2-3=111(69)				
Max. kickdo	wn speed - drive range [km/h (mph)]	3-2=105(65), 2-1=50(31)				
Min. overdriv	ve speed [km/h (mph)]	72 (45)				
	Number of elements	3				
Torque	Max. ratio at stall	2.35				
converter	Type of cooling (air, liquid)	Liquid				
-	Nominal diameter	245 (9.65)				
	Capacity factor "K"*					
.ubricant	Capacity [refill L (pt.)]	4.5L (9.5 pts.)				
	Type Recommended	GM Dexron II				
	f., opt., NA, internal, external, air, liquid)	Standard, integral with radiator				
Fransmission	n case material & mass kg (lbs)**	Aluminum 71.7 (158.1)				

#### **Axie or Front Wheel Drive Unit**

Type (front,	rear)	Rear
Description		Semi-floating axle, overhung hypoid drive pinion and ring gear
Limited slip	differential (type)	Not Available
Drive pinion	offset	1.50
Drive pinion	(type)	Hypoid gear
No. of differe	ential pinions	Two
Pinion/diffe	rential adjustment (shim, other)	Shim
Pinion/diffe	rential bearing adjustment (shim, other)	Collapsible Sleeve
Driving whe	el bearing (type)	Roller bearing
Lubricant '	Capacity [L (pt.)]	1.66
LUGRICANI	Type recommended	GL-5 Gear Lubricant
<del></del>		
	- Type (scanning)	GL-3 GEAR LUDETCANT

#### Axie or Transaxie Ratio and Tooth Combinations (See 'Power Teams' for axie ratio usage.)

Axle ratio (or overall top gear ratio)		3.42	
No. of	Pinion	41	
teeth	Ring gear or gear	12	
Ring gear o.d.		194 (7.625)	
Transaxle	Transfer gear ratio	Not Applicable	
	Final drive ratio	11 11	<del></del>

<sup>\*</sup> input speed + 

torque

<sup>\*\*</sup> Includes shift linkage, lubricant, & clutch housing. If other specify.

MVM	A Specifications F	orm	Vehicle Line_	CAMARO	<u> </u>	_	
, To a para	· Opoomoziione	••••	Model Year	1989	issued _	6-88	Revised (•)
METRIC	(U.S. Customary)		•				
Engine Dee	eription/Carb.	5.0 Li	ter V8 (30!	CID)		<del></del>	
Engine Cod		(Elect	ronic Fuel	Iniecti	on) RPO	103	
Automati	ic Transmission/Transaxie						<del></del>
Trade name		4-spee	d Automatic				
Type and spe	ecial features (describe)	Torque	converter				:*
	Location		<u>700-R4</u> or console	<del></del>		<del>,</del>	<del></del>
Selector	Ltr./No. designation		D -D-2-1		<del></del>	· · · · · · · · · · · · · · · · · · ·	· · ·
	1st	3.06		•		<u> </u>	
Gear	2nd	1.63*		<del></del>			· · · · · · · ·
ratios	3rd	1.00*	··.				
	400	0.70*	•				
	Reverse	2.29	-	· · · · · · · · · · · · · · · · · · ·		-	
Max. upshift i	speed - drive range [km/h (mph)]		(37), 2-3=1	13/70)			
	m speed - drive range [km/h (mph))	3-2=10		=42 (26	1		<del></del>
Min. overdriv	e speed [km/h (mph)]	58 (36		-42 (20	<del>                                     </del>	<del></del>	
	Number of elements	3 130	<del>/</del>		··· · · · · · · · · · · · · · · · ·		
Torque	Max. ratio at stall	1.91					
COUALGE	Type of cooling (air, liquid)	Liquid	<del></del>	**	- <del> </del>	<del>-</del>	· · · · · · · · · · · · · · · · · · ·
	Nominal diameter	298 (1	1.75)		· · · · · · · · · · · · · · · · · · ·		
	Capacity factor "K"		· · / · · · · · · · · · · · · · · · · ·				
Lubricant	Capacity (refill L (pt.))	4.5L (	9.5 pts.)				
LUDRIÇANI	Type Recommended	GM Dex			<del></del>		<del></del>
Oil cooler (std.	., opt., NA, internal, external, air, liquid)	;	rd integral	with w	adiaton		
	case material & mass kg (lbs)**		um 71.1 (15		BUTALUE		
	ront Wheel Drive Unit		e converter		in 2nd,	3rd &	4th gears.
Type (front, n	ear)	Rear	-		-		
Type (mern, ii			loating avi	0 011010	h	المال المالية	
Description		pinion	loating axl and rear o	le, over Jear	nung nyp	ola ari	ve
Limited slip di	ifferential (type)		ailable				
Drive pinion o	offset	1.50					
Drive pinion (	type)	Hypoid	gear				
No. of differen	ntial pinions	Two					
Pinion/differe	ential adjustment (shim, other)	Shim					
——————————————————————————————————————	ential bearing adjustment (shim, other)		sible Space	r			
Driving wheel	bearing (type)		nt roller b				
	Capacity [L (pt.)]	1.66	<u> </u>	can ma			
Lubricant ,	Type recommended		ear Lubrica	int			
				<del></del>			
Axle or T	ransaxie Ratio and Tooth C	combination	S (See 'Power Tear	Manual ns for exie rati	Trans.	Au	to. Trans.
	overall top gear ratio)			3.			2.73
No. of	Pinion		*	40		· · · · · · · · · · · · · · · · · · ·	41
teeth	Ring gear or gear			13			15
Ring gear o.d				19	4 (7.625	5)	194 (7.625)
Transaxle	Transfer gear ratio		_	No		,	
	Final drive ratio				l1		

Vehicle Line \_\_\_CAMARO

<sup>\*</sup> Input speed + V torque

<sup>\*\*</sup> Includes shift linkage, lubricant, & clutch housing. If other specify.

**CAMARO** Vehicle Line 1989 6-88 Model Year\_ Issued Revised (\*)

#### METRIC (U.S. Customary)

Engine Description/Carb.		5.0 LTR V	8 (305 CID)	RPO LB9	5.7 LTR V8 (350 CID) RPO L			
Engine Co			rt Fuel Inj		(Tuned Port Fuel Injection			
Automa	itic Transmission/Transaxie			<u> </u>				
Trade name	•	4-speed A						
Type and a	special features (describe)	Torque converter with clutch 700-R4						
0.1	Location	On floor						
Selector	Ltr./No. designation	P-R-N- D	-D-2-1	·				
	1st	3.06		<del></del>	11-1			
Geer	2nd	1.63*	· · · · ·					
ratios	3rd	1.00*						
	4th	0.70*		<del></del>				
	Reverse	2.29	<del></del>		·			
Max. upshif	t speed - drive range (km/h (mph))	1-2=65(41	), 2-3=122(	76)	1-2=55(34), 2-3=105(65)			
	own speed - drive range [km/h (mph)]		<del>2), 2-1=55)</del>		3-2=88(55), 2-1=32(20)			
Min. overdri	ive speed [km/h (mph)]	66 (41)	•		58 (36)			
	Number of elements	3	··· ·					
Torque	Max. ratio at stall	2.15			1.91			
converter	Type of cooling (air, liquid)	Liquid						
	Nominal diameter	<del>298 (11.7</del>	5)					
	Capacity factor "K"	<del></del>		<del></del>				
Lubricant	Capacity [refill L (pt.)]	4.5L (9.5	pts.)					
LUDI CE II	Type Recommended	GM Dexron II						
Oil cooler (st	d., opt., NA, internal, external, sir, liquid)		integral wi	th radiate	or , (2)			
	n case material & mass kg (lbs)**		71.1 (158.1					
	Front Wheel Drive Unit				nd, 3rd, & 4th gears.			
Type (front,	rear)	Rear						
Description		Semi-floating axle, overhung hypoid drive pinion and rear gear						
imited slip o	differential (type)	Cone clutch						
Orive pinion		1.50						
Drive pinion		Hypoid gear						
	ential pinions	Iwo*, fourd						
	rential adjustment (shim, other)	Shim						
	rential bearing adjustment (shim, other)	Collapsib	e spacer					
	bl bearing (type)			no*, tane	red roller bearing @			
	Capacity [L (pt.)]	Straight roller bearing*, tapered roller bearing @						
ubricant /	Type recommended	GL-5 Gear Lubricant						
axie or T	ransaxle Ratio and Tooth Co		e 'Power Teams' for a	de ratio usage.)				
oxie ratio (or	overall top gear ratio)	3.23	3.08	2.73	3.45			
lo. of	Pinion	42	40	41	38			
eth	Ring gear or gear	13	13	15	11			

Transfer gear ratio

Final drive ratio

(7.75)

Ring gear o.d.

Transaxle

194 (7.625)

Not Applicable

<sup>\*</sup> Input speed + V torque

<sup>\*\*</sup> Includes shift linkage, lubricant, & clutch housing. If other specify.

<sup>\* - 2.73</sup> and 3.23 axles.@ - 3.27 and 3.45 axles.

<b>MVMA</b>	Specifications Form
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Vehicle Line CAMARO

Model Year 333 1989 Issued 334 6 7 8 8 Revised (e)

**METRIC (U.S. Customary)** 

SPORT COUPE

IROC-Z

Engine Description/Carb. Engine Code Propeller Shaft - Rear Wheel Drive

Propelle	r Shaft - R	ear Wi	1001 Drive	
Manufacture Type (straigi internal-exte	Manufacturer Type (streight tube, tube-in-tube, internal-external damper, etc.)			Straight tube - Internal damper
	Manual 3-speed transmission		mission	Not Available
Outer	Manual 4-sş	peed trans	mission	п
diam. x length* x wall thickness	Manual 5-sp	peed trans	mission	63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)
	Overdrive			Not Available
	Automatic transmission		on	63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)
Inter- mediate	Type (plain, anti-friction)		n)	None
bearing	Lubrication (fitting, prepack)		epack)	n.
	Туре			Splined
Slip yoke	Number of teeth			27
	Spline o.d.			29.84 mm (1.174 in.)
	Make and m	ta no	Front	Saginaw 44
			Rear	Saginaw 44
	Number use			Two
l february al	Type (ball ar	nd trunnio	n, cross)	Cross
Universal joints	Rear attach	(u-bolt, cla	amp, etc.)	Strap & bolts
	Bearing	Type (	plain.	Anti-friction
		Lubrica (fitting,	ation , prepack)	Prepacked
Drive taken to arms or sprin	hrough (torque igs)	tube,		Torque Arm
	Torque taken through (torque tube, arms or aprings)			Torque Arm

<sup>\*</sup> Centerline to centerline of universal joints, or to centerline of rear attachment.

<sup>\* - 70</sup>mm (2.75) dia. aluminum shaft replaces base steel shaft where necessary for weight reduction.

#### **CAMARO** Vehicle Line **MVMA Specifications Form** <u>. 1989</u> ·6-88 Model Year tesued Revised (\*) **METRIC (U.S. Customary)** Body Type And/Or Engine Displacement All Models Suspension - General including Electronic Controls Not Applicable Standard/optional/not avail. Manual/automatic control Type (air/hydraulic) Car leveling Primary/assist spring Rear only/4 wheel leveling Single/dual rate spring Single/dual ride heights Jacking provisions on rocker panels Provision for jacking Not Applicable Standard/option/not avail. Manual/automatic control Number of damping rates Shock Type of actuation (manual/ absorber electric motor/air, etc.) damping contols Lateral acceleration Deceleration 8 Acceleration Road surface Direct, double acting, hydraulic (a) Type Shock Delco Make (front & 54mm (2.125 in) front; 25 (1.0) Piston diameter rear) 25mm (1.0 in) front; 13.49mm (0.53) rear Rod diameter (a) - Delco Bilstein rear shock absorbers on IROC-Z $\emptyset$ Suspension – Front Type and description Independent w/coil springs, modified MacPherson strut 75.0 mm (2.95 in) Full jounce Travel\* 104.0 mm (4.90 in) Full rebound Type (coil, leaf, other) & material Coil, steel alloy Rubber (top) Insulators (type & material) 260 x 103.0; 2490 x 15 mm, **Spring** Size (coil design height & i.d., bar length x dia.) $(10.2 \times 4.06; 98 \times .59 in)$ Sport Coupe 64.0 (365.0), IROC-Z 96.0 (548.0) Spring rate [N/mm (lb./in.)] Sport Coupe 17.7 (101.0),Rate at wheel [N/mm (lb./in.)] IROC-Z 25.6 (146.0)Stabilizer Link Type (link, linkless, frameless) Steel Steel 34 mm 30 mm (1.2 in Material & bar diameter (1.3 in)IROC-Z

Ø Suspension − Rear

Type and description		Caliabumu aula/t
	·	Salisbury axle w/torque arm, ICA, track bar, coil springs
Full jour	nce	87.0 mm (3.4)
Full reb	ound	118.0 mm (4.5)
Type (o	oil, leaf, other) & material	Coil-Steel Alloy
Size (length x width, coil design height & i.d., bar length & dia.)		254.0 x 102.6; 2709 x 12.0 (10 x 4.03; 27.9 x .472 in)
Spring rate [N/mm (lb./in.)]		18/25 variable coil (103.0) Spt. Cpe. IROZ-Z 23.0 (131.5)
Rate at wheel [N/mm (lb./in.)] Insulators (type & material)		22.7 (130.0) Spt. Cpe. IROZ-Z 29.0 (165.4)
		Rubber isolated
H	No. of leaves	Not Applicable
leaf	Shackle (comp. or tens.)	и и
Type (link, linkless, frameless)		Link
Material & bar diameter		18 mm (007 in) Spt. Cpe.   IROZ-Z - 23 mm (0.9 in)
pe)		"U" section w/rubber bushings
	Full jour Full reb Type (or Size (let height & Spring r Rate att Insulato If leat Type (lir	Full jounce Full rebound Type (coil, leaf, other) & material Size (length x width, coil design height & .d., bar length & dia.) Spring rate [N/mm (lb./in.)] Rate at wheel [N/mm (lb./in.)] Insulators (type & material) If No. of leaves leaf Shackle (comp. or tens.) Type (link, linkless, frameless) Material & bar diameter

<sup>\*</sup> Define load condition:

**CAMARO** Vehicle Line\_ 1989 Issued .

**METRIC (U.S. Customary)** 

Body Type And/Or	

Sport Coupe IROC-Z

6-88 Revised (•)

					TRUC-7
Brakes	<u>- Servi</u>	Ce			
Description					Single caliper disc front, duo-servo drum rear disc optional front/rear
Manufactur	er and		Front (disc or dru	ım)	Disc
brake type		, n.a.)	Rear (disc or dru	m)	Drum; disc optional for IROZ-Z
Valving typ	e (proport	ion, delay, r	netering, other)		Proporting, failure warning
Power brak	e (std., o	ot., n.a.)		<del></del>	Standard
Booster typ	e (remote	, integral, v	ac., hyd., etc.)		Tandem vacuum
•	Soun	ce (inline, pu	ımp, etc.)		Inline
Vacuum	Rese	rvoir (volum	e in.3) and source		None
	Pump	-type (elec,	gear driven, belt d	riven)	TI T
Fraction	Oper	ational spee	d range		"
ontrol	Туре	engine inter	vention (electronic	mech.)	<b>"</b>
	Front	/rear (std.,	opt., n.a.)		II .
	Manu	facturer			II .
Anti-lock	Туре	(electronic,	mech.)		H
device	Numt	er sensors	or circuits		
	Numt	er anti-lock	hydraulic circuits		II .
-	Integ	al or add-or	system		"
	Yaw	control (yes,	no)		11
	Hydra	sulic power source (elect., vac. mtr., pwr. strg.)		pwr. strg.)	"
Effective ar	ea (cm²(ir	1. <sup>2</sup> )]*			615.5 ( 95.4) total
Bross lining	area (cm	r <sup>2</sup> (in. <sup>2</sup> )] *(F/	R)		691.6 (107.2) total
Swept area	[cm²(in.²	)]***(F/A)			1985.1 (307.7) total
	Outer	working dia	meter	F/R	\F/267 mm (10.5), R/267 mm (10.5)
Rotor	Inner	Inner working diameter		F/R	F/171.5 mm (6.75), R/171.5 mm (6.75)
•	Thick	Thickness		F/R	F/26.2 mm (1.03, R/26.2 mm (1.03)
	Mater	ial & type (v	ented/solid)	F/R	Cast iron, vented F/R
~	Diame	eter & width		F/R	241.0 mm (9.5), 50.8 mm (2.0)
Orum	Type	and materia	l	F/R	Cast iron finned (aluminum for selected applications)
Wheel cylin	der bore			F/R	F/64 mm (2.5); R/19 mm (0.75) drum; 25.4 mm (1.0) dis
Master cylin	nder	Bore/strok	(e	F/A	Bore: 24.0 mm (0.94) disc/drum; 25.4 mm (1.0) disc/dis
Pedal arc ra	atio				3.25:1
ine pressu	re at 445	N(100 lb.) p	edal load [kPa (psi	)]	
ining clean	ance			F/R	Self-adjusting/self-adjusting
		Bonded o	r riveted (rivets/seg	.)	Riveted; 8
		Rivet size			5.3 x 7.92 (.210 x .312)
		Manufacti			Delco Marine
	Front	Lining coo	je****		DM8034
	wheel	Material			Semi-metallic
		•••• Pr	imary or out-board		125.0 x 48.4 x 11.04 mm (4.92 x 1.91 x 0.435)
		Size Se	condary or in-boar	đ	$125.0 \times 48.4 \times 10.55 \text{ mm} (4.92 \times 1.91 \times 0.415)$
Brake Ining		Shoe thickness (no lining)			0/B3.42 mm (0.135); IB 4.85 mm (0.191)
		Bonded or	r riveted (rivets/seg	.)	Riveted 10 primary, 12 secondary drum; riveted. 8-disc
		Manufactu	irer		Inland   Delco Moraine
	Rear	Lining cod	le****		IN 4035/4050 DM 5470
	wheel	Material			Non-asbestos
		ores Pr	imary or out-board		192.5 x 50.8 x 4.98mm (7.58 x 2.0 x 0.196) / (a)
		Size Se	condary or in-boar	d	$249.6 \times 50.8 \times 6.75 \text{mm} (9.83 \times 2.0 \times 0.266) / (b)$
		Shoe thickness (no lining)			Drum 1.98mm(0.078);disc OB/3.42mm(0.135),IB/4.85mm(0.

<sup>\*</sup>Excludes rivet holes,grooves, chamfers, etc.

<sup>\*\*</sup>Includes rivet holes, grooves, chamfers, etc.

<sup>\*\*\*\*</sup>Total swept area four brakes. (Drum brake: Widest lining contact width for each brake x its contact circumference.)

(Disc brake: Square of Outer Working Dia.minus Square of inner Working Dia. multiplied by Pi/2 for each brake.)

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

<sup>(</sup>a) 125.0x48.4x11.04mm(492x1.91x0.435)

MVMA-C-89 125.0x48.4x10.55(4.92x1.91x0.415) Page 12

**CAMARO** Vehicle Line\_ . ...1989 Issued \_\_\_\_\_ 6-88 Revised (•) \_ Model Year\_\_\_

		A	
MEIKIC	IU.5.	Customary)	

Body	Туре	And	Or
Enek	io Dis	بمحاد	ment

Sport Coupe & IROC-Z

0	Brakes	- Service	1
~	D: 27-0	- 0011100	,

Brakes	- Servi	Ce			
Description	n .				FDONT & DEAD DISC PRANTS (Ontions I DRO 165)
					FRONT & REAR DISC BRAKES (Optional RPO J65)  Disc
	anufacturer and ake type (std., opt., n.a.) Front (disc or drum)				Disc
			Rear (disc or dru	m)	
			y, metering, other)		Remote proportioning front/rear split
Power brai					Standard
Booster typ	<del>- i</del>		l, vac., hyd., etc.)		200 mm (7.87 in.) tandem vacuum
			, pump, etc.)		Engine
√acuum			ume in.3) and source		Not Applicable
			lec, gear driven, belt d	riven)	
raction			peed range		
loranox	Туре	engine i	ntervention (electronic	. mech.)	
		<del></del>	td., opt., n.a.)		
	Manu	facturer			" "
Anti-lock	Туре	(electror	nic, mech.)		" "
device	Numt	er sens	ors or circuits		" "
	Numt	er anti-l	ock hydraulic circuits		11
·	Integr	ral or ado	i-on system		
	Yaw	control (y	/es, no)		
	Hydra	Hydraulic power source (elect., vac. mtr., pwr. strg.)			" 2 2
Effective ar	rea (cm²(ir	1.2)]*			717 cm <sup>2</sup> (111.1 in. <sup>2</sup> )
Bross lining	g area (crr	<sup>2</sup> (in. <sup>2</sup> )]**	(F/R)		792 cm <sup>-</sup> (122 <sub>2</sub> 9 in. <sup>-</sup> )
wept area	[cm²(in.²	)}***(F/A	)		2980. 74 cm (462.02 in. <sup>2</sup> )
	Outer	uterworking diameter F/R		F/R	F 301.25 mm (11.86 in.) R 296.0 mm (11.65 in.)
totor .	Inner	Inner working diameter F/R		F/R	F 197.40 mm (7.77 in.) R 211.0 mm (8.31 in.)
	Thick		·	F/R	F 26.20 mm (1.03 in.) R 20.0 (0.79 in.)
	Mater	ial & typ	e (vented/solid)	F/R	Cast iron vented
	Diame	eter & wi	dth	F/R	Not Applicable
)rum	Туре	and mat	erial	F/B	<b>— # · · · · · · · · · · · · · · · · · · </b>
Wheel cylin	nder bore				F 2 x 38 mm (1.50 in.) R 40.5 mm (1.59 in.)
Aaster cylin	nder	Bore/s	troke	F/R	24.0 mm (0.94 in.)
edal arc n		<u> </u>			3.25:1
ine pressu	re at 445	N(100 lb	.) pedal load (kPa (psi	וו	••
ining clear			7,7	F/R	Self adjusting
		Bonde	d or riveted (rivets/seg	1	Integrally molded
•		Rivet	<u> </u>		Not Available
		<del></del>	acturer		Japan Brake Industries
			code****		CP26
	Front	Materi			Semi-metallic 2
-		****	Primary or out-board		$53.2 \text{cm}_2^2 \text{x9.5mm} (8.25 \text{ in.}_2^2 \text{x.37 in.})$ area x thickness
		Size	Secondary or in-boar	·d	53.2cm x9.5mm(8.25 in. x.37 in.) area x thickness
			hickness (no lining)	-	IB 6.0mm (.24 in.) OB 6.0 mm (.24 in.)
Brake ining	-	$\overline{}$	d or riveted (rivets/seg		Integrally molded
			<del></del>		Japan Brake Industries
		_	acturer		HB33
**	Rear	_	code****	***	
•	,	Materi		_	Semi-metallic
		2000	Primary or out-board		28.4cm x8.2mm(4.4 in. x.32 in.) area x thickness
		Size	Secondary or in-boar	a	28.4cm x8.2mm(4.4 in. x.32 in.) area x thickness
		Shoe t	hickness (no lining)		IB 5.5 mm (.21 in.) OB 4.0 mm (.16 in.)

<sup>\*</sup>Excludes rivet holes, grooves, chamfers, etc.

<sup>\*\*</sup>Includes rivet holes, grooves, chamfers, etc.

<sup>\*\*\*</sup>Total swept area for four brakes. (Drum brake: Widest lining contact width for each brake x its contact circumference.)
(Disc brake: Square of Outer Working Dia.minus Square of inner Working Dia. multiplied by Pi/2 for each brake.)

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

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

	A Specifi (U.S. Custo	cations Fo	rm		AMARO 989 k	ssued(	<del></del>	Revised (•)	
Body Type And/Or Engine Displacement			SPORT	COUPE		IRO	:-Z		
Tires And	d Wheels (Sta	indard)		<u> </u>					
	Size (load range		P215/6	55R-15	- 1	P215/6	D_15 /	+)	
. ~	Type (bias, radial,			belted radia	<del> </del>	1213/00	M-13 (	<del>*)</del>	<del></del>
Tires	Inflation pres- sure (cold) for recommended max. vehicle load	Front [kPa (psi)]	205 (3	···		240 (35	5)		<del></del>
		Rear [kPa (psi)]	205 (3			240 (35			
	Rev./mile-at 70 l	km/h (45 mph)	498 R/			505 R/I	<u>m</u>		<del></del>
	Type & material			luminum	·				
	Rim (size & flang	e type)	15 x /	<u></u>					
Wheels	Wheel offset		8.0			<del></del>			
		Type (bolt or stud)	Stud			<u></u>	·		
	Attachment	Circle diameter	120.7	<del>0   E   EU   E</del>	<b>54 75.4</b>				
	<del>                                       </del>	Number & size	3-1112	х 1.5 - 6H-t	na. (met	ric)			
Ø Spare	Tire and wheel		15x4`T125/70D15 (except with G80 axle)						
	Storage position & location (describe)		Vertic	ally adjacen	t to R.H	. quarte	er pane	1	
Tires And	d Wheels (Opt	tional)							
Tire size (load	Tire size (load range, ply)					P245%50	)ZR16_*	(+) ?	
Type (bias, ra	Type (bias, radial, steel, nylon, etc.)					Steel			·
Wheel (type &	Wheel (type & material)					(Casily a)	uminum		ija 1
Rim (size, fla	nge type and offset	)			ĺ	16 X 8	Front	₩0,₩Re	āř: 16 🚡
Tire size (load	d range, ply)		_		, ,	C WAS STREET STREET			
Type (bias, re	adiai, steel, nylon, e	tc.)							
Wheel (type &	& material)								
Rim (size, fla	nge type and offset	)				_			
Tire size (load	d range, ply)								
Type (bias, ra	idial, steel, nylon, e	tc.)		<u></u>					
Wheel (type 8	<del></del>								
	nge type and offset	)							
Tire size (load	<del></del>								
	idial, steel, nylon, e	tc.)					_		
Wheel (type &	<del></del>		<del></del> .	<del></del>					
	nge type and offset	, <u> </u>	·						
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		<u></u>			,			
Type of contr	ol		Grin h	andle control	7		-		
Location of or	•			side of floor					
Operates on				ervice brakes					
-p	Type (internal or	external)			<del></del>				
If separate from service brakes	Drum diameter								
								<del></del>	
(*	) Directio	nal Tread.	(+)	- Non "All Se	eason" t	ires.	. = =		

Vehicle Line	CAMARO					
Model Year	1989	. Issued .	-6-88	Revised (*)	-	

**METRIC (U.S. Customary)** 

Body Type And/Or Engine Displacement				SPORT COUPE	IROC-Z				
Steering									
Manual (std.,	opt., n.a.)			Not Available					
Power (std.,	opt., n.a.)			Standard					
* ************************************		Туре			haft A haso of stag while no				
Adjustable steering wheel/column (tilt, telescope, other)  Manufacturer (Std., opt., n.a.)		Manufacture	er e	Saginaw Steering Gear	<del>нать и махи от ьы ут жить о</del> ро				
		1.a.)	Optional						
Wheel diameter** (W9) SAE J1100 Power			Not Available						
		Power		368 mm (14.5 in)					
Turning diameter m (ft.)	Outside	Wall to wall (l. & r.)		12.59 (41.3)	1 12 05 (42 5)				
	front	Curb to curb (l. & r.)		11.73 (38.5)	12 29 (40 2)				
	Inside	Wall to wall (l. & r.)		Not Available	12.20 (40.3)				
	rear	Curb to curb (l. & r.)		H II					
Scrub Radius	•	_		99 11					
Manual		Туре		n n					
	Gear	Manufacturer		H II					
		Ratios	Gear	tt 11					
			Overall	11 0					
	No. wheel turns (stop to stop)		stop)	W II					
)	Type (coaxial, elec., hyd., etc.)		i., etc.)	Coaxial					
	Manufacturer			Saginaw Steering Gear Div. G.M.C.					
_		Туре		Semi-reversible recirculating ball					
Power	Gear	Ratios	Gear	14:1	12 7.1				
			Overali	15.4:1	14:1				
•	Pump (drive)			Relt	1 1 1 1 1				
	No. wheel turns (stop to stop)			2.57					
-	Туре			Parallelogram					
Linkage	Location ( of wheels,	front or rear other)		Front					
	Tie rods (one or two)			Two					
Steering axis	inclination at camber (deg.)			Not Available					
		Upper		Rall stud					
	Bearings (type)	Lower		Ball stud					
	(type)	Thrust		None					
Steering spine	dle & joint ty	pe		Steering knuckle with spherical	ininto				
Wheel ·	Inner bearing		9	31.73-31.74 (1.2493-1.2498)					
	Diameter	Outer bearing		21.04-21.42 (0.83-0.84)					
spindle/hub	Thread (size)			3/4-20 UNEF-3A (modified)					
ľ	Bearing (type)			Tapered roller	<del></del>				

<sup>&</sup>quot;The horizontal distance in the front elevation between wheel centerline and kingpin (ball joint) axis at ground.

<sup>&</sup>quot;See Page 22

MVMA Specifications Form	Vehicle Line <u>CAMARO</u>
manny obeempations LOIII	Model Year 1989 Issued 6-88 Revised (•)
METRIC (U.S. Customary)	,

Body Type And/Or Engine Displacement

SPORT COUPE AND IROC-Z

Wheel Alignment Caster (deg.) Service checking +0.3 +/- .5° Camber (deg.) Toe-in [outside track-mm (in.)] Front wheel at curb mass Service reset\* Camber (wt.) Toe-in Ħ Caster n **Periodic** Camber n spection 11 Toe-in

Not Applicable

11

11

17

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

Service checking

Service reset\*

Periodic

spection

Rear wheel at curb mass (wt.)

Camber (deg.)

Toe-in

Camber

Toe-in

Toe-in [outside track-mm (in.)]

Speed-	Type (analog, digital, std., opt.)	Round dial, pointer 0-115 mph (a)(b)		
ometer	Trip odometer (std., opt., n.a.)	Standard Standard		
EGR mainten	ance indicator	Not Available		
Charge	Туре	Flectric gage		
indicator	Warning device (light, audible)	Not_Available		
Temperature	Туре	Electric gage		
indicator	Warning device (light, audible)	Not Available		
Oil pressure	Туре	Electric gage		
indicator	Warning device (light, audible)	Not Available		
Fuel	Туре	Electric gauge with pointer		
indicator	Warning device (light, audible)	Not Available		
	Type (standard)	Two speed-manual control-fluidic (wet arm)		
Wind-	Type (optional)	Intermittent		
shield wiper	Blade length	454 mm (18 inches)		
	Swept area [cm²(in.²)]	5792 (898.0)		
Wind-	Type (standard)	Manual control		
shield , washer	Type (optional)	Not Available		
Wesilei	Fluid level indicator (light, audible)	41 11		
Rear window	wiper, wiper/washer (std., opt., n.a.)	11 11		
	Туре	Vibrator		
Horn	Number used	Two		
Other		Tachometer standard (Round dial, pointer) Upshift telltale		

(a) Metric conversions included.(b) 0-145 speed for IROC-Z with LB9 or £98 V8.

<sup>#</sup> Same caster, camber & toe alignment for Sport Coupe & IROC at check, reset, and inspection.

Vehicle Line <u>CAMARO</u>

Model Year <u>1989</u> Issued <u>6-88</u> Revised (e) <u>9-88</u>

**METRIC (U.S. Customary)** 

Engine Description/Carb. Engine Code 2.8 Liter V6 (173 CID)
(2.8 Multi Port FI) RPO LB8

**Electrical – Supply System** 

	Manufacturer	Delco Remy		
	Model, std., (opt.)	75-525 (a), 75-570 (b)		
	Voltage	12 Volts		
Battery	Amps at 0°F cold crank	525 (a), 570 (b)		
•	Minutes-reserve capacity	(a) 90 minutes, (b) 90 minutes		
	Amp/hrs 20 hr. rate			
_ :	Location	Engine compartment right front		
	Manufacturer	Delco Remy		
	Rating (idle/max. rpm)	(c, d)		
Alternator	Ratio (alt. crank/rev.)	2.75:1		
	Output at idle (rpm, park)			
	Optional (type & rating)	None		
Regulator	Туре	Micro circuit units, integral with alternator		

Electrical - Starting System

_		
	Manufacturer	Delco Remy
Start, motor	Current drain at 0°F	235 @ 20°F.
	Power rating [kw (hp)]	1.4 (1.9)
Motor drive	Engagement type	Positive shift solenoid
	Pinion engages from (front, rear)	Rear

**Electrical - Ignition System** 

<b>T</b>	Electronic	(std., opt., n.a.)	
Туре	Other (specify)		Computer controlled coil ignition (C <sup>3</sup> I)
	Manufacturer "*		Delco Remy
, Coil	Model		Separate
JOII	Current	Engine stopped – A	0
		Engine idling - A	5.5 max.
	Manufacturer		AC
	Model		R42 CTS
Spark	Thread (mm)		M14 x 1.25 SAF
Spark Hug	Tightening torque [N-m (lb, ft)]		9-20 (7-15)
	Gap		1.143 (.045)
•	Number per cylinder		One
Distributes	Manufactu	rer	Not Applicable
Distributor	Model		

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.

- (a) Standard battery
- (b) With H.D. option UAl
- (c) 85 amp with heater, 30 amp at idle.
- (d) 100 amp with air conditioning, 36 amp at idle.

 Vehicle Line
 CAMARO

 Model Year
 1989

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 6-88

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 9-88

#### **METRIC (U.S. Customary)**

Engine Description/Carb. Engine Code

5.0 Liter V8 (305 CID)
(Electronic Fuel Injection) RPO 103

Electrical - Supply System

	Manufacturer	Delco Remv
	Model, std., (opt.)	70-525 (a), 75-570 (b)
	Voltage	12 Volts
Battery	Amps at 0°F cold crank	525 (a), 570 (b)
•	Minutes-reserve capacity	75 (a). 90 (b)
	Amp/hrs 20 hr. rate	••
	Location	Engine compartment right front
	Manufacturer	Delco Remy
	Rating (idle/max, rpm)	(a, b)
Uternator	Ratio (alt. crank/rev.)	3.14:1
	Output at idle (rpm, park)	
	Optional (type & rating)	None
Regulator	Туре	Micro circuit units, integral with alternator

#### Electrical - Starting System

	Manufacturer	Delco Remv
Start, motor	Current drain at 0°F	305 0 - 20°F (C)
	Power rating [kw (hp)]	2.3 (3.1)
	Engagement type	Positive shift solenoid
Motor drive	Pinion engages from (front, rear)	Rear

#### Electrical – Ignition System

<b>T</b>	Electronic (std., opt., n.a.)		
Туре	Other (specify)		High Energy Ignition, (H.E.I.)
	Manufacturer		_Delco Remy
Coil	Model		Integral with distributor
COII	Current	Engine stopped – A	0.5
		Engine idling – A	1.0
	Manufacturer		AC
	Model		R45TS
Spark	Thread (mm)		M14 x 1.25 SAF
Spark plug	Tightening torque [N-m (lb, ft)]		9-20 (7-15)
•	Gap		0.89 (0.035")
	Number per cylinder		One
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.

(a) - 85 amp (+C41), 30 amp at idle.

(b) - 100 amp (+C60/C67), 36 amp at idle.

(c) - First five seconds of engine cranking at -20°F.

 Vehicle Line
 CAMARO

 Model Year
 1989
 Issued
 6-88
 Revised (●)
 9-88

#### **METRIC (U.S. Customary)**

Engine	Description/Carb.
Engine	Code

5.0 LTR V8 (305 CID) RPO LB9 | 5.7 LTR V8 (350 CID) RPO L98 (Tuned Port Fuel Injection) (Tuned Port Fuel Injection)

Electrical - Supply System

	Manufacturer	Delco Remy	
	Model, std., (opt.)	70-525 (a), 75-570 (b) 75-630	
	Voltage	12 Volts	
Battery	Amps at 0°F cold crank	525 (a), 570 (b)   630	
	Minutes-reserve capacity	75 (a) 90 (b) 90	
	Amp/hrs 20 hr. rate		
	Location	Engine compartment right front	
	Manufacturer	Delco Remy	
	Rating (idle/max. rpm)	105 amp (42 amp at idle)	
Itemator	Ratio (att. crank/rev.)	3.14:1	
	Output at idle (rpm, park)		
	Optional (type & rating)	None	
legulator	Туре	Micro circuit units, integral with alternator	

### Electrical - Starting System

	Manufacturer	Delco Remy	
Start, motor	Current drain at 0°F	305 @ - 20°F	
	Power rating [kw (hp)]	1.9 (2.5)	2.3 (3.1)
Motor drive	Engagement type	Positive shift solenoid	
	Pinion engages trom (front, rear)	Rear	

#### Electrical – Ignition System

T.m.s	Electronic (std., opt., n.a.)		
Type	Other (specify)		High Energy Ignition, (H.F.I.)
	Manufactu	rer	Delco Remy
Coil	Model		Remote mounted
COII	Current	Engine stopped - A	0.5
		Engine idling - A	1.0
	Manufacturer \		AC ?
	Model		R45TS
Spark	Thread (mm)		M14 x 1.25 SAF
plug	Tightening torque [N-m (lb, ft)]		9-20 (7-15)
	Gap		0.89 (0.035")
	Number per cylinder		One
Distributor	Manufacturer		_ Delco_Remy
Pastrioniol	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.

(a) - Standard battery.

<sup>(</sup>b) - With H.D. option UA1.

26/26	A Specifi	ostions For-	Vehicle Models CAMARO				
rat A tai1	4 Speciii	cations Forn	Model Year 1989   Issued 5-88   Revised (e)				
METRIC	(U.S. Custo	mary)					
Body Type			SPORT COUPE AND IROC-Z				
Body							
			[Full unitized steel construction 0.1				
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.				
Dumper syst front - rear	em		Body color soft facia, honeycomb absorber and heavy gauge reinforcement used front and rear. GM 5 mph protection.				
		••	Galvanized metals, zinc rich primers, wax coating and other corrosion resistant materials used throughout.				
Anti-corrosio	n treatment						
$\varnothing$ Body – N	liscellaneous	Information					
Type of finish	(lacquer, enamel, e	other)	High solids acrylic enamel base coat/clear coat				
	Material & mass		Steel				
Hood	Hinge location (fr	ont, rear)	Rear				
	Type (counterbal		Gas strut assist				
	Release control (		[Internal]				
Trunk	Material & mass		Steel				
lid	Type (counterbal	ance, other)	Convertible only (a)				
· · · · · · · · · · · · · · · · · · ·	internal release o	ontrol (elec., mech., n.a.)	Convertible only. Mechanical release				
Hatch-	Material & mass		Glass/steel				
back lid	Type (counterbal	ance, other)	Dual gas struts - electric final closure standard.				
	Internal release o	ontrol (elec., mech., n.a.)	Electric release optional				
	Material & mass		Not Applicable				
Tailgate	Type (drop, lift, d	oor)					
	internal release co	ntrol (elec., mech., n.a.)					
	control (crank,	Front	Not Available				
friction, pivot,	power)	Rear					
Window regu	lator type	Front	Sector Drive				
(cable, tape,	flex, drive, etc.)		Sector Drive				
Seat cushion	type	Front	Bucket molded foam pad				
(e.g., 60/40, i	bucket, bench,	Rear	н и и				
wire, foam et	u.,	3rd seat					
Seat back typ			Reclining bucket molded foam pad				
(e.g., 60/40, i wire, foam et	oucket, bench,	Rear	Folding bench. Split back optional molded foam pad				
wire, ioaiii et	··,	3rd seat					

(a) Convertible folding top manual standard, no power option.

# MVMA Specifications Form METRIC (U.S. Customary)

Vehicle LineCAMARO		
Model Year 1989 Issued6 88 Revised (e)	-	

Type
TYPE

Seating Pos	sition	-			Left		Center	
Type & description			First seat	Lap belt	& shoulder	N/A	Center	Lap & shoulder belt
Active	(lap & shoulder belt, lap belt, etc.)		Second seat	Lap &	k shoulder	N/A		Lap & shoulder belt
Standard / optional		•	Third seat	N/A		N/A		N/A
	Type &		First seat	N/A				
Passive	description (air bag, motorized - 2-point belt, fixed be knee bolster, manual lap belt)	lt,	Second seat					
<u>.</u>	Standard / optional		Third seat					N/A
Glass	ilass SAE Ref. No.			Cou	pe		Con	vertible
Windshield g surface area	dshield glass exposed S1 ace area [cm²(in.²)]		90	00.4 (	1395.0)			
Side glass ex xrea [cm²(in.	side glass exposed surface \$2 rea [cm²(in.²)] - total 2-sides		65	19.8 (	1010.6)			
Backlight gla surface area	ss exposed [cm²(in.²)]	S3	62:	6232.0 ( 966.0) 3844.1 (598			.1 (598.8)	
Fotal glass e area [cm²(in.	xposed surface 2)]	S4	217	21752.2 (3371.6)   193			<u> </u>	.3 (3001.4)
Windshield (	glass (type)		Curved - Laminated Plate					
ide glass (t)	/pe)		Curved - Tempered Plate					
lacklight gla	ss (type)		Curved - Tempered Plate   Vinyl					
amps ar	nd Headlamp Lo	cations	i			·		
	Description - sealed thatogen, replaceable		Seal	ed be	am - four la	mp systa	m	
	Shape		Rect	angul	ar	p_5/30C		
eadiamps	Lo-beam type (2A1, 2 2C1, etc.)	B1,	2A					
- <del>-</del> -	Quantity		2					
	Hi-beam type (1A1, 2 2C1, etc.)	A1, 1C1,	1A					
<del></del> .	Quantity		2	<del></del>				
rame		-						

MVM	A Specifications Form	Vehicle Line 1989 6-88
•	(U.S. Customary)	Model Year 1989 Issued 6-88 Revised (●)
Body Type	Γ	SPORT COUPE AND IROC-Z
Conveni	ence Equipment (standard, optional	, n.a.)
Air condition auto, temp o	ing (manual, ontrol)	0-4/11
<u> </u>		Optional - manual control
Clock (digita	i, analog)	Digital, in radio. Not Available
Compass/tr	nermometer	
Console (floo	or, overhead)	Floor standard, Overhead not available
Defroster, ek	ec. backlight	Optional (Not available on convertible)
	Diagnostic monitor (integrated, individual)	Not Available
	Instrument cluster (list instruments)	<b>n</b>
	Keyless entry	
Electronic	Tripminder (avg. spd., fuel)	n
	Voice alert (list items)	n
	Other	· · · · · · · · · · · · · · · · · · ·
		H-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
Fuel door loc	ck (remote, key, electric)	Not Available
,	Auto head on / off delay, dimming	
	Cornering	
	Courtesy (map, reading)	Included in optional lamp group (under dash)
	Door lock, ignition	Not Available
	Engine compartment	Included in optional lamp group
Lamps	Fog	Standard IROC-Z, not available on Sport Coupe
	Glove compartment	Standard (compartment in floor console)
	Trunk	included in optional lamp group
	Illuminated entry system (list lamps, activation)	Not Available
	Other	
	Day ∕ night (auto. man.)	Manual standard
	L.H. (remote, power, heated)	Remote standard, power optional
	R. H. (convex, remote, power, heated)	Manual standard, power optional. Both convex
Mirrors	Visor vanity (RH / LH, illuminated)	RH, non-illuminated NA Spt. Cpe Std. IROC-Z

CAMAKU

Vehicle Line\_

### Radio Options

Parking brake-auto release (warning light)

Hand release, warning light standard

<sup>\*</sup> Full gage package (non-electronic) standard on Trans Am GTA and Formula; optional on Firebird.

\*\* Seat belt warning, engine warning.

MVMA Specifications Form	Vehicle Line CAMARO				
METRIC (U.S. Customary)	Model Year 1989	_ issued	6-88	Revised (•) _	

	ence Equ	ipment (standard, options	i, n.a.)
i	Deck tid (release, pull down)		Opt - electric, door locks and rear hatch release
	Door looks describe s	s (manual, automatic, ystem)	Manual - standard Electric - optional
•	-, -4	2 - 4 - 6 way, etc.	Optional 6-way power driver's seat
		Reclining (R.H., L.H.)	Reclining both front seats
	Seats	Memory (R.H., L.H., presst, recline)	Not Available
Power		Lumber, hip, thigh, support	W W
equipment		Heated (R.H., L.H., other)	9 9
	Side windo	ws	Optional
	Vent windo	WS .	Not Available
	Rear winds	DW8	T 11
	Antenna (k	ocation, whip. w/shield, power)	R. F. Fender fixed mast standard, power optional
	Standard		R. F. Fender fixed mast standard, power optional
Radio systems	Optional	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	AM/FM Stereo w/seek, scan & digital clock, AM/FM electronically tuned stereo seek, scan, cassette player & digital clock, AM/FM Stereo electronically tuned seek, scan graphic equalizer, cassette w/search & repeat w/digital clock, AM/FM Bose II Stereo, cassette search & repeat digital clock.
	Speaker (nu	umber, location)	Four-two in instrument panel, two in roof sail pan. Convertible in quarter sidewalls.
Roof open air fixed (flip-up, sliding, "T")		sliding, 'T')	"T" type, optional
Speed control device			Cruise Control, optional
Speed warning device (light, buzzer, etc.)		t, buzzer, etc.)	Not Available
Tachometer (rpm)			Standard
	stem (describ	0)	Not Available
haft deterrer	it system		Lock mounted on steering column: locks steering wheel.

(a) Power final closure latch standard for both non-convertible mode.

MVMA Specificati	IS FORM	Hasued 6:88 Revised (e)
Vehicle Dimensions Sec	ev Sheets for definitions	
_		
Body Type	SPORT COUPE	IROC-Z
	8AE	
Front Compartment	No.	
Sg RP front, "X" coordinate	L31 1050 (41.3)	
Effective head room	ны 940 (37.0) coupes, 942 (3	7.1) convertible
Max. eff. leg room (accelerator)	1092 (43.0) coupes, 1089 (4	
SgRP to heel point	H30 181 ( 7.1)	
SgRP to heel point	1.53 911 (35.9)	
Back angle	L40 26.5	
Hip angle	L42 98.0	
Knee angle	L44 133.0	
Foot angle	L46 87.0	
Design H-point front travel	192 ( 7.6)	
Normal driving & riding seat track trvt.	L23 171 ( 6.7)	
Shoulder room	w3 1460 (57.5) coupes, 1488 (5)	8.6) convertible
Hip room		2.8) convertible
Upper body opening to ground	H50	
Steering wheel maximum diameter*	<sup>M9</sup> 368 (14.5)	
Steering wheel angle	418 18.0	
Accel, heel pt. to steer, whi, cntr	-11 Not Available	
Accel, heel pt. to steer, whi, ontr	417 я и	
Steering wheel to C/L of thigh	413 91 ( 3.6)	
Steering wheel torso clearance	7 360 (14.2)	
Headlining to roof panel (front)	12 ( 0.5)	
Undepressed floor covering thickness	<sup>467</sup> 16 ( 0 6)	
Rear Compartment	Front Compartment Interior Dimensions Are Meas Forward Andmm Upward of Rearmost	
		Position.
Sg RP Point couple distance	<sup>.50</sup>   668 (26.3)	
Effective head room	63 905 (35.6) coupes, 918 (36	1) convertible
Min. effective leg room	51 756 (29.8) coupes, 719 (28	3) convertible
Sg RP (second to heel)	183 (7.2)	, , , , , , , , , , , , , , , , , , , ,
Knee clearance	48 -15 (-0.6)	
Compartment room	3 582 (22.9)	
Shoulder room	v4 1430 (56.3) coupes, 1222 (48	3.1) convertible
Hip room	1087 (42.8) coupes, 1116 (43	3.9) convertible
Upper body opening to ground	151	
Back angle	41 28.0°	
Hip angle	43 68.0	
Knee angle	45 66.5	
Foot angle	47 116.5	
Headlining to roof panel (second) Depressed floor covering thickness	Not Available	
Contracting trackings	18 ( 0.7)	
Luggage Compartment	•	
Usable luggage capacity (L (cu. ft.))	19	
Liftover height	1195	146L (5.2 cu.ft.) convertible
	883 (34.8)	(o.z ca.i.c.) convertible
interior Volumes (EPA Class		
Vehicle class		
nterior volume index (cu. ft.)	Sub-Compact	
Toronto House (GC. IC.)	84 9	·

All linear dimensions are in millimeters (inches).
\*\* EPA Loaded Vehicle Weight, Loading Conditions

Vehicle Models CAMARO

Model Year 1989 Issued 6-88 Revised (e)

" ^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	SAE Ref.	CDODY CAUSE	
Width	No	SPORT COUPE	IROC-Z
Tread (front)	W101	1505 ( 60 0)	
Tread (rear)	W102	1525 ( 60.0)	
Vehicle width	W103	1548 ( 60.9)	
Body width at Sg RP (front)	W117	1850 ( 72.8)	
/ehicle width (front doors open)	W120	1830 ( 72 0)	
/ehicle width (rear doors open)	W121	3939 (155.1)	
ront fender overall width	W106		
Rear fender overall width	W107	1850 ( 72.8)	
Tumble-home (deg.)	W122	<u> 1840 ( 72.4)</u>	,
Vehicle width including mirrors	1 ****	31.5°	
Terminal and transporting that the	<u></u>		
Length			
Wheelbase	L101		
/ehicle length	L103	<del>2566 (101.0)</del>	
Overhang (front)	L104	<del> 4877 (192.0)</del>	
Overhang (ront)	L104	<del>1178 ( 46.4)</del>	
		<del></del>	
Joper structure length	L123	<del>2669 (105.1)</del>	
Rear wheel C/L "X" coordinate	L127	<del>- 2138 ( 84.2)</del>	
30wf point "X" coordinate	L125	<del>108 ( 4.3)</del>	
ront end length at centerline	L126		<u> </u>
Rear end length at centerline	L129	<del>345 (-13.6)</del>	
Height **			
assenger distribution (front/rear)	PD1,2,3		**
runk/cargo load			**
fehicle height -	H101	1279 ( 50.3)	
owl point to ground	H114	904 ( 35.6)	
Deck point to ground	H138	918 ( 36.1)	····
locker panel-front to ground	H112	201 ( 7.9)	
iottom of door closed-front to ground	H133	362 ( 14.3)	<del></del>
locker panel-rear to ground	H111	197 ( 7.8)	
lottom of door closed-rear to ground	H135		
Vindshield slope angle	H122	62.0°	
lacklight slope angle	H121	71.0°	
	11121	/1.0	
Pround Clearance			**
ront bumper to ground –	H102	247 ( 12 7)	13. 72
lear bumper to ground	H102	347 ( 13.7)	
	17104	329 ( 13.0)	
tumper to ground [front t curb mass (wt.)]	H103	359 ( 14.1)	
lumper to ground (rear t curb mass (wt.)]	H105	344 ( 13.5)	
ngle of approach (degrees)	H106	12.2°	
ngle of departure (degrees)	H107	18.8°	
amp breakover angle (degrees)	H147	13.4°	
xle differential to ground (front / rear)	H153	182 (7.2)	
lin, running ground clearance	H156	128 (5.1)	
	<del></del>	160 13.11	

<sup>\*\*</sup> 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 Accesories Whic Weigh Three Pounds Or More And Which Are Sold On At Least 33% Of The Car Line. Plus Two Occupants.

MVMA Specification	ne E	0 PM	Ve	bicle Line CAMARO				
		OIIII	Mo	del Year <u>** 1989</u>	Issued	6-88	_ Revised (e)	
METRIC (U.S. Customary) Vehicle Dimensions See	Key She	ets for defin	itions					
Body Type					<del></del>			
33, 1,62	SAE	SPORT	COU	PE		IROC-Z	<u>.</u>	
Panilan Manage Third Cons	Ref.					· · · · · ·	·	<del></del>
Station Wagon - Third Seat	No.	, <u>-</u>						
Seat facing direction	SD1	Not						
Sg RP couple distance	L85	Appli	cable	<u> </u>				
Shoulder room	W85	,,,				-		
Hip room	W86							
Effective leg room	L86							
Effective head room	H86							
Sg RP to heel point	H87							
Knee clearance	L87							
Back angle	LB8							
Hip angle	L89							
Knee angle	L90							
Foot angle	L91							
Station Wagon - Cargo Spac	0							
Cargo length (open front)	L200	Not		·	•			
Cargo length (open second)	L201							
Cargo length (closed front)	L202	- Appli	Capic	<del>}</del>				
Cargo length (closed second)	L203							
Cargo length at belt (front)	L204	<del> </del>		·			<del></del>	
Cargo length at belt (second)	L205	<del> </del>				,	<del></del>	
Cargo width (wheelhouse)	W201				· · · -			
Rear opening width at floor	W203	<del> </del>	-	······································				
Opening width at belt	W204							· · · · · · · · · · · · · · · · · · ·
Min. rear opening width above belt	W205							***
Cargo height	H201						·	tu.
Rear opening height	H202							
Tailgate to ground height	H250							
Front seat back to load floor height	H197		<del></del>					
Cargo volume index [m3(ft,3)]	V2			<u> </u>				+-
Hidden cargo volume index [m3(ft.3)]	V4					-		
Cargo volume, index-rear of 2-seat	V10					-		
Hatchback - Cargo Space		·						
Cargo length at front seatback height	L208	895	(35.2	2)				
Cargo tength at floor (front)	L209	1556	<i>(</i> 61.3	3)				
Cargo length at second seatback height	L210	610	(24.0	))			•	
Cargo length at floor (second)	<u>L211</u>	845	•	i				
Front seatback to load floor height	H197	355	<u>(14.0</u>	) [			,	
Second seatback to load floor height	H198	242	و آ	ii .		·	, -	
Cargo volume index [m <sup>3</sup> (ft. <sup>3</sup> )]	V3	879	<i>(</i> 31.0	1			•	
Hidden cargo volume index [m3(ft.3)]	V4							
Cargo volume index-rear of 2-seat	V11	350	(12.4	<u> </u>				
Aerodynamics*								
Wheel lip to ground, front	H172	600	(07 -	\				
Wheel lip to ground, rear	H172	<u>689</u>	$\frac{(27.1)}{(27.1)}$	<del> </del>		<del></del>	<del></del> -	
Frontal area [m²(ft²)]	<del>  П#/3</del> -	1 99	<del>(6/ +3</del>	<del>\</del>	<del></del>		<del></del>	
Drag coefficient (Cd)		<del></del>	<del>(                                    </del>	<del>}</del>	<del></del>			<del></del>

Not Available

### MVMA Speci METRIC (U.S. Cus

fications Form	Vehicle Line CAMARO  Model Year 1989			· 
stomary)	Model Year 1989	Issued 6-88	Revised (•)	

IROC-Z

soay Type	SPORT	COUPE
	·	

**Body Type** 

Vehici	e Fidu	cial Marks
Fiducial I Number	Mark	Define Coordinate Location
Front		X - Fiducial mark to vertical base grid line - front measured horizontally, from the base grid line to the front fiducial mark located on top of th 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 adjust mounting bolt.
		Z - Fiducial mark to horizontal base grid line - front, measured vertically from base grid line to front fiducial mark located on top of the front seat adjuster mounting bolt.
Rear		X - Fiducial mark to vertical base grid line - rear, measured horizontally from the base grid line to rear fiducial mark located on the rail (compartment pan - longitudinal).
		Y - Fiducial mark to centerline of car - rear, width measurement made from centerline of car to fiducial mark located on the rail (compartment plongitudinal).
Fiducial Mark Number		Z - Fiducial mark to horizontal base grid line - rear, measured vertically from the base grid line to rear fiducial mark located on the rail (compartment pan - longitudinal).
	W21*	540 ( 21.3)
Front	L54°	688 ( 27.1)* -32 ( -1.3)#
7,011	H161*	296 ( 11.7)
••	H163*	284 ( 11.2)
•		
	W22*	548 ( 21.6)
_	L55°	2815 (110.8)*
Rear	H82° H162°	96 ( 3.8)# 417 ( 16.4)
	H164*	407 (16.0)
,		* Vertical Base Grid 2000 mm Line. # Horizontal Base Grid 500 mm Line.

<sup>\*</sup> Reference - SAE Recommended Practice, J182, Motor Vehicle Fiducial Marks.

All linear dimensions are in millimeters (inches).
\*\* EPA Loaded Vehicle Weight, Loading Conditions

Model Year 1989 Issued 6-88 Revised (•)

METRIC (U.S. Customary)

·		Vehicle Mass (weight)							
			CURB MASS	i, kg. (lb.)*	%1	PASS. MASS	DISTRIBUTIO	ON	
			F -		Pass in Front		Pass In Rear		1
Code	Model	Front	Rear	Total	Front	Rear	Front	Rear	ETWC**
· Sport Coup	e								
IFP87 2-Door		775	623	1398					
Hatchback Cou	ne	(1709)	(1373)		<del>-                                    </del>	<del>                                     </del>		<del></del>	
LBS & MBI		(1/03)	(13/3)	(3002)	<del> </del>		<del> </del>		····-
			<del> </del>		+				
1FP87 W/Z08 2		870	612	1482	1				
Convertible C	oupe	(1918)	(1349)	(3267)					
LO3 & M39									
TROC-Z		<del>                                     </del>							
1100 Z		<del></del>			+		<del> </del>		
IFP87 w/Z28 2	-Door	779	627	1406		<del> </del>	<del>                                     </del>		<del></del>
Hatchback Cou	pe ~	(1717)	(1382)	(3099)	1	1	<del>-</del>		
LO3 & M39									
TLD077756 8	700	A94	615						
IFP87 w/Z28 & 2-Door Conver		874	616	1490					
LO3 & M39	tible	(1927)	(1358)	(3285)		ļ			
LU3 & 1139	<del> </del>								
						ļ	<u> </u>		<del></del>
				<u> </u>	<del> </del>	<u> </u>			
	<del></del>	-			<del>                                     </del>	-			
Curb Weight -	The calcu	lated we	ight o	f a vehicl	e with	standay	d equin	ment	<del></del>
	only as d	esigned	with t	he additio	nal loa	d of o	1. lube	S.	
Curb Weight -	coolants,	and fue	all	filled to	capacit	у.	, , , , , , ,	,	
							_		
Shinning Weig			į			1			
	ht Cama	26 5222					<u> </u>		
PP ING RC 19.	ht - Same	as base	curb w	eight, exc	ept 3 g	allons	of gaso	line.	
- PP ing neig	ht - Same	as base	curb w	eight, exc	ept 3 g	allons	of gaso	line.	
	ht - Same	as base	curb w	eight, exc	ept 3 g	allons	of gaso	line.	
TPPTING HOLD	ht - Same	as base	curb w	eight, exc	ept 3 g	allons	of gaso	line.	
- Ppring nerg	ht - Same	as base	curb w	eight, exc	ept 3 g	allons	of gaso	line.	
	ht - Same	as base	curb w	eight, exc	ept 3 g	allons	of gaso	line.	
pping neig	ht - Same	as base	curb w	eight, exc	ept 3 g	allons	of gaso	line.	
	ht - Same	as base	curb w	eight, exc	ept 3 g	allons	of gaso	line.	
	ht - Same	as base	curb w	eight, exc	ept 3 g	allons	of gaso	line.	
		as base	curb w	eight, exc	ept 3 g	allons	of gaso	line.	
		as base	curb w	eight, exc	ept 3 g	allons	of gaso	line.	
		as base	curb w		ept 3 g	allons	of gaso	line.	
		as base	curb w		ept 3 g	allons	of gaso	line.	
		as base	curb w		ept 3 g	allons	of gaso	line.	
		as base	curb w		ept 3 g	allons	of gaso	line.	

SHIPPING MASS (weight) = Curb Weight Less Kg. (lbs.)\_

<sup>\*</sup> Reference - SAE J1100 Motor vehicle dimensions, curb weight definition.

<sup>\*\*</sup> ETWC - Equivalent Test Weight Class - U.S. Environmental Protection Agency emission certifications are based on the ETWC's shown. NA - Not Applicable - applies to model/series combinations not requiring testing.

Vehicle Line <u>CAMARO</u> Model Year 1989

**METRIC (U.S. Customary)** 

Optional Equipment Differential Mass (weight)\*

issued .

6-88

Revised (\*)

	Optional Equipment Differential Mass (weight)*				
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		MASS, kg. (	····	Remarks	
Code Equipment	Front	Rear	Total	Restrictions, Requirements	
RPO-AG9 Power Seat, 6-Way	1.6	2.0	3.6	All Models	
(Driver's side only)	(3.5)	(4.4)	(7.9)		
RPO-AU3 Power Door Locks-	.9	.9	1.8	All models	
Electric	(2.0)		(4.0)	All models	
RPO-A31 Power Windows- Electric	(2.6)	1.0 (2.2)	2.2 (4.8)	All models	
RPO-A90 Lock Release- Liftback Electric	.2	.4	.6	NA convt.	
ETTEBACK ETECTTIC	(0.4)	(0.9)	(1.3)	·	
RPO-B34 Mats, Front Floor-	.8	.4	1.2	All models	
Colored-Keyed Carpet	(1.8)	(0.9)	(2.7)		
<del></del>	<del></del>				
RPO-B35 Mats, Rear Floor-	.2	.6	.8	All models	
Color-Keyed carpet	(0.4)	(1.3)	(1.8)		
RPO-B48 Deluxe Luggage Compartment Trim	0	.4	.4	All models	
Compartment Ir in	(0)	(.9)	(.9)		
RPO-B84 Moldings-Body Side-	(0.4)	(0.9)	.6 (1.3)	All models	
	(0.4)	(0.3)	(1.5)		
N			<del> </del>		
				.4 - 1	
			<del></del>		

<sup>\*</sup> Also see Engine - General Section for dressed engine mass (weight).

Vehicle Line CAMARO

Model Year 1989 Issued 6-88 Revised (\*)

	Optional Equipment Differential Mass (weight)*					
· · · · · · · · · · · · · · · · · · ·	<del></del>	MASS, kg. (	lb.)	Remarks		
Code , Equipment	Front	Rear	Total	Restrictions, Requirements		
RPO-CC1 Root-Removable Hatch	. 5.8	9.6	15.4	Includes storage bag and		
Panels-Glass	(12.8)	(21.2)	(34.0)	attaching hardware.		
RPO-CD4 Windshield washer and	.2	.0	.2	Optional		
Wiper (Pulse System)	(0.4)	(ŏ)	(0.4)	- Optional		
	(01.7)					
RPO-C49 Defogger-Rear Window	0	.4	.4	All models		
(Electric)	1 6	(0.9)	(0.9)	All models		
	\\\\					
RPO-C60 Air Conditioning	16.8	2.2	19.0	With RPO LB8 engine.		
(Manual Control)	(37.0)	(4.9)	(41.9)	Sport Coupe		
	18.0	1.4	19.4	With engine.		
	(39.7)	(3.1)	(42.8)			
·	18.0	1.4	19.4	With RPO LB9 & MD8		
	(39.7)	(3.1)	(42.8)	WICH KIO EDS & FIDO		
	19.4	1.6	21.0	With RPO LO3 & MD8		
	(42.8)	(3.5)	(46.3)	WICH RFO LOS & PIDS		
	10.0		70.0			
	18.0	1.2	19.2 (42.3)	With RPO LB9 & M39		
	19.4 (42.8)	1.6 (3.5)	21.0	With RPO LO3 & M39		
	1 (12.0)	(0.0)	(40.0)			
RPO-DG/ Sport Mirrors - Electric	.4	.2	- 6	All models		
Remote Control-R.H.&L.H.	(0.9)	(0.4)	.6 (1.3)	All moders		
Controls on L.H. Door	1 (1117)	/	(2.00)	<del></del>		
Panel.						
RPO-D42 Rear Compartment	4	2.4	2.0	NA convt.		
Carco Area Cover	(-0.9)	(5.3)	(4.4)	THE CONTEST		
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<sup>\*</sup> Also see Engine - General Section for dressed engine mass (weight).

Vehicle Line \_\_\_ Model Year\_\_\_

CAMARO 1989 6-88 Revised (e) \_\_ lasued \_

	Optional Equipment Differential Mass (weight)*				
Code Factoria		MASS, kg.		Remarks Restrictions, Requirements	
DDO 155 Dougle 4 Uhoo 1 Dags	Front	Rear	Total		
RPO-J65 Power 4-Wheel Disc Brakes.	1 0	3.6	3.6	IROC-7 with 198 only	
Drakes.	(0)	(7.9)	(7.9)		
RPO-K34 Cruise Control-Three Mode	- 2.4	. 0	2.4	All models except LB8	
with Resume Feature.	(5.3)		(5.3)	CALL MULLETZ EXCEPT CRO	
(Available on Manual or	1 2000				
Automatic Transmissions.)	2.0	0	2.0	With IB8	
	(4.4)	(0)	(4.4)		
	<u> </u>				
RPO-LB9 5.0 Liter V8 (305 CID)	75.0		82.4	IROC-7 with M39	
	(165.3)	(16.3)	(181.6)	· · · · · · · · · · · · · · · · · · ·	
	63.6		72.4	IROC-7 with MD8	
	(140.2)	(4.9)	(145.1)		
RPO-LO3 5.0 Liter V8 (305 CID)	70.2	2.2	72.4	Court Cours with MOO	
W 0 503 3:0 E1081 40 (303 CID)	(154.8)			Sport Coupe with M39	
	11174.01	(4.3/	(133.7)		
	53.4	1.8	55.2	Sport Coupe with MD8	
	(117.7)			<del></del>	
		Í			
RPO-L98 5.7 Liter V8 (350 CID)	68.0	6.8	74.8	IROC-7 with MD8	
	(149.9)	(15.0)	(164.9)		
DDO 1120 F C 1 M					
RPO-M39 5-Speed Manual Transmission	4	0		<u> </u>	
11 411211172 1011	(-0.9)		(-0.9)		
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<sup>\*</sup> Also see Engine - General Section for dressed engine mass (weight).

Vehicle Line	CAMARO				
Model Year	1989	issued _	6-88	Revised (•)	

		Optional	Equipment l	Differential Mass (weight)*
		MASS, kg.	(lb.)	Remarks
Code ** Equipment	Front	Rear	Total	Remarks Restrictions, Requirements
RPO-MXO Automatic Transmission	11.4	3.8	15.2	With LB8-V6 engine, With
Overdrive (700-R4)	(25.1)	(8.4)	(33.5)	Sport Coupe
	12.8		17.2_	With LO3-V8 engine,
<u> </u>	(28.2)	(9.7)	(37.9)	Sport Coupe
	31.4	10.0	41.4	With LO3-V8 engine,
	(69.2)	(22.0)	(91.2)	IROC-Z
	31.4	10.0	41.4	With LR9 & L98 V8
	(69.2)	(22.0)	(91.2)	Engines, IROC-Z only.
RPO-N33 Steering Column-Tilt	8	.2	1.0	All models
	(1.8)	(0.4)	(2.2)	
RPO-U29 Lamp Group-Auxillary	0	0	0	All models
Includes: -Courtesy Lamps				
RPO-U25 -Rear Compartment				
Light	0	(0.4)	(0.4)	
		(0.4)	(0.4)	
RPO-U26-Underhood Light	0	0	0	
RPO-TR9 Package Number	.2	0	. 2	
	(0.4)	(0)	(0.4)	
RPO-UAl Battery-Heavy Duty	.6	-	.6	
	(1.3)		(1.3)	
				. = -
			<u> </u>	

<sup>\*</sup> Also see Engine - General Section for dressed engine mass (weight).

Vehicle Line	CAMARO				<del></del>
Model Year	1989	Issued	6-88	Revised (e)	

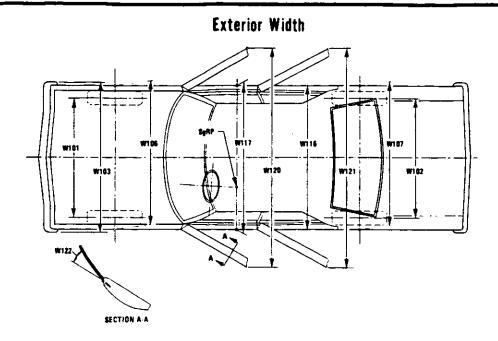
	Optional Equipment Differential Mass (weight)				
		MASS, kg.	(lb.)	Remarks	
Code Equipment	Front	Rear	Total	Restrictions, Requirements	
RPO-U75 Antenna - Power	1.0	2	1.2	All models	
(Consists of RPO-UN9	(2.2)	(0.4)	(2.6)		
Radio Suppression					
Equipment requires					
Radio)				<u> </u>	
RPO-UUS Extended Range Sound	- 6	0	6	Optional except convt.	
System AM/FM Stereo	(1.3)		(1.3)		
Cassette Tape Dolby	•				
Sound and Digital Clock					
RPO-UX1 Extended Range Sound	4	2	6	Optional	
System, AM Stereo/FM	(.9)	( 4)	(1.3)	OP CTOTICE T	
System, AM Stereo/FM Stereo ETR Radio-	(13)	(,,,	72107		
Cassette, with Clock and					
Graphic Equalizer.					
(Includes RPO-VES, UU6,					
ÙP8, U73, U79)					
•					
RPO-UM6 Extended Range Sound	1.0	.4	<del>-1.4 -</del>	-Optional	
System AM/FM Stereo	(2.2)	(.9)	<del>-(3.1)</del>		
ETR Radio, Clock, Cassette					
(Includes RPO-UP8, UU9,			<del> </del>	<del></del>	
Ú73, U79.)					
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<sup>\*</sup> Also see Engine - General Section for dressed engine mass (weight).

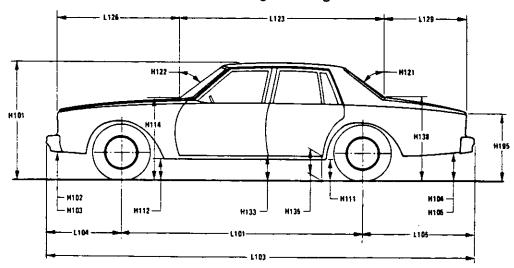
METRIC (U.S. Customary)

Exterior Vehicle And Body Dimensions - Key Sheet

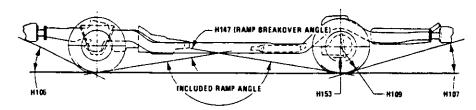
2



Exterior Length & Height

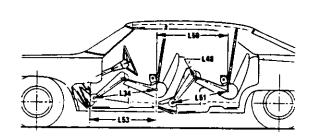


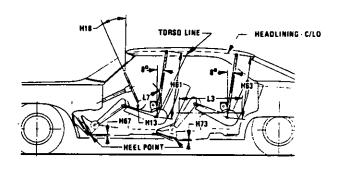
**Exterior Ground Clearance** 

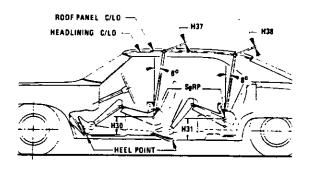


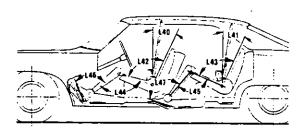
METRIC (U.S. Customary)

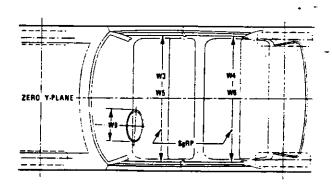
interior Vehicle And Body Dimensions – Key Sheet

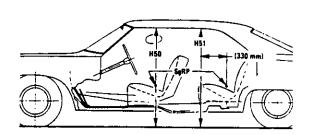








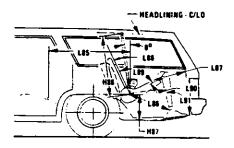


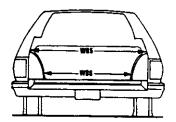


METRIC (U.S. Customary)

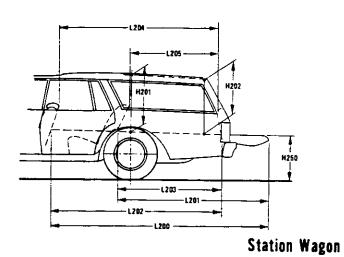
Interior Vehicle And Body Dimensions – Key Sheet

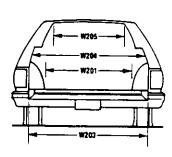
Third Seat





Cargo Space





L208 — L210
H198
L208
L208
L211

Hatchback

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.
- 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.
- 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.
- W106 FRONT FENDER WIDTH. The dimension measured between the widest points at the front wheel centerline, excluding moldings
- REAR FENDER WIDTH. The dimension measured between the widest points at the rear wheel centerline, excluding moldings.
- 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.
- 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.
- 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.

#### **Length Dimensions**

- WHEELBASE (WB). The dimension measured longitudinally between front and rear wheel centerlines. In case of dual rear axies, 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.
- OVERHANG-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.
  UPPER STRUCTURE LENGTH. The dimension measured L123 longitudinally from the cowl point to the deck point.
- COWL POINT "X" COORDINATE. L125
- FRONT END LENGTH. The dimension measured longitud-L126 inally from the cowl point to the foremost point on the vehicle at the zero "Y" plane excluding ornamentation or burnpers. In cases where bumpers and/or grills are integrated with the profile, measurement is made at the foremost
- point of front end contour.
  REAR WHEEL CENTERLINE "X" COORDINATE or in the L127 case of dual rear axies, the coordinate shall be the midpoint of the distance between the rear axle centerlines.
- REAR END LENGTH. The dimension measured longitudi-L129 nally from the deck point to the rearmost visible point of the body sheet metal at the zero "Y" plane, excluding ornamentation or bumpers.

#### **Height Dimensions**

- H101 VEHICLE HEIGHT. The dimension measured vertically from the highest point on the vehicle body to ground.
- 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.
- 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" plar
- BACKLIGHT SLOPE ANGLE. The angle between the ve cal 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
- WINDSHIELD SLOPE ANGLE. The angle between the H122 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.
- H133 BOTTOM OF DOOR CLOSED-FRONT TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum closed position, to ground.
- BOTTOM OF DOOR CLOSED-REAR TO GROUND. The H135 dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum
- H138
- closed position, to ground.

  DECK POINT TO GROUND. Measured at zero "Y" plane.

  STATIC LOAD-TIRE RADIUS-REAR. Specified by the H109 manufacturer in accordance with composite TIRE SEC-TION STANDARD.

#### **Ground Clearance Dimensions**

- 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.
- FRONT BUMPER TO GROUND-CURB MASS (WT.). H103 Measured in the same manner as H102.

METRIC (U.S. Customary)

#### Interior Vehicle And Body Dimensions — Key Sheet **Dimensions Definitions**

- REAR BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the rear bumper to ground, including bumper guards, if standard
- H105 REAR BUMPER TO GROUND - CURB MASS (WT.). Measured in the same manner as H104.
- ANGLE OF APPROACH. The angle measured between a H106 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.
- ANGLE OF DEPARTURE. The angle measured between H107 a line tangent to the rear tire static loaded radius arc and the initial point of structural interference rearward of the rear tire to ground. The limiting component shall be desig-
- RAMP BREAKOVER ANGLE. The angle measured be-H147 tween 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.
- REAR AXLE DIFFERENTIAL TO GROUND. The minimum H153 dimension measured from the rear axle differential to
- ground.
  MINIMUM RUNNING GROUND CLEARANCE. The mini-H156 mum dimension measured from the sprung vehicle to ground. Specify location.

#### Glass Areas

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

#### Fiducial Mark Dimensions

#### Fiducial Mark - Number 1

- L54 "X" coordinate. W21 "Y" coordinate. "Z" coordinate. H81
- Height "Z" coordinate to ground at curb weight. Height "Z" coordinate to ground. H161
- H163 Fiducial Mark - Number 2
- L55 "X" coordinate.
- "Y" coordinate. W22
- "Z" coordinate. W82 H162
- Height "Z" coordinate to ground at curb weight. Height "Z" coordinate to ground. H164

#### Front Compartment Dimensions

- STEERING WHEEL TORSO CLEARANCE. The minimum L7 dimension measured in the side view from the rearmost edge of the steering wheel, with front wheels in the straight ahead position, to the torso line.
- 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
- 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
- NORMAL DRIVING AND RIDING SEAT TRACK TRAVEL. L23 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 SQRP-FRONT. "X" COORDINATED.
- MAXIMUM EFFECTIVE LEG ROOM-ACCELERATOR. L34 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 teh accelerator is depressed, the manufacturer shall place foot flat on pedal and note the depression of the pedal.
- BACK ANGLE-FRONT. The angle measured between a L-40 vertical line through the SgRP-front and the torso line. If the seatback is adjustable, use the normal driving and rid-
- ing position specified by the manufacturer.
  HIP ANGLE-FRONT. The angle measured between torso L-42 line and thigh centerline.
- L44 KNEE ANGLE-FRONT. The angle measured between thigh centerline and lower leg centerline measured on the right leg.
- FOOT ANGLE-FRONT. The angle measured between the L46 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.
- SQRP-FRONT TO HEEL. The dimension measured hori-L53
- zontally from the SgRP-front to the accelerator heel point. SHOULDER ROOM-FRONT. The minimum dimension measured laterally between the trimmed surfaces on the W3 "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.
- HIP ROOM-FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane **W5** 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 att of the SgRP--front.
  STEERING WHEEL MAXIMUM OUTSIDE DIAMETER.
  Define if other than round. W9
- STEERING WHEEL TO CENTERLINE OF THIGH. The H13 minimum dimension measured from the bottom of steering wheel, with front wheels in the straight position, to the thigh centerline.
- ACCELERATOR HEEL POINT TO THE STEERING H17 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.
  STEERING WHEEL ANGLE. The angle measured from a H18 vertical to the surface plane of the steering wheel.
- SgRP-FRONT TO HEEL. The dimension measured verti-H30 cally from the SgRP-front to the accelerator heel point.
- HEADLINING TO ROOF PANEL-FRONT. The dimension H37 measured from the intersection of the headlining and the extended effective head room line normal to the sheet metal
- H50 UPPER BODY OPENING TO GROUND-FRONT. The dimension measured vertically from the trimmed body open-
- ing to the ground on the SgRP-front "X" plane. EFFECTIVE HEAD ROOM-FRONT. The dimension mea-H61 sured along a line 8 deg. rear of vertical from the SgRP-
- front to the headlining plus 102 mm (4.0 in.). FLOOR COVERING THICKNESS-UNDEPRESSED-**H67** FRONT. The dimension measured vertically from the surface of the undepressed floor covereing to the underbody sheet metal at the accelerator heel point.

#### **Rear Compartment Dimensions**

COMPARTMENT ROOM-SECOND. The dimension mea-L3 sured horizontally from the back of the front seat to the front of the second seatback at a height tangent to the top of the second seat cushion.

**METRIC (U.S. Customary)** 

#### Interior Vehicle And Body Dimensions - Key Sheet **Dimensions Definitions**

- L-41 BACK ANGLE-SECOND. The angle measured between a vertical line through the SgRP-second and the torso line. HIP ANGLE-SECOND. The angle measured between
- L43 torso line and thigh centerline.
- KNEE ANGLE-SECOND. The angle measured between L45 thigh centerline and lower leg centerline.
- FOOT ANGLE-SECOND. The angle measured between L47 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 254mm (10.0 in.).
- SHOULDER ROOM-SECOND. The minimum dimension W4 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.
- HIP ROOM-SECOND. Measured in the same manner as W6 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.
- **H38** HEADLINING TO ROOF PANEL-SECOND. The dimension measured from the intersection of the headlining and the extended effective head room line normally to the roof sheet metal.
- 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.
- EFFECTIVE HEAD ROOM-SECOND. The dimension **H63** measured along a line 8 deg. rear of vertical from the SgRP to the headlining, plus 102 mm (4.0 in.).
- FLOOR COVERING DEPRESSED SECOND. The di-**H73** mesnion measured vertically from the heel point to the underbody sheet metal.

#### **Luggage Compartment Dimensions**

- 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.
- LIFTOVER HEIGHT. The dimension measured vertically H195 from the luggage compartment lower opening at the zero "Y" plane to ground.

#### 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

- SQRP COUPLE DISTANCE-THIRD. The dimension measured horizontally from the SgRP-second to the SgRPthird
- L86 EFFECTIVE LEG ROOM-THIRD. The dimension measured along a line from the ankle pivot center to the SgRPthird 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 51mm (2.0 in.). With rear-facing third seat, dimension is measured to closure.
- L88 BACK ANGLE-THIRD. Measured in the same mannere as L41.
- L89 HIP ANGLE-THIRD. Measured in the same manner as L43.
- L90 KNEE ANGLE-THIRD. Measured in the same manner as 1.45
- 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.
- EFFECTIVE HEAD ROOM-THIRD. The dimension, mea-H86 sured 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

- CARGO LENGTH-OPEN-FRONT. The minimum dime sion measured longitudinally from the back of the frc seatback at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the open tailgate or cargo surface if the rear closure
- is a conventional door type tailgate at the zero "Y" plane. CARGO LENGTH-OPEN-SECOND. The dimension mea-L201 sured longitudinally from the back of the second seatback at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the open taligate or cargo floor surface if the rear closure is a con-
- ventional door type tailgate, at the zero "Y" plane.
  CARGO LENGTH-CLOSED-FRONT. The minimum di-L202 mension measured horizontally from the back of the front seat at the height of the undepressed floor covering to the rearmost point on the undepressed 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 undepressed floor covering to the rearmost point on the undepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.
- CARGO LENGTH AT BELT-FRONT. The minimum di-L204 mension 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. CARGO LENGTH AT BELT-SECOND. The minimum di-L205 mension measured horizontally from the back of the second seatback at the seatback top to he foremost normal surface of the closed tailgate at the height of the belt, on the zero "Y" plane.
- CARGO WIDTH-WHEELHOUSE. The minimum dimer W201 sion measured laterally between the trimmed wheelhou. ings at floor level. For any vehicle not trimmed, measure to the sheet metal.

#### **METRIC (U.S. Customary)**

# Interior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

W203	REAR OPENING WIDTH AT FLOOR. The minimum dimension measured laterally between the limiting interferences of
W204	the rear opening at floor level.  REAR OPENING WIDTH AT BELT. The minimum dimension measured laterally between the limiting interferences of
W205	the rear opening at belf height or top of pick up box. REAR OPENING WIDTH ABOVE BELT. The minimum dimension measured laterally between the limiting interfer-
H197	ences of the rear opening above the belt height. FRONT SEATBACK TO LOAD FLOOR HEIGHT. The dimension measured vertically from the horizontal tangent to
H201	the top of the seatback to the undepressed floor covering.  CARGO HEIGHT. The dimension measured vertically from the top of the undepressed floor covering to the headlining
H202	at the rear wheel "X" coordinate on the zero "Y" plane. REAR OPENING HEIGHT. The dimension measured vertically from the top of the undepressed floor covering to the upper trimmed opening on the zero "Y" plane with rear door
H250	fully open.  TAILGATE TO GROUND CURB MASS (WT.). The dimension measured vertically from the top of the undepressed floor covering on the lowered tailgate to ground on the zero
V2	"Y" plane. STATION WAGON Measured in inches:
	W4 x H201 x L204 1728 = ft <sup>3</sup>
	1728 = ft <sup>3</sup> Measured in mm:
	$\frac{\text{W4 x H201 x L204}}{10^9} = \text{m}^3 \text{ (cubic meter)}$
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.
V5	TRUCKS AND MPV'S WITH OPEN AREA.
	Measured in inches: $\frac{L506 \times W500 \times H503}{1728} = \text{ft}^3$
	Management in array
	$\frac{1.506 \times W500 \times H503}{10^9} = m^3 \text{ (cubic meter)}$
V6	10° (CUDIC Meter) TRUCKS AND MPV'S WITH CLOSED AREA.
•0	Measured in inches:
	$\frac{\text{L204} \times \text{W500} \times \text{H505}}{\text{L204} \times \text{W500} \times \text{H505}} = \text{ft}^3$
	Measured in mm:
	L204 x W500 x H505
V8	$\frac{10^9}{10^9} = m^3 \text{ (cubic meter)}$
<b>V</b> 0	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:
	H201 x L205 x W4 + W201
	2
	1728 = ft <sup>3</sup> Measured in mm:
	Weasureo in mim:

#### 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 electrically 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
- ence 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 "Y" 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 seat back to the undepressed floor covering.

  V3 HATCHBACK.
  - HATCHBACK.
    Measured in inches:

Measured in mm:

$$\frac{\frac{\text{L208} + \text{L209}}{2} \times \text{W4} \times \text{H197}}{10^9} = m^3 \text{ (cubic meter)}$$

- 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:

$$\frac{\frac{L210 + L211}{2} \times W4 \times H198}{2} = ft^{3}$$

Measured in mm:

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

= m<sup>3</sup> (cubic meter)

# METRIC (U.S. Customary)

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