MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. Customary)

1989

Manufacturer		Vehicle Line	
	Pontiac Motor Division General Motors Corporation	CIDEDIDO	
	Chevrolet-Pontiac-Canada Group Engineering Center General Motors Corporation	FIREBIRD	
	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.

Blank Forms Provided by Technical Affairs Division

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NOTE:

- 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.

Vehicle Line FIREBIRD

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

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$^{\prime}$	20-21-6-	A
V !	VANICIA	CHICAN
_	Vehicle	• • • • • • • • • • • • • • • • • • • •

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

\varnothing Vehicle 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)
·				
FIREBIRD				
2-Door Sport Coupe	(RWD)	2FS87	4 (2/2)	45.4 (100.1)
FIREBIRD TRANS AM 2-Door Sport Coupe	(RWD)	2FW87	4 (2/2)	45.4 (100.1)

^{**} FWD - Front Wheel Drive AWD - All Wheel Drive 4WD - Four Wheel Drive

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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						
	Displ.	pl. Induction		SAE Net at RPM		x h a		AXLE RATIO (std. first)
Code	Liters (in ³)	(FI, CARB / BBL, etc.)	Compr. Ratio	Power kW (bhp)	Torque N • m (lb. ft.)	u s t S/D*	TRANSAXLE	(StO. INSI)
LB8	V6 2.8	MFI **	8.9:1	(135)	217 (160)	s	Man. 5-Spd. (MB1) Base	3.42
		<u></u>		4900	3900	-	MD8) Avail	3.42
L03	V8 5.0	EFI ***	9.3:1	127 (170)	346 (255)	S	Man. 5-Spd.	3.08
	(305)			@ 4400	0 2400		Auto \700-R4'	2.73
LB9	V8 5.0 (305)	TPI @	9.3:1	(215) @	386 (285) @	S	Man.5-Spd. (M39) Base	3.08
				142 (190) @	400 (295) @	S	Auto `700-R4' (MD8) Avail	2.73
	•			168 (225) @	407 (300) @	n. (35	Man. 5-Spd. (MK6) Avail	3.45
L98	V8 5.7 (350)	TPI @	9.3:1	168 (225) @	447 (330) @	S	Auto `700-R4' (MD8) Base	2.77
				175 (235) @	461 (340) @	D	Auto `700-R4′ (MD8) Avail	3.27
rt Fuel	Injectio Injectio	n n		4400	3200			
rt Fuel	Injectio	n						
Ì	LB8 LB9 L98 L98	LB8 V6 2.8 (173) L03 V8 5.0 (305) LB9 V8 5.0 (305) Ct Fuel Injection of Fuel Injection	LB8 V6 MFI 2.8 (173) L03 V8 EFI 5.0 (305) LB9 V8 TPI 5.0 (305) L98 V8 TPI 5.7 @	LB8 V6 2.8 (173)	LB8 V6 MFI 8.9:1 101 (135) @ 4900 L03 V8 EFI 9.3:1 127 (170) @ 4400 LB9 V8 TPI 9.3:1 160 (215) @ 4400 142 (190) @ 4000 168 (225) @ 4600 L98 V8 TPI 9.3:1 168 (225) @ 4200 175 (235) @ 4400 175 (235) @ 4400 175 (235) @ 4400 175 (235) @ 4400	LB8	LB8	LB8 V6

^{*} Single / Dual

- MVMA-C-89

	Specifications Fo	Vehicle Line FIREBIRD Model Year 1989 Issued 6-88 Revised (•)
		2.8L V6 (173 CID) (Multi-Port FI) RPO LB8
Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)		60° V - Front - Longitudinal
Manufacturer		Chevrolet
No. of cylinders		6
Bore		89.0 (3.50)
Stroke		76.0 (2.99)
Bore spacing (C /	L to C / L)	111.8 (4.40)
Cylinder block ma	iterial & mass kg (lbs.) (machined)	Cast Iron 41.731 (91.9)
Cylinder block de	ck height	224 (8.82)
Cylinder block ler	gth	435.5 (17.1)
Deck clearance (r (above or below t		0.12 (.0047) below
Cylinder head ma	terial & mass kg (lbs.)	Cast iron 11.227 (24.8)
Cylinder head vol	ume (cm³)	
Cylinder liner mat	erial	Not Applicable
Head gasket thickness (compressed)		.838 (.033)
Minimum combustion chamber total volume (cm ³)		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
Intake manifold m	naterial & mass [kg (lbs.)]**	Cast alum./2.370 (5.1) Ctr, 3.810 (8.4) Lwr
Exhaust manifold	rnaterial & mass [kg (lbs.)]**	Cast iron/3.610 (8.0) RH, 2.425 (5.3) LH

		1 					
Ø	Number				,		
Engine mounts	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.						
	Added isolation (sub-frame, crossmember, etc.)						
Total dressed er	ngine mass (wt) dry***	195.7	(431.4)	Auto,	206.9	(456.1)	Man

Engine - Pistons

Fuel required unleaded, diesel, etc.

Fuel antiknock index (R + M) + 2

Material & mass, g (weight, oz.) - piston only Aluminum alloy/.467 (1.0)

Unleaded

87

Engine - Camshaft

Engino - v		
Location		In block above crankshaft
Material & mas	ss kg (weight, lbs.)	Cast iron/3.098 (6.83)
Drive type Chain / belt Width / pitch	Chain / belt	Chain
	Width / pitch	19.4/60.9

^{*} Rear of engine – drive takeoff. View from drive takeoff end to determine left & right side of engine.

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

^{**} Finished state.

^{***} Dressed engine mass (weight) includes the following:

^{@ -} Piston at TDC, spark plug and valves in place, and cylinder head torqued to specifications.

Vehicle Line <u>FIREBIRD</u>

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

METRIC (U.S. Customary)

Engine	Description/Carb.
Engine	Code

5.0 Liter V8 (305 CID) (Electronic Fuel Injection) RPO LO3

ENGINE - GENERAL

	otion (inline, V, angle,	
flat, location, fr	ont, mid, rear, igitudinal, soho, doho,	90°
ohv, hemi, wed	ige, pre-camber, etc.)	Front
	<u> </u>	Longitudinal
Manufacturer		Chevrolet
No. of cylinder	5	8
Bore		94.89 (3.74)
Stroke		88 39 (3 48)
Bore spacing (C/L to C/L)	111 8 (4.40)
Cylinder block	material & mass kg (lbs.) (machined)	Cast Iron 68.674 (151.4)
Cylinder block	deck height	229.2 (9.025)
Cylinder block	length	512.8 (20.19)
Deck clearance (above or below		635 (.025) below
Cylinder head i	material & mass kg (lbs.)	Cast iron 19.8 (43.7)
Cylinder head		
Cylinder liner m	naterial	Not Applicable
Head gasket th	ickness	mor Appricable
(compressed)		522 (021)
Minimum comb	ustion chamber	533 (.021)
total volume (ca	m ³)	55.2 (+2.2)
Cyl. no. system	L. Bank	1-3-5-7
(front to rear)*	A. Bank	2-4-6-8
Firing order		1-8-4-3-6-5-7-2
Intake manifold	material & mass [kg (lbs.)]**	Cast aluminum/6_900 (15.2)
	ild inaterial & mass [kg (lbs.)]**	
	nleaded, diesel, etc.	Cast iron/4 345 (9.6) LH, 3.800 (8.4) RH
	index (R + M) + 2	87
	Number	
Engine	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.	
mounts	Added isolation (sub-frame, crossmember, etc.)	
Total dressed e	ngine mass (wt) dry***	275.1 (606.5) Auto. 290.8 (64) 1) Map
		275.1 (606.5) Auto, 290.8 (641.1) Man
Engine – P	istons	
Material & mass, g (weight, oz.) - piston only		Aluminum
, , , , , , , , , , , , , , , , , , , 		645 (1.4)
Engine – C	amshaft	
Location		In block above crankshaft
Material & mass	kg (weight, lbs.)	
	Chain / helt	Steel 4.124 (9.1)

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

Chain

15.976 (.625)/.5

Drive type

Chain / belt

Width / pitch

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

^{**} Finished state.

^{***} Dressed engine mass (weight) includes the following:

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

METRIC (U.S. Customary)

Engine Description/Carb. Engine Code 5.0 Liter V8 (305 CID)
(Tuned Port Fuel Injection) RPO LB9

ENGINE - GENERAL

Type & descript	tion (infine, V, angle,	
flat, location, fro	ont, mid, rear,	90°
	gitudinal, sohc, dohc, ge, pre-camber, etc.)	Front
Only, Hellin, Wed	go, pro-cambor, etc.)	Longitudinal
Manufacturer		Chevrolet
No. of cylinders	<u> </u>	8
Bore		94.89 (3.74)
Stroke		88.39 (3.48)
Bore spacing (C	C/L to C/L)	111.8 (4.40)
Cylinder block r	material & mass kg (lbs.) (machined)	Cast Iron 68.674 (151.4)
Cylinder block o		229.2 (9.025)
Cylinder block le	ength	512.8 (20.19)
Deck clearance	(minimum)	
(above or below		.635 (.025) below
Cylinder head n	material & mass kg (lbs.)	Cast Iron 19.8 (44.7)
Cylinder head v		
Cylinder liner m	·······	Not Applicable
Head gasket thi	ickness	THE THE PERSON OF THE PERSON O
(compressed)		.533 (.021)
Minimum combi	ustion chamber	
total volume (cn	π ³)	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
Intake manifold	material & mass [kg (lbs.)]**	Cast aluminum/6.117 (13.5)
	ld material & mass [kg (lbs.)]**	Cast iron/L.H. 4.46 (9.8) R.H. 3.800 (8.4)
	nleaded, diesel, etc.	Unleaded
	index (R + M) + 2	91
	Number	
	Material and type (elastomeric,	
Engine	hydroelastic, hydraulic damper, etc.	
mounts	Added isolation (sub-frame, crossmember, etc.)	
Total drassed :		
- CIGI (118556) 61	ngine mass (wt) dry***	254.1 (560.2) Auto., 297.9 (656.7) Man.
Engine – P	istons	282.4 (622.6)
Material & mass, g (weight, oz.) - piston only		Aluminum/.645 (1.4)
Engine – C	amshaft	
Location		In block above crankshaft
Material & mass	s kg (weight, lbs.)	Steel 4.200 (9.3)
Drive type	Chain / bett	Chain Chain
nuse tha	Width / pitch	15.976 (.625)/.5

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

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

^{**} Finished state.

^{***} Dressed engine mass (weight) includes the following:

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

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METRIC (U.S. Customary)

Engine	Description/Carb.
Fraine	Code

5.7 Liter V8 (350 CID) (Tuned Port Fuel Injection) RPO 198

ENGINE – GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, soho, doho,		90°
ohv, hemi, wed	ge, pre-camber, etc.)	Front
Manufacturer		Longitudinal Chevrolet
No. of cylinders	<u> </u>	8
Bore		94.89 (3.74)
Stroke	· - · · · · · · · · · · · · · · · · · ·	88.39 (3.48)
Bore spacing (0	C/L to C/L)	111.8 (4.40)
	material & mass kg (lbs.) (machined)	
Cylinder block o		220 2 (0 025)
Cylinder block i		506.2 (19.93)
Deck clearance (above or below	(minimum)	(.025) Below
Cylinder head n	naterial & mass kg (lbs.)	Cast Iron 19.8 (43.7)
Cylinder head v		
Cylinder liner m		Not Applicable
Head gasket thi	ckness	THOU TOUTE
(compressed)		(.021)
Minimum combo		75.47 Combustion chamber with piston at top dead center as 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	material & mass [kg (lbs.)]**	Cast aluminum/6.117 (13.5)
Exhaust manifol	ld inaterial & mass [kg (lbs.)]**	Cast iron/L.H. 4.46 (9.8), R.H. 3.800 (8.4)
Fuel required ur	nleaded, diesel, etc.	Unleaded (0.4)
Fuel antiknock i	ndex (R + M) + 2	91
	Number	
Engine mounts	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.	
- Inguitio	Added isolation (sub-frame, crossmember, etc.)	
Total dressed er	ngine mass (wt) dry***	284.5 (627.3) Auto
Engine – P	istons	
Material & mass (weight, oz.) - pi	s g ston only	Impacted Cast Aluminum/.645 (1.4)
Engine – C	amshaft	· · · · · · · · · · · · · · · · · · ·
Location		In cylinder block "V" above crankshaft
Material & mass	kg (weight, lbs.)	Steel 4.200 (9.3)
Drive type	Chain / bett	Chain
(7)-0	Width / pitch	15.976 (.625)/.5

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

^{**} Finished state.

^{***} Dressed engine mass (weight) includes the following:

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

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Engine	Description/Carb.
Engine	Code

2.8L Liter V6 (173 CID) (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

Material & mass [kg., (weight, lbs.)]*	Steel .399 (0.9)	· · · · · · · · · · · · · · · · · · ·
Length (axes€ to€) mm	144.78	

Engine - Crankshaft

Material & mass [kg., (we	ight, lbs.)]*	Nodular Cast Iron 14.170 (31.24)	
End thrust taken by beari	ng (no.)	3	
Length & number of main	bearings	4	-
Seal (material, one, two	Front	Fluoroelastomer, one-piece, lip seal	
piece design, etc.)	Rear	Fluoroelastomer, one-piece, lip seal	

Engine - Lubrication System

Married all accessors (I/D) (call) at application	345-448 (50-65) @ 1200	
Normal oil pressure (kPa (psi) at engine rpm)		
Type oil intake (floating, stationary)	Stationary	
Oil filter system (full flow, part, other)	Full-flow	
Capacity of c/case, less filter-refill-L (qt.)	3.8 (4.0)	

Engine - Diesel Information

Diesel engine	manufacturer	Not	
Glow plug, cu	urrent drain at 0°F	Applicable	
Injector	Туре		
nozzle	Opening pressure [kPa (psi)]	- 11 - 11	
Pre-chamber	design		
Fuel in-	Manufacturer	· · · · · · · · · · · · · · · · · · ·	
jection pump	Туре		
Fuel injection	pump drive (belt, chain, gear)		
Supplementa	ry vacuum source (type)	1	
Fuel heater (y	yes/no)		
Water separa (std., opt.)	ator, description		
Turbo manufa	acturer		
Oil cooler-typ	e (oil to engine coolant; t air)		
Oil filter		-	

Engine - Intake System

Turbo charger - manufacturer	Not
Super charger - manufacturer	Applicable
Intercooler	

^{*}Finished State

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

Hydraulic lifters (std., opt., NA)		Standard
Velves -	Number intake / exhaust	8/8
	Head O.D. intake / exhaust	46.74 (1.84) 38.10 (1.50)

Engine – Connecting Rods

Material & mass [kg., (weight, lbs.)]*	Steel/.388 (.855)	
Ø Length (axes€ to€) mm	144.78	

Engine - Crankshaft

Material & mass [kg., (we	night, lbs.)]*	Nodular Cast Iron/23.360 (51.50)
End thrust taken by beari	ng (no.)	5
Length & number of main	bearings	5
Seal (material, one, two	Front	Fluoroelastomer, one-piece, lip seal
piece design, etc.)	Rear	Fluoroelastomer, one-piece, lip seal

Engine - Lubrication System

Normal oil pressure (kPa (psi) at engine rpm)	345-448 (50-65) @ 2000
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full-flow
Capacity of c/case, less filter-refill-L (qt.)	4.5 (5.0)

Engine - Diesel Information

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

Engine - Intake System

Turbo charger - manufacturer	Not	
Super charger - manufacturer	Applicable	
Intercocler		

^{*}Finished State

	A Specifications	rorm	Vehicle Line Model Year	1989	lssued	6-88	_ Revised (e) _	9-88
METRIC	(U.S. Customary)		1110001 1021		188000		_ rievised (*) _	<u> </u>
	(,			X 9 B 1				
	scription/Carb.	5.0 Lit	er V 8 (305	CID)		_		
Engine Coo	10	(Tunea	Port Fuel In	njection) RPO LB	9		
Engine –	Valve System							
Hydraulic lift	ers (std., opt., NA)	Standar	d					
	Number intake / exhaust	8/8					-	
Valves	Head O.D. intake / exhaust	46.74 (1.84) 38.10	(1.50)				•
Engine –	Connecting Rods			<u> </u>				
	ass [kg., (weight, lbs.)]*	Steel/.	388 (0.85)					
Length (axes		144.78	300 (0.83)			·	 	
		214.70	· · · · · · · · · · · · · · · · · · ·			-		
Engine –	Crankshaft	·			<u> </u>		_	
Material & m	ass [kg., (weight, lbs.)]*	Nodular	Cast Iron/2	23.360 (51.50)			
End thrust ta	ken by bearing (no.)	5					- · <u>-</u>	
Length & nur	mber of main bearings	5						
Seal (materia				ie-piece	, lip se	al		
piece design	, etc.) Rear	Fluoroe	lastomer, or	<u>ie-piece</u>	, lip se	al		
Engine ~	Lubrication System							-
Normal oil pr	essure [kPa (psi) at engine rpm]	345-450	(50-65) @ 2	2000 wit	h auto t	rans*	-	
Type oil intak	re (floating, stationary)	Station	ary					
Oil filter system (full flow, part, other)		Full-flo	OW					
Capacity of c	/case, less filter-refill-L (qt.)	4.5 (5.0	0)					
Engine –	Diesel Information							
Diesel engine	e manufacturer	Not	·				· · · · · · · · · · · · · · · · · · ·	
Glow plug, cu	urrent drain at 0°F	Applical	ole					
Injector	Туре				· · · · · · · · · · · · · · · · · · ·			
nozzie	Opening pressure [kPa (psi)]	-						
Pre-chamber	design							
Fuel in-	Manufacturer							
ection pump	Туре					-		
	pump drive (belt, chain, gear)							
Supplementa	ry vacuum source (type)							-
Fuel heater (yes/no)							
Water separa (std., opt.)	ator, description					-		
Turbo manuf	acturer	-						
Dil cooler-typ oil to ambient	e (oil to engine coolant; t air)				<u> </u>			
Oil filter							<u> </u>	-
Engine -	Intake System						<u> </u>	
Turbo charge	r - manufacturer	Not						
		Applicat						

^{*}Finished State

Intercooler

^{* 485-585 (70-85) @ 2000} with Manual Transsmission

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METRIC (U.S. Customary)

		•
Engine Description/Carb. Engine Code Engine — Valve System		5.7 Liter V8 (350 CID) Tuned Port Fuel Injection (TPI) RPO L98
Hydraulic lift	ers (std., opt., NA)	Standard
	Number intake / exhaust	8/8
Valves	Head O.D. intake / exhaust	49.28 (1.94) 38.10 (1.50)
Engine –	Connecting Rods	
Material & ma	ass [kg., (weight, lbs.)]*	Steel/.388 (0.855)
Length (axes	s€ to∕e) mm	144.78
Engine –	Crankshaft	
Material & ma	ass [kg., (weight, lbs.)]*	Nodular Cast Iron/22.900 (50.49)
End thrust tal	ken by bearing (no.)	5
Length & nun	nber of main bearings	5
Seal (materia	I, one, two Front	Fluoroelastomer, one-piece, lip seal
piece design,		Fluoroelastomer, one-piece, lip seal
Engine –	Lubrication System	
Normal oil pre	essure [kPa (psi) at engine rpm]	485-585 (70-85) @ 2000
Type oil intak	e (floating, stationary)	Stationary
Oil filter system (full flow, part, other)		
Oil filter syste	m (full flow, part, other)	Full-flow (including engine oil cooler)
	em (full flow, part, other) /case, less filter-refill-L (qt.)	Full-flow (including engine oil cooler) 4.5 (5.0)
Capacity of c		Full-flow (including engine oil cooler) 4.5 (5.0)
Capacity of c	/case, less filter-refill-L (qt.)	4.5 (5.0)
Capacity of control of	case, less filter-refill-L (qt.)	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu	case, less filter-refill-L (qt.) Diesel information manufacturer	4.5 (5.0)
Capacity of control of	case, less filter-refill-L (qt.) Diesel information manufacturer ment drain at 0°F	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu injector nozzle	Case, less filter-refill-L (qt.) Diesel information manufacturer ment drain at 0°F Type Opening pressure [kPa (psi)]	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu injector nozzle Pre-chamber	Case, less filter-refill-L (qt.) Diesel information manufacturer ment drain at 0°F Type Opening pressure [kPa (psi)]	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu Injector nozzle Pre-chamber Fuel in-	Case, less filter-refill-L (qt.) Diesel information manufacturer ment drain at 0°F Type Opening pressure [kPa (psi)] design Manufacturer	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu injector nozzle Pre-chamber Fuel in- ection pump	Case, less filter-refill-L (qt.) Diesel information manufacturer ment drain at 0°F Type Opening pressure [kPa (psi)] design Manufacturer	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu injector nozzle Pre-chamber Fuel injection pump	Case, less filter-refill-L (qt.) Diesel information manufacturer ment drain at 0°F Type Opening pressure [kPa (psi)] design Manufacturer Type	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu injector nozzle Pre-chamber Fuel injection pump	Process filter-refill-L (qt.) Diesel information manufacturer ment drain at 0°F Type Opening pressure [kPa (psi)] design Manufacturer Type pump drive (belt, chain, gear) ry vacuum source (type)	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu injector nozzle Pre-chamber Fuel in- ection pump Fuel injection Supplemental Fuel heater (y	Process filter-refill-L (qt.) Diesel information manufacturer ment drain at 0°F Type Opening pressure [kPa (psi)] design Manufacturer Type pump drive (belt, chain, gear) ry vacuum source (type)	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu injector nozzle Pre-chamber Fuel injection Supplemental Fuel heater (y Nater separa istd., opt.)	Diesel information manufacturer rent drain at 0°F Type Opening pressure [kPa (psi)] design Manufacturer Type pump drive (belt, chain, gear) ry vacuum source (type) res/no) tor, description	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu injector nozzle Pre-chamber Fuel injection pump Fuel injection Supplemental Fuel heater (y Nater separa std., opt.) Furbo manufa	Diesel information manufacturer ment drain at 0°F Type Opening pressure [kPa (psi)] design Manufacturer Type pump drive (belt, chain, gear) ry vacuum source (type) res/no) tor, description acturer e (oil to engine coolant;	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu injector nozzle Pre-chamber Fuel injection pump Fuel injection Supplemental Fuel heater (y Nater separa std., opt.) Furbo manufa Dil cooler-type ii to ambient	Diesel information manufacturer ment drain at 0°F Type Opening pressure [kPa (psi)] design Manufacturer Type pump drive (belt, chain, gear) ry vacuum source (type) res/no) tor, description acturer e (oil to engine coolant;	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu injector rozzle Pre-chamber Fuel injection Supplemental Fuel heater (y Water separa std., opt.) Furbo manufa Dil cooler-typp il to ambient Dil fliter	Diesel information manufacturer ment drain at 0°F Type Opening pressure [kPa (psi)] design Manufacturer Type pump drive (belt, chain, gear) ry vacuum source (type) res/no) tor, description acturer e (oil to engine coolant;	4.5 (5.0) Not
Capacity of co Engine — Diesel engine Glow plug, cu injector nozzle Pre-chamber Fuel injection Supplemental Fuel heater (y Water separa std., opt.) Furbo manufal Dil cooler-typp bil to ambient Dil flitter Engine —	Diesel information manufacturer ment drain at 0°F Type Opening pressure [kPa (psi)] design Manufacturer Type pump drive (belt, chain, gear) ry vacuum source (type) res/no) tor, description acturer e (cil to engine coolant; air)	Not Applicable
Capacity of co Engine — Diesel engine Glow plug, cu injector rozzle Pre-chamber Fuel injection Supplemental Fuel heater (y Water separa std., opt.) Furbo manufa Dil cooler-typp il to ambient Dil filter Engine — Furbo chargel	Diesel information manufacturer rent drain at 0°F Type Opening pressure [kPa (psi)] design Manufacturer Type pump drive (belt, chain, gear) ry vacuum source (type) res/no) tor, description acturer e (oil to engine coolant; air) Intake System	4.5 (5.0) Not

^{*}Finished State

Vehicle Line	FIREBIRD	
Model Year	1989 Issued	6-88Revised (•)

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

Standard Standard	
Radiator cap relief valve pressure [kPa (psij) 103.4 (15)	
Type (choke, bypass) Bypass Starts to open at *C (*F) 91 °C (195 °F)	
Starts to open at ℃ (₹) 91°C (195°F)	
Type (centritugal, other) Centrifugal	
GPM 1000 pump rpm	
Number of pumps	
Drive (V-belt, other) Single belt poly 'V' accessory drive (serpentine)	
Dearing type Sealed ball-roller	
Dearing type Sealed ball-roller	
Housing material Aluminum	
By-pass recirculation [type (inter, ext.)]	
Cooling system capacity	
With air cond.—L(qt.) 12.1 (12.8) Man, 12.2 (12.9) Auto Opt. equipment [specify—L(qt.)]	
With air cond.—L(qt.) 12.1 (12.8) Man, 12.2 (12.9) Auto	
Opt. equipment [specify—L(qt.)]	
Water all around cylinder (yes, no) Yes Water jackets open at head face (yes, no) No Radiator core Std., A/C, HD Std. A/C Type (cross-flow, etc.) Cross-flow Construction (fin & tube mechanical, braze, etc.) Not Available 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	
Water jackets open at head face (yes, no) No Radiator core Std., A/C, HD Std. A/C Type (cross-flow, etc.) Cross-flow Construction (fin & tube mechanical, braze, etc.) Not Available 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., A/C, HD	
Type (cross-flow, etc.) Cross-flow	
Radiator core	
Radiator core Material, braze, etc.) Not Available	
Material, mass [kg (wgt, lbs.)]	
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	
Thickness 23.5 23.5 Fins per inch @ 4.0 3.0 Radiator end tank material Plastic	
Fins per inch d 4.0 3.0 Radiator end tank material Plastic	
Radiator end tank material Plastic	
Std., elec., opt. Std., Electric	
Number of blades & type (flex, solid, material) 5, Plastic Solid	
Diameter & projected width 423.0 (16.7)	
Ratio (fan to crankshaft rev.) Not Applicable	
Fan cutout type ECM controlled	
Drive type (direct, remote)	
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	

^{* -} Distance between top of fins.

Vehicle Line FIREBIRD

Model Year 1989 Issued 6-88 Revised (*)

METRIC (U.S. Customary)

Engine Description/Carb. Engine Code

5.0L V8 (305 CID) (Electronic Fuel Injection) RPO LO3

Engine - Cooling System

Engine -	- Cooling System				
Coolant rec	overy system (std., opt., n.a.)	Standard			
	location (rad., bottle)	Bottle, coolant recovery			
Radiator ca	p relief valve pressure [kPa (psi)]	103.4 (15)			
Circulation	Type (choke, bypass)	Choke			
thermostat	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	One			
Water	Drive (V-belt, other)	Single belt poly 'V' accessory drive (serpentine)			
pump	Bearing type	Sealed double row ball			
	Impeller material	Steel			
	Housing material	Cast Iron			
By-pass rec	sirculation [type (inter,. ext.)]	Internal			
	With heater-L(qt.)	15.52 (16.40)			
Cooling system	With air condL(qt.)	15.90 (16.80)			
capacity	Opt. equipment [specify-L(qt.)]	13.90 (10.80)			
Weter jecke	its full length of cyl. (yes, no)	Yes			
	ound cylinder (yes, no)	Yes			
	its open at head face (yes, no)				
TTELOT JECNO	Std., A/C, HD	No Short and A (Control of the AC of			
		Standard A/C or HD AC & HD			
	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	667.5 667.5			
	Height	437.8 437.8			
	Thickness	23.5 34.0			
	Fins per inch (d	* 2.5			
Radiator en	d tank material	Plastic			
	Std., elec., opt.	Standard Optional			
	Number of blades & type	5, Plastic, 5, Plastic,			
	(flex, solid, material)	Solid Solid			
	Diameter & projected width	423.0 (16.7) 423.0 (16.7)			
	Ratio (fan to crankshaft rev.)	Not Applicable			
Fan	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, eng. cvl head			
	Switch point (temp., pressure) (elec.)	1900-2100			
	Fan shroud (material)	Plastic			

^{@ -} Distance between top of fins.

^{* - 4.0} with manual trans.

^{3.5} with auto. trans.

Vehicle LineFIREBIRD.		
Model Year 1989	Issued6-88	Revised (•)

METRIC (U.S. Customary)

Engine Description/Carb. Engine Code	5.0L V8 (305 CID) Tuned Port Fuel Inj. RPO LB9	5.7L V8 (350 CID) Tuned Port Fuel Inj. RPO L9	
Engine - Cooling System			
Coolent recovery system (std. ont. n.a.)	Chandand		

Coolant recovery s	ystem (std., opt., n.a.)	Standard
Coolant fill location	(rad., bottle)	Bottle, coolant recovery
Radiator cap relief	valve pressure [kPa (psi)]	103.4 (15)
	pe (choke, bypass)	Choke
nermostat Sta	rts to open at °C (°F)	90.6°C (195°F)
Тур	pe (centrifugal, other)	Centrifugal
GP	M 1000 pump rpm	12 (Total cooling system flow)
Nur	mber of pumps	One
/ater Driv	ve (V-belt, other)	Single belt poly 'V' accessory drive (serpentine)
	aring type	Sealed double row ball
Imp	peller material	Steel
Hoi	using material	Cast Iron
y-pass recirculation	on [type (inter,. ext.)]	Internal
Cooling Wit	th heaterL(qt.)	16.78 (17.7)
ystem Wit	th air condL(qt.)	16 28 (17.2)
pacity	t. equipment [specify-L(qt.)]	
ater jackets full in	ength of cyl. (yes, no)	Yes
ater all around c	ylinder (yes, no)	Yes
ater jackets oper	n at head face (yes, no)	No
Std	f., A/C, HD	Standard
Туг	pe (cross-flow, etc.)	Cross-flow
l me	nstruction (fin & tube schanical, braze, etc.)	Fin & Tube
ladiator Ma	iterial, mass [kg (wgt, lbs.)]	Aluminum, high efficiency radiator
Wie		667 5
He	ight	437 8
	ickness	34.0.
	s per inch	2 5
tadiator end tank	<u> </u>	Plastic
	J., elec., opt.	Standard A/C
Nu	mber of blades & type ex, solid, material)	5 Plastic Solid
Die	ameter & projected width	423.0 (16.7) - 2 Fans 318.0 (12.5) - 2 fans
	tio (fan to crankshaft rev.)	Not Applicable
<u> - </u>	n cutout type	FCM controlled
e., 	ive type (direct, remote)	
	PM at idle (elec.)	
<u> </u>	otor rating (wattage) (elec.)	150 Rt & Lt
 	otor switch (type & location) (elec.)	Temp switch engine cylinder head
	vitch point (temp., pressure) (elec.)	2100-2200 Rt. Lt
	n shroud (material)	Plastic Plastic

^{0 -} Distance between top of fins.
* - 21.36mm (0.84") wide, 5.20mm (0.20) thick, with uniform dynamic tensioner.

Vehicle Line FIRERIRD Model Year 1989 Issued 6-88 __ Revised (e) _

METRIC (U.S. Customary)

Engine Description/Carb. Engine Code		2.8L V6 (173 CID) (Multi-Port Fuel Injection) RPO LB8
Engine	e – Fuel System (See supple	emental page for details of Fuel Injection, Supercharger, Turbocharger, etc. if used)
		The second secon
	type: carburetor, fuel system, etc.	
Manufacti	ırer	Fuel Injection
\sim	r no. of barrels	Rochester Products
idle A/F m		None
	Point of injection (no.)	Pre-Set-No adjustment Provided
Fuel	Constant, pulse, flow	Fuel Injection at Inlet Ports
injection	Control (electronic, mech.)	Pulse
	System pressure [kPa (psi)]	ECM
łdle spdr		300 (45)
(spec. neutral or		
drive and	Automatic	
propane if used)		
Intaka ma	nifold heat control (exhaust	
or water th	nermostatic or fixed)	Water
Air cleane	rtype	Dual elements
Fuel filter	(type / location)	- Dual elements
~	Type (elec. or mech.)	Electric
Ø Fuel pump	Location (eng., tank)	
pamp	Pressure range (kPa (psi))	250 (50 0)
Ø	Flow rate at regulated pressure (L (gal) / hr (a kPa (psi))	350 (50.8)
Fuel Ta	nk	<u> </u>
Capacity [efill L (gallons)]	58.7 (15.5)
Location (d	describe)	Rear center
Attachmen	t	Underbody strap
Material &	Mass [kg (weight lbs)]	Steel, 8.579 (18.9)
Filler	Location & material	Left rear quarter
pipe	Connection to tank	Solder
Fuel line (r	naterial)	Steel
Fuel hose	(material)	Rubber
Return line	(material)	Steel
Vapor line	(material)	Steel
Educated	Opt., n.a.	Not Available
Extended range tank	Capacity [L (gallons)]	H H
tank	Location & material	И
	Attachment	11 11
	Opt., n.a.	0 0
A	Capacity [L (gallons)]	It ii
Auxiliary tank	Location & material	11 11
	Attachment	ti ti
	Selector switch or valve	И И
	Separate fill	11 11

METRIC	(U.S. Customary)			
Engine Desc Engine Code	cription/Carb.	5.0L V8 (305 CID) (Flectronic Fuel Injection) RPO 103		
Engine –	Fuel System (See suppler	nental page for details of Fuel Injection, Supercharger, Turbocharger, etc. if used)		
Induction type injection syste	e: carburetor, fuel em, etc.	Fuel Injection		
Manufacturer		Rochester Products		
Carburetor no	o. of barrels	None		
Idle A/F mix.		Preset-No adjustment provided		
-	Point of injection (no.)	Fuel Injection at Inlet Ports		
Fuel injection	Constant, pulse, flow	Pulse		
in question	Control (electronic, mech.)	FCM		
•	System pressure [kPa (psi)]			
Idle spdrpm	Manual			
(spec. neutral or				
drive and propane if	Automatic			
used)				
	old heat control (exhaust mostatic or fixed)			
Air cleaner ty	pe	Replaceable element, single snorkel		
Fuel filter (type/location)		Acptaceaute etements, stringte shorket		
×	Type (elec. or mech.)	Flectric		
) Fuel pump	Location (eng., tank)	Fuel Tank		
panip	Pressure range [kPa (psi)]	14.5 - 31.0 (2.1-4.5)		
Ø	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))			
Fuel Tani	k			
Capacity [refi	II L (gallons)]	58.7 (15.5)		
Location (describe) Attachment		Rear center		
		Underbody stran		

Capacity [retili L (gallons)]		58.7 (15.5)	
Location (describe)		Rear center	
Attachment		Underbody strap	
Material & Mass [kg (weight lbs)]		Steel 8.765 (19.3)	
Filler	Location & material	Left rear quarter	
pipe	Connection to tank	Solder	
Fuel line (material)		Steel	
Fuel hose (material)		Rubber	
		1	

Return line (material) Vapor line (material)		Steel
		Steel
	Opt., n.a.	Not A
Extended range	Capacity [L (gallons)]	
tank	Location & material	
	Attachment	
	+	

-			- · · · · · · · · · · · · · · · · · · ·
	Opt., n.a.	Not Available	
	Capacity [L (gallons)]	11	
	Location & material	It	
	Attachment	n	
	Opt., n.a.	ti	
	Capacity [L (gallons)]	11	
	Location & material	11	,
	Attachment	11	
	Selector switch or valve	11	
	Separate fill	lf	
_			

Vehicle Line	FIREBIRD			
Model Year	1989 Issued _	6-88	. Revised (•)	

METRIC (U.S. Customary)

Engine Description/Carb. Engine Code		5.0L V8 (305 CID) (Tuned Port Fuel Injection) RPO LB9			
Engine -	- Fuel System (See supp	olemental page for details of Fuel Injection, Supercharger, Turbocharger, etc. if used)			
Induction typ	pe: carburetor, fuel tem, etc.	Fuel Injection			
Manufacture		Pooch			
Carburetor n		None			
Idle A/F mix.	IO. OI DAITEIS	Preset-No adjustment provided			
IGIG PCT TITIA.	Point of injection (no.)	Fuel Injection at Inlet Ports			
Fuel	Constant, pulse, flow	Pulse			
injection	Control (electronic, mech.)				
	System pressure [kPa (psi)]	300 (44)			
idle spdrpm		300 (44)			
(spec	Maridal				
neutral or drive and	Automotio				
propane if used)	Automatic				
Intake manifo or water their	old heat control (exhaust mostatic or fixed)	Replaceable dual elements			
Air cleaner ty	pe				
Fuel filter (typ	pe/location)	Electric			
	Type (elec. or mech.)	Fuel lank			
Fue! pump	Location (eng., tank)	350 (50.8)			
	Pressure range [kPa (psi)]				
	Flow rate at regulated pressure				
	(L (gal) / hr @ kPa (psi))				
Fuel Tani	(L (gal)/hr @ kPa (psi))				
Fuel Tani	(L (gal) / hr @ kPa (psi))				
	(L (gal) / hr (e kiPa (psi)) k II L (gallons)]	58.7 (15.5)			
Capacity [refil	(L (gal) / hr (e kiPa (psi)) k II L (gallons)]	58.7 (15.5) Rear Center			
Capacity [refit Location (des Attachment	(L (gal) / hr (e kiPa (psi)) k II L (gallons)]	58.7 (15.5) Rear Center Underbody Strap			
Capacity [refit Location (des Attachment Material & Ma	(L (gal) / hr (e kiPa (psi)) k II L (gallons)]	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9)			
Capacity [refit Location (des Attachment	(L (gal) / hr @ kPa (psi)) If L (gallons)] ccribe) ass (kg (weight (bs))	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9)			
Capacity [refit Location (des Attachment Material & Ma	(L (gal) / hr (e kPa (psi)) k If L (gallons)] cribe) ass [kg (weight (bs))] Location & material Connection to tank	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter			
Capacity [refil Location (des Attachment Material & Ma Filler pipe	(L (gal) / hr (e kPa (psi)) k If L (gallons)] cribe) ass [kg (weight (bs))] Location & material Connection to tank erial)	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter Solder			
Capacity [refil Location (des Attachment Material & Ma Filler pipe Fuel line (mat	(L (gal) / hr (e kPa (psi)) k II L (gallons)] cribe) ass [kg (weight (bs)) Location & material Connection to tank erial)	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter Solder Steel Rubber			
Capacity [refit Location (des Attachment Material & Ma Filler pipe Fuel line (mat	(L (gal) / hr (e kPa (psi)) k II L (gallons)] cribe) ass [kg (weight lbs)] Location & material Connection to tank cerial) aterial)	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter Solder Steel Rubber Steel			
Capacity [refit Location (des Attachment Material & Ma Filler pipe Fuel line (mat Fuel hose (mat Return line (mat Vapor line (mat	(L (gal) / hr (e kPa (psi)) k II L (gallons)] cribe) ass [kg (weight lbs)] Location & material Connection to tank cerial) aterial)	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter Solder Steel Rubber			
Capacity [refil Location (des Attachment Material & Ma Filler pipe Fuel line (mat Fuel hose (mat Return line (mat Vapor line (mat Extended	(L (gal) / hr (e kPa (psi)) (K If L (gallons)] scribe) ass [kg (weight lbs)] Location & material Connection to tank terial) aterial) aterial)	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter Solder Steel Rubber Steel Steel			
Capacity [refit Location (des Attachment Material & Ma Filler pipe Fuel line (mat Fuel hose (mat Return line (mat Vapor line (mat	(L (gal) / hr (e kPa (psi)) k If L (gallons)] cribe) ass [kg (weight (bs))] Location & material Connection to tank erial) aterial) aterial) aterial) Opt., n.a.	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter Solder Steel Rubber Steel Steel Not Available			
Capacity [refil Location (des Attachment Material & Ma Filler pipe Fuel line (mat Fuel hose (mat Return line (mat Vapor line (mat Extended	(L (gal) / hr (e kPa (psi)) k If L (gallons)] cribe) ass [kg (weight lbs)] Location & material Connection to tank erial) aterial) aterial) aterial) Opt., n.a. Capacity [L (gallons)]	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter Solder Steel Rubber Steel Steel Not Available			
Capacity [refil Location (des Attachment Material & Ma Filler pipe Fuel line (mat Fuel hose (mat Return line (mat Vapor line (mat Extended	(L (gall) / hr (e kPa (psi)) k If L (gallons)] cribe) ass [kg (weight (bs)) Location & material Connection to tank erial) aterial) aterial) aterial) Opt., n.a. Capacity [L (gallons)] Location & material	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter Solder Steel Rubber Steel Steel Not Available			
Capacity [refit Location (des Attachment Material & Ma Filler pipe Fuel line (mat Fuel hose (mat Return line (m Vapor line (mat Extended ange ank	(L (gall) / hr (e kPa (psi)) k Il L (gallons)] cribe) ass [kg (weight (bs)) Location & material Connection to tank erial) aterial) aterial) aterial) Opt., n.a. Capacity [L (gallons)] Location & material Attachment	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter Solder Steel Rubber Steel Steel Not Available			
Capacity [refit Location (des Attachment Material & Ma Filler pipe Fuel line (mat Fuel hose (mat Return line (mat Vapor line (mat Extended range ank	(L (gall) / hr (e kPa (psi)) k Il L (gallons)] cribe) ass [kg (weight (bs)) Location & material Connection to tank erial) aterial) aterial) opt., n.a. Capacity [L (gallons)] Location & material Attachment Opt., n.a.	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter Solder Steel Rubber Steel Steel Not Available """ """ """ """ """ """ """ """ """ "			
Capacity [refit Location (des Attachment Material & Ma Filler pipe Fuel line (mat Fuel hose (mat Return line (m Vapor line (mat Extended ange ank	(L (gall) / hr (e kPa (psi)) (L (gallons)] cribe) ass [kg (weight (bs))] Location & material Connection to tank erial) aterial) aterial) opt., n.a. Capacity [L (gallons)] Location & material Attachment Opt., n.a. Capacity [L (gallons)]	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter Solder Steel Rubber Steel Steel Not Available """ """ """ """ """ """ """ """ """ "			
Capacity [refit Location (des Attachment Material & Ma Filler pipe Fuel line (mat Fuel hose (mat Return line (mat Vapor line (mat Extended range ank	(L (gall) / hr (e kPa (psi)) k If L (gallons)] cribe) ass [kg (weight (bs))] Location & material Connection to tank erial) aterial) aterial) aterial) Opt., n.a. Capacity [L (gallons)] Location & material Attachment Opt., n.a. Capacity [L (gallons)] Location & material	58.7 (15.5) Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear quarter Solder Steel Rubber Steel Steel Not Available """ """ """ """ """ """ """ """ """ "			

MVMA Specifications Form Vehicle Line FIREBIRD Model Year 1989 Issued 6-88

METRIC (U.S. Customary)

Engine	Description/Carb.
Engine	Code

5.7L V8 (350 CID)
Tuned Port Injection (TPI) RPO L98

Revised (•)

Pressure range [kPa (psi)] 350 (50.8)	Engine Coo		runed rote injection (FFI) KPO 196
Type	Èngine –	Fuel System (See supple	mental page for details of Fuel Injection, Supercharger, Turbocharger, etc. if used)
Carburator no. ot barrels None			Fuel Injection
Caburetor no. of barrels Idde AP mix. Point of Injection (no.) Fuel Injection at Iniet Ports Constant, pulse, flow Constant, pulse, flow Control (electronic, mech.) System pressure (IPPa (psi)) Lide spd-tym chows and program of the control (enhaust or water thermostatic or true) Automatic Variet (type-location) Fuel Injection at Iniet Ports Pulse Control (electronic, mech.) System pressure (IPPa (psi)) Z55 (37) Lide spd-tym chows and program of the control (enhaust or water thermostatic or true) Water Automatic Variet (type-location) Fuel Iffact (type-location) Fuel Iffact (type-location) Fuel Replace (type-location) Steel Replace	Manufacturer		Bosch
Preset - No adjustment provided Fuel Injection (no.) Fuel Injection at Iniet Ports			None
Point of injection (no.) Fuel Injection at Intel Ports			
Constant, putse, flow Control (electronic, mech.) ETECTYONIC - ON BOARD COMPUTER (System pressure (kPa (ps)))		Point of injection (no.)	
Control (electronic, mech.) System pressure (IPa (psi)) Idle spdrym Manual (spec. Audomatic Location freed) Mater Replaceable paper dual element Fuel filter (type / location) Fuel Tank Capacity [refilt L (gallons)] Material A Massa (kg (weight lbs)) Material A Massa (kg (weight lbs)) Material A Massa (kg (weight lbs)) Fuel filter (material) Material A Mass (kg (weight lbs)) Fuel filter (material) Material A Mass (material) Fuel Incompton (material) Steel Vapor line (material) Capacity [L (gallons)] Audimatic Capacity [L (gallons)] Steel Vapor line (material) Audimatic Capacity [L (gallons)] Steel Vapor line (material) Audimatic Selector switch or valve Matachment Dyn. n.a. Capacity [L (gallons)] Location & material Attachment Dyn. n.a. Capacity [L (gallons)] Location & material Attachment Dyn. n.a. Capacity [L (gallons)] Location & material Location & material Attachment Selector switch or valve			
System pressure (kPa (psi)) Ide end drym Manual	injection		
tide spd rpm (spec- restration of received and propage if a control (exhaust or rives and propage if Automatic			
Automatic Automatic Control (exhaust or water thermostatic or fised) Water	idle and -rom	· · · · · · · · · · · · · · · · · · ·	
drive and propane if used) Intake manifold heat control (exhaust or water thermostatic or fixed) Air cleaner type RepTaceable paper dual element Fuel titler (type / location) Fuel Type (elec. or mech.) Fuel tank	(spec.		
Intake manifold heat control (exhaust or water thermostatic or fixed) Air cleaner type RepTaCeabTe paper dual element Fuel litter (type / location) Fuel tank Pressure range (kPa (psi)) Filow rate at regulated pressure (L (gal) /n & kPa (psi)) Fuel tank Capacity (refilf L (gallons)) Location (describe) Attachment Location (describe) Material & Mass (kg (weight ibs)) Location & material Left rear quarter pipe Connection to tank Steel Return line (material) Steel Vapor line (material) Auxiliary tank Auxiliary tank Location & material Attachment Opt. n.a. Not Avaliable Capacity (L (gallons)) Location & material Attachment Opt. n.a. Not Avaliable Capacity (L (gallons)) Location & material Attachment Opt. n.a. Opt. n.a. Not Avaliable Capacity (L (gallons)) Location & material Attachment Opt. n.a. Selector switch or valve	drive and	Automatic	
Intake manifold heat control (exhaust or water thermostatic or fixed) Air cleaner type Fuel filter (type / location) Fuel Type (elec. or mech.) Electric		- Telefridate	· ,
or water thermostatic or fixed) Air cleaner type Fuel filter (type / location) Fuel Type (elec. or mech.) Electric		<u>. </u>	
Air cleaner type / RepTaCeable paper dual element Fuel filter (type / location) Fuel			Water
Fuel litter (type / location) Fuel pump Fuel Location (eng. tank)	Air cleaner tvi	De .	
Type (elec. or mech.) ETECTTIC			
Description			Electric
Pressure range [kPa (psi)] 350 (50.8)	Ø Fuel		
Filer tank Capacity [refiil L (gallons)] 58.7 (15.5) Location (describe) Rear center Attachment Underbody strap Material & Mass [kg (weight ibs)] Stee I 8.579 (18.9) Filler Location & material Left rear quarter pipe Connection to tank Solder Fuel line (material) Stee I Fuel line (material) Stee I Fuel mose (material) Stee I Vapor line (material) Stee I Capacity [L (gallons)] Capacity [L (gallons)	punip		
Capacity [refill L (gallons)] 58.7 (15.5)	Ø	Flow rate at regulated pressure	
Capacity [refil] L (gallons)] 58.7 (15.5)	Fuel Tank		
Conception (describe) Rear center			58.7 (15.5)
Material & Mass Kg (weight lbs) Stee 8.579 (18.9)			
Steel 8.579 (18.9) Steel 8			
Location & material Left rear quarter		ss (kn (weight the))	
Fuel line (material) Stee			
Fuel line (material) Rubber			
Rubber Rubber Rubber Rubber Return line (material) Steel			
Napor line (material) Steel			
Vapor line (material) Steel Extended range tank Opt., n.a. Not Available Location & material Attachment Opt., n.a. Opt., n.a. Capacity L (gallons) Capacity L (gallons) Location & material Attachment Selector switch or valve Selector switch or valve			
Extended range tank Capacity [L (gallons)] Location & material Attachment Opt., n.a. Opt., n.a. Copacity [L (gallons)] Location & material Attachment Selector switch or valve			
Capacity L (gallons) Location & material	-,,,,,		
tank Location & material Attachment Opt., n.a. Capacity L (gallons) Location & material Attachment Selector switch or valve	Extended		
Attachment Opt., n.a. Capacity L (gallons) Location & material Attachment Selector switch or valve	range tank		т т
Auxiliary tank Copacity L (galions)] Location & material Attachment Selector switch or valve			H
Auxiliary tank Location & material Attachment Selector switch or valve	· · · · · · · · · · · · · · · · · · ·	**************************************	# #
Auxiliary tank Location & material Attachment Selector switch or valve	ļ		#
Attachment Selector switch or valve	Auxiliary		1
Selector switch or valve	TB NK		H 1
	ŀ		
I coherent in	ŀ		
		O POPOLO IIII	

 Vehicle Line
 FIREBIRD

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

METRIC (U.S. Customary)

Engine	Description/Carb.
Engine	Code

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

Vehicle Emission Control

	T		
	Type (air injection, engine modifications, other)		Computer Command Control
		Pump or pulse	Pump - manual transmission only
		Driven by	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
	ļ	Number of	One
	Catalytic Converter	Location(s)	Beneath RF underbody
		Volume [L (in ³)]	2.78
		Substrate type	Monolith
	}	Noble metal type	Platinum/Rhodium
		Noble metal concentration (g/cm ³)	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
	Air inlet (bre	ather cap, other)	Air inlet duct
Evapora-	Vapor vente (crankcase.	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

	- Exhibite Oyatem	
Type (single dual, other)	e, single with cross-over,	Single with dual tailpipes
Muffler no. separate re	& type (reverse flow, straight thru, sonator) Material & Mass [kg (weight lbs)]	One reverse flow
Resonator	no. & type	*(See Below)
Eutraceat	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)
Tail pipe	o.d. & wall thickness	Aluminum coated steel
	Material & Mass [kg (weight lbs)]	Aluminum coated steel 3.231 (7.1)

^{*}Outer pipe 57.15x1.02 (2.25 x 0.04), inner pipe 50.08 x 0.086 (2.0x.003) (2.5 (0.1) air gap between pipes).
@OOuter pipe 63.5x1 (2.5x0.04), inner pipe 57.15x0.086 (2.25x.003) (2.15 (0.08) air gap between pipes).

**Muffler and tailpipe unit 7.620 (16.8).

Vehicle Line FIREBIRD

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

METRIC (U.S. Customary)

Engine	Description/Carb.
Engine	Code

5.0L V8 (305 CID)
Electronic Fuel Injection RPO LO3

Vehicle Emission Control

	Type (air injection, engine modifications, other)		Air injection with computer command control
		Pump or pulse	Vane Pump
		Driven by	V-Belt ·
	Air Injection	Air distribution (head, manifold, etc.)	Exhaust Manifold & Catalytic Converter
		Point of entry	Exhaust Manifold
Exhaust	Exhaust	Type (controlled flow, open oritice, other)	Back pressure modulated
Emission Control	Gas Recircula-	Exhaust source	Manifold Exhaust Crossover
CONTROL	tion	Point of exhaust injection (spacer, carburetor, manifold, other)	Inlet manifold
		Туре	Dual bed, oxidizing & reducing
		Number of	One
		Location(s)	Beneath RF underbody
	Catalytic Converter	Volume [L (in ³)]	2.78
	Converter	Substrate type	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 source (manifold vacuum, carburetor, other)		Manifold vacuum
Control	Discharges manifold, ot	(to intake her)	Throttle Body
	Air inlet (bre	eather cap, other)	Air cleaner
Evapora-	Vapor vente		Canister
tive Emission	canister, oth		Canister
Control	Vapor stora	ge provision	Canister
Electronic	Closed loop	(yes/no)	Yes
system	Open loop (yes/no)	No

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single with dual tailpipes		
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	(b)		
	Material & Mass [kg (weight lbs)]	(See notes) 5.069 (11.2)		
Inter- mediate	o.d. & wall thickness	57.15 x 1.14 (2.25 x .045)		
pipe_	Material & Mass [kg (weight lbs)]	Aluminum coated steel		
Tail pipe	o.d. & wall thickness	63.5 x 1.07 (2.5 x 0.042)		
	Material & Mass [kg (weight lbs)]	Aluminum coated steel		

⁽a) - Left hand branch - stainless steel; outer 57.15 x 1.02 (2.25 x 0.040), 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 otr tube, 50.8x0.86 (2.0x0.003), w/ steel inner tube.

* Muffler and tailpipe unit 8.732 (19.3).

⁽b) - Stainless steel; outer, 63.5 x 1.02 (2.5 x 0.040), inner, 57.15 x 0.86 (2.25 x 0.003) with 2.155 (0.085) air gap between pipes.

Vehicle Line_	FIREBI	RD		
Model Year_	1989	Issued 6-88	Revised (e) 9	-88

METRIC (U.S. Customary)

Engine	Description/Carb.
Engine	Code

5.0L V8 (305 CID) RPO LB9 (Tuned-Port Fuel Inj.

5.7L V8 (350 CID) RPO L98 (Tuned-Port Fuel Int

Vehicle Emission Control

	Type (air injection, engine modifications, other)		Air injection with computer command control
		Pump or pulse	Air Pump
		Driven by	Belt_
	Air Injection	Air distribution (head, manifold, etc.)	Exhaust manifold & catalytic converter
•		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
COMMO	tion	Point of exhaust injection (spacer, carburetor, manifold, other)	Inlet_manifold
		Туре	Dual bed, oxidizing & reducing
		Number of	One
		Location(s)	Beneath RF underbody
	Catalytic	Volume (L (in ³))	2.78 (170)
	Converter	Substrate type	Mono)ith
5		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 source (manifold vacuum, carburetor, other)		Manifold vacuum
Control	Discharges manifold, of	(to intake her)	Intake manifold
	Air inlet (bre	eather cap, other)	Throttle body
Evapora-	Vapor vente	ed to Fuel tank	Canister
tive Emission	canister, oth		
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, separate resonator) Material & Mass [kg (weight lbs)] Resonator no. & type		One, reverse flow	
		None	
	Branch o.d., wall thickness	(a)	
Exhaust pipe	Main o.d., wall thickness	(b)	
•	Material & Mass [kg (weight lbs)]	(See notes) 6.124 (13.5)	
nter-	o.d. & wall thickness	69.85 x 1.40 (2.75 x 0.05)	
mediate pipe	Material & Mass [kg (weight lbs)]	Aluminum coated steel	
Tail pipe	o.d. & wall thickness	63.5 x 1.07 (2.25 x .04)	
	Material & Mass [kg (weight lbs)]	Aluminum coated steel	

⁽a)-Laminated-stainless steel outer pipe, 63.5 x 1.016 (2.5 x 0.04), steel inner pipe.

* Muffler & tailpipe unit 9.845 (19.5).

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Page 7. 2

⁽b)-Laminated-stainless steel outer pipe, 76.2 x 1.016 (3.0 x 0.04), steel inner pipe.

MVMA Specifications Form		Vehicle Line FIREBIRD						
				Model Year	1989	Issued	6-88	Revised (•)
WIE I N	IC (U.S. CI	ustomary)						
Engine D	escription/Ca	rb.	2.8 Lite	r - V6 (173	CID)			
Engine C	ode		Multi-Po	rt Fuel Inj	ection	RPO LB8		
Transm	nissions/Tr	ansaxle (Std., (
Manual 3-	speed (manufac	turer/country)	Not Avai	lahlo		······································		
Manual 4-	speed (manufac	turer/country)	Not Avai					
Manual 5-s	speed (manufac	turer/country)	Standard					
Automatic	(manufacturer/c	country)	Optional					
Automatic	overdrive (man	ufacturer/country)	Optional	· · · · · · · · · · · · · · · · · · ·				
Manual	l Transmiss	ion/Transaxie	(MB1)	- <u> </u>				
Number of	forward speeds		5					· · · · · · · · · · · · · · · · · · ·
	1st		4.03					
	2nd		2.37					·····
_	3rd		1.50					
Gear ratios	4th		1.00					
	5th		0.76					
	Reverse		3.76					
	us meshing (sp	ecify gears)	_All forwa	rd gears				
Shift lever I			Eloor					
Trans. case	e mat'l. & mass		Aluminum					
Lubricant	Capacity (L		3.251 (6.	87 pts.)				
	Type recon	mended	Dextron I	<u> </u>				
Clutch ((Manual Tra	insmission)					 	
Clutch man	nufacturer		Bellevill	e				
	(dry, wet; single		Dry disc					
Linkage (hy	ydraulic, cable, r	od, lever, other)						
	l effort (nom. l, new) N (lbs)	Depressed	<u> 130 n</u>			 		
		Released						
Assist (spring, power/percent, nominal)			<u>None</u>	······	·			 -
Type pressi	ype pressure plate springs							
	<u> </u>	new) N (lbs)	Diaphragm					
	load (nominal,		5750 (129	3)				
	g load (nominal, Facing mfgi	. & material coding	5750 (129 Valeo/F20	3) 2				
	g load (nominal, Facing mfgi	. & material coding erial & construction	5750 (129 Valeo/F20 Non-asbes	3) 2				
	Facing mfgi Facing mate Aivets per t	. & material coding erial & construction	5750 (129 Valeo/F20 Non-asbes 16	3) 2 tos	6 10			
	Facing mfgi Facing mate Facing mate Rivets per t	. & material coding erial & construction acing	5750 (129 Valeo/F20 Non-asbes 16 232.0 x 1	3) 2_ tos 55.0 (9.125	× 6.12	25)		
Total spring	Facing mfgr Facing mate Rivets per fr Outside x in Total eff. are	. & material coding prial & construction acing side dia. (nominal) pa [cm²(in.²)] pressure plate side/	5750 (129 Valeo/F20 Non-asbes 16 232.0 x 1 234.0 (36	3) 2_ tos 55.0 (9.125	× 6.12	25)		
	Facing mfgg Facing mate Rivets per t Outside x in Total eff. ar Thickness (fly wheel sic	. & material coding erial & construction acing side dia. (nominal) ea [cm²(in.²)] pressure plate side/ de) (pressure plate side/	5750 (129 Valeo/F20 Non-asbes 16 232.0 x 1 234.0 (36 3.2/3.2	3) 2_ tos 55.0 (9.125	× 6, 12	25)		
Total spring	Facing mfg Facing mate Facing mate Facing mate Rivets per f. Outside x in Total eff. ar Thickness (fly wheel sic Rivet depth fly wheel sic	. & material coding erial & construction acing side dia. (nominal) ea [cm²(in.²)] pressure plate side/ de) (pressure plate side/	5750 (129 Valeo/F20 Non-asbes 16 232.0 x 1 234.0 (36 3.2/3.2	3) 2_ tos 55.0 (9.125 .28)				
Total spring	Facing mfg Facing mate Facing mate Facing mate Rivets per f. Outside x in Total eff. ar Thickness (fly wheel sic Rivet depth fly wheel sic	. & material coding erial & construction acing side dia. (nominal) ea [cm²(in.²)] pressure plate side/le) (pressure plate side/le) (tressure plate side/le)	5750 (129 Valeo/F20 Non-asbes 16 232.0 x 1 234.0 (36 3.2/3.2 1.1 min Driven pl	3) 2 tos 55.0 (9.125 .28)	noke so	rings		-packed & sealed

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

Vehicle Line FIREBIRD		
Model Year 1989	_ Issued _ 6-88	Revised (e)

			Model Year 1989	Issued _ 6-88	Revised (*)
METR	IC (U.S. Customary)			 	(-)
Engine D	escription/Carb.	5.0 Liter V8	3 (305 CID)		
Engine C		(Electronic	Fuel Injection)	RPO LOS	,
Trenen	dissions/Transaulo /64d		Tue! Injection/	KI O LOS	
	nissions/Transaxie (Std.,			·	
	speed (manufacturer/country)	Not Availab			
	speed (manufacturer/country) speed (manufacturer/country)	Not Availab	<u>e</u>		·
	(manufacturer/country)	Standard			
	overdrive (manufacturer/country)	Optional			
	(mandacialencountry)	Optional			
Manual	Transmission/Transaxie	(M39)			
Number of	forward speeds	5			
	1st	2.95			
	2nd	1.94			7
	3rd	1.34			
Gear ratios	4th	1.00		<u> </u>	
	5th	0.63			
	Reverse	2.76	· -		
Synchronou	us meshing (specify gears)	All forward	gears		·
Shift lever l	ocation	Floor			
rans. case	mat'l. & mass kg (lbs)*	Aluminum			
Lubricant	Capacity [L (pt.)]	3.25L (6.87	pts.)		
	Type recommended				
Clutch (Manual Transmission)				
lutch manu	ufacturer	Belleville			
lutch type	(dry, wet; single, multiple disc)	Dry disc			
inkage (hyd	draulic, cable, rod, lever, other)	Hydraulic		-	
Aax. pedal	effort (nom. Depressed	150n			
pring load,	new) N (lbs) Released				· · · · · · · · · · · · · · · · · · ·
ssist (sprin	g. power/percent, nominal)	None			
ype pressu	re plate springs	Diaphragm		·	
otal spring	load (nominal, new) N (lbs)	7750 (1742)			
	Facing mfgr. & material coding	Valeo/F202			
	Facing material & construction	Non-asbestos			
lutch cing	Rivets per facing	18		· · ·	
	Outside x inside dia. (nominal)	254.0 x 165.	0 (10.0 x 6.5)		
	Total eff. area [cm²(in.²)]	293.0 (45.43)		
	Thickness (pressure plate side/ fly wheel side)	3.45/3.45 (0			
	Rivet depth (pressure plate side/ fly wheel side)	1.1 min (0.0			
	Engagement cushion method	Driven niste	Wave cooks cons		

Release bearing type & method lub. Sell f

Torsional damping method, springs, hysteresis | Coil springs with non-metal friction control.

centering angular contact ball bearing pre-packed & sealed.

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

	A Specifications	- Cilli	Model Year	1989 Issued	6-88	_ Revised (•)
METRI	C (U.S. Customary)		1110001 1 001			
Engine Description/Carb. Engine Code			er V8 (305 C Port Fuel In	ID) jection) RPO	LR9	
Transm	lssions/Transaxle (Std., C	pt., N.A.)		,		
Manual 3-s	peed (manufacturer/country)	Not Ava	ilable		,, _ -,	
Manual 4-s	peed (manufacturer/country)					
Aanual 5-s	peed (manufacturer/country)	Standar				
Automatic ((manufacturer/country)	Optiona				
Automatic o	overdrive (manufacturer/country)	Optiona		<u> </u>	· -	
Manual	Transmission/Transaxie	(M39)			(MK6)	
Number of	forward speeds	5			åe E	
	1st	2.95			2 75	
	2nd	1.94			1 94	
	3rd	1.34			1 34	
3ear atios	4th	1_00		· · ·	1 00	
	5th	0.63		•	0.74	
	Reverse	2.76			°2 76	<u> </u>
Synchronou	us meshing (specify gears)	All for	ward gears			
Shift lever l	ocation	Floor				
rans, case	mat'l. & mass kg (lbs)*	Aluminu	*			
			!! ·		_	
	Capacity [L (pt.)]	3.251 (-	
ubricant	Capacity [L (pt.)] Type recommended	3.25L (1 5W-30	5.87 pts.)		-	
ubricant					-	
ubricant	Type recommended Manual Transmission)	5W-30	5.87 pts.)			
Clutch (Clutch type	Manual Transmission) ufacturer (dry, wet; single, multiple disc)	5W-30	5.87 pts.)			
Clutch (Clutch type	Type recommended Manual Transmission)	SW-30	5.87 pts.)			
Clutch (Clutch type Linkage (hy	Manual Transmission) ufacturer (dry, wet; single, multiple disc)	Bellevi Bry_disc	5.87 pts.)			
Clutch (Clutch man Clutch type Linkage (hy Max. pedal spring load	Manual Transmission) Infacturer Infacturer Information (dry, wet; single, multiple disc) Infacturer Information (normation) Information (normation)	Bellevi Dry disc	5.87 pts.)			
Clutch (Clutch man Clutch type Linkage (hy Max. pedal spring load	Manual Transmission) Indiacturer Indiactur	Bellevi Dry disc Hydraul 150n	11e			
Clutch (Clutch man Clutch type Linkage (hy Max. pedal spring load Assist (sprin	Manual Transmission) Indiacturer (dry, wet: single, multiple disc) (draulic, cable, rod, lever, other) I effort (nom. leffort (nom. leftort (nom. leftort)) (new) N (lbs) Released (ng, power/percent, nominal)	Bellevil Dry disc Hydraul 150n None Diaphrac	11e			
Clutch (Clutch man Clutch type Linkage (hy Max. pedal spring load Assist (sprin	Manual Transmission) Manual Transmission) Manual Transmission) Manual Transmission) Manual Transmission Manua	Bellevil Dry disc Hydraul 150n None Diaphrac	11e ic 742)			
Clutch (Clutch man Clutch type Linkage (hy Max. pedal spring load Assist (sprin	Manual Transmission) Indiacturer Indiactur	Bellevi Dry disc Hydraul 150n None Diaphrac 7750 (1	11e ic m 742)			
Clutch (Clutch man Clutch type Linkage (hy Max. pedal spring load Assist (sprin	Manual Transmission) Infacturer Infacturer Information (dry, wet; single, multiple disc) Infacturer Information (dry, wet; single, multiple disc) Information (d	Bellevi Dry disc Hydraul: 150n None Diaphrac 7750 (17	11e ic m 742)			
Clutch (Clutch man Clutch type Linkage (hy Max. pedal spring load Assist (sprin	Manual Transmission) aufacturer (dry, wet: single, multiple disc) (draulic, cable, rod, lever, other) deffort (nom., new) N (lbs) Released ng, power/percent, nominal) ure plate springs load (nominal, new) N (lbs) Facing mfgr. & material coding Facing material & construction Rivets per facing Outside x inside dia. (nominal)	Bellevi Dry disc Hydraul: 150n None Diaphrac 7750 (1: Valeo/F2 Non-asbe	11e ic m 742)	•		
Clutch (Clutch man Clutch type Linkage (hy Max. pedal spring load Assist (spring Type pressi	Manual Transmission) Infacturer Infacturer Information (dry, wet; single, multiple disc) Infacturer Information (dry, wet; single, multiple disc) Information (d	Bellevi Dry disc Hydraul 150n None Diaphrac 7750 (1) Valeo/F2 Non-asbe 18 267.0 x	11e ic 742) 202	•		
Clutch (Clutch man Clutch type Linkage (hy Max. pedal spring load Assist (sprin	Manual Transmission) aufacturer (dry, wet: single, multiple disc) (draulic, cable, rod, lever, other) deffort (nom., new) N (lbs) Released ng, power/percent, nominal) ure plate springs load (nominal, new) N (lbs) Facing mfgr. & material coding Facing material & construction Rivets per facing Outside x inside dia. (nominal)	Bellevi Dry disc Hydraul 150n None Diaphrac 7750 (1) Valeo/F2 Non-asbe 18 267.0 x	11e 11e 1c 742) 202 2stos 165.0 (10.5	•		
Clutch (Clutch man Clutch type Linkage (hy Max. pedal Spring load Assist (spring Type pression Total spring	Manual Transmission) Infacturer Infacturer Information (dry, wet; single, multiple disc) Information (normation) Inf	Bellevi Dry disc Hydraul: 150n None Diaphrac 7750 (1: Valeo/F2 Non-asbe 18 267.0 x 346.0 (!	11e 11e 1742) 202 25tos 165.0 (10.5	•		
Clutch (Clutch man Clutch type Linkage (hy Max. pedal Spring load Assist (spring Type pression Total spring	Manual Transmission) aufacturer (dry, wet; single, multiple disc) (draulic, cable, rod, lever, other) deffort (norn, new) N (lbs) replate springs (load (nominal, new) N (lbs) Facing mfgr. & material coding Facing material & construction Rivets per facing Outside x inside dia. (nominal) Total eff. area [cm²(in.²)] Thickness (pressure plate side/fly wheel side) Rivet depth (pressure plate side/	Bellevi Dry disc Hydraul 150n None Diaphrac 7750 (1) Valeo/F2 Non-asbe 18 267.0 x 346.0 (5	11e 11e 1742) 202 25tos 165.0 (10.5 15 (0.136) (0.0433)	× 6.5)		
Clutch (Clutch man Clutch type Linkage (hy Max. pedal spring load Assist (spring Type press Total spring	Manual Transmission) Infacturer Information (dry, wet; single, multiple disc) Information (dry, wet; single, multipl	Bellevi Dry disc Hydraul 150n None Diaphrac 7750 (1) Valeo/F2 Non-asbe 18 267.0 x 346.0 (5	11e 11e 1742) 202 25tos 165.0 (10.5 15 (0.136) (0.0433)	x 6.5)		

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

	IA Specifi IC (U.S. Custo		Model Year Issued Revised (•)
Engine D	escription/Carb. ode		5.7 Liter V8 (350 CID) (Tuned Port Fuel Injection) RPO L98
Transm	ilssions/Trans	axle (Std (
	speed (manufacturer/		Not Available
	speed (manufacturer/		The state of the s
	speed (manufacturer/		
	(manufacturer/countr	 _	Standard
	overdrive (manufactu	<u></u>	Standard
		- On Codinay)	
Manual	Transmission	/Transaxie	
Number of	forward speeds		
	ist		
	2nd		
	3rd		
Gear ratios	4th		Not
. 2003	5th		Available
	Reverse		
Synchronou	is meshing (specify g	jears)	
Shift lever lo			
Trans. case	mat'l. & mass kg (ib:	s)"	
	Capacity [L (pt.)]		
Lubricant	Type recommend		
	1 2		
		. <u></u>	
Clutch (i	Manual Transn	nission)	
Clutch manu	rfacturer		
Clutch type (dry, wet; single, multiple disc)		tiple disc)	
Linkage (hydraulic, cable, rod, lever, other)		ver, other)	Not
Max. pedal e	O. O. C.	ressed	Available
spring load,	new) N (lbs) Rele	eased	
Assist (sprin	g, power/percent, no	minal)	
	re plate springs		
otal spring	load (nominal, new) i	N (lbs)	
	Facing mfgr. & ma	aterial coding	
	Facing material &	construction	
	Rivets per facing		
	Outside x inside d	lia (nominal)	

j

Total eff. area [cm²(in.²)]

Release bearing type & method lub.

Torsional damping method, springs, hysteresis

Thickness (pressure plate side/ fly wheel side)

Rivet depth (pressure plate side/ fly wheel side)

Engagement cushion method

Clutch facing

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

Vehicle Line	<u> FIREBIRI</u>	<u> </u>		<u> </u>	
Model Year	1989	Issued	6-88	Revised (•) .	

METRIC (U.S. Customary)

Engine Description/Carb-Engine Code 2.8L V6 (173 CID)
(2.8 Multi-Port FI) RPO IB8

Autometic	Transmission	/Transayia
Automatic	i tausmissiöt	I/ I FAIISAXIU

Trade name		4-speed Automatic
Type and special features (describe)		Torque converter with clutch 700-R4
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
Max. upshift	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"	
Lubricant	Capacity [refill L (pt.)]	4.5L (9.5 PTS)
	Type Recommended	GM Dexron II
Oil cooler (st	d., opt., NA, internal, external, air, liquid)	Standard, integral with radiator
Transmissio	n case material & mass kg (lbs)**	Aluminum 71.7 (158.1)

Axie or Front Wheel Drive Unit

*Torque	converter	clutch	in 3rd	å	4th	gears
---------	-----------	--------	--------	---	-----	-------

Type (front,	rear)	Rear
Description		Semi-floating axle, overhung hypoid driven pinion and ring
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	Collansible spacer
Driving whe	el bearing (type)	Roller bearing
Lubdagg	Capacity [L (pt.)]	1.66
Lubricant	Type recommended	GL-5 gear lube

Axle or Transaxle Ratio and Tooth Combinations (See 'Power Teams' for axle ratio usage.)

Axle ratio (d	or overall top gear ratio)	3.42
No. of Pinion		41
No. of teeth	Ring gear or gear	12
Ring gear o	ı.d.	194_(7,625)
Transaxle	Transfer gear ratio	Not Applicable
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Final drive ratio	п. п

^{*} Input speed + V torque

^{**} Includes shift linkage, lubricant, & clutch housing. If other specify.

Vehicle Line	FIREBIRD				
Model Year_	1989	Issued	6-88	Revised (•)	

METRIC (U.S. Customary)

Engine Description/Carb. **Engine Code**

5.0L V8 (305 CID)

(Electronic Fuel Injection) RPO LO3

Automatic	Transmissi	ion/Transaxie
~~~		IVII/II ANDALIB

Trade name	<u> </u>	4-speed Automatic
Type and special features (describe)		Torque converter with clutch 700-R4
	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
Max. upshift	speed - drive range (km/h (mph))	1-2=59(37), 2-3-113(70)
Max. kickdov	wn speed - drive range [km/h (mph)]	3-2=106(66), $2-1=42(26)$
Min. overdriv	ve speed [km/h (mph)]	5.8 (36)
	Number of elements	3
Torque	Max. ratio at stall	1.91
converter	Type of cooling (air, liquid)	Liquid
	Nominal diameter	298 (11.75)
<u></u>	Capacity factor "K"*	
Lubricant	Capacity [refill L (pt.)]	4.5L (9.5 PTS)
	Type Recommended	GM Dexron II
	d., opt., NA, internal, external, air, liquid)	Standard, integral with radiator
Transmission	n case material & mass kg (lbs)**	Aluminum 71.1 (158.1)
Avia ar E	ront Wheel Orive Unit	*Torque converter clutch in 3rd & 4th gears.

#### **Axle or Front Wheel Drive Unit**

Description		Rear Semi-floating axle, overhung hypoid driven pinion and ring
1 1-14- d -11- d144.	1	gear
rimited sub cities	rential (type)	Not Available
Drive pinion offse	et	1.50
Drive pinion (type	e)	Hypoid gear
No. of differential	al pinions	Two
Pinion/differenti	ial adjustment (shim, other)	Shim
Pinion / differentia	ial bearing adjustment (shim, other)	Collapsible spacer
Driving wheel be	saring (type)	Straight roller bearing
ubricant C	Capacity [L (pt.)]	1.66
	Type recommended	GL-5 gear lubricant

Manual transmission

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

Axle ratio (d	or overall top gear ratio)	3.08	2.73	
No. of teeth	Pinion	40	41	
	Ring gear or gear	13	15	
Ring gear o.d.		194 (7.625)	194 (7.625)	
Transaxle	Transfer gear ratio	Not Applicable		
	Final drive ratio	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		

^{*} Input speed + V torque

^{**} Includes shift linkage, lubricant, & clutch housing. If other specify.

Vehicle	Line	<u>FIREBIRD</u>				
Model \	/ear	1989	Issued _	6-88	Revised (•)	

Engine De Engine Co	scription/Carb. de ,	5.0L V8 (305 CID) (TPI) RPO LB9	5.7L V8 (350 CID) (TPI) RPO L98		
Automat	tic Transmission/Transaxie		100/ 100 200		
Trade name		4-speed Automatic			
Type and sp	becial features (describe)	Torque converter with clutc	h 700-R4		
_	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	<del></del>		
Max. upshift	speed - drive range [km/h (mph)]	1-2=66(41), 2-3=122(76)	1-2=55(34), 2-3=105(65)		
Max. kickdo	wn speed - drive range [km/h (mph)]	3-2=116(72), 2-1=55(34)	3-2=88(55), 2-1=32(20)		
Min. overdri	ve speed [km/h (mph)]	66 (41)	58 (36)		
Number of elements		3			
Torque converter	Max. ratio at stall	2.15	1.91		
	Type of cooling (air, liquid)	Liquid			
	Nominal diameter	298 (11.75)			
	Capacity factor "K"				
Lubricant	Capacity [refill L (pt.)]	4.5L (9.5 PIS)			
	Type Recommended	GM Dexron II			
Oil cooler (sto	d., opt., NA, internal, external, air, liquid)	Standard, integral with rad	iator		
Transmissio	n case material & mass kg (lbs)**	Aluminum 71.1 (158.1)			
Axle or F	ront Wheel Drive Unit	*Torque converter clutch in	3rd & 4th gears		
Type (front,	rear)	Rear			
Description		Semi-floating axle, overhun gear	g hypoid driven pinion and rea		
Limited slip differential (type)		Cone clutch			
Drive pinion offset		1.50			
Drive pinion (type)		Hypoid gear			
No. of differential pinions Pinion / differential adjustment (shim, other)		lwo*, four @			
		Shim	· <del></del>		
	rential bearing adjustment (shim, other)	Collapsible spacer			
		Straight roller bearing*, t	apered roller bearings @		
Driving wheel bearing (type)		1.66	apara rotter beat ings e		
Lubricant	Capacity [L (pt.)]				

#### Axle or Transaxle Ratio and Tooth Combinations (See 'Power Teams' for axle ratio usage.)

Axle ratio (o	r overall top gear ratio)	3 23	3 08	2 72	3 45	·
No. of teath	Pinion	42	40	41	3.13	
	Ring gear or gear	13	13	15	11	
Ring gear o.	d.	1 94 (	7 625)		197 (7 75)	
Transaxle	Transfer gear ratio	Not An	nlicable		197 (7770)	
	Final drive ratio	ii ii	n			· .
•••					<del> </del>	

^{*} input speed + torque

^{* 2.73, 3.08} and 3.23 axles. @ 2.77, 3.27 and 3.45 axles. ** Includes shift linkage, lubricant, & clutch housing. If other specify,

<b>MVMA Specifications Fe</b>	0 PPM	Vehicle Line FIREBI		
in this opecifications F	J1111	Model Year 1989	Issued 6-88	Revised (e)
METRIC (U.S. Customary)	2.8L-V6	5.0L- <b>V</b> 8	5.0L-V8	5.7L-V8

Engine Description/Cerb. Engine Code MFI (173 CID) EFI (305 CID) TPI (305 CID) TPI (350 CID) RPO LB8 RPO LO3 RPO LB9 RPO L98

<b>Propeller</b>	Shaft - Rear	Wheel Drive	

Manufacture Type (strain	fanufacturer ype (straight tube, tube-in-tube, tternal-external damper, etc.)		neel Drive	Straight tube - internal damper
·	Manual 3-s	Manual 3-speed transmission		Not Available
	Manual 4-s	peed trans	mission	Not Available
Outer 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		n 	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)		pack)	None
	Туре	Туре		Splined
Slip yoke	Number of t	Number of teeth		27
	Spline o.d.	Spline o.d.		29.84 mm (1.174 in.)
	Make and m	ifg. no.	Front	Saginaw size 44 Saginaw size 44
	Number use	d		Two
Universal joints	Type (ball a	nd trunnior	n, cross)	Cross
	Rear attach	(u-bolt, cla	amp, etc.)	Strap and bolts
	Bearing	Type (p	plain, ction)	Anti-friction
		Lubrica (fitting,	ition prepack)	Prepacked
Drive taken t arms or sprir	through (torque ngs)	tube,		Torque arm
	orque taken through (torque tube, rms or springs)			Torque arm

^{*} Centerline to centerline of universal joints, or to centerline of rear attachment.

^{* 70}mm (2.75 in) dia. aluminum shaft replaces base steel shaft where necessary for weight reduction.

Vehicle Line	FIREBI	RD		· · · · · · · · · · · · · · · · · · ·	
Model Year	1080	Issued	6_99	Revised (*)	

METRIC (U.S. Customary)

Body Type And/Or
Engine Displacement

A11

 $\varnothing$  Suspension - General including Electronic Controls

	Standard/optional/not avail.	Not Available
	Manual/automatic control	
Car leveling	Type (air/hydraulic)	
	Primary/assist spring	
	Rear only/4 wheel leveling	"
	Single/dual rate spring	n n
	Single/dual ride heights	п
	Provision for jacking	Body pickup at rocker panels
	Standard/option/not avail.	Not Applicable
	Manual/automatic control	п
	Number of damping rates	т п
Shock ubsorber damping	Type of actuation (manual/ electric motor/air, etc.)	-
contols	S Lateral acceleration	N H
	n Deceleration	
	o Acceleration	
	s Road surface	
Shock absorber	Туре	Direct, double-action, hydraulic
	Make	Delco Products
front & ear)	Piston diameter	32.0mm (1.26), 35.0mm (1.38) w/ws6 front;
	Rod diameter	25mm (1.0) Front; 12.5mm (0.5) rear. 25.0mm (1.0) rear.

 $\varnothing$  Suspension – Front

Type and description		Independent w/coil springs, modified MacPherson strut		
Travel*	Full jounce	75.0 mm (2.95)		
	Full rebound	100.0 mm		
Spring	Type (coil, leaf, other) & material	Coil, alloy steel		
	Insulators (type & material)	Rubber (Top)		
	Size (coil design height & i.d., bar length x dia.)	260.0 x 103.0; 2490.0 x 15.0 base (10.2 x 4.06); (98.0 x 0.59)		
	Spring rate [N/mm (lb./in.)]	64 (345.6), 96 (547.2) (a)		
	Rate at wheel [N/mm (lb./in.)]	Spring rate x (2.455)		
Stabilizer	Type (link, linkless, frameless)	Link		
	Material & bar diameter	STL-30.0mm(1.2)Base & V-6;34.0mm(1.34)Trans Am; Base & V-8		
-	,	36.0mm (1.4) w/WS6 Opt		

### Ø

Suspension - Rear			
Type and description			Salisbury axle w/torque arm, LCA, track bar, coil springs
Travel*	Full jour	100	85.0mm (3.3)
1 LWAGI-	Full rebound		118.0mm (4.6)
	Type (coil, leaf, other) & material  Size (length x width, coil design height & i.d., bar length & dia.)		Coil, steel alloy
Spring			254.0 x 102.6; 2709.0 x 12.0mm (10.0 x 4.03); (27.9 x 0.472)
	Spring rate [N/mm (lb./in.)]		18 (159), 23 (204) (b)
	Rate at wheel [N/mm (lb./in.)]		(Spring Rate x 0.96)
	Insulators (type & material)		Rubber isolated
	if No. of leaves	No. of leaves	Not applicable
	leaf	Shackle (comp. or tens.)	
	Type (link, linkless, frameless)		Link
Stabilizer	Material & bar diameter		Steel-18.0mm(0.71)Base & V6; 23.0mm(0.91) (c)
Track bar (ty	pe)		'U' section w/rubber bushings

^{*} Define load condition:

 Vehicle Line
 FIREBIRD

 Model Year
 1989

 Issued
 6-88

 Revised (●)

METRIC (U.S. Customary) SUPPLEMENTAL PAGE

(a) Firebird-base:64(V6),96 (V8)
Formula and GTA - Base: 96
Trans AM - base 96, WS6: 96

(b) Firebird-base: 18/25 (c) Trans Am Base Formula and GTA: 23 & VB; 24.0mm Trans AM:18, LB9:23, WS6:23 (1.9) WS6

**FIREBIRD** Vehicle Line. 1989 6-88 Model Year. issued . Revised (*)

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

		And/Or	
Engin	e Dis	placement	t

**A11** 

Ø

Manufacturer brake type (st					Single caliper disc front, duo-servo drum rear.				
brake type (st Valving type (					Disc optional front/rear				
Valving type (			Front (disc or dru	m)	Disc				
	ld., opt.,	n.a.)	Rear (disc or drur	m)	Drum; disc optional				
Power brake (	proportio	n, delay,	metering, other)		Remote metering and proportioning, front/rear split				
	(std., opt	., n.a.)			Standard				
3ooster type	(remote,	integral, v	vac., hyd., etc.)		landem vacuum				
	Source	(inline, p	oump, etc.)		Inline				
Vacuum	Resen	roir (volur	me in.3) and source		None				
	Pump-	type (elec	c, gear driven, belt dr	iven)	None				
Traction			ed range						
control	Туре е	ngine inte	ervention (electronic,	mech.)					
	Front/	rear (std.	., opt., n.a.)		11				
İ	Manut	acturer	<u>.</u> .						
Anti-lock	Туре (	electronic	c, mech.)						
device	Numb	er senson	s or circuits						
	Numb	er anti-loc	k hydraulic circuits		•				
	Integra	or add-	on system						
	Yaw c	ontrol (ye	s, no)						
	Hydrau	lic power s	ource (elect., vac. mtr.,	pwr. strg.)					
Effective area	[cm²(in	<u>*)]*</u>			615.5 (95.4) total				
Gross lining a	ırea (cm	(in.²))**(F	F/R)		691.6 (107.2) total				
Swept area (c	:m²(in.²)	***(F/A)			1985.1`(307.7) total				
	Outen	vorking di	iameter	F/R	F/267.0mm (10.5); R/267.0mm (10.5)				
Rotor	Inner	vorking di	iameter	F/R	F/171.5mm (6.75); R/171.5mm (6.75)				
	Thickn	ess		F/R	F/26.2mm (1.03); R/26.2mm (1.03)				
	Materi	al & type	(vented/solid)	F/R	Cast iron vented F/R				
Drum	Diame	ter & wid	th	F/R	241.0mm (9.5) x 50.8mm (2.0)				
J10111	Type a	ind mater	rial	F/R	Cast iron finned (aluminum for selected applications)				
Wheel cylinde	er bore				F/64.0mm (2.5); R/19.0mm (.75) drum; 48.0mm (1.9) dis				
Master cylind	er	Bore/str	roke	F/R	Bore: 24.0mm (0.94) disc/drum; 25.4mm (1.0) disc/disc				
Pedal arc rati	io				3.25:1				
Line pressure	at 445	V(100 lb.)	pedal load [kPa (psi	)]					
Lining clearar	nce			F/R	Self adjusting F/R				
			or riveted (rivets/seg	)-)	Riveted (8)				
		Rivet si	20		5.33 x 7.92mm (0.210 x 0.312)				
		Manufa			Delco Moraine				
	Front	Lining c	ode****		DM8034				
	wheel	Materia	<u> </u>		Semi-metallic				
	1	****	Primary or out-board	l	125.0 x 48.4 x 11.04mm (4.92 x 1.91 x 0.435)				
		Size	Secondary or in-boar	rd	125.0 x 48.4 x 10.55mm (4.92 x 1.91 x 0.415)				
Brake		Shoe th	nickness (no lining)		OB/3.42mm (0.135); IB-4.85mm (0.191)				
lining	!	Bonded	or riveted (rivets/sec	<b>j.</b> )	Riveted 10 PRI, 12 sec drum Riveted, 8 disc				
		Manufa	cturer		Inland Delco Moraine				
	Rear	Lining o	code****		In 4035/4050 DM5470				
	wheel	Materia	<u> </u>		Non-asbestos (4.92x1.91x0.435)				
		****	Primary or out-board		192.5x50.8x4.98mm(7.58x2.0x0.196)125.0x48.4x11.04mm				
		Size	Secondary or in-boa	rd	249.6x50.8x6.75mm(9.83x2.0x0.266)125.0x48.4x10.55mm				

^{*}Excludes rivet holes, grooves, chamfers, etc.

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

**Total swept area for four brakes. (Drum brake: Widest lining contact width for each brake x its contact 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. ****Size for drum brakes includes length x width x thickness.

Vehicle Line	<u>-FIREBIRD</u>		
Model Year	1989	Issued <u>6-88</u> Revised (•)	

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

		<u></u>	•
Body Type And/Or Engine Displacement	Heavy Duty (Optional RPO J65)		
	· · · · · · · · · · · · · · · · · · ·		

#### Ø

Description					Front & rear disc brakes		
Manufactur	er and		Front (disc or dr	nw)	Disc		
brake type		n.a.)	Rear (disc or dr	um)	Disc		
Valving typ	e (proporti	on, delay.	metering, other)		Remote proportioning, front/rear split		
Power brak	e (std., op	t., n.a.)			Standard		
Booster typ	e (remote	, integral, v	ac., hyd., etc.)		200mm (7.87 in.) tandem vacuum		
	Source	e (inline, p	ump, etc.)		Engine		
/acuum	Reser	voir (volun	ne in.3) and source	•	Not Applicable		
Bodum	Pump	type (elec	, gear driven, belt o	driven)	n It		
Fraction	Opera	tional spec	ed range		, , , , , , , , , , , , , , , , , , ,		
control	Type	engine inte	rvention (electronic	c, mech.)	И И		
	Front	rear (std.,	opt., n.a.)		И		
	Manu	acturer			H II		
Anti-lock	Туре	electronic	, mech.)		ll R		
device	Numb	er sensors	or circuits		li ii		
<u> </u>	Numb	er anti-loci	k hydraulic circuits		" "		
	Integr	al or add-o	n system		<b>1</b>		
	Yaw	ontrol (yes	s, no)		H Ir		
	Hydrau	ilic power so	ource (elect., vac. mtr.	, pwr. strg.)			
Effective ar	ea (cm²(in	.2)]*			717 cm ² (111.1. in ² )		
Gross lining	area [cm	²(in.²)]**(F	/R)		792 cm² (122.9 in.²) 2		
Swept area	[cm²(in.²)	)***(F/R)			2980.74 cm ² (462.02 in. ² )		
	Outer	working dia	ameter	F/R	F 301.25mm (11.86 in.) R 296.0mm (11.65 in.)		
Rotor	Inner	Inner working diameter		F/R	F 197.40mm (7.77 in.) R 211.0mm (8.31 in.)		
	Thicks	1055		F/R	F 26.20mm (1.03 in) R 20.0mm (0.79 in.)		
	Mater	ial & type (	vented/solid)	F/R	Cast iron, vented		
	Diame	ter & widtl	h	F/R	Not Applicable		
Orum	Туре	and materi	al	F/R	T T T T T T T T T T T T T T T T T T T		
Wheel cylin	der bore				F 2 x 38mm (1.50 in.) R 40.5mm (1.69 in.)		
Aaster cylin	nder	Bore/stro	oke	F/R	24.0mm (0.94 in.)		
edal arc n	atio		•		3.25:1		
ine pressu	re at 445	N(100 lb.)	pedal load [kPa (ps	i)]	••		
ining clear	rance			F/R	Self adjusting		
		Bonded	or riveted (rivets/se	g.)	Integrally molded		
	1	Rivet siz	0		Not Available		
		Manufac	turer		Japan Brake Industries		
	Front	Lining co	xde****		CP26		
	wheel	Material			Semi-meţallic 2		
		**** F	Primary or out-board	d	$53.2 \text{ cm}^2 \times 9.5 \text{mm} (8.25 \text{ in} . 1 \times . 37 \text{ in} .) \text{ area. } x \text{ thickness}$		
		Size S	Secondary or in-boa	ard	52.2 cm ² x 9.5mm(8.25 in. 2 x .37 in.) area x thickness		
Brake		Shoe thickness (no lining)			IB/6.0mm (.24 in.) OB 6.0mm (.24 in.)		
ning		Bonded (	or riveted (rivets/se	g.)	Integrally molded		
		Manufac	turer		Japan Brake Industries		
	Rear	Lining co	de****		HB33		
	wheel	Material			Semi metallic		
			rimary or out-boan	d d	$28.4 \text{ cm}_2^2 \times 8.2 \text{mm} (4.4 \text{ in}2^2 \times .32 \text{ in}.) \text{ area } \times \text{ thickness}$		
		Size Secondary or in-board			28.4 cm 2 x 8.2mm (4.4 in. 2 x .32 in.) area x thickness		
		Shoe thickness (no lining)			IB 5.5mm (.21 in.) OB 4.0mm (.16 in.)		

^{*}Excludes rivet holes,grooves, chamfers, etc.

^{**}Includes rivet holes, grooves, chamfers, etc.

^{***}Total swept area for four brakes. (Drum brake: Widest lining contact width for each brake x its contact 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.

	_	cations Fo	Model	Year 1989 Iss	ued 6-88 Revi	sed (•)
METRI(	C (U.S. Custo	emary)				
Body Type Engine Dis	And/Or placement		Base	Formula	Trans Am LO3 Y99 W/LB8,	GTA
Tires An	d Wheels (Sta	indard)		*+		*+
	Size (load range	, ply)	215/65R15	245/50ZR16	215/65R15	245/50ZR16
	Type (bias, radial,	steel, nylon, etc.)	Steel Belted	Radial	220/ 001120	243/ 302R10
Tires	Inflation pres- sure (cold) for recommended max. vehicle	Front [kPa (psi)]	207 (30)			
	load	Rear [kPa (psi)]	207 (30)			
	Rev./mile-at 70 i	cm/h (45 mph)	498 R/Km	505 R/Km	498 R/Km	505 R/Km
	Type & material		Cast Alum.	Cast Alum.	Cast Alum.	Cast Aluminu
	Rim (size & flang	e type)	15" X 7" JJ	16" x 8" JJ	15" x 7" JJ	16" x 8" JJ
Wheels	Wheel offset		8mm	OmmF/16mmR	8mm	OmmF/16mmR
		Type (bolt or stud)	Stud		<del>-</del>	- Tarining
	Attachment	Circle diameter	120.7mm (4.7			
	<u> </u>	Number & size	5-M12 x 1.5	- 6H - thd (met	ric)	
S	Tire and wheel		T125/70D15,	15" x 4" (excep	t with G80 axle)	
Spare	Storage position (describe)	& location		adjacent to RH		
Tires And	d Wheels (Opt	tional)				
Tire size (loa	d range, ply)		****		P245/50ZR16 *	
Type (bias, r	adial, steel, nylon, et	tc.)	· · · · · · · · · · · · · · · · · · ·	****	Steel Belted I	Padial
Wheel (type	& material)				Cast Alum, sty	
Rim (size, fla	nge type and offset)				16" x 8" JJ x	
Tire size (loa	d range, ply)					16mm Rr
Type (bias, ra	adial, steel, nylon, et	c.)				1 Out 1/1
Wheel (type	Material)			· · · · · · · · · · · · · · · · · · ·		
Rim (size, fla	nge type and offset)				· · · · · · · · · · · · · · · · · · ·	
Tire size (loa	d range, ply)				· · · · · · · · · · · · · · · · · · ·	
Type (bias, re	dial, steel, nylon, et	c.)				
Wheel (type i	/					· · · · · · · · · · · · · · · · · · ·
	nge type and offset)					····
Fire size (load						·
	idial, steel, nylon, et	c.)				
Wheel (type &						
	nge type and offset)					
pare tire and wheel size (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)			road tire		ole) used with G8	
Brakes -	Parking				WICH TO	in. roau cire
ype of contro			Hand Lever A	pplication - nus	h button reverse	
ocation of co			Between from	t seats	m pacton reverse	
perates on			Rear service		· · · · · · · · · · · · · · · · · · ·	
	Type (internal or e	xternal)	30.770	41144		
separate	Drum diameter		<del></del>		·	<u> </u>
rom service orakes	Lining size (length width x thickness	×				

FIREBIRD 1989

**MVMA Specifications Form** 

^{*} Directional tread + Non - "All seasons" tire

Vehicle Line_	FIREBIRD				
Model Year	1989	Issued _	6-88	Revised (•) _	

METRIC (U.S. Customary)

Body Type And/Or Engine Displacement	All	 •
		 <u>.</u>

Steering			Ť			± <del></del>			
Manual (std.,	Manual (std., opt., n.a.)			Not_	<u>Available</u>			-	
Power (std., opt., n.a.)			Stan	dard					
Adjustable steering wheel/column Type Manufacturer			Tilt	6 posit	ion				
		Manufacturer							
(tift, telescope	, other)	(Std., opt., n.a.)		Stan	dard GTA,	Ontio	al othe	rs .	
Wheel diameter** (W9) SAE J1100		Manual			Availablé				
		Power		368.Omm (14.5) Rim					
•	Outside	Wall to wall (l. & r.)		12.59 (41.3)					
Turning	front	Curb to curb (I. & r.)		11.7	<del></del>		•	12	.28 (40.3)
diameter m (fl.)	Inside	Wall to wall (i	. & r.)	Not	available				<del>100 (1010)</del>
	rear	11300		11	17				
Scrub Radius	•			ff ff	н				
		Туре		11	11				!
	Gear	Manufacturer		n	+1				
Manual	Gear	Ratios	Gear	11	n				· · · · · · · · · · · · · · · · · · ·
			Overall	n	17		,		
	No. wheel	o. wheel turns (stop to stop)		11	17				· · · · · · · · · · · · · · · · · · ·
	Type (cos	xial, elec., hyd.	etc.)	Coax	ial rocin	culativ	a ball		
	Manufacti	Manufacturer		Coaxial recirculating ball Saginaw Steering Gear					
		Туре		Acmo	worm rec	ing use	ina hal		
Power	Gear	- <del>*</del> :	Gear	14 • 1	- <del>worm rec</del>	<del>ITCUIA</del> I		<del>(b)</del>	10 7.1 (-)
	Gear	Ratios	Overall	15 4	<del>-\a/</del> •1		14.7	<del>(D)</del>	12.7:1 (c)
	Pump (dri	Pump (drive)		Relt			<del>-14†1</del>		1911
		No. wheel turns (stop to stop)					2 14		0.14
	Туре			2.57	llelogram		<del>2.14</del>	· ·	2.14
	Location (front or rear		Para	rerogram					
Linkage	of wheels	, other)	1	_	_				
	Tip code (	ana ar t\		<u> </u>	<u> </u>				
	<del></del>	one or two) at camber (de		Two					
<b>5</b> 1	H CHINEGION	· · · · · ·	9-7		<del>wailable</del>				
Steering axis	Bearings	Upper		<u> Ball</u>	stud				
-	(type)	Lower		Ball stud					
01		Thrust		None					
Steering spine	die & joint ty				ring knucl	<del>kle w/s</del>	pherical	<del>l join</del>	
1401	Diameter	Inner bearing		31.73	3 31.74	(1.249	3 - 1.2	<del>198) -</del>	
Whee! spindle/hub		Outer bearing		21.04	- 21.42	(0.83	- 0.84)	<del></del>	
-	Thread (s			3/4 -	- 20 UNEF	- 3A (	modifiéc	<del>d)</del>	
	Bearing (t	aring (type)		Tanex	red_roller	<u>r</u>		•	

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

(a) Base.

(b) RPO F41 (Trans Am) (c) RPO FE2 (Formula)

[&]quot;See Page 22

Vehicle Line FIRFBIRD

Model Year 1989 Issued 6-88 Revised (•)

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

Body Type And/Or Engine Displacement A11

Wheel Alignment

	Service	Caster (deg.)	+4.7° (L/R side to be equal within 0.7°)
	checking	Camber (deg.)	+0.3° +/5°
		Toe-in [outside track-mm (in.)]	0° +/2°
ront		Caster	$+4.7^{\circ}$ +/5° (L/R side to be equa) within 0.7°)
heel at	Service reset*	Camber	.3° +/- 5°
curb mass (wt.)	10301	Toe-in	0° +/2°
	Periodic M.V. in- spection	Caster	4.7° +/5°
		Camber	0.3 +/5*
		Toe-in	0° +/2°
	Service	Camber (deg.)	Not Applicable
ear	checking	Toe-in (outside track-mm (in.))	"
rheel at	Service	Camber	Ħ
curb mass (wt.)	reset*	Toe-in	11
	Periodic M.V. in- spection	Camber	li .
		Toe-in	11

^{*} Indicates pre-set, adjustable, trend set or other.

**Electrical – Instruments and Equipment** 

Speed- ometer	Type (analog, digital, std., opt.)	Circular dial and pointer, 7 digit odometer (a)		
	Trip odometer (std., opt., n.a.)	Standard		
EGR mainten	ance indicator	Not Available		
Charge	Туре	Gage		
indicator	Warning device (light, audible)	•-		
Temperature	Туре	Gage		
indicator	Warning device (light, audible)	••		
Oil pressure	Туре	Gage		
indicator	Warning device (light, audible)			
Fuel	Type .	Flectric gage (b)		
indicator	Warning device (light, audible)			
	Type (standard)	Flectric 2-speed, depressed park		
Wind- shield	Type (optional)	Intermittent standard, GTA; optional others		
wiper	Blade length	454.4mm (18 in.)		
	Swept area [cm²(in.²)]	5792.0 (898.0)		
Wind-	Type (standard)	Pushbutton wet arm standard		
shield washer	Type (optional)	Not available		
## 431 PG1	Fluid level indicator (light, audible)	Optional		
Rear window	wiper, wiper/washer (std., opt., n.a.)	Not Available		
	Туре	Flectric vibrator		
Hom	Number used	Dual standard		
Other		Provisions for check engine, headlamp high beam, turn signals, brake warning light, fasten seat belts.  Driver information center available w/U52 electronic cluster.		

⁽a) Diital speedometer with U52 electronic cluster option available for Trans AM and GTA.

(b) Liquid crystal fuel gage (analog) with U52.

Vehicle Line FIREBIRD

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

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

Engine	Description/Carb.
Engine	Code

2.8L V6 (173 CID)

Multi-Port Fuel Injection RPO LB8

Electrical - S	ipply System
----------------	--------------

	Manufacturer	Delco Remy
	Model, std., (opt.)	75-525 (a) 75-570 (b)
	Voltage	12Volts
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)
• •	Engagement type	Positive shift solenoid
Motor drive	Pinion engages from (front, rear)	Rear

#### **Electrical - Ignition System**

Time	Electronic	(std., opt., n.a.)		
Type	Other (specify)		Computer controlled coil ignition (C31)	
	Manufacturer		Delco Remy	
Coil	Model		Separate	
COII	Current	Engine stopped – A	0	
		Engine idling – A	5.5 max.	
	Manufacturer		AC	
	Model		R42 CTS	
Spark	Thread (mm)		M14 x 1.25 SAE	
Spark olug	Tightening torque [N-m (lb, ft)]		9-20 (7-15)	
	Gap		1.143 (0.045)	
	Number per cytinder		One	
Distributor	Manufacturer		Not Applicable	
	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 UA1

⁽c) - 85 amp with heater, 30 amp at idle.

⁽d) - 100 amp with air conditioning, 36 amp at idle.

Vehicle Line_	FIREBI	RD			
Model Year	1989	Issued _	6-88	Revised (•) _9-88	

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

Engine Description/Carb. Engine Code

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

**Electrical – Supply System** 

	Manufacturer	Delco Remy	
	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	or Type Micro circuit units integral with alternator		

#### **Electrical – Starting System**

	Manufacturer	Delco Remy
Start, motor	Current drain at 0°F	305 @ -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

Time	Electronic	(std., opt., n.a.)	
Туре	Other (specify)		High energy ignition (HEI)
	Manufacturer		Delco Remy
Coil	Model		Integral with distributor
CON	Current	Engine stopped – A	0.5
		Engine idling - A	1.0
	Manufacturer		AC
	Model		R45TS
Spark plug	Thread (mm)		M14 x 1.25 SAE
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
 FIREBIRD

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

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

Engine Description/Carb. Engine Code 5.0 Liter V8 (305 CID) (TPI) RPO LB9 5.7 Liter V8 (350 CID) (TPI) RPO L98

**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		
Alternator	Ratio (alt. crank/rev.)	3.14:1		
	Output at idle (rpm, park)	•		
	Optional (type & rating)	None		
Regulator	Туре	Type 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)
	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 (spe	ecify)	High energy ignition (H.E.I.)	
	Manufactu	irer	Delco Remy	
Coil	Model		Remote mounted	
CON	Other (specif Manufacturer Model Current  Manufacturer Model Thread (mm) Tightening to Gap Number per of	Engine stopped - A	0.5	
	<u> </u>	Engine idling A	1.0	
	Manufacturer		AC	
	Model		R45TS	
Spark	Thread (m	m)	M14 x 1.25 SAE	
Spark Plug	Tightening	torque [N-m (ib, ft)]	9-20 (7-15)	
	Gap Number per cylinder		0.89 (0.035")	
-			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) Standard Battery
- (b) With H.D. option UA1

MVM	A Specifi	cations For	Vehicle Models FIREBIRD
	- opcom		Model Year 1989 Issued 6-88 Revised (•)
METRIC	(U.S. Custo	mary)	
Body Type			A11
, Body			
			Full unitized steel construction. Could work with the
Structure			Full unitized steel construction. Cowl, roof, underbody and body panels welded to form body shell. Bolt-in front suspension crossmember. Doors, roof, hood and hatch lid double panel construction.
Bumper syst front - rear			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		
Body – N	liscellaneous	Information	
Type of finish	(lacquer, enamel,	other)	High solids acrylic enamel base coat/clear coat
	Material & mass		Steel
Hood	Hinge location (fr	ont, rear)	Rear
	Type (counterbal	ance, prop)	Gas strut assist
	Release control (	internal, external)	Internal
Trunk	Material & mass		Not Applicable
lid	Type (counterbal	ance, other)	ii ii
	internal release o	control (elec., mech., n.a.)	H II
Hatch-	Material & mass		Glass/steel
back lid	Type (counterbal	ance, other)	Dual gas struts-elec. final closure
	Internal release o	control (elec., mech., n.a.)	Electric release optional
	Material & mass		Not Applicable
Tailgate	Type (drop, lift, d	oor)	it ti
	Internal release co	ntrol (elec., mech., n.a.)	P 11
Vent window	control (crank,	Front	Not Available
friction, pivot	, power)	Rear	п п
Window regu	dator type	Front	Sector drive
(cable, tape,	flex, drive, etc.)	Rear	Sector drive
0		Front	Bucket molded foam pad
Seat cushion (e.g., 60/40,	type bucket, bench,	Rear	n n n
wire, toam et		3rd seat	<u> </u>
	<del></del>	Front	Reclining bucket molded foam pad
Seat back type (e.g., 60/40,	be bucket, bench,	Rear	
wire, toam et		3rd seat	Folding bench, split back optional, molded foam pad
<del></del>			

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

Vehicle Line_	FIREBIRD	)			
Model Year	1989	Issued	6-88	Revised (e)	_

Body Type				All					
Restrain	t System					•			
Seating Posi		=		Left	Center	Diaba			
	Type & description		First seat	Lap & shoulder belt	Conte	Lap & shoulder belt			
Active	(lap & shoulder belt, lap belt, etc.)		Second seat	Lap & shoulder belt		Lap & shoulder belt			
•	Standard / optional		Third seat						
	Type &		First seat		<del></del>				
Passive	description (air bag, motorized - 2-point belt, fixed be knee bolster, manua lap belt)	lt,	Second seat						
	Standard / optional		Third seat						
Glass		SAE Ref. No.							
Windshield g surface area	lass exposed [cm²(in.²)]	S1	900	0.4 (1395.0)					
Side glass ex erea [cm²(in.	cposed surface ² )] - total 2-sides	S2	6519.8 (1010.6) 6232.0 (966.0)						
Backlight gla surface area	ss exposed [cm²(in.²)]	S3							
Total glass e erea [cm²(in.	xposed surface	S4	217	52.2 (3371.6)	,				
Windshield (	glass (type)		Cur	ved-laminated plate					
Side glass (t)	/pe)		Cur	ved-tempered plate					
Backlight glas	ss (type)		Cur	ved-tempered plate	•	-			
Lamps ar	nd Headlamp Lo	cations	В						
<del></del>	Description - sealed halogen, replaceable	beam, bulb, etc.	Sea	led beam - two lamp sy	stem				
	Shape	-	Rec	tangular					
-leadlamps	Lo-beam type (2A1, 2C1, etc.)	281,	2B						
	Hi-beam type (1A1, 2 2C1, etc.)	2A1, 1C1,			<u> </u>				
	Quantity		(2B)	<u> </u>	·				
Frame	· · · · · · · · · · · · · · · · · · ·		<i>-</i> -						
Type and des	scription (separate frame, partially-unitized fram	e, 1 <del>0</del> )	Full from	l integral body frame, nt suspension crossmem	includes bolto	ed on			

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

Vehicle Line	FIREBIRD	<u> </u>			
Model Year	1989	lssued	6-88	Revised (•)	

Body Type

ATT		
ו אוו		

Air condition	ing (manual,	
auto. temp c	oritrol)	Manual controls std GTA - optional, sport coupe & Tra
	·	AM; electronic controls - optional GTA and Trans AM
Clock (digita	I, analog)	Digital in radio
Compass/th	nermometer	Not Available
Console (flo	or, overhead)	Full length front console - standard
Defroster, el	ec. backlight	Electric - Standard GTA; Optional others
	Diagnostic monitor (integrated, individual)	Optional for Trans AM and GTA
	Instrument cluster (list instruments)	Tachometer, speedometer, trip odometer, fuel, oil pressure*, temp, volt**
	Keyless entry	Not Available
Electronic	Tripminder (avg. spd., fuel)	Optional for Trans AM and GTA
	Voice alert (list items)	Not Available
	Other	
Fuel door loc	ck (remote, key, electric)	Not Available
	Auto head on / off delay, dimming	п
	Cornering	
	Courtesy (map, reading)	Dome lamp/lighted mirror optional
	Door lock, ignition	Not Available
	Engine compartment	The state of the s
Lamps	Fog	Standard Trans AM & GTA; not available base or Formu
	Glove compartment	Not Available
	Trunk	Standard GTA, Optional others
-	Illuminated entry system (list lamps, activation)	Not Applicable
	Other	
	Day/night (auto. man.)	Manual - standard
	L.H. (remote, power, heated)	Remote standard, power standard GTA; Optional, others
	R. H. (convex, remote, power, heated)	Manual-std., power Std. GTA; Opt. others; both convey
Mirrors	Visor vanity (RH / LH, illuminated)	RH - Optional

### Radio Options

Parking brake-auto release (warning light)

Hand release, warning light standard

^{*} Full gage package (non-electronic) standard on Trans AM, GTA & Formula; optional on Firebird.

** Seat belt warning, engine warning.

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

Vehicle Line_	FIREBI	RD		
Model Year	1989	issued	6-88	Revised (e)

Body Type	•		ATT
Conven	ence Equ	Ipment (standard, optional	, n.a.)
Ø	Deck lid (re	elease, puli down)	Power door locks and hatch rel. std. GTA opt. others**
	Door locks describe s	(manual, automatic, ystem)	Manual - Standard Electric optional
		2 - 4 - 6 way, etc.	Ultima seat-base GTA, opt. Trans AM 4-way
		Reclining (R.H., L.H.)	Driver/Passenger - Standard
,	Seats	Memory (R.H., L.H., preset, recline)	N/A
Power		Lumbar, hip, thigh, support	
equipment		Heated (R.H., L.H., other)	N/A
	Side windo	WS	Standard GIA, Optional all others
	Vent windo	ws	Not Available
	Rear windo	W8	
	Antonno (la		P. F. fondon fixed most w/modia and cTA
	ATTEMPERATE (IC	ocation, whip. w/shield, power)	R.F. fender fixed mast w/radio, pow. std. GTA; opt
Ø	Standard		others AM/FM stereo standard
Radio systems	Optional	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	AM/FM stereo cassette: AM stereo/FM stereo cassette with equalizer and soft touch switches on tape drive; AM stereo/FM stereo auto. reverse cassette, equalizer, all pushbutton control. (Std. for GTA). Redundant pushbutton controls, in steering wheel hub, standard for GTA.
	Speaker (n	umber, location)	6-2 in. I.P., 2 in sail panel, 2 subwoofers in sail panel.
	ir fixed (flip-up	, sliding, "T")	Hatch roof w/removable glass panels - optional
Speed contro			Cruise control with resume speed - Std. GTA; Opt.others
		rt, buzzer, etc.)	Not Available
Tachometer	<del> </del>		Standard
	ystem (describ	HO)	Not Available
Theft deterrs	nt system		Lock mounted on steering column - locks steering wheel, transmission shift levers and ignition. Electronic system (VATS II) standard.

^{***} Power final hatch closure latch standard - all

Vehicle Models FIREBIRD

Model Year 1989 Issued 6-88 Revised (●)

**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. np. refers to the definition published in SAE Recommended Practice J1100 "Motor Vehicle Dimensions." unless otherwise specified.

•	SAE	2FS87	7EU07
Body Type	Ref. No.	4F30/	2FW87
Width	.40.	All dimensions m	n (in ) unless noted
Fread (front)	W101	1541 (60.7)	
Tread (rear)	W102	1564 (61.6)	
Vehicle width	W103	1838 (72.4)	
Body width at Sg RP (front)	W117	1830 (72.0)	
Vehicle width (front doors open)	W120	3939 (155.1)	
/ehicle width (rear doors open)	W121		
Front fender overall width	W106	1801 (70.9)	
Rear fender overall width	W107	1832 (72.1)	
rumble-home (deg.)	W122	31.5°	
/ehicle width including mirrors			
ength			
Wheelbase	L101	2566 (101.0)	
/ehicle length	L103	4839 (190.5)	4781 (191.8)
Overhang (front)	L104	1150 ( 45.3)	1182 ( 46.5)
Overhang (rear)	L105	1123 ( 44.2)	1102 ( 40.3)
Jpper structure length	L123	2669 (105.1)	
Rear wheel C/L "X" coordinate	L127	2138 ( 84.2)	
Cowl point "X" coordinate	L125	108 ( 4.3)	
ront end length at centerline	L126	1692 ( 66.6)	
lear end length at centerline	L129	345 ( 13.6)	
leight * *			
assenger distribution (front/rear)	PD1,2,3	2 - 0	**
runk/cargo load			**
ehicle height	H101	1263 (49.7)	
cowl point to ground	H114	887 (34.9)	
Peck point to ground	H138	912 (35.9)	
locker panel-front to ground	H112	184 ( 7 2)	
lottom of door closed-front to ground	H133	250 ( 9.8)	
locker panel-rear to ground	H111	187 ( 7.4)	
lattom of door closed-rear to ground	H135	<del></del>	
Vindshield slope angle	H122	62.0	
acklight slope angle	H121	71.0	
around Clearance **		7 2 10	-
ront bumper to ground	H102	273 (10.7)	
ear bumper to ground	H104	359 (14.1)	
lumper to ground (front it curb mass (wt.)]	H103	304 (12.0)	
lumper to ground (rear t curb mass (wt.)]	H105	378 (14.9)	
ngle of approach (degrees)	H106	15.7°	
ngle of departure (degrees)	H107	15.6°	
amp breakover angle (degrees)	H147	10.7°	
xle differential to ground (front / rear)	H153	305 (12.0)	
lin. running ground clearance	H156	115 ( 4.5)	
ocation of min. run. grd. clear.	<del>1                                    </del>	Front crossmember	

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

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

METRIC (U.S. Customary)   Vehicle Dimensions   See Key Sheets for definitions	- 6-88 Revised (●)	198	Model					A Specification	
Section   Sect	7	••		tt _ Tat _		ha-4- 6-	) 	U.S. Customary	METRIC (U.: Vabiola Dim
Sate   Ref.   No.			S		or de	neets to	Key S	Dimensions 266	veriicie Dim
Pront Compartment   No.	∠2F₩87				37	2F\$8			Body Type
Separation   Sep						<u> </u>			
### Effective head room  ### Max. eff. leg room (accelerator)  ### Jay 1092 (43.0)  ### SgRP to heel point  ### SgRP to heel point  ### SgRP to heel point  ### Back angle  ### L40  ### Jay 1092 (43.0)  ### Jay 1092 (43.								mpartment	Front Compa
Heli			\ \	1.3	7	1050	L31	"X" coordinate	Sg RP front, "X" co
Max. eff. leg room (accelerator)   L34   1092 (43.0)					_		H61	d room	Effective head room
SgRP to heel point   H30					_		L34	room (accelerator)	Max. eff. leg room (
SgRP to heel point		-	<u> </u>		<del></del> -		H30	point	SgRP to heel point
Section angle   L40   26.5°				5 0	_		L53	point	SgRP to heel point
L42   98 .0					$\boldsymbol{ extstyle -}$		L40		Back angle
Crost angle							L42		tip angle
L46   87 0   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   192 ( 7 6 )   1							L44	<del></del>	(nee angle
Design H-point front travel  L17							+		
Normal driving & riding seat track trivi.  Italian (1977)  Indicate the control of the control o				7 -			+	nt front travel	
Shoulder room  William room  Wilding room  W					+		<del> </del>	<del></del>	
tip room W5 1434 (56.5)  Itering wheel maximum diameter* W9 37.0 (14.6)  Itering wheel maximum diameter* W9 37.0 (14.6)  Itering wheel angle H18 18.0  Itering wheel angle H18 18.0  Itering wheel to c/L of thigh H13 89 (3.5)  Itering wheel to C/L of thigh H13 89 (3.5)  Itering wheel to cole arance L7 356 (14.0)  Itering wheel to cole arance L7 356 (14.0)  Indepressed floor covering thickness H67 12 (0.5)  Itering wheel to cole arance L50 668 (26.3)  Itering wheel to cole arance L50 66.3  Ite	•			***	<del>,                                    </del>		<del>}</del>	<del> </del>	
Steering wheel maximum diameter*   W9   370   (14.6)		<del></del>							
Steering wheel maximum diameter* Steering wheel angle Local, heel pt. to steer, whi, cntr Local, heel pt. to steer, whi cntr Local, heel pt. to steer, whi cntr Local, heel pt. to steer, whi cntr Local, heel pt.				•••			+	pening to ground	<del></del>
Steering wheel angle H18 18.0  Accel. heel pt. to steer. whi. cntr L11 Not Available in Steering wheel to C/L of thigh H13 8.0  Steering wheel to C/L of thigh H13 8.0 (3.5)  Steering wheel to C/L of thigh H13 8.0 (3.5)  Steering wheel to co clearance L7 356 (14.0)  Anderpressed floor covering thickness H67 12 (0.5)  Anderpressed floor covering thickness H67 16 0.0 (3.5)  Steer Compartment Forward And mm Upward of Rearmost Position.  Since Compartment Forward And mm Upward of Rearmost Position.  Since Point couple distance L50 668 (26.3)  Since Clearance L48 -15 (-0.6)  Since Clearance L48 -15 (-0.6)  Sompartment room L3 582 (22.9)  Shoulder room W4 1430 (56.3)  Sipper body opening to ground H51  ack angle L41 28.0°  Sipper Body opening to ground H51  seed angle L45 66.5  Sompartment covering thickness H73 18 (0.7)  Suggage Compartment		-		5-8	•		-		
Accel. heel pt. to steer. whil. cntr  Bibering wheel torso clearance  L7  356 (14.0)  12 (0.5)  Indepressed floor covering thickness  H67  Accel. 12 (0.5)  Indepressed floor covering thickness  H67  Accel. 14.0  12 (0.5)  Indepressed floor covering thickness  H67  Accel. 14.0  12 (0.5)  Accel. 14.0  A	**************************************			4.6	١.		+		
Interesting wheel to C/L of thigh this steering wheel to C/L of thigh this steering wheel to covering thickness the steering wheel to cover						~~			
Steering wheel to C/L of thigh Steering wheel torso clearance L7 356 (14.0) Hardenessed floor covering thickness  Rear Compartment  osition  Rear Compartment  Rear Compartment Position  Rear Compartment Reasured With The Forward And mulp Upward of Rearmost Position.  Rear Compartment Reasured With The Forward And mulp Upward of Rearmost Position.  Rear Compartment Reasured With The Forward And mulp Upward of Rearmost Position.  Rear Compartment Reasured With The Forward And mulp Upward of Rearmost Position.  Rear Compartment Reasured With The Forward And mulp Upward of Rearmost Position.  Rear Compartment Reasured With The Forward And mulp Upward of Rearmost Position.  Rear Compartment Reasured With The Forward And mulp Upward of Rearmost Position.  Rear Compartment Reasured With The Forward And mulp Upward of Rearmost Position.  Rear Compartment Reasured With The Reasured Reasured With The Reasured			<del>le</del>		A٧٠		+		<u>;</u>
Steering wheel torso clearance leadlining to roof panel (front) Indepressed floor covering thickness  Rear Compartment  GREAR Compartment  GREAR Compartment  GREAR Compartment  GREAR Compartment  GREAR Compartment  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  GREAR Compartment  oom  GREAR Compartment room  GREAR Compartment room  GREAR Compartment  FRONT COMPARTMENT  FORWARD AND  GREAR COMPARTMENT  FORWARD AND  GREAR COMPARTMENT  FORWARD AND  GREAR COMPARTMENT  FORWARD AND  GREAR COMPARTMENT  FORWARD AND  FRONT COMPARTMENT  FORWARD AND  FORWARD AND  FRONT COMPARTMENT  FORWARD AND  FORWARD AND  FRONT COMPARTMENT  FORWARD AND  FRONT COMPARTME				<u> "</u>		H	+		
Headlining to roof panel (front)  Indepressed floor covering thickness  Rear Compartment  Front Compartment  Front Compartment  Front Compartment  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  Rear Compartment  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  Rear Compartment  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  Rear Compartment Position.  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  Front Compartment Interior Dimensions Are Measured With The Forward And mm Upward of Rearmost Position.  Front Compartment Interior Dimensions Are Measured With The Forward And				<del>3.5</del>	+		+		
Anderpressed floor covering thickness H67  Rear Compartment  Sig RP Point couple distance Effective head room Alin. effective leg room Sig RP (second to heel) Compartment L3  Compartment Room  H31 183 (7.2) Chee clearance Compartment room L3 582 (22.9) Compartment room H33 582 (22.9) Compartment room H34 1430 (56.3) Compartment ground H35 Compartment ground H36 Compartment room H37 183 (7.2) Chee clearance Compartment room L3 582 (22.9) Compartment room H38 Chee angle L41 28,0° Chee angle L43 68.5 Chee angle L45 66.5 Chee angle L47 116.5 Chee clining to roof panel (second) H38 Chepressed floor covering thickness H73 18 (0.7)  Luggage Compartment				4.0	-(1	<del>-356</del>			
Front Compartment  nterior Dimensions Are Measured With The Forward And	•			<del>0.5</del>	-(-	12	+	<del></del>	
Section   Sect	Senting Belessen Brief (2-00)	lone Are I	oterior	<del>2. S</del>		=1 <del>5</del>	1	tool covering uncuress	incepressed floor c
### ### ### ### ### ### ### ### ### ##	is seaming reserved Polit (SGRP)				And	Forward		partment	Rear Compart
### ### ### ### ### ### ### ### ### ##				5.3	(2	668	L50	couple distance	g RP Point couple
Ain. effective leg room  Isg RP (second to heel)  Isg RP (second to hee				_			H63	t room	ffective head room
RP (second to heel)							L51	leg room	lin. effective leg roo
L48					7		H31	d to heel)	g RP (second to he
Compartment room					1-		L48	<b>&gt;</b> 8	nee clearance
Shoulder room				_	_		L3	room	ompartment room
ip room W6 1087 (42.8)  sper body opening to ground H51 ack angle L41 28.0°  ip angle L43 68.5  nee angle L45 66.5  oot angle L47 116.5  eadlining to roof panel (second) H38 epressed floor covering thickness H73 18 ( 0.7)  suggage Compartment	· · · · · · · · · · · · · · · · · · ·						W4	n	houlder room
pper body opening to ground H51 ack angle L41 28,0° ip angle L43 68,5 nee angle L45 66,5 oot angle L47 116,5 eadlining to roof panel (second) H38 epressed floor covering thickness H73 18 ( 0,7)							W6	·*************************************	ip room
ack angle L41 28,0° ip angle L43 68,5 nee angle L45 66,5 oot angle L47 116,5 eadlining to roof panel (second) H38 epressed floor covering thickness H73 18 ( 0,7)	<del></del>			- : <del>-</del>			H51	pening to ground	pper body opening
in angle L43 68.5  The angle L45 66.5  Oot angle L47 116.5  L48 L49 L49  L49 L49 L49 L49  L49 L49 L49 L49 L49 L49 L49 L49 L49 L49		· · · · · · · · · · · · · · · · · · ·	·····		, n°		-		
nee angle L45 66.5  oot angle L47 116.5  leadlining to roof panel (second) H38 lepressed floor covering thickness H73 18 ( 0.7)  .uggage Compartment									
oot angle L47 116.5 eadlining to roof panel (second) H38 epressed floor covering thickness H73 18 ( 0.7) suggage Compartment							+		·
eadlining to roof panel (second) H38 epressed floor covering thickness H73 18 ( 0.7) suggage Compartment							-		
epressed floor covering thickness H73 18 ( 0.7)  uggage Compartment			<del>,,,,</del> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		<u> </u>		-	roof panel (second)	<del></del>
uggage Compartment				7	7		_		
				44.		10			
/SADSE UNDORGE CRORCITY IL. (CIL. TI )   1   V1	·	-					V1		-
					10	070			

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

Vehicle class

Interior volume index (cu. ft.)

Trunk/cargo index (cu. ft.)

Sub-compact

97 2

<b>MVMA</b> Specification	ons F	orm		ine FIREBIE		6 00	
Model Year 1989 Issued 6-88 Revised (•)  METRIC (U.S. Customary)  Vehicle Dimensions See Key Sheets for definitions							
Body Type	,	2FS87				2FW87	7
Station Wagon - Third Seat	SAE Ref. No.	L			<del></del>		
Seat facing direction	SD1	Not An	n]inabl			· · · · · · · · · · · · · · · · · · ·	
Sg RP couple distance	L85	WIL AP	plicable	-			
Shoulder room	W85	<del> </del>			<del></del>		<del></del>
Hip room	WB6						
Effective leg room	L86						
Effective head room	H86	<del></del>			· · · · · · · · · · · · · · · · · · ·		
Sg RP to heel point	H87	<u> </u>				······	
Knee clearance	L87	†					
Back angle	L88	<u> </u>					
Hip angle	L89				• • •		
Knee angle	L90		·····	*			
Foot angle	L91				· .		
Station Wagon - Cargo Space	D						
Cargo length (open front)	L200	Not Ap	plicable	)			
Cargo length (open second)	L201					<u></u>	
Cargo length (closed front)	1.202	· · · · · · · · · · · · · · · · · · ·				•	
Cargo length (closed second)	1203	· ·					
Cargo length at belt (front)	1204				<del></del>		
Cargo length at belt (second)	1205		· · · · · · · · · · · · · · · · · · ·			<del></del>	
Cargo width (wheelhouse)	W201						
Rear opening width at floor	W203						<del></del>
Opening width at belt	W204					<del></del>	
Min. rear opening width above belt	W205		·			<del></del>	
Cargo height	H201						······································
Rear opening height	H202						
Tailgate to ground height	H250				-	· · · · · · · · · · · · · · · · · · ·	
Front seat back to load floor height	H197						
Cargo volume index [m³(ft.³)]	V2						
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	886 (	34.9)				
Cargo length at floor (front)	1.209	1556 (	61.3)				
Cargo length at second seatback height	L210	610 (	24.0)		<del></del>		
Cargo length at floor (second)	L211	845 (	33 31				
Front seatback to load floor height	H197	360 (	14 2)			**.	
Second seatback to load floor height	H198	242 i	. 9.51	<del>-</del>			
Cargo volume index [m³(ft.³)]	V3	879 (	31.0)			·	
Hidden cargo volume index [m3(ft.3)]	V4					······································	
Cargo volume index-rear of 2-seat	V11	350 (	12.41				
Aerodynamics*							
Wheel lip to ground, front	H17	2					<u>.                                  </u>
Wheel lip to ground, rear	H17	_					
Frontal area [m²(ft²)]		1 05 /21	۸۱		1	06 /01 (	21

Drag coefficient (Cd)

Not Available * EPA Loaded Vehicle Weight, Loading Conditions

METRIC (U.S. Customary)

Vehicle Line FIREBIRD			
Model Year 1989	Issued _6-	88 Revised (	•)

Body	Type
,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

2FS87 2FW87

#### Vehicle Fiducial Marks

Fiducia Numbe			Define Coordinate Location
Front	(1)	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 the front seat adjuster mounting bolt.
		·Y	- Fiducial mark to centerline of car - front, width measurement made from centerline car to fiducial mark located on top of the front seat adjuster mounting bolt.
	(2)	Z	- Fiducial mark to horizontal base grid line - front, measured vertically from base grid line to front fiducial mark located on top of the firont seat adjuster mounting bolt.
lear	(1)	x	- Fiducial mark to vertical base grid line - rear, measured horizontally finor the base grid line to rear fiducial mark located on the right hand raid (compartment pan - longitudinal).
		Y	- Fiducial mark to centerline of car - rear, width measurement made from centerline of car to fiducial mark located on the right hand rail (compartment pan - longitudinal).
iducial lark umber		Z	<ul> <li>Fiducial mark to horizontal base grid line - rear, measured vertically from body base grid line to rear fiducial mark located on the right hand rail (compartment pan - longitudinal).</li> </ul>
	W2	1*	540 ( 21.3)
	1.54	ļ•	688 ( 27.1)*
ront	H81	-	-32 ( -1.3)#
	H16	-	293 ( 11.5) 267 ( 10.5)
	W2	$\rightarrow$	548 ( 21 6) 2815 (110 8)*
<b>180</b>	H82	-	2815 (110.8)* - 96 ( 3.8)#
	H16	32*	421 ( 16.6)
**	H16	<b>4</b> •	402 ( 15.8)
		ļ	Vertical base grid 2000 mm line. Horizontal base grid 500 mm line.

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

All linear dimensions are in millimeters (inches).

^{**} EPA Loaded Vehicle Weight, Loading Conditions

Vehicle Line FIREBIRD

Model Year 1989 Issued 6-88 Revised (*)

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

			Vehicle Mass (weight)							
•		CURB MASS, kg. (lb.)*		% PASS. MASS DISTRIBUTION				<del>-</del>		
Onda	Na del	F			Pass	n Front	Pass In	Rear		
Code <u>Firebird</u>	Model	Front	Rear	Total	Front	Rear	Front	Rear	ETWC**	
TITEDITO	<del></del>				+	<del> </del>	<b> </b>			
2-Door Hatch	back Coupe	<del> </del>			<del>                                     </del>			<del> </del>	<del></del>	
·- ·- ·- ·- ·- ·- ·- ·- ·- ·- ·- ·- ·	<u>-</u>	<del> </del>			<del></del>		<del> </del>			
<u>Firebird</u>		756	642	1398	42.6	57.4	16.5	83.5	1361	
LB8 & MBI 2	FS87	(1667)	(1416)	(3083)					(3001)	
Irans Am		835	661	1496	42.5	F7 A	16 5	02.5	1465	
LO3 & M39 2F	W87	(1841)	(1457)	(3298)	42.6	57.4	16.5_	83.5	1465 (3230)	
		120417	(145/)	(3230)		-			(3230)	
Firebird For		839	673	1512					1457	
LB9 W/W66 2F	S87	(1850)	(1484)	(3334)		•			(3213)	
Twone Am P	тх	010	604	1500	ļ			ļ		
Trans Am - G L98 w/Y84 2F		912 (2011)	684 (1508)	1596 (3519)	ļ			ļ <u>.</u>	1508	
L30 #/ 104 Z1	WO/	(2011)	(1308)	(3213)	<del> </del> .	ļ. <u> </u>	1		(3325)	
		<del> </del>		<del></del>	<del> </del>	<del> </del>	<u> </u> 			
					<u> </u>	<del>                                     </del>			<del>-</del> .	
	•	<u> </u>								
Vision II and a second										
Curb Mass	- The calc	ulated	weight	of a vehi	cle wit	h_stand	ard equ	ipment	only as	
CUTD MASS	designed	i with	additio	nal load o	f oils.	lubes	ard equ coolar	ipment ts and	only as fuel	
curp mass	designed	i with	additio	of a vehi nal load o 6.0 gallon	f oils.	lubes	lard equ coolar	ipment ts and	only as fuel	
	designed filled 1	with capa	addition city (1	nal load o 6.0 gallon	f oils, s avera	lubes ge).	coolar	ipment ts and	only as fuel	
Shipping Mas	designed filled 1	with capa	addition city (1	nal load o 6.0 gallon	f oils, s avera	lubes ge).	coolar	ipment its and	only as fuel	
	designed filled 1	with capa	addition city (1	nal load o 6.0 gallon	f oils, s avera	lubes ge).	coolar	ipment its and	only as fuel	
	designed filled 1	with capa	addition city (1	nal load o 6.0 gallon	f oils, s avera	lubes ge).	coolar	ipment its and	only as fuel	
	designed filled 1	with capa	addition city (1	nal load o 6.0 gallon	f oils, s avera	lubes ge).	coolar	ipment ts and	only as fuel	
	designed filled 1	with capa	addition city (1	nal load o 6.0 gallon	f oils, s avera	lubes ge).	coolar	ipment its and	only as fuel	
	designed filled 1	with capa	addition city (1	nal load o 6.0 gallon	f oils, s avera	lubes ge).	coolar	ipment ts and	only as fuel	
	designed filled 1	with capa	addition city (1	nal load o 6.0 gallon	f oils, s avera	lubes ge).	coolar	ipment its and	only as fuel	
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	designed filled 1	with capa	addition city (1	nal load o 6.0 gallon	f oils, s avera	lubes ge).	coolar	ipment its and	only as fuel	
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	designed filled 1	with capa	addition city (1	nal load o 6.0 gallon	f oils, s avera	lubes ge).	coolar	ipment its and	only as fuel	
	designed filled 1	with capa	addition city (1	nal load o 6.0 gallon	f oils, s avera	lubes ge).	coolar	ipment its and	only as fuel	
	designed filled 1	with capa	addition city (1	nal load o 6.0 gallon	f oils, s avera	lubes ge).	coolar	ipment its and	only as fuel	

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

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

^{••} 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 FIREBIRD

Model Year 1989 Issued 6-88 Revised (*)

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

			Optional	Equipment 0	ifferential Mass (weight)*	
	_		MASS, kg.		Remarks Restrictions, Requirements	
AC3	Power Seat	Front	Rear	Total	N/A on Pontiac	
	TOWEL SEAL				N/A. OII POILLIAC	
A31	Power Windows	1.2	1.0	2.2		
	<u> </u>	(2.6)	(2.2)	(4,8)		
B20	Luxury Interior	1.2	.6	1.8		
<del></del>		(2.6)	(1.3)	(3.9)		
CC1	Hatch Roof	(12.8)	9.6	15.4 (33.9)	Integral locks	
C60	Air Cardidiania					
COU	Air Conditioning	18.0 (39.7)	1.4 (3.1)	19.4 (42.8)	With RPO 189 engine	
		17.6	1.4	19.0	With RPO LBS engine	
		(38.8)		(41.9)	·	
		16.6	2.0	18.6	With RPO 103 engine	
		(36.6)	(4.4)	(41.0)	,	
		17.4 (38.4)	1.2	18.8	With RPO 198 engine	
				(41.0)		
C67	Air Conditioning/ Electronic	18.4	(3.1)	19.6 (43.2)		
D81	Spoiler-Aero Wind	8	8.0	7.2	2FW87 only	
501	Sporrer Hero Willia	(-1.8)	(17.7)	(15.9)	ZEWSZ DILLY	
J65	4-Wheel Disc Brakes	0	3.6	3.6		
		(0)	(7.9)	(7.9)		
					·	

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

Vehicle Line ____FIREBIRD

1989 Issued 6-88 Revised (•)

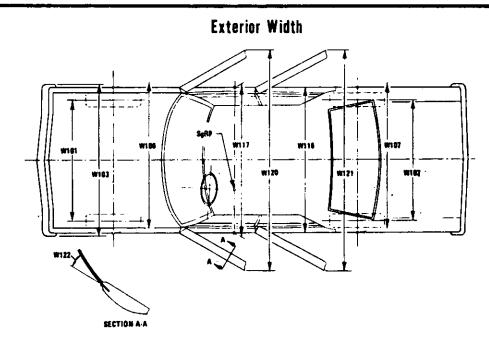
**METRIC (U.S. Customary)** 

		Optional Equipment Differential Mass (weight)*				
•			MASS, kg.	(lb.)	Remarks	
Code	Equipment	Front	Rear	Total	Restrictions, Requirements	
RPO-K34	Cruise Control	2.2	0	2.2		
		(4.9)	(0)	(4.9)		
RPO-LO3	5.0 Liter V8 (305 CID)	70.2	2.2	72.4	Fare and Auto 1	
111 0 200	3.0 Liter 40 (303 CID)	(154.8)			For manual transmission	
		1137.07	17.07			
RPO-L03	5.0 Liter V8 (305 CID)	53.4	1.8	55.2	For automatic transmission	
		(117.8)				
RPO-LB9	5.0 Liter V8 (305 CID)	75.0	7.4	82.4	For manual transmission	
		(165.3)	(16.3)	(181.6)		
RPO-LB9	5.0 Liter V8 (305 CID)	63.8	6.4	70.0		
INTO-EDS	3.0 Liter 48 (303 CID)	(140.7)	(14.1)	70.2 (154.8)	For automatic transmission	
		1140.77	114-17	(134.0)		
RP0-L98	5.7 Liter V8 (350 CID)	68.0	6.8	74.8	For automatic transmission	
		(149.9)		(164.9)		
550 HBA						
RPO-MD8	Automatic Transmission	12.8	4.4	17.2	With LB8 engine	
	With Overdrive	(28.2)	(9.7)	(37.9)		
<u> </u>		31.4	10.0	41 4	11.41 100 100	
		(69.2)	(22.0)	41.4 (91.2)	With LO3, LB9, L98 engines	
		(03.2)	(22.0)	(31.2)		
RPO-N33	Steering Column Tilt	.8	.2	1.0		
		(1.8)	(.4)	(2,2)		
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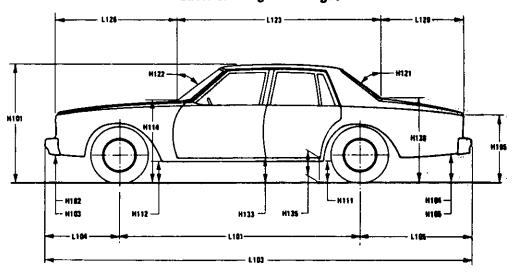
^{*} Also see Engine - General Section for dressed engine mass (weight).

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

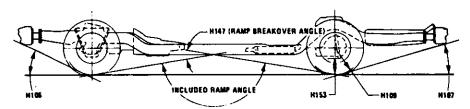
Exterior Vehicle And Body Dimensions – Key Sheet



Exterior Length & Height

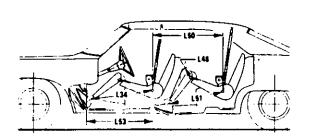


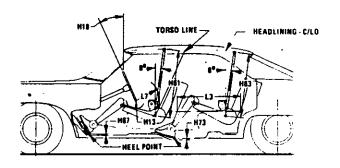
**Exterior Ground Clearance** 

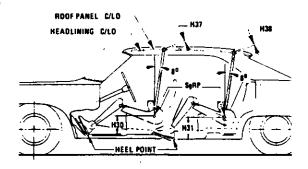


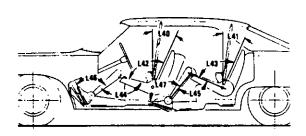
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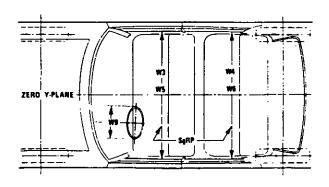
Interior Vehicle And Body Dimensions – Key Sheet

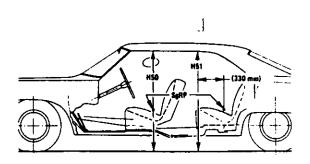








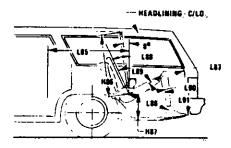


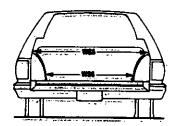


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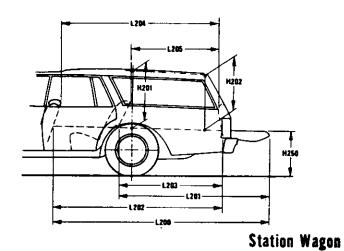
Interior.Vehicle And Body.Dimensions – Key Sheet:

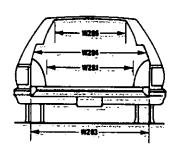
Third Seat

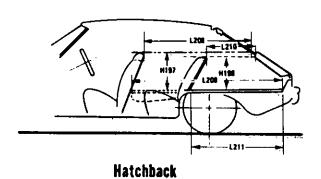




Cargo Space







**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

- TREAD-FRONT. The dimension measured between the W101 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.
- W103 VEHICLE WIDTH. The maximum dimension measured between the widest point on the vehicle, excluding exterior mirrors, flexible mud flaps, marker tamps, but including bumpers, moldings, sheet metal protrusions or dual wheels, if standard equipment.
- FRONT FENDER WIDTH. The dimension measured be-W106 tween the widest points at the front wheel centerline, excluding moldinas.
- REAR FENDER WIDTH. The dimension measured be-W107 tween the widest points at the rear wheel centerline, excluding moldings.
- BODY WIDTH AT SQRP-FRONT. The dimension measured laterally between the widest points on the body at the SgRP-front, excluding door handles, applied moldings, or appliques.
- W120 VEHICLE WIDTH-FRONT DOORS OPEN. The dimension measured between the widest point on the front doors in maximum hold-open position.
- W121 VEHICLE WIDTH-REAR DOORS OPEN. The dimension measured between the widest point on the rear doors in maximum hold-open position. For vehicles with a rear door on only one side, this dimension is to the zero "Y" plane.
- W122 TUMBLE-HOME. STRAIGHT SIDE GLASS. The angle measured from a vertical to the outside surface of the front door glass at the SgRP "X" plane. CURVED SIDE GLASS. The angle measured from a vertical to a chord extending from the upper DLO to the lower DLO at the outside surface of the front door glass at the

#### **Length Dimensions**

front SgRP "X" plane.

- WHEELBASE (WB). The dimension measured longitudinally between front and rear wheel centerlines. In case of dual rear axles, the dimension shall be to the midpoint of the centerlines of the rear wheels.
- VEHICLE LENGTH. The maximum dimension measured L103 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.
- L125 COWL POINT "X" COORDINATE.
- L126 FRONT END LENGTH. The dimension measured longitudinally from the cowl point to the foremost point on the vehi-cle at the zero "Y" plane excluding ornamentation or bumpers. In cases where bumpers and/or grills are integrated with the profile, measurement is made at the foremost point of front end contour.
- L127 REAR WHEEL CENTERLINE "X" COORDINATE or in the case of dual rear axles, the coordinate shall be the midpoint of the distance between the rear axle centerlines.
- 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**

- VEHICLE HEIGHT. The dimension measured vertically from the highest point on the vehicle body to ground.
- ROCKER PANEL-REAR TO GROUND. The dimension H111 measured vertically from the bottom of the rocker or side quarter panel at the front of the rear wheel opening, exclu-
- ding flanges, to ground.

  ROCKER PANEL-FRONT TO GROUND. The dimension H112 measured vertically from the foremost point on the bottom
- of the rocker panels, excluding flanges, to ground.
  COWL POINT TO GROUND. Measured at zero "Y" plane. H114 BACKLIGHT SLOPE ANGLE. The angle between the verti-H121
- 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.
- H135 BOTTOM OF DOOR CLOSED-REAR 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.

  DECK POINT TO GROUND. Measured at zero "Y" plane. H138
- H₁₀₉ STATIC LOAD-TIRE RADIUS-REAR. Specified by the 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
- H₁₀₃ FRONT BUMPER TO GROUND-CURB MASS (WT.). 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 H104 measured vertically from the lowest point on the rear bumper to ground, including bumper guards, if standard equipment.
- REAR BUMPER TO GROUND CURB MASS (WT.). H105 Measured in the same manner as H104.
- H106 ANGLE OF APPROACH. The angle measured between a line tangent to the front tire static loaded radius arc and the initial point of structural interference forward of the front tire to ground. The limiting structural component shall be designated.
- 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 designated
- RAMP BREAKOVER ANGLE. The angle measured between two lines tangent to the front and rear tire static H147 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.
- **S2** Side windows area. Includes the front door, rear door, vents, and rear quarter windows on both sides of the vehide.
- Backlight areas.
- Total area. Total of all areas (S1 + S2 + S3).

#### **Fiducial Mark Dimensions**

#### Flducial Mark - Number 1

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

#### Fiducial Mark - Number 2

- L55 "X" coordinate.
- W22 "Y" coordinate. "Z" coordinate. WR2
- Height "Z" coordinate to ground at curb weight. Height "Z" coordinate to ground. H162
- 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.
- ACCELERATOR HEEL POINT TO STEERING WHEEL L11 CENTER. The dimension measured horizontally from the AHP to the intersection of the steering column centerline and a plane tangent to the upper surface of the steering wheel rim.
- DESIGN H-POINT-FRONT TRAVEL. The dimension mea-**L17** sured 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 SgRP-FRONT. "X" COORDINATED.
- MAXIMUM EFFECTIVE LEG ROOM-ACCELERATOR. L34 The dimension measured along a line from the ankle plvot 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 vertical line through the SgRP-front and the torso line. If L-40 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.
- KNEE ANGLE-FRONT. The angle measured between thigh centerline and lower leg centerline measured on the 144 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.
- SgRP-FRONT TO HEEL. The dimension measured hori-L53
- zontally from the SgRP-front to the accelerator heel point. SHOULDER ROOM-FRONT. The minimum dimension **W3** measured laterally between the trimmed surfaces on the "X" plane through the SgRP-front at height between the belt line and 254 mm (10.0 in.) above the SgRP-front, ex-
- cluding the door assist strap and attaching parts.
  HIP ROOM-FRONT. The minimum dimension measured **W5** laterally between the trimmed surfaces on the "X" plane through the SgRP-front within 25 mm (1.0 in.) below and 76 mm (3.0 in.) above the SgRP-front and 76 mm (3.0 in.) fore and aft of the SgRP-front.
- STEERING WHEEL MAXIMUM OUTSIDE DIAMETER. W9 Define if other than round.
- 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 vertically from the SgRP-front to the accelerator heel point.

    HEADLINING TO ROOF PANEL-FRONT. The dimension H30
- **H37** measured from the intersection of the headlining and the extended effective head room line normal to the sheet
- UPPER BODY OPENING TO GROUND-FRONT. The di-H50 mension 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**

Page 31

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**

- BACK ANGLE-SECOND. The angle measured between a L-41
- vertical line through the SgRP-second and the torso line. HIP ANGLE-SECOND. The angle measured between L43 torso line and thigh centerline.
- L45 KNEE ANGLE-SECOND. The angle measured between 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).
- KNEE CLEARANCE-SECOND. The minimum dimension L48 measured from the knee pivot center to the back of the front seatback minus 51 mm (2.0 in.)
- SgRP COUPLE DISTANCE-SECOND. The dimension L50 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.
- HEADLINING TO ROOF PANEL-SECOND. The dimen-H38 sion measured from the intersection of the headlining and the extended effective head room line normally to the roof sheet metal.
- UPPER BODY OPENING TO GROUND-SECOND. The H51 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 **HB3** 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.
- H195 LIFTOVER HEIGHT. The dimension measured vertically 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. tt 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

- SaRP COUPLE DISTANCE-THIRD. The dimension mea-1.85 sured horizontally from the SgRP-second to the SgRP-
- 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.
- HIP ANGLE-THIRD. Measured in the same manner as L89 **L43**
- L90 KNEE ANGLE-THIRD. Measured in the same manner as L45
- L91 FOOT ANGLE-THIRD. Measured in the same manner as
- W85 SHOULDER ROOM-THIRD. Measured in the same man-
- ner as W4. HIP ROOM-THIRD. Measured in the same manner as W5. **W86**
- **H86** EFFECTIVE HEAD ROOM-THIRD. The dimension, measured along a line 8 deg. from the SgRP-third to the headlining rear of vertical plus a constant of 102 mm (4.0 in.).
- H87 SgRP-THIRD TO HEEL POINT.
- SD1 SEAT FACING DIRECTION-THIRD.

#### Station Wagon - Cargo Space Dimensions

- CARGO LENGTH-OPEN-FRONT. The minimum dimension measured longitudinally from the back of the front 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.
- L201 CARGO LENGTH-OPEN-SECOND. The dimension measured 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 tailgate or cargo floor surface if the rear closure is a conventional door type tailgate, at the zero "Y" plane.
- L202 CARGO LENGTH-CLOSED-FRONT. The minimum dimension measured horizontally from the back of the front seat at the height of the 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-CLOSED-SECOND. The dimension L203 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
- L204 CARGO LENGTH AT BELT-FRONT. The minimum dimension measured horizontally from the back of the front seatback at the seatback top to the foremost normal surface of the closed tailgate or inside surface of the cab backpanel at the height of the belt, on the zero "Y" plane.
- L205 CARGO LENGTH AT BELT-SECOND. The minimum dimension measured horizontally from the back of the second seatback at the seatback top to he foremost normal surface of the closed tailgate at the height of the belt, on the zero "Y" plane.
- CARGO WIDTH-WHEELHOUSE. The minimum dimension measured laterally between the trimmed wheelhousings at floor level. For any vehicle not trimmed, measure to the sheet metal.

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

# Interior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

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

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

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

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

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

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

V2 STATION WAGON Measured in inches:

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:

Measured in mm:

$$\frac{L506 \times W500 \times H503}{10^9} = m^3 \text{ (cubic meter)}$$

V6 TRUCKS AND MPV'S WITH CLOSED AREA. Measured in inches:

L204 x W500 x H505

$$\frac{\text{W}500 \times \text{H}505}{1728} = \text{ft}$$

Measured in mm:

$$\frac{L204 \times W500 \times H505}{10^9} = m^3$$
 (cubic meter)

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

V10 STATION WAGON CARGO VOLUME INDEX.

Measured in inches:

$$\frac{\text{H201 x L205 x} \frac{\text{W4 + W201}}{2}}{1728} = \text{ft}^{5}$$

Measured in mm:

#### 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.

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.

Measured in inches:

Measured in mm:

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:

 $\frac{\frac{\text{L210} + \text{L211}}{2} \times \text{W4} \times \text{H198}}{\frac{2}{1728}} = \text{ft}$ 

Measured in mm:

$$\frac{\frac{\text{L210} + \text{L211}}{2} \times \text{W4} \times \text{H198}}{10^9} = \text{m}^3 \text{ (cubic meter)}$$

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

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