# MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

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

1990

Manufacturer		Vehicle Line		
	Pontiac Motor Division General Motors Corporation	FIREBIRD		
Mailing Address  Chevrolet-Pontiac-Canada Group  Engineering Center				
	General Motors Corporation 30003 Van Dyke Warren, MI 48090-9060	June, 1989	Revised September, 1989	

Direct questions concerning these specifications to the manufacturer listed above.

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

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



Motor Vehicle Manufacturers Association of the United States, Inc.

Blank Forms Provided by Technical Affairs Division

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

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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) specs, are in kilograms (pounds).
- 3. The General Specifications herein are those in effect at date of compilation and are subject to change without notice or incurring obligation by the manufacturer.
- Additional Vehicle Dimensions (based in part on SAE J1100 "Motor Vehicle Dimensions") may be available from the manufacturer.

#### FORM MVMA-90

 Vehicle Line
 FIREBIRD

 Model Year
 1990
 Issued 6-89
 Revised(\*)
 9-89

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

o Vehicle Origin

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

#### o 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 Coupe (RWD)		2FS87	4 (2/2)	45.4 (100)
FIREBIRD TRANS AM			• •	
2-Door Coupe (RWD)		2FW87	4 (2/2)	45.4 (100)
FIREBIRD FORMULA		2F\$87	4 (2/2)	45.4 (100)
2-Door Coupe (RWD)		(With W68)		
FIREBIRD GTA		2FS87	4 (2/2)	45.4 (100)
2-Door Coupe (RWD)		(With Y84)	• •	. ,

 Vehicle Line
 FIREBIRD

 Model Year
 1990
 Issued
 6-89
 Revised(\*)
 9-89

# METRIC (U.S. Customary) Power Teams

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

			Α	В	С	D
	Engine	Code	LHO	гно	LO3	L03
		cement (cu. in.)	3.1 (191)	3.1 (191)	5.0 (305)	5.0 (305)
E	inducti (Fi, Ca	ion system rb, etc.)	Multi-Port Fuel Injection	Multi-Port Fuel Injection	Throttle Body Injection	Throttle Body Injection
G _ :	Compr	ession	8.5:1	8.5:1	9.3:1	9.3:1
N E	SAE Net	Power kW (bhp)	104 (140) @ 4400	104 (140) @ 4400	127 (170) @ 4000	127 (170) @ 4000
	at RPM	Torque Newton meters (lb.ft.)	244 (180) @ 3600	244 (180) @ 3600	346 (255) @ 2400	346 (255) @ 2400
	Exhau: Single,		Single	Single	Single	Single
TR	Transm Transa	nission/ xle	MB1 Manual Transmission 5-Speed	MD8 Automatic Transmission 4-Speed	M39 Manual Transmission 5-Speed	MD8 Automatic Transmission 4-Speed
A N S	Axle Ra (std. fi		3.42	3.23	3.08	2.73

vallability	Power Tea	ms (A - B - C - D)
Code	Standard	Optional
2FS87	A	B, C, D
100 100		
2FW87	E	F, G, H
2FS87 (With W66)	С	D, F, G, H
2FS87 (With Y84)	G	н
- <u></u>	·	· · · · · · · · · · · · · · · · · · ·
		<u> </u>
	2FS87 2FW87 2FS87 (With W66)	Code         Standard           2FS87         A           2FW87         E           2FS87 (With W66)         C           2FS87 (With Y84)         G

Vehicle Line	FIREB	IRD				
Model Year	1990	Issued	6-89	Revised(*)	9-89	

METRIC (U.S. Customary)
Power Teams

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

			E	F	G	Н
	Engine	Code	LB9	LB9	LB9	L98 .
	Displa Liters	cement (cu. in.)	5.0 (305)	5.0 (305)	5.0 (305)	5.7 (350)
EN		ion system rb, etc.)	Multi-Port Fuel Injection	Multi-Port Fuel Injection	Multi-Port Fuel Injection	Multi-Port Fuel Injection
G _ :	Compr ratio	ession	9.3:1	9.3:1	9.3:1	9.3:1
N E	SAÉ Net	Power kW(bhp)	153 (205) @ 4400	153 (205) @ 4400	168 (255) @ 4400	179 (240) @ 4400
	at RPM	Torque Newton meters (lb.ft.)	386 (285) @ 3200	386 (285) @ 3200	400 (295) @ 3200	461 (340) @ 2800
	Exhau: Single,		Single	Single	Dual	Dual
T R A	Transπ Transa	nission/ xle	M39 Manual Transmission 5-Speed	MD8 Automatic Transmission 4-Speed	MK6 Manual Transmission 5-Speed	MD8 Automatic Transmission 4-Speed
N S	Axle Ra (std. fir		3.08	2.73	3.42	3.23

Series Availability		Power Tear	ms (A - B - C - D)
Model	Code	Standard	Optional
<del></del>			
			<u> </u>
		· · · · · · · · · · · · · · · · · · ·	
			<del></del>

Vehicle Line	FIRE	BIRD				
Model Year	1990	Issued	6-89	Revised(*)	9-89	

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

Engine	Description
Engine	Code

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

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

#### Engine - Pistons

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

Aluminum Alloy, 365 (12.8)

#### **Engine Camshaft**

Location		Cylinder Block
Material &	mass kg (weight, lbs.)	·
		Cast Iron, 3.098 (6.83)
Drive	Chain/belt	Chain
type	Width/pitch	15.9 x 9.375mm (.625 x.369 in.)

<sup>\*</sup>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:

Vehicle Line **FIREBIRD** 

Model Year 1990

Issued

6-89

Revised(\*)

9-89

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

**Engine Description Engine Code** 

5.0 LITER V8 (305 CID)

THROTTLE BODY INJECTION RPO LO3

#### **ENGINE - GENERAL**

Type & description (inline, V, angle, flat, location, front, mid, rear,

flat, location, front, mid, rear, transverse, longitudinal, soho, doho, ohy, hemi, wedge, pre-chamber, etc.)		il, sohe, dohe,			
			90 deg. V, Front, Longitudinal		
Manufacture	er .		C-P-C Group - G.M. Corporation		
No. of cylind	iers		8		
Bore			94.89 mm (3.74 in.)		
Stroke			88.39 mm (3.48 in.)		
Bore spacing	g (C/L to C	/L)	111.8 mm (4.40 in.)		
Cyl blck mat	l & mass k	g(lbs.)(machined)	Cast Iron, 68.674 (151.4)		
Cylinder blo	ck deck he	eight	229.4 mm (9.025 in.)		
Cylinder blo	ck length		512.8 mm (20.19 in.)		
Deck clearar (above or be			.635 mm (.025 in.) Below		
Cyl. head ma	aterial & m	ass kg (ibs.)	Cast Iron, 19.800 (43.7)		
Cylinder hea	ad volume	(cu. cm.)			
Cylinder liner material			Not Applicable		
Head gasket thickness (compressed)		•	.533 mm (.021 in.)		
Minimum cor total volume		chamber	55.2 (+/- 2.2)		
Cyl. no. syst		1. Bank	1-3-5-7		
(front to rear	r)	R. Bank	2-4-6-8		
Firing order			1-8-4-3-6-5-7-2		
Intake manif	old mati &	mass[kg(lbs.)]**	Cast Aluminum, 6.900 (15.2)		
Exh. manifol	ld matl & m	nass [kg (lbs.)]**	Cast Iron, 4.345 (9.6) L.H., 3.800 (8.4) R.H.		
Fuel require	d unleaded	i, diesel, etc.	Unleaded		
Fuel antiknock index (R + M) / 2		7 + M) / 2	87		
Quantity		ty	2		
Engine mounts	hydro	nd type (elastomeric, elastic, hydraulic ir, etc.)	Elastomeric		
		l isolation (sub-frame, nember, etc.)			
Total dresse	d engine n	nass (wt) dry***	275.1 kg. (606 lbs.) Auto., 290.8 kg. (641 lbs.) Man.		
		•			

#### Engine - Pistons

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

Aluminum Alloy, .645 (1.4)

#### **Engine Camshaft**

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

<sup>\*</sup>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:

**FIREBIRD** Vehicle Line Revised(\*) 9-89 6-89 Model Year

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

Engine Description **Engine Code** 

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

## **ENGINE - GENERAL**

Type & description (inline, V, angle,

flat, location transverse, k	ription (inline, v., a i, front, mid, rear, ongitudinal, soho vedge, pre-chami	, dohc,				
			90 deg. V, Front, Longitudinal			
Manufacture	or		C-P-C Group - G.M. Corporation			
No. of cylind	lers		. 8			
Bore			94.89 mm (3.74 in.)			
Stroke			88.39 mm (3.48 in.)			
Bore spacing	g (C/L to C/L)	•	111.8 mm (4.40 in.)			
Cyl blck mat	i & mass kg(lbs.)(i	machined)	Cast Iron, 68.674 (151.4)			
Cylinder blo	ck deck height		229.4 (9.025)			
Cylinder blo	ck length		512.8 mm (20.19 in.)			
Deck clearar (above or be	nce (minimum) Now block)	,	.635 mm (.025 in.) Below			
Cyl. head ma	aterial & mass kg	(lbs.)	Cast Iron, 9.800 (43.7)			
Cylinder hea	ad volume (cu. cm	1.)	55.2 +/- 2.2			
Cylinder line	Cylinder liner material		Not Applicable			
Head gasket thickness (compressed)			.724 mm (.0285 in.)			
Minimum co total volume	mbustion chamb (cm. cu.)	er	55.2 (+/- 2.2)			
Cyl. no. syst	tem L. B	ank	1-3-5-7			
(front to rea	r) A. B	lank	2-4-6-8			
Firing order			1-8-4-3-6-5-7-2			
Intake manif	fold mati & mass[	kg(lbs.))**	Cast Aluminum, 6.117 (13.5)			
Exh. manifo	id mati & mass [k	g (lbs.)]**	Cast Iron, L.H. 4.460 (9.8), R.H. 3.800 (8.4)			
Fuel require	d unleaded, dies	el, etc.	Unleaded			
Fuel antiknock index (R + M) / 2		/2	91			
Quantity			2			
Engine mounts			Elastomeric			
	Added isolat crossmembe	ion (sub-frame, ir, etc.)				
Total dresse	ed engine mass (v	vt) dry***	282.4 kg. (623 lbs.) Auto. 297.9 kg. (657 lbs.) Man.			

#### Engine - Pistons

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

Aluminum Alloy, .645 (1.4)

#### **Engine Camshaft**

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

<sup>\*</sup>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:

Vehicle Line	FIRE	BIRD				
Model Year	1990	Issued	6-89	Revised(*)	9-89	

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

Engine	Description
Engine	Code

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

#### **ENGINE - GENERAL** Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, soho, doho, ohv, hemi, wedge, pre-chamber, etc.) 90 deg. V, Front, Longitudinal C-P-C Group - G.M. Corporation Manufacturer 8 No. of cylinders 101.6 mm (4.00 in.) Bore 88.4 mm (3.48 in.) Stroke 111.8 mm (4.40 in.) Bore spacing (C/L to C/L) Cast Iron, 68.674 (151.5) Cyl bick mati & mass kg(lbs.)(machined) 229.4 mm (9.025 in.) Cylinder block deck height 506.2 mm (19.93 in.) Cylinder block length Deck clearance (minimum) (above or below block) .635 mm (.025 in.) Below Cast Iron, 19.800 (43.7) Cyl. head material & mass kg (lbs.) Cylinder head volume (cu. cm.) **Not Applicable** Cylinder liner material Head gasket thickness (compressed) .724 mm (.0285 in.) 75.47 Combustion Chamber With Piston At Top Dead Center And All Components Minimum combustion chamber total volume (cm. cu.) In Place Torqued To Specifications 1-3-5-7 Bank Cyl, no. system (front to rear) 2-4-6-8 R. Bank 1-8-4-3-6-5-7-2 Firing order Cast Aluminum, 6.117 (13.5) Intake manifold mat! & mass[kg(lbs.)]\*\* Cast Iron, L.H. 4.460 (9.8), R.H. 3.800 (8.4) Exh. manifold matl & mass [kg (lbs.)]\*\* Unleaded Fuel required unleaded, diesel, etc. 91 Fuel antiknock index (R + M) / 2 2 Quantity Matl and type (elastomeric, hydroelastic, hydraulic damper, etc.) Engine mounts Elastomeric Added isolation (sub-frame, crossmember, etc.) 284.5 (627) Auto. Total dressed engine mass (wt) dry\*\*\* Engine - Pistons Material & mass, g (weight, oz.) – piston only Impacted Cast Aluminum, .540 (1.2) **Engine Camshaft** In Cylinder Block "V" Above Crankshaft Location Material & mass kg (weight, lbs.) Steel, 4.200 (9.3) Chain Chain/belt Drive type 15.976 (.625)/.5

Width/pitch

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

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

MVMA Specifications		ations	Vehicle Line FIREBIRD					·	
		Model Year	1990	Issued	6-89	Revised(*) _	9-89		
METRIC (	U.S. Custom	ary)							
Engine Des	cription		3.1 LITER V6 (191	CID)					
Engine Cod	8		MULTI-PORT FUE		ON RPO LHO	)			
Engine -	Valve Syster	m							
Hydraulic lifter	s (std., opt., NA)	<del>-</del>	Standard						
	Number intake/e	exhaust	6/6						
Valves	Head O.D. intak	e/exhaust	43.64 mm (1.72 in.)	/ 36.20 mr	n (1.43 in.)				
Engine -	Connecting	Rods							
Material & mass [kg., (weight, lbs.)]*			Forged Steel, .602 (	1.33) Full <i>f</i>	Assembly.				
Length(axes ce	nterline to centerline	0)	144.78 mm (5.79 in.)	)					
Engine -	Crankshaft								
Material & mass [kg., (weight, lbs.)]*			Nodular Cast Iron, 1	7.9 (39.5)					
End thrust taken by bearing (no.)		3							
Length & numb	er of main bearings	<del> </del>	**, 4 Bearings						
Seal (material, o piece design, et		Front	Viton/Steel, One Pie						
		Rear	Viton/Steel, One Pie	ce					<del></del> -
Engine -	Lubrication S	System							
Normal oil press	sure[kPa(psi) 🛭 eng i	rpm]	345-450 (50-65) @ :	345-450 (50-65) @ 2400					
Type oil intake (	floating, stationary)		Stationary	Stationary					
Oil filter sys. (fu	il flow,part, other)		Full Flow						
Capacity of c/c filter-refill-L (q	h\$6,less t.)		Refill W/W.O. Filter 3	3.8 (4.0)					
Engine -	Diesel Inform	nation	(NOT APPLICABLE)					,	
Diesel angine m	anufacturer								
Glow plug, curr	ent drain at 0 deg. F	<del></del>							
injector Nozzie	Туре								
	Opening pressur	e[kPa(psi)]							
Pre-chamber d	T								<del></del>
Fuel in- jection pump	Manufacturer		<del></del>					:	
Fuelini numa d	rive (belt,chain,gear	-1	_ +						
	vacuum source (typi		- +						
Fuel heater (yes		·,					·		•
Water separator, description (std., opt.)									
Turbo manufacturer									
Oil cooler-type (oil to engine coolant; oil to ambient air)				· ·					
Oil filter	· · · · · · · · · ·		<u> </u>						<del>-</del> - · ·
Engine -	Intake Syste	m	(NOT APPLICABLE)		<u> </u>		ж.		
		111	(NOT APPLICABLE)						
Turbo charger -				<u>.</u>			<u>-</u>		<del>.</del>
Super charger - Intercooler			<del>-  </del>						
			<u> </u>				<del></del>		

For 3.1L V6; #1,4 = 29.5mm (1.18 in.); #2,3 = 24.0mm (0.96 in.)

<sup>\*</sup> Finished State

<sup>\*\*</sup> Standard measurement for width only:

B#1/R# A	Specifies	ations	Vehicle Line	Vehicle Line FIREBIRO					
MVMA Specifications			Model Year	1990	Issued	6-89	Revised(*)		
METRIC	(U.S. Customa	агу)							
Engine Des			5.0 LITER V8 (30 THROTTLE BODY	•	N RPO L03				
Engine -	Valve Systen	n							
Hydraulic lifters (std., opt., NA)			Standard	•					
	Number intake/e	xhaust	8/8						
Valves	Head O.D. intake	e/exhaust	46.74 (1.84) / 38.10	(1.50)					
Engine -	Connecting I	Rods							
	ss [kg., (welght, lbs.)]*		Steel, .388 (.855)	· · · · · · · · · · · · · · · · · · ·					
	enterline to centerline								
Engine -	- Crankshaft					-			
	ss [kg., (weight, ibs.)]'		Nodular Cast Iron,	23.360 (51	.50)				
End thrust ta	ken by bearing (no.)		5			•			
Length & num	ber of main bearings		5	•					
Seal (material		Front	Fluroelastomer, One Piece, Lip Seal						
piece design,	etC.)	Rear	Fluroelastomer, On	Fluroelastomer, One Piece, Lip Seal					
Engine -	- Lubrication_	System							
Normal oil pre	ssure[kPa(psi) 🗨 eng	rpm]	41 (6) @ 1000/124	(18) @ 200	0/165 (24) @	4000 (Ho	()		
Type oil intak	e (floating, stationary)		Stationary	Stationary					
Oil filter sys.	(full flow,part, other)		Full Flow	<del>                                     </del>					
Capacity of c			3.8 (4.0)	3.8 (4.0)					
Engine - Diesel Information		(NOT APPLICABLE	(NOT APPLICABLE)						
Diesel engine	manufacturer								
Glow plug, cu	rrent drain at 0 deg. F						<u> </u>		
Injector Nozzle	Туре			`					
	Opening pressur	e[kPa(psi)]							
Pre-chamber	design								
Fuel in- jection pump	Manufacturer								
	Туре								
	drive (belt,chain,gea	<del></del>							
Supplementary vacuum source (type)									
Fuel heater ()									
(std., opt.)	tor, description								
Turbo manufa	acturer								
Oil cooler-typoil to ambien	pe (oif to engine coolar t air)	nt;							
Oil filter					<del> </del>				

Intercooler

Engine - Intake System

Turbo charger - manufacturer Super charger - manufacturer (NOT APPLICABLE)

<sup>\*</sup> Finished State

B#\/R#A (	Specifics	ations	Vehicle Line	FIRE	BIRD				
IVI V IVIA	Specifica	1110112	Model Year	1990	Issued	6-89	Revised(*)		
METRIC (U	.S. Customa	ary)					<del>-,</del> ··		
Engine Descr	lption		5.0 LITER V8 (3	•				<del></del>	
Engine Code			TUNED PORT FU	EL INJECT	ION RPO LI	39			
Engine - V	alve Systen	n							
Hydraulic lifters (	std., opt., NA)		Standard						
Valves	Number intake/e	xhaust	8/8						
	Head O.D. intake	/exhaust	46.74 (1.84) / 38.10	(1.50)				<del>-</del>	
Engine - C	onnecting i	Rods							
Material & mass [	kg., (weight, lbs.)]*		Steel, .388 (.85)						
Length(axes cent	erline to centerline	)	144.78					<u> </u>	
Engine - C	rankshaft_								
Material & mass [	kg., (weight, lbs.))*		Nodular Cast Iron,	Nodular Cast Iron, 23.360 (51.50)					
End thrust taken	by bearing (no.)		5	5					
Length & number	of main bearings		5	5					
Seal (material, on piece design, etc		Front	Fluroelastomer, On	Fluroelastomer, One Piece, Lip Seal					
piece design, etc	·	Rear	Fluroelastomer, On	e Piece, Li	o Seal				
Engine - L	ubrication S	System	·				,		
Normal oil pressu	ire(kPa(psi) <b>@</b> eng r	pm)	41 (6) @ 1000/124	41 (6) @ 1000/124 (18) @ 2000/165 (24) @ 4000 (Hot) **					
Type oil intake (fl	oating, stationary)		Stationary	Stationary					
Oil filter sys. (full	flow,part, other)		Full Flow	Full Flow					
Capacity of c/case,less filter-refill-L (qt.)		3.8 (4.0)	3.8 (4.0)						
Engine - E	Diesel Inforn	nation	(NOT APPLICABLE	=)			·		
Diesel engine ma	nufacturer								
Glow plug, curre	nt drain at 0 deg. F								
Injector Nozzle	Тура								
	Opening pressur	e[kPa(psi)]		<del> </del>					
Pre-chamber de	sign T				==-				
Fuel in- jection pump	Manufacturer								
	ht		1						

Oil cooler-type (oil to engine coolant; oil to ambient air)		
Oil filter		
Engine - Intake System	(NOT APPLICABLE)	
Turbo charger manufacturer		
Super charger - manufacturer		
Intercooler		

<sup>\*</sup> Finished State

Fuel inj. pump drive (belt,chain,gear)
Supplementary vacuum source (type)

Fuel heater (yes/no)

Water separator, description (std., opt.)

Turbo manufacturer

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

RAVINA <	Specifics	vehicle Line FIREBIRD						
MVMA Specifications		Model Year	1990	Issued	6-89	Revised(*)		
METRIC (U	.S. Custom	ary)						
Engine Description		5.7 LITER V8 (35	SO CID)				<del>-</del>	
Engine Code	-		TUNED PORT FUE	L INJECT	ON RPO L9	8		
Eng <u>ine</u> – V	alve Syster	n						
Hydraulic lifters (:			Standard					
	Number intake/	xhaust	8/8					
Valves	Head O.D. intak	e/exhaust	49.28 (1.94) / 38.10	(1.50)				
Engine – C	onnecting	Rods		<del>-</del>		-		
Material & mass [i	g., (weight, lbs.))	*	Steel, .388 (.85)					
Length(axes cent	erline to centerline	<b>e</b> )	144.78					
Engine – C	rankshaft							
Material & mass [I		ń	Nodular Cast Iron, 2	23.360 (51.	50)			
End thrust taken	by bearing (no.)		5					
Length & number	of main bearings		5					
Seal (material, one		Front	Fluroelastomer, One	Piece, Lip	Seal			
piece design, etc.	) 	Rear	Fluroelastomer, One	Piece, Lip	Seal			
Engine – L	ubrication :	System					_	-
Normal oil pressu	re(kPa(psi) @ eng	rpm]	41 (6) @ 1000/124 (	(18) @ 200	0/165 (24) @	4000 (Hot	)	
Type oil intake (fi	pating, stationary)	)	Stationary	Stationary				
Oil fitter sys. (full	flow,part, other)		Full Flow	Full Flow				
Capacity of c/cas filter-refili-L (qt.)	e,less		3.8 (4.0)	3.8 (4.0)				
Engine – D	lesel Infor	mation	(NOT APPLICABLE	)				
Diesel engine ma	nufacturer					_		
Glow plug, curren	t drain at 0 deg. F							
Injector	Туре				•			
Nozzie	Opening pressur	re[kPa(psi)]						
Pre-chamber des	ign							
Fuel in-	Manufacturer						·	
jection pump	Туре							
Fuel inj. pump dri	ve (belt,chain,gea	ır)						
Supplementary v	cuum source (typ	•)						
Fuel heater (yes/	по)							
Water separator, (std., opt.)	description							
Turbo manufactu	rer							
Oil cooler-type (coil to ambient air)	il to engina coola	nt;						
Oil filter		<del> </del>					<del></del>	
Engine ~ Is	ntake Syste		(NOT APPLICABLE	)				
Turbo charger - s			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,				<u> </u>
			·					

Intercooler

Super charger - manufacturer

<sup>\*</sup> Finished State

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

Engine Description
Engine Code

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

Engine Code			MULTI-PORT FUEL INJECTION RPO LHO		
Engine -	Cooling System				
Coolant recovery system (std, opt, n.a.)			Standard		
	ation (rad., bottle)		Bottle, Coolant Recovery		
Radiator cap re [kPa (psi)]	elief valve pressure		400 4 (45)		
<del></del>	Transfer bases		103.4 (15)		
Circulation	Type (choke, bypass)		Bypass	······································	
thermostat	Starts to open @ deg's C(F)		91 (195)		
	Type (centrifugal, other)		Centrifugal	· · · · · · · · · · · · · · · · · · ·	
	GPM 1000 pump rpm Number of pumps		1 .		
Water Pump	<del></del>		Single Belt Poly 'V' Accessory Drive (Serpentine)		
rump	Drive (V-belt, other)		Sealed Ball-Roller		
	Bearing type		Cast Iron		
	Impeller material		Aluminum		
Bu-nagg rasing	Housing material		Addistanti		
ext.)]	ulation [type (inter-,		Internal		
0	With heater - L (qt.)		13.87 (14.66)		
Cooling system	With air conditioner-L(qt.)		13.87 (14.66)		
capacity	Opt. equip.[specify-L(qt.)]		<b></b>		
Water jackets	full length of cyl(yes,no)		Yes		
Water all arour	nd cylinder (yes, no)		Yes		
Water jackets	open at head face (yes,no)		No		
	Std., A/C, HD A	ıto	Standard	A/C	
	Type (cross-flow, etc.)		Cross-Flow		
	Construction (fin & tube mechanical, braze, etc.)		Fin & Tube		
Radiator core	Mati., mass [kg(wgt.,lbs.)]		Aluminum, High Efficiency Radiator		
	Width		667.5 mm	667.5 mm	
	Height		437.8 mm	437.8 mm	
	Thickness		23.5 mm	23.5 mm	
	Fins per inch	@	3.5 mm	3.5 mm	
Radiator end t	ank material		Plastic		
	Std., elec., opt.		Standard, Electric	· · · · · · · · · · · · · · · · · · ·	
	Number of blades & type (flex, solid, material)		5. Plastic Solid		
	Diameter & projected width		423.0 (16.7)		
_	Ratio(fan to crnkshft.rev.)		Not Available		
Fan	Fan cutout type		ECM Controlled		
	Drive type (direct, remote)				
	RPM at idle (elec.)		1900 - 2100		
	Motor rating(wattage)(elec)		150W		
	Motor switch (type & location) (elec.)		Part ECM		
	Switch point (temp., pressure) (elec.)		108 deg. C (226 deg. F)		

<sup>@ -</sup> Distance Between Top Of Fins.

Fan shroud (material)

Plastic (Integral Partial Shroud)

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METRIC (U.S. Customary)

**Engine Description Engine Code** 

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

Coolant recovery system (std, opt, n.a.)			Standard		
Coolant fill loc	ation (rad., bottle)		Bottle, Coolant Recovery		
Radiator cap relief valve pressure [kPa (psi)]		103.4 (15.0)			
<u> </u>	Type (choke, bypasa)		Choke		
Circulation thermostat	Starts to open @ deg's C(F)		90.6 (195)		
	Type (centrifugal, other)		Centrifugal		
	GPM 1000 pump rpm		14 (Total Cooling System Flow)	•	
	Number of pumps		1		
Water Pump	Drive (V-belt, other)		Single Belt Poly 'V' Accessory Drive (Serpentin	ne)	
	Bearing type		Sealed Double Row Ball		
	Impeller material		Steel		
	Housing material		Cast Iron		
By-pass recir ext.)]	culation [type (inter.,		Internal		
Caallar	With heater - L (qt.)		16.4 (17.33)		
Cooling system	With air conditioner-L(qt.)		17.01 (17.97)		
capacity	Opt. equip.[specify-L(qt.)]		Auto		
Water jackets	full length of cyl(yes,no)		Yes	·	
Water all arou	nd cylinder (yes, no)		Yes		
Water jackets	open at head face (yes,no)		No		
	Std., A/C, HD		Standard	A/C	
	Type (cross-flow, etc.)		Cross-Flow		
	Construction (fin & tube mechanical, braze, etc.)		Fin & Tube		
Radiator core	Mati., mass [kg(wgt.,ibs.)]		Aluminum, High Efficiency Radiator		
	Width		667.5 mm	667. 55 mm	
	Height		437.8 mm	437.8 mm	
	Thickness		23.5 mm	34.0 mm	
	Fins per inch	a	4.0 mm	2.5 mm	
Radiator end 1	tank material		Plastic		
	Std., elec., opt.		Standard	Optional Optional	
	Number of blades & type (flex, solid, material)		5 Plastic, Solid		
	Diameter & projected width		423.0 (16.7)	<del></del>	
<b>-</b>	Ratio(fan to crnkshft.rev.)		Not Applicable		
Fan	Fan cutout type		ECM Controlled		
	Drive type (direct, remate)				
	RPM at idle (elec.)		1900 - 2100		
	Motor rating(wattage)(elec)		150W	· · · · · · · · · · · · · · · · · · ·	
	Motor switch (type & location) (elec.)		Temp Switch Engine Cylinder Head	A/C Control Head & A/C Pressure Switch On Liquid Line	
	Switch point (temp., pressure) (elec.)		223 deg. F		
	Fan shroud (material)		Plastic (Integral Partial Shroud)		

<sup>@ -</sup> Distance Between Top Of Fins.

Vehicle Line **FIREBIRD** Model Year 1990 6-89 Revised(\*) Issued 9-89

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

**Engine Description Engine Code** 

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

Fnoine .	- Cooling	System
CHURITS -	- 600111161	37216111

	Cooling System	Tour day			
	ery system (std, opt, n.a.)	Standard Santa San			
	ation (rad., bottle)	Bottle, Coblant Recovery	Bottle, Coolant Recovery		
(Pa (psi))	elief valve pressure	103.4 (15)	·		
irculation -	Type (choke, bypass)	Choke			
hermostat	Starts to open @ deg's C(F)	90.6 (195)			
	Type (centrifugal, other)	Centrifugal			
	GPM 1000 pump rpm	12 (Total Cooling System Flow)			
<b>Vator</b>	Number of pumps	1			
ump	Drive (V-belt, other)	Single Belt Poly 'V' Accessory Drive (Serp	entine)*		
	Bearing type	Sealed Double Row Ball			
	Impeller material	Steel			
	Housing material	Cast Iron			
ly-pass recirc xt.)]	culation (type (inter.,	internal	• •		
	With heater - L (qt.)	16.19 (17.11)			
Cooling system	With air conditioner-L(qt.)	16.33 (17.26)			
apacity	Opt. equip.(specify-L(qt.))	+-			
Water jackets	full length of cyl(yes,no)	Yes			
	nd cylinder (yes, no)	Yes			
	open at head face (yes,no)	No			
	Std., A/C, HD	Standard			
	Type (cross-flow, etc.)	Cross-Flow			
	Construction (fin & tube mechanical, braze, etc.)	Fin & Tube			
Radiator core	Mati., mass [kg(wgt.,ibs.)]	Aluminum, High Efficiency Radiator			
	Width	667.5 mm			
	Height		437.8 mm		
	Thickness	34.0 mm			
	Fins per inch	② 2.5 mm			
Radiator end t	<del> </del>	Plastic			
	Std., elec., opt.	Standard	A/C		
	Number of blades & type (flex, solid, material)	5, Plastic, Ring			
	Diameter & projected width	423.0 (16.7)	318.0 (12.5) - 2 Fans		
_	Ratio(fan to crnkshft.rev.)	Not Applicable			
an	Fan cutout type	ECM Controlled	ECM (LH), Switch (RH)		
	Drive type (direct, remote)				
	RPM at idle (elec.)		<del></del>		
	Motor rating(wattage)(elec)	150 W	150 W LH/RH		
•	Motor switch (type & location) (elec.)	ECM	LH - ECM & A/C Pressure Switch RH - A/C Pressure Switch/ECM		
	Switch point (temp., pressure) (elec.)	1900 - 2100	2100 - 2200		
	Fan shroud (material)	Plastic (Integral Shroud)	Plastic (Unshrouded Ring)		

<sup>@ -</sup> Distance Between Top Of Fins.

<sup>\* - 21.36</sup>mm (0.84") Wide, 5.20mm (0.20") Thick With Uniform Dynamic Tensioner.

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

Engine Description
Engine Code

5.7 LITER V8 (350 CID)

TUNED PORT FUEL INJECTION RPO L98

Engine - Cooling System

Engine -	Cooling System				
Coolant recove	ry system (std, opt, n.a.)		Standard	•	
Coolant fill location (rad., bottle)			Bottle, Coolant Recovery		
Radiator cap re	Radiator cap relief valve pressure				
[kPa (psi)]			103.4 (15.0)		
Circulation	Type (choke, bypass)		Choke		
thermostat	Starts to open @ deg's C(F)		90.6 (195)	<u> </u>	
	Type (centrifugal, other)		Centrifugal With Cast Aluminum Housing		
	GPM 1000 pump rpm		13		
	Number of pumps		1		
Water Pump	Drive (V-belt, other)		Single Belt Poly 'V' Accessory Drive (Serpentine)*		
	Bearing type		Sealed Double Row Ball		
	Impeller material		Steel		
	Housing material		Cast Iron		
By-pass recircient.)]	ulation (type (inter.,	-	Internal		
Cooling	With heater - L (qt.)		15.55 (16.43)		
Cooling system	With air conditioner-L(qt.)		15.55 (16.43)		
capacity	Opt. equip.[specify-L(qt.)]				
Water jackets f	ull length of cyl(yes,no)		Yes		
Water all aroun	d cylinder (yes, no)		Yes		
Water jackets o	pen at head face (yes,no)		No		
	Std., A/C, HD		A/C, Standard	<del></del>	
	Type (cross-flow, etc.)				
	Construction (fin & tube mechanical, braze, etc.)	_	Fin & Tube	-	
Radiator core	Matl., mass [kg(wgt.,lbs.)]		Aluminum Header, Tubes And Fins, Plastic Tanks		
	Width		667.5 mm		
	Height		437.8 mm		
	Thickness		34.0 mm	<del></del>	
		0	2.5		
Radiator end ta	Fins per inch	42	Plastic	<del></del>	
naciator end ta	· <sub>1</sub> · · · · · · · · · · · · · · · · · · ·			<del></del>	
	Std., elec., opt.		Standard A/C		
	Number of blades & type (flex, solid, material)		5-Blades, High Efficiency Curved Blades And		
			Ring Shroud, Plastic		
	Diameter & projected width			0 (12.5) - 2 Fans	
Fan	Ratio(fan to crnkshft.rev.)	-			
	Fan cutout type		ECM Controlled ECM (LH), Switch (RH	)	
	Drive type (direct, remote)				
	RPM at idle (elec.)				
	Motor rating(wattage)(elec)		150 W LH/RH		
	Motor switch (type & location) (elec.)		ECM LH - ECM & A/C Pressure S  RH - A/C Pressure Switch/E		
	Switch point (temp., pressure) (elec.)		1900 - 2100 2100 - 2200		
	Fan shroud (material)			tic (Unshrouded Ring)	
				,	

<sup>@ -</sup> Distance Between Top Of Fins.

<sup>\* - 21.36</sup>mm (0.84") Wide, 5.20mm (0.20") Thick With Uniform Dynamic Tensioner.

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## METRIC (U.S. Customary)

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

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

## Fuel Tank

Capacity [refill L	(callenell)	50.7 (45.5)
		58.7 (15.5)
Location (describe)		Rear Center
Attachment		Underbody Strap
Material & Mass	[kg (weight lbs.)]	Steel 8.579 (18.9)
Filler	Location & material	Left Rear Quarter, Steel
pipe	Connection to tank	Solder
Fuel line (materia	a!)	Steel
Fue! hose (material)		Rubber
Return line (material)		Steel
Vapor line (mate	rial)	Steel
Extended	Opt., n.a.	Not Available
range	Capacity [L (gallons)]	*
LETIK	Location & material	77
	Attachment	,
	Opt., n.a.	*
	Capacity [L (gallons)]	*
Auxiliary	Location & material	н
tank	Attachment	7
	Sictr switch or valve	н
	Separate fill	н

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

Engine Description
Engine Code

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

nduction type: carburetor, fuel njection system, etc.		Fuel Injection		
fanufacturer		AC/Rochester Products		
arburetor no. of t	parrels	None Preset - No Adjustment Provided		
dle A/F mix.				
	Paint of inj. (no.)	Fuel Injection At Throttle Body (2)		
uel .	Constant, pulse, flow	Pulse		
njection	Control (elec., mech.)	Electronic		
	Sys. press. [kPa (psi)]	76 (11.0)		
idle spdrpm (spec. neutral	Manual			
or drive and propane if used)	Automatic			
ntake manifold he or water thermost	eat control (exhaust atic or fixed)	Exhaust		
Air cleaner type		Replaceable Paper Element, Single Snorkei		
Fuel filter (type/lo	cation)	Replaceable Stainless Steel (With Paper Element) Located Near Fuel Tank		
•	Type (elec. or mech.)	Electric		
	Location (eng., tank)	Fuel Tank		
Fuel pump	Press. range [kPa(psi)]	Pressure Depends On Flow Rate And System Voltage		
	Flow rate at regulated pressure (L (gal)/hr @kPa (psi))	113 @ 83 (29.84 @ 12.0)		

I GOI TOTAL		
Capacity [refill L	(gallons)]	58.7 (15.5)
Location (describe)		Rear Center
Attachment		Underbody Strap
Material & Mass	(kg (weight (bs.))	Steel 8.579 (18.9)
Filler	Location & material	Left Rear Quarter, Steel
pipe	Connection to tank	Solder
Fuel line (materia	i)	Steel
Fuel hose (mater	ial)	Rubber
Return line (material)		Steel
Vapor line (mater	ial)	Steel
	Opt., n.a.	Not Available
Extended range tank	Capacity [L (gallons)]	n
tank	Location & material	n
	Attachment	п
	Opt., n.a.	Not Available
	Capacity [L (gallons)]	Ti di
Auxiliary	Location & material	7
tank	Attachment	п
	Sictr switch or valve	п
	Separate fill	11

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

Engine Description Engine Code 5.0 LITER V8 (305 CID)

TUNED PORT FUEL INJECTION RPO LB9

	rburetor, fuel	
Manufacturer Carburetor no. of barrels		Fuel Injection
		AC/Rochester Products
		None
Idle A/F mix.		Preset - No Adjustment Provided
	Point of inj. (no.)	Fuel Injection At Inlet Ports (8)
Fuel	Constant, puise, flow	Pulse
Injection	Control (elec., mech.)	ECM
	Sys. press. [kPa (psi)]	300 (44)
	Manual	<u></u>
dle spd.–rpm spec. neutral		
or drive and propane if	Automatic	
ised)		
	eat control (exhaust	
or water thermost	LETTIC OF TIXEO)	Water
Air cleaner type		Replaceable Paper Elements, Single Snorkel
uel filter (type/lo	cation)	Replaceable Stainless Steel (With Paper Element) Located Near Fuel Tank
	Type (slec. or mech.)	Electric
P 4	Location (eng., tank)	Fuel Tank
Fuel pump	Press. range (kPa(psi))	Pressure Depends On Flow Rate And System Voltage
	Flow rate at regulated pressure (L (gal)/hr @ kPa (psi))	93.3 @ 350 (24.65 @ 50.8)
Fuel Tank		
	gallons)]	58.7 (15.5)
Capacity [refill L (	·	58.7 (15.5) Rear Center
Capacity [refill L ( Location (describ	·	
Capacity [refill L ( Location (describe Attachment	e)	Rear Center
Capacity [refill L ( Location (describe Attachment Material & Mass [i Filler	e)	Rear Center Underbody Strap
Capacity [refill L ( Location (describe Attachment Material & Mass [i Filler	kg (weight lbs.)]	Rear Center Underbody Strap Steel 8.579 (18.9)
Capacity [refill L ( Location (describ Attachment Material & Mass [i Filler pipe	kg (weight lbs.)]  Location & material  Connection to tank	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel
Capacity [refill L ( Location (describ Attachment Material & Mass [i Filler pipe	kg (weight lbs.)]  Location & material  Connection to tank	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel Solder
Capacity [refill L ( Location (describ- Attachment Material & Mass [i Filler pipe Fuel line (material) Fuel hose (material)	kg (weight lbs.)] Location & material Connection to tank )	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel Solder Steel
Capacity [refill L ( Location (describ- Attachment Material & Mass [i Filler Sippe Fuel line (material) Fuel hose (material)	kg (weight lbs.)] Location & material Connection to tank )	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel Solder Steel Rubber
Capacity [refill L ( Location (describ- Attachment Material & Mass [i Filler ripe Fuel line (material) Fuel hose (material Return line (material	kg (weight lbs.)] Location & material Connection to tank )	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel Solder Steel Rubber Steel
Capacity [refill L ( Location (describ- Attachment Material & Mass [ Filler Fuel line (material) Fuel hose (material Return line (material Latended Latended Latended Latended Latended Latended Latended Latended Latended	kg (weight lbs.)] Location & material Connection to tank ) al) ial) Opt., n.a.	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel Solder Steel Rubber Steel Steel Steel Steel
Capacity [refill L ( cocation (describ- Attachment Aaterial & Mass [i iller ipe iuel line (material) iuel hose (material leturn line (material apor line (material ixtended lange	kg (weight lbs.)]  Location & material  Connection to tank ) sal) ial) Opt., n.a. Capacity [L (gallons)]	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel Solder Steel Rubber Steel Steel Steel Not Available
capacity [refill L ( cocation (describ- catachment Asterial & Mass [ iller ipe  uel line (material) uel hose (material leturn line (material apor line (material axtended lange	kg (weight lbs.)] Location & material Connection to tank ) al) ial) Opt., n.a.	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel Solder Steel Rubber Steel Steel Steel Not Available
Capacity [refill L ( Location (describ- Attachment Material & Mass [ Filler Fuel line (material) Fuel hose (material Return line (material Latended Latended Latended Latended Latended Latended Latended Latended Latended	kg (weight lbs.)]  Location & material  Connection to tank  al)  Opt., n.a.  Capacity [L (gallons)]  Location & material  Attachment	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel Solder Steel Rubber Steel Rubber Steel Not Available " "
Capacity [refill L ( Location (describ- Attachment Material & Mass [ Filler Fuel line (material) Fuel hose (material Return line (material Latended Latended Latended Latended Latended Latended Latended Latended Latended	kg (weight lbs.)]  Location & material  Connection to tank  al)  ial)  Opt., n.a.  Capacity [L (gallons)]  Location & material  Attachment  Opt., n.a.	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel Solder Steel Rubber Steel Steel Steel Not Available "
Capacity [refill L ( Location (describe Attachment Material & Mass [i Filler pipe Fuel line (material) Fuel hose (material Return line (material Vapor line (material Extended ange	kg (weight lbs.)]  Location & material  Connection to tank  al)  Opt., n.a.  Capacity [L (gallons)]  Location & material  Attachment  Opt., n.a.  Capacity [L (gallons)]	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel Solder Steel Rubber Steel Rubber Steel Not Available " Not Available
Capacity [refill L ( Location (describ- Attachment Material & Mass [i Filler pripe Fuel line (material) Fuel hose (material Return line (material Laterial Extended Lange Lank Auxiliary	kg (weight lbs.)]  Location & material  Connection to tank ) sil) ial)  Opt., n.a.  Capacity [L (gallons)]  Location & material  Attachment  Opt., n.a.  Capacity [L (gallons)]  Location & material	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel Solder Steel Rubber Steel Steel Steel Not Available " Not Available " Not Available "
Fuel Tank Capacity [refill L ( Location (describ) Attachment Material & Mass [i Filler pipe Fuel line (material) Fuel hose (material) Return line (material) Extended range tank  Auxiliary tank	kg (weight lbs.)]  Location & material  Connection to tank  al)  Opt., n.a.  Capacity [L (gallons)]  Location & material  Attachment  Opt., n.a.  Capacity [L (gallons)]	Rear Center Underbody Strap Steel 8.579 (18.9) Left Rear Quarter, Steel Solder Steel Rubber Steel Rubber Steel Not Available " " Not Available " " " Not Available "

 Vehicle Line
 FIREBIRD

 Model Year
 1990
 Issued
 6-89
 Revised(\*)
 9-89

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

Engine Description
Engine Code

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

Engine - Fu		olemental page for details of Fuel Inj, Supercharger, Turbocharger, etc. if used)			
Induction type: carburetor, fuel injection system, etc.		TPI ~ Tuned Port Fuel Injection			
Manufacturer		AC/Rochester Products			
Carburetor no. of barrels		None			
Idle A/F mix.		Preset - No Adjustment Provided			
	Point of inj. (no.)	Fuel Injection At Inlet Ports (8)			
Fuel	Constant, pulse, flow	Pulse			
njection	Control (elec., mech.)	Electronic - On Board Computer			
	Sys. press. [kPa (psi)]	300 (43.5)			
	Manual				
dle spdrpm spec. neutral					
or drive and propane if	Automatic				
sed)					
ntake manifold he or water thermost	eat control (exhaust atic or fixed)	Water, Thermostat			
Air cleaner type		Replaceable Paper Single Element			
uel filter (type/lo	cation)	Replaceable Stainless Steel (With Paper Element) Located Near Fuel Tank			
	Type (elec. or mech.)	Electric			
	Location (eng., tank)	Fuel Tank			
Fuel oump	Press. range [kPa(psi)]	Pressure Depends On Flow Rate And System Voltage			
	Flow rate at regulated pressure (L (gal)/hr @	93.3 @ 350 (24.65 @ 50.8)			
	kPa (psi))	93.3 W 330 (£4.63 W 30.6)			
Fuel Tank	1840 18-4 <u>- 1</u> 800				
Capacity [refill L (	gallons)]	58.7 (15.5)			
ocation (describe	0)	Rear Center			
Attachment		Underbody Strap			
Material & Mass [I	(g (weight lbs.)]	Steel 8.579 (18.9)			
Filler Pipe	Location & material	Left Rear Quarter, Steel			
pipe	Connection to tank	Solder			
Fuel line (material)	)	Steel			
Fuel hose (materia	af)	Rubber			
Return line (mater	lai)	Steel			
Vapor line (materi	ai)	Steel			
Endament of	Opt., n.a.	Not Available			
Extended ange	Capacity [L (gallons)]	*			
<b>A</b> nk	Location & material	*			
	Attachment	n			
	Opt., n.a.	Not Available			
	Capacity [L (gallons)]	*			
Auxiliary	Location & material	n n			
Auxiliary tank	Attachment	*			
	Sictr switch or valve	*			
	Separate fill				

Vehicle Line	FIRE	BIRD				
Model Year	1990	Issued	6-89	Revised(*)	9-89	

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

Engine Description
Engine Code

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

	Type (air injec	tion, engi	ne	Computer Command Control		
	modifications	<del></del>		Computer Command Control		
		Pump o		Pump Belt		
Air injection	Driven		Delt			
		ribution manifold,	Exhaust Manifold			
	l —		f entry	Exhaust Manifold		
	Exhaust	flow, o		Back Pressure Modulated Controlled Flow		
	Gas Recircu-	orifice,		Exhaust Manifold		
xhaust mission	lation		st source f exh.inj.	Landas Mannold		
ontrol		(spacer	r, carb., Id, other)	Inlet Manifold		
		Type	ic, other)	Single Bed, Oxidizing & Reducing		
		Numbe	r of	1		
	i	110				
		Locatio	on(s)	Beneath RF Underbody		
	Catalytic Converter	Volume	[L(cu.in)]	2.78 (170)		
		Substr	ate type	Monolith		
		Noble	metal type	Platinum (Pt), Rhodium (Rh)		
		Noble metal concentration (g/cu. cm.)		0.000838		
Type (ventilates to atmosphere, induction system, other)			Induction System			
Crankcase Imission Control	Energy source vacuum, carb	e (manifo uretor, ot	ld her)	Manifold Vacuum		
	Discharges (t manifold, oth	to intake er)		Inlet Manifold		
	Air init(breati	er cap.ot	her)	Air Inlet Duct		
vapora-	Vapor vented	-	Fueltank	Canister		
ive mission	crankcase, canister,othe		Carburetor			
Control	Vapor storag	•	n	Canister		
lectron-	Closed loop (			Yes		
c System	Open loop (ye	s/no)		No .		
Engine -	- Exhaust	Syste	m			
	single with cros			Single With Dual Tailpipes		
straight thru	k type (reverse fl , separate reson ass (kg (weight l	ator)		1, Reverse Flow		
Resonator n				None		
	Branch o.d.,	wall thick	ness	(a)		
xhaust ipe	Main o.d., wa			(b)		
	Mati, & Mass	•		See Notes 4.53 (10.0)		
nter-	o.d. & wall th			Aluminum Coated Steel		
nediate lipe	Matl. & Mass	(kg(wght	.lbs.)]	57.15 x 1.09 mm (2.25 x 0.04 in.)		
rait .	o.d. & wall th			Aluminum Coated Steel		
oipe			.lbs.)]	Aluminum Coated Steel, 3.231 (7.1)		

Vehicle Line FIREBIRD

Model Year 1990 Issued

METRIC (U.S. Customary)
SUPPLEMENTAL PAGE

Issued 6-89 Revised(\*)

#### NOTES:

(a) Left Hand/Right Hand Branch - Stainless Steel Laminated; 50.8 x 0.76 Outer Tube, With 0.76 Thick Stainless Steel Inner Tube.

- (b) Stainless Steel Laminated; 57.15 x 0.76 Outer Tube With Stainless Steel Inner Tube 0.76 Thick.
- \* Muffler And Tailpipe Unit 7.62 (16.8).

Vehicle Line	FIRE	BIRD			
Mode! Year	1990	Issued	6-89	Revised(*)	

METRIC (U.S. Customary)

Engine	Description
Engine	Code

5.0 LITER V8 (305 CID)	 
THROTTLE BODY INJECTION RPO LO3	

**Vehicle Emission Control** 

T						
Type (air injections modifications	ction, eng s, other)	ine	Air Injection W/Computer Command Control			
	Pump or pulse		Pump Vane			
A:-	Driven	by	V-Belt			
injection			Exhaust Manifold And Catalytic Converter			
	Point c	of entry	Exhaust Manifold			
Exhaust Gas	flow, o	pen	Back Pressure Modulated			
lation	Exhau	st source	Manifold Exhaust Crossover			
	(space	r, carb.,	Inlet Manifold			
	Type		Dual Bed (Oxidizing And Reducing)			
	Number of		1			
	Location(s)		Beneath RF Underbody			
Converter	Volume	e (L(cu.in))	2.78 (170)			
	Substrate type		Monolith			
	Noble metal type		Platinum (Pt), Pailadium (Pd), Rhodium (Rh)			
	Noble metal concentration (g/cu. cm.)					
atmosphere,	induction		Induction System			
Energy source vacuum, carbi	e (manifol uretor, ot	ld her)	Manifold Vacuum			
Discharges (t manifold, oth	rges (to intake Id, other		Throttle Body			
Air init(breather cap,other)		her)	Air Cleaner			
	to	Fuel tank	Canister			
	r)	Carburetor	Canister			
Vapor storage	provisio	n	Canister			
Closed loop (	yes/no)		Yes			
Open loop (ye	s/no)		No			
	Type (air injections  Air injection  Exhaust Gas. Recirculation  Catalytic Converter  Type (ventilat atmosphere, system, other carbination)  Discharges (the manifold, other carbinations)  Air init(breath Vapor vented crankcase, canister, other carbinations)  Closed loop (closed loop (closed loop (closed loop))	Type (air injection, eng modifications, other)  Pump Driven Air injection Air dis (head, etc.,) Point of Gas Recirculation Exhau Point of (space manifor Type Number Converter Volume Substr. Noble Noble concert Noble Noble concert of the concert o	Air injection  Air distribution (head, manifold, etc.,)  Point of entry  Type (controlled flow, open orifice, other)  Exhaust Gas Recirculation  Exhaust source  Point of exh.inj. (spacer, carb., manifold, other)  Type  Number of  Location(s)  Catalytic  Converter  Volume (L(cu.in))  Substrate type  Noble metal type  Noble metal concentration (g/cu. cm.)  Type (ventilates to atmosphere, induction system, other)  Energy source (manifold vacuum, carburetor, other)  Discharges (to intake manifold, other)  Air init(breather cap,other)  Vapor vented to crankcase, canister,other)  Closed ioop (yes/no)			

Engine - Exhaust System

Type (single dual, other)	, single with cross-over,	
		Single With Dual Tailpipes
straight thru	& type (reverse flow, ı, separate resonator) lass [kg (weight ibs.)]	1, Reverse Flow
Resonator n	o. & type	None
F	Branch o.d., wall thickness	(a)
Exhaust pipe	Main o.d., wall thickness	(b)
<u></u>	Mati. & Mass [kg(wght.lbs.)]	(See Notes) 4.07 (9.0)
Inter-	o.d. & wall thickness	57.15 x 1.14 mm (2.25 x .045 in.)
mediate pipe	Mati. & Mass [kg(wght.lbs.)]	Aluminum Coated Steel
Tail	o.d. & wall thickness	63.5 x 1.07 mm (2.25 x 0.042 in.)
pipe	Mati. & Mass [kg(wght.ibs.)]	Aluminum Coated Steel

SEE ATTACHED NOTES

METRIC (U.S. Customary)
SUPPLEMENTAL PAGE

Vehicle Line	FIRE	BIRD			
Model Year	1990	lssued	6-89	Revised(*)	

#### NOTES:

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

/ehicle Line	FIRE	BIRD		
Aodel Year	1990	Issued	6-89	Revised(*)

Dual Converters (With N10)

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

**Vehicle Emission Control** 

**Engine Description Engine Code** 

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

TOILIOID I		<b>30111110</b>	<u> </u>	Chiga Controller (that control				
	Type (air inject modifications	tion, engi	ne	Air Injection W/ Computer Command Control				
	_	Pump o	or pulse	Air Pump				
		Driven		Belt				
			ribution manifold,	Exhaust Manifold And Catalytic Converter				
		Point o	1 entry	Exhaust Manifold				
	Exhaust Gas	<del>                                     </del>	ontrolled pen	Back Pressure Modulated Controlled Flow				
	Recircu-		st source	Manifold				
khaust mission ontrol		(space	f exh.inj. r, carb., ld, other)	Inlet Manifold				
		Туре		Dual Bed, Oxidizing & Reducing				
		Numbe	er of	One	Two			
		Location	on(s)	Beneath RF Underbody				
	Catalytic Converter	Volum	e [L(cu.in)]	2.78 (170)				
		_	ate type	Monolith				
		_	metal type	Platinum (Pt), Palladium (Pd), Rhodium (Rh)	Platinum (Pt), Palladium (Pd), Rhodium (Rh)			
No ble metal concentration (g/cu, cm.)		ntration	0.001096					
	Type (ventila atmosphere, system, othe	induction	· · · · · · · · · · · · · · · · · · ·	Induction System				
rankcase mission ontrol	mission vacuum, carburetor, other)			Manifold Vacuum				
•	Discharges ( manifold, oth	to intake ier		Intake Manifold				
	Air init(breat	her cap,ot	ther)	Throttle Body				
vapora-	Vapor vented	to	Fuel tank	Canister				
ve mission	crankcase, canister,othe	or)	Carburetor					
ontrol	Vapor storag	e provisio	n	Canister				
lectron-	Closed loop	(yes/no)		Yes				
; ystem	Open loop (y	es/no)		No				
ngine ·	- Exhaust	Syste	m	Single Converter (Without N10)	Dual Converters (With N10)			
	single with cros			Single With Dual Tailpipes				
trainht thru	type (reverse fi , separate reson ass [kg (weight i	atori		1, Reverse Flow				
lesonator n				None				
	Branch o.d.,	wall thick	ness	(a)	(c)			
xhaust pe	Main o.d., w			(b)	(d)			
•	Mati. & Mass			4.07 (9.0)	15.68 (34.6)			
iter-	o.d. & wall th			57.15 x 1.14mm (2.25 x .045 in.)	69.85 x 1.40mm (2.75 x 0.05 in.)			
nediate lipe	Mati, & Mass	(kg(wght	i.lbs.)}	Aluminum Coated Steel				
	1			62.5 v 4.07 mm /2.25 v .04 in )				

Single Converter (Without N10)

Mati. & Mass [kg(wght.lbs.)]

o.d. & wall thickness

Aluminum Coated Steel

63.5 x 1.07 mm (2.25 x .04 in.)

Tail pipe

<sup>\*</sup> Muffler & tailpipe unit 8.845 (19.5). (SEE FOOTNOTES ON PAGE 7.5).

# MVMA Specifications METRIC (U.S. Customary)

SUPPLEMENTAL PAGE

Vehicle Line	FIRE	BIRD			
Model Year	1990	Issued	689	Revised(*)	

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

<sup>(</sup>a) Laminated - Stainless Steel Outer Pipe, 63.5 x 1.016 (2.5 x 0.04), Steel Inner Pipe.

<sup>(</sup>b) Laminated - Stainless Steel Outer Pipe, 76.2 x 1.016 (3.0 x 0.04), Steel Inner Pipe.

<sup>(</sup>c) 57.15 x 1.37 Thickwall Stainless Steel.

<sup>(</sup>d) 63.5 x 1.37 Thickwall Stainless Steel.W-Tube 69.85 x 1.37 Thickwall Stainless Steel.

Vehicle Line FIREBIRD

Model Year 1990 Issued 6-89 Revised(\*)

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

Engine Description
Engine Code

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

**Vehicle Emission Control** 

	Type (air injections	ction, engine s, other)	Air Injection W/Computer Command Control
		Pump or pulse	
	Driven by	Belt	
	Air injection	Air distribution (head, manifor etc.,)	
		Point of entry	Exhaust Manifold
	Exhaust Gas	Type (control flow, open orifice, other)	
٠	Recircu- lation	Exhaust sour	Manifold
Exhaust Emission Control		Point of exh.i (spacer, carb, manifold, oth	
		Туре	Dual Bed, Oxidizing & Reducing
		Number of	2
		Location(s)	Beneath RF Underbody
	Catalytic Converter	Volume (L(cu.	n)] 2.78 (170)
		Substrate typ	Monolith Monolith
	1	Noble metal t	Platinum (Pt), Palladium (Pd), Rhodium (Rh)
		Noble metal concentration (g/cu, cm.)	0.001096
	Type (ventilat atmosphere, system, other	induction	Induction System
Crankcase Emission Control	Energy sourc vacuum, carb	e (manifold uretor, other)	Manifold Vacuum
	Discharges (t manifold, oth	o intake er	Intake Manifold
	Air init(breath	er cap,other)	Throttle Body
Evapora-	Vapor vented	to Fuel	tank Canister
ive Emission Control	crankcase, canister,othe	r) Carb	uretor
.ontroi	Vapor storage	provision	Canister
lectron-	Closed loop (	yes/no)	Yes
s System	Open loop (ye	s/no)	No

	Engine - Exhaust System  Type (single, single with cross-over, dual, other)  Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs.)]  Resonator no. & type		Dual Converters (With N10)		
			Single With Dual Tailpipes		
*			1, Reverse Flow		
			None		
	P	Branch o.d., wall thickness	(a)		
	Exhaust pipe	Main o.d., wall thickness	(b)		
		Mati. & Mass [kg(wght.lbs.)]	15.68 (34.6)		
*	Inter-	o.d. & wall thickness	69.85 x 1.40 mm (2.75 x 0.05 in.)		
	mediate pipe	Mati. & Mass (kg(wght.lbs.))	Aluminum Coated Steel		
	Tạil	o.d. & wall thickness	63.5 x 1.07 mm (2.25 x .04 in.)		
	pipe	Matl. & Mass [kg(wght.ibs.)]	Aluminum Coated Steel		

<sup>(</sup>a) 57.15 x 1.37 Thickwall Stainless Steel.

<sup>(</sup>b) 63.5 x 1.37 Thickwall Stainless Steel. W-Tube 69.85 x 1.37 Thickwall Stainless Steel.

<sup>\*</sup> Muffler & Tailpipe Unit 8.845 (19.5).

Vehicle Line	FIREBIRD				
Model Year	1990	Issued	6-89	Revised(*)	

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

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

ransmissions/Transaxie (Std., Opt.,	, N.A.)
Manual 3-speed (manufacturer/country)	Not Available
Manual 4-speed (manufacturer/country)	Not Available
Manual 5-speed (manufacturer/country)	Standard
	1

Automatic (manufacturer/country) Optional

Auto, overdrive (manufacturer/country) Optional

Manual Transmission/Transaxie		(MBI)
Number of	forward speeds	5
	151	4.03
	2nd	2.37
Gear	3rd	1.50
ratios	4th	1.00
	5th	0.76
	Reverse	3.76
Synchronous meshing (specify gears) Shift lever location		All Forward Gears
		Fioor
Trans, case	e mat'l. & mass kg (lbs)*	Aluminum

3.25 (6.87)

Dexron II

Clutch (Manual Transmission)

Capacity [L (pt.)]

Type recommended

Lubricant

Clutch manufacturer			Belleville	
Clutch type disc)	e (dry, wet; single, multipl	G	Dry Disc	
Linkage (h)	yd., cable, rod, lever,othe	r)	Hydraulic	
	effort (nom.	Depressed	130	
spring load	l, new) Ñ (ibs.)	Released		_
Assist (spri	ing, power/percent, nomi	nai)	None	
Type press	ture plate springs		Diaphragm	
Total sprin	g load (nominal, new) N(Ib	s)	5750 (1293)	
	Facing mfgr. & matt. coding		Valeo/F202	
	Facing matt. & construction		Non-Asbestos	
	Rivets per facing		16	
	Outside x inside dia. (nom.)  Total eff.area[sq cm(sq in)]  Thickness (pressure plate side/fly wheel side)  Rivet depth (pressure plate side/fly wheel side)  Engagement cushion method		232.0 x 155.0 mm (9.125 x 6.125 in.)	
Clutch facing			234.0 (36.28)	
tacing			3.2/3.2	
			1.1 mm (.043 in.)	
			Driven Plate Wave Spoke Springs	
Release be	aring type & method lub.		Self Centering Angular Contact Ball Bearing Pre-Packed And Sealed	
Torsional d hysteresis	lamping method, springs,		Coil Springs With Non-Metal Friction Control	

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

Vehicle Line	FIREBIRD				
Model Year	1990	Issued	6-89	Revised(*)	

## METRIC (U.S. Customary)

Engine	Description
Engine	Code

5.0 LITER V8 (305 CID)	 · · · · ·
THROTTLE BODY INJECTION RPO Lo3	

Transmissions/Transaxie (Std.,	Opt., N.A.)	
Manual 3-speed (manufacturer/country)	Not Available	
Manual 4-speed (manufacturer/country)	Not Available	
Manual 5-speed (manufacturer/country)	Standard	-
Automatic (manufacturer/country)	Optional	
Auto, overdrive (manufacturer/country)	Optional	

Manuai Transmission/Transaxie		(M39)
Number of	forward speeds	5
	1st	2.95
	2nd	1.94
Gear	3rd	1.34
ratios	4th	1.00
	5th	0.63
	Reverse	2.76
Synchronoi	us meshing (specify gears)	All Forward Gears
Shift lever	location	Floor
Trans. case	mat'i. & mass kg (lbs)*	Aluminum
L., b.,	Capacity (L (pt.))	3.25 (6.87)
Lubricant	Type recommended	
		1

## Clutch (Manual Transmission)

Clutch mar	nufacturer		Belleville
Clutch type (dry, wet; single, multiple disc)		le .	Dry Disc
Linkage (h	yd., cable, rod, lever,othe	or)	Hydraulic
Max. peda	effort (nom.	Depressed	150
spring load	i, new) Ñ (lbs.)	Released	
Assist (spri	ing, power/percent, nomi	nal)	None
Type press	sure plate springs		Diaphragm
Total sprin	g load (nominal, new) N(lb	s)_	7750 (1742)
-	Facing mfgr. & matt. coding		Valeo/F202
	Facing matl. & construction		Non-Asbestos
	Rivets per facing		18
	Outside x inside dia. (nom.)		254.0 x 165.0 mm (10.0 x 6.5 in.)
Clutch facing	Total eff.area[sq cm(sq in)]		293.0 (45.43)
tacing	Thickness (pressure plate side/fly wheel side)  Rivet depth (pressure plate side/fly wheel side)  Engagement cushion method		3.45/3.45
			1.1 mm (.043 in.)
			Driven Plate Wave Spoke Springs
Release be	saring type & method lub.		Self Centering Angular Contact Ball Bearing Pre-Packed And Sealed
Torsional damping method, springs, hysteresis			Coil Springs With Non-Metal Friction Control

 $<sup>\</sup>ensuremath{^{\pm}}$  includes shift linkage, lubricant, and clutch housing. If other specify,

Vehicle Line	FIREBIRD				_	
Model Year	1990	Issued	6-89	Revised(*)		

## METRIC (U.S. Customary)

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

<b>Transmiss</b>	ions/Tran:	saxle (Std.,	Opt., N.A.)

	- P-10 - 1-1	
Manual 3-speed (manufacturer/country)	Not Available	
Manual 4-speed (manufacturer/country)	Not Available	
Manual 5-speed (manufacturer/country)	Standard	
Automatic (manufacturer/country)	Optional	
Auto, overdrive (manufacturer/country)	Optional	

<u>Manual</u>	Transmission/Transaxie	(M39)	(MK6)	
Number of f	orward speeds	5	5	
	1st	2.95	2.75	
	2nd	1.94	1.94	
Gear	3rd	1.34	1.34	
ratios	4th	1.00	1.00	
	5th	0.63	0.74	
	Reverse	2.76	2.76	
Synchronou	s meshing (specify gears)	All Forward Gears		
Shift lever l	ocation	Floor		
Frans. case	mat'i. & mass kg (ibs)*	Aluminum		
	Capacity (L (pt.))	3.25 (6.87)		
Lubricant Type recommended	Type recommended	5W-30		

#### Clutch (Manual Transmission)

Clutch manufacturer		•	Belleville
Clutch type disc)	e (dry, wet; single, multipl	•	Dry Disc
Linkage (h)	d., cable, rod, lever,othe	r)	Hydraulic
	effort (nom.	Depressed	150
spring load	, new) Ň (lbs.) ——-	Released	
Assist (spri	ng, power/percent, nomi:	af)	None
Type press	ure plate springs		Diaphragm
Total spring	o load (nominal, new) N(Ib	s)	7750 (1742)
	Facing mfgr. & matl. coding		Valeo/F202
	Facing matl. & const	ruction	Non-Asbestos
	Rivets per facing		18
	Outside x inside dia. (nom.)		267.0 x 165.0 mm (10.5 x 6.5 in.)
Clutch	Total eff.area[sq cm	(sq in)]	346.0 (53.6)
Thickness (pressure placed of the side of	plate	3.45/3.45	
			1.1 mm (.043 in.)
	Engagement cushion method		Driven Plate Wave Spoke Springs
Release be	aring type & method lub.		Self Centering Angular Contact Ball Bearing Pre-Packed And Sealed
Torsional d hysteresis	amping method, springs,		Coil Springs With Non-Metal Friction Control

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

Vehicle Line	FIREBIRD		IREBIRD		.8
Model Year	1990	Issued	6-89	Revised(*)	

MICIRIC	(U.S. Customary	,			
Engine Description			5.7 LITER V8 (350 CID)		
Engine Cod			TUNED PORT FUEL INJECTION RPO L98		
Linginio oo					
Transmis	sions/Transaxie	(Std., Opt.,			
Manual 3-spec	ed (manufacturer/country)		Not Available		
Manual 4-spec	ed (manufacturer/country)				
Manual 5-spec	d (manufacturer/country)		*		
Automatic (ma	nufacturer/country)		Standard		
Auto, overdriv	e (manufacturer/country)		Standard		
Manual T	ransmission/Tra	nsaxle	(NOT AVAILABLE)		
Number of for	ward speeds				
	1st		<u> </u>		
	2nd				
Gear ratios	3rd				
	4th				
	5th				
	Reverse		<u> </u>		
Synchronous	meshing (specify gears)				
Shift lever loc	ation				
Trans. case ma	ıt'i, & mass kg (lbs)*				
	Capacity [L (pt.)]				
Lubricant	Type recommended	·			
	<u>                                     </u>				
<b>6</b> 1-4-1-7			AND ANAMARI (C)		
Clutch (N	lanual Transmis	ision)	(NOT AVAILABLE)		
Clutch manufa	acturer				
Clutch type (d	lry, wet; single, multiple				
Linkage (hyd.	, cable, rod, lever,other)				
Max. pedal of		Depressed			
spring load, n	BW) N (IDS.)	Released			
Assist (spring	, power/percent, nominal)				
Type pressure	plate springs				
Total spring lo	ad (nominal, new) N(lbs)				
	Facing mfgr. & matt. co	ding			
	Facing matt. & construc	<del></del>			
	Rivets per facing				
	Outside x inside dia. (no	om.)			
Clutch	Total eff.area(sq cm(sq				
facing	Thickness (pressure pla	·			
	side/fly wheelside)				
	Rivet depth (pressure paide/fly wheel side)	olate			
	Engagement cushion m	ethod			
Release beari	ng type & method lub.				
Torsional dam hysteresis	sping method, springs,				

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

Vehicle Line	FIREBIRD				
Model Year	1990	Issued	6-89	Revised(*)	

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

Engine	Description
Engine	Code

		 	<del></del>
3.1 LITER V6 (191 CID)			
13.1 LITER VO (181 CID)			
1			
MULTI-PORT FUEL INJEC	TION RPO LHO		

Trade Name		
Type and specia	ul features (describe)	4-Speed Automatic
	Location (column, floor, other)	Column & Floor
Gear selector	Ltr./No. designation (e.g. PRND21)	P-R-N-(D-D-2-1
	Shift interlock (yes, no, describe)	No
-	181	2.92
	2nd	1.56
Gear ratios	3rd	1.00 (Converter Clutch Engagement)
	4th	0.70 (Converter Clutch Engagement)
	Reverse	2.38
Max. upshift so	eed - drive range	1-2 = 40 (25)
(km/h (mph))	· · · •	2-3 = 166 (103)
Max, kickdown speed – drive range		4-3 = 140 (87
[km/h (mph)]	· •	3-2 = 105 (65)
		2-1 = 60 (37)
Min. overdrive speed [km/h (mph)]		68 (42)
	Number of elements	3
	Max. ratio at stall	2.22
Torque converter	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245mm (9.8 in.)
	Capacity factor "K"	177
	Capacity (refill L(pt.)]	8.75 (18.38)
Lubricant	Type recommended	Dexron II
Oil cooler (std., external, air, liq	opt., N.A., internal,	Standard, Integral Part Of Radiator
Trans. mass (kg	(ibs)] & case mati.**	83.3 (163.26)
	/ 4 Wheel Drive	(NOT APPLICABLE)
Desc. & type (p 2/4 shift while chain/gear, etc	art-time, full-time, moving, mech., elect., )	
	Manufacturer and model	
Transfer case	Type and location	
Low-range gez	ar ratio	
	nect (describe)	
Center differential	Type (bevel, planetary, w or w/o viscous bias, torsen, etc.)	
	Torque split(% frt/rear)	

<sup>\*</sup> input speed / square root of torque.
\*\* Dry weight including torque converter. If other, specify.

Vehicle Line	FIREBIRD				•
Model Year	1990	Issued	6-89	Revised(*)	

METRIC (U.S. Customary)

Engine	Description
Engine	Code

5.0 LITER V8 (305 CID) THROTTLE BODY INJECTION RPO LO3

Trade Name			
	· · · · · · · · · · · · · · · · · · ·	'700-R4'	'200–4R'
Tuma amal ama afo		4 Speed Automobie Termin Commission	
Type and special features (describe)		4-Speed Automatic Torque Converter	
	Landing technical disease	With Planetary Gears	_
Gear selector	Location (column, floor, other)	Steering Column	
	Ltr./No. designation (e.g. PAND21)	P-R-N-(D)-D-2-1	
	Shift interlock (yes, no, describe)		-
·	1st	306	2.74
0	2nd	1.63*	1.57
Gear ratios	3rd	1.00*	1.00*
	4th	0.70*	0.67*
	Reverse	2.29	2.07
Max. upshift speed – drive range (km/h (mph))		1-2 = 60 (37.5)	
		2-3 = 108 (67)	Not Available
Max. kickdown speed – drive range (km/h (mph))		3-2 = 100 (62)	
		2-1 = 45 (28)	. #
Min. overdrive speed [km/h (mph)]		67 (41.5)	
	Number of elements	3	
	Max. ratio at stall	5.8:1	Not Available
Forque converter	Type of cooling (air, liquid)	Liquid	
	Nominal diameter	298 (11.75)	
	Capacity factor "K"		
	Capacity (refit) L(pt.))	3.0 (6.3)	
Lubricant	Type recommended	Dexron II	<u></u>
Oil cooler (std., e external, air, liqu	opt., N.A., internal, rid)	Standard, Integral With Radiator	-
Trans, mass ike	lbs)} & case mati.**	Aluminum	
	/ 4 Wheel Drive	(NOT AVAILABLE)	<u></u>
Desc. & type (pa	rt-time, full-time, noving, mech., elect.,		
Transfer case	Manufacturer and model		
	Type and location		
Low-range gear	ratio		
System disconn	ect (describe)		
Center differential	Type (bevel, planetary, w or w/o viscous bias, torsen, etc.)		
		<del></del>	

<sup>\*</sup> Input speed / square root of torque.
\*\* Dry weight including torque converter. If other, specify.

Vehicle Line FIREBIRD

Model Year 1990 Issued 6-89 Revised(\*)

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

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

Automatic	Transmission/Transaxi	<u> </u>
Trade Name  Type and special features (describe)		'700-R4'
		4-Speed Automatic Torque Converter with Clutch
	Location (column, floor, other)	Floor Console
Gear selector	Ltr./No. designation (e.g. PRND21)	P-R-N-(D)-D-2-1
	Shift interlock (yes, no, describe)	
	181	3.06
	2nd	1.63
Gear ratios	3rd	1.00*
	4th	0.70*
	Reverse	2.29
Max. upshift speed - drive range (km/h (mph))		1-2 = 66 (41), 2-3 = 122 (76)
Max. kickdown speed – drive range (km/h (mph))		3-2 = 116 (72), 2-1 = 63 (39)
Min. overdrive speed (km/h (mph))		66 (41)
	Number of elements	3
	Max. ratio at stall	2.15
Torque converter	Type of cooling (air, liquid)	Liquid
	Nominal diameter	298 (11.75)
	Capacity factor "K"	115
	Capacity (refill L(pt.))	4.7 (10.0)
Lubricant	Type recommended	GM Dexron II
Oil cooler (std., opt., N.A., internal, external, air, liquid)		Standard Integral With Radiator
Trans. mass ike	g(ibs)) & case mati.**	Aluminum 74.2 (163.5)
tioner index (a)		* Torque Converter Clutch in 3rd & 4th Gears.
All Whee	i / 4 Wheel Drive	(NOT APPLICABLE)
Desc. & type (part-time, full-time, 2/4 shift while moving, mech., elect., chain/gear, etc.)		
Transfer case	Manufacturer and model	
	Type and location	
Low-range ge	ar ratio	
	nnect (describe)	
Center differential	Type (bevel, planetary, w or w/o viscous bias, torsen, etc.)	
	Torque split(% frt/rear)	

<sup>\*</sup>Input speed / square root of torque.
\*\* Dry weight including torque converter, if other, specify.

Vehicle Line	FIRE	BIRD			
Model Year	1990	Issued	6-89	Revised(*)	

METRIC (U.S. Customary)

Engine Description **Engine Code** 

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

Trade Name  Type and special features (describe)		4-Speed Automatic Torque Converter with Clutch		
Gear selector	Ltr./No. designation (e.g. PRND21)	P-R-N-(D)-D-2-1		
	Shift interlock (yes, no, describe)			
	1st	3.06		
	2nd	1.63		
3ear atio≉	3rd	1,00*		
	4th	0.70*		
	Reverse	2.29		
Max. upshift speed – drive range (km/h (mph))		1-2 = 63 (39), 2-3 = 125 (78) 3-4 = 197 (125)		
Max. kickdown speed – drive range (km/h (mph))		3-2 = 104 (65), 2-1 = 57 (35)		
Min. overdrive speed (km/h (mph))		65 (41)		
	Number of elements	3		
	Max, ratio at stall	1.91		
Torque converter	Type of cooling (air, liquid)	Liquid		
	Nominal diameter	298 (11.75)		
i	Capacity factor "K"	100		
	Capacity (refill L(pt.))	4.7 (10.0)		
Lubricent	Type recommended	GM Dexron II		
Oil cooler (std., opt., N.A., internal, external, air, liquid)		Standard Integral With Radiator		
Trans. mass (k)	g(lbs)] & case mati.**	Aluminum 74.2 (163.5)		
		* Torque Converter Clutch in 3rd & 4th Gears.		
All Wheel / 4 Wheel Drive		(NOT APPLICABLE)		
Desc. & type (part-time, full-time, 2/4 shift while moving, mech., elect., chain/gear, etc.)				
Transfer case	Manufacturer and model			
	Type and location			
Low-range ge	ar ratio			
	nnect (describe)			
Center differential	Type (bevel, planetary, w or w/o viscous bias, torsen, etc.)			
#11141A141	Torque split(% frt/rear)			

<sup>\*</sup>Input speed / square root of torque.
\*\*Dry weight including torque converter, if other, specify.

BAVARA Considerations	Vehicle Line	FIREBIRD			
MVMA Specifications	Model Year _	1990	Issued	6-89	Revised(*)

Engine Description 3.	3.1 LITER V6 (191 CID)
Engine Code M	MULTI-PORT FUEL INJECTION RPO LHO

o Axle Ratio and Tooth Combinations		inations _AUTOMATIC - MD8	MANUAL - MB1
	or overall top gear ratio)	3.23 (226)	3.42 (2.60)
Ring gear o		7.625 in.	7.625 ln.
No. of	Pinion	13	12
teath	Ring cear	42	41

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

Manufacturer				Saginaw Division
Type (straigh) nternal-exte	t tube, tubein rnal damper, et	-tube, :c.)		Straight Tube W/Internal Damper
	Manual 3-s	peed transmission		Not Applicable
Duter Siam. x	Manual 4-s	peed transmission		Not Applicable
ength* x wall	Manual 5-s	peed transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)
hickness	Overdrive			Not Available
	Automatic t	ransmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)
nter-	Type (plain,	anti-friction)		Not Applicable
mediate bearing	Lub. (fitting	;, prepack)		Not Applicable
	Туре			Splined
Slip yoke	Number of	Number of teeth		27
	Spline o.d.			29.84 mm (1.174 in.)
		_	Front	Saginaw Division
	Make and r	nfg. no.	Rear	Saginaw Division
	Number us	ed		2
Universal	Type (ball and trunnion, cross)			Cross
joints	Rr. attach(	u-bolt,clamp,etc)		Strap & Bolts
		Type (plain, anti-friction)		Anti-Friction
	Bearing Lubrication (fitting, prepack)			Prepacked
Drive taken through (torque tube, arms or springs)			Propeller Shaft Assembly	
Torque taken through (torque tube, arms or springs)			Torque Arm Assembly	

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

<sup>\* 70</sup>mm (2.75 in) Dia. Aluminum Shaft Replaces Base Steel Shaft Where Necessary For Weight Reduction.

MVIVI	4 Spe	cifications	5	Vehicle Line Model Year	1990	BIRD Issued	6-89	Revised(*)	
METRIC	(U.S. C	ustomary)			,,,,,,			11041360( )	
Engine De	scription			5.0 LITER V8 (305	S CID)				
Engine Co	•			THROTTLE BODY	,	N RPO LO3			
a Avia Da	No and I	'aath Cambir						··	
		ooth Combin	ations	T	D8		<del></del>	MANUAL - M39	·
	overall top g	ear ratio)		2.73 (1.91) Not Available	<del></del>			3.08 (1.94)	
Ring gear o.c	Pinion	<del></del>		NOT AVAILABLE				<u> </u>	··
teeth	Ring gear						<del></del> -		
o Rear Ax	ie Unit		-						
Description				Salisbury/Beam Ho	usina			<del></del>	<del></del> .
Limited stip (	differential (ty	/pe)		Not Applicable					
···	Ту			Hypoid				<u> </u>	
Drive pinion		set		1.50					
No. of differe	ential pinions			2				· · · · · · · · · · · · · · · · · · ·	
Pinion/	Ad	justment (shim, etc.)		Shim					
Gifferential	Bearing adjustment		Shim						
Driving whee	iving wheel bearing (type)		Cylindrical Roller Direct On Shafts, Drawn Cup						
Lubricant	Capacity [L (pt.)]		1.66		"		:		
Lubricant	Type reco	mmended		GL-5 Gear Lubrica	nt				
		. <u>.                                   </u>							
	01			,					
		Rear Wheel	Drive						
Manufacture Type (straigh	t tube, tube-i	n-tube,		Saginaw Division					
internal-exte	rnal damper,			Straight Tube W/Internal Damper					
Quter		speed transmission		Not Applicable					·
diam, x length* x	<del></del>	speed transmission	· · · · · · · · · · · · · · · · · · ·	Not Applicable					
wall thickness		speed transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)					
	Overdrive		<del>-</del>	Not Available					
Inter-		transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)					
mediate bearing		, anti-friction) g, prepack)		Not Applicable					
Doming	Type	g, prepack)		Not Applicable		<del></del>			
Stip yoke	Number of	teath		Splined 27					
JONE	Spline o.d.			00.04 mm (4.474 in )					
<del></del>	Opinio dia		Front	Saginaw Division	·/		-		
	Make and	mfg. no.	Rear	Saginaw Division	<del></del>	****			
	Number us	ed		2					
Type (be		ype (ball and trunnion,				<u> </u>			
Universal	Jniversal			Cross					
joints	Rr. attachi	u-bolt,clamp,etc)		Strap & Bolts					
		Type (plain, anti-friction)							
	Bearing	l ubring!		Anti-Friction					
		Lubrication (fitting, prepack)		Prepacked					

Propeller Shaft Assembly

Torque Arm Assembly

Drive taken through (torque tube, arms or springs)

Torque taken through (torque tube, arms or springs)

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

<sup>\* 70</sup>mm (2.75 in) Dia. Aluminum Shaft Replaces Base Steel Shaft Where Necessary For Weight Reduction.

# MVMA Specifications Vehicle Line FIREBIRD Model Year 1990 Issued 6-89 Revised(\*) 9-89

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

Engine Description	5.0 LITER V8 (305 CID)
Engine Code	TUNED PORT INJECTION RPO LB9

o <u>Axie R</u>	atio and Tooth Combinations	AUTOMATIC - MD8	MANUAL - M39	MANUAL - MK6
Axle ratio (	or overall top gear ratio)	2.73 (1.91)	3.08 (1.94)	3.42 (2.50)
Ring gear o	.d.	Not Available		·
No. of	Pinion	н		
teeth	Ring gear	,	<del></del>	

### o Rear Axie Unit

Description		Salisbury/Beam Housing
Limited slip o	differential (type)	Not Applicable
	Туре	Hypoid
Drive pinion Offset		1.50
No. of differe	ential pinions	2
inion/	Adjustment (shim, etc.)	Shim
differential	Bearing adjustment	Shim
Oriving whee	el bearing (type)	Cylindrical Roller Direct On Shafts, Drawn Cup
	Capacity [L (pt.)]	1.66
ubricant	Type recommended	GL-5 Gear Lubricant

### o Propeller Shaft - Rear Wheel Drive

T TOPONO	· Ondit	Real Willer	DIIIV					
Manufacturer Type (straigh	t tube, tube-ii	n-tuha		Saginaw Division				
internal-exte	rnal damper, e	tc.)		Straight Tube W/Internal Damper				
Outer	Manual 3-speed transmission			Not Applicable				
odier diam. x length* x wall thickness	Manual 4-a	peed transmission		Not Applicable				
	Manual 5-a	peed transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)				
	Overdrive			Not Available				
	Automatic	transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)				
Inter-	Type (plain	anti-friction)		Not Applicable				
mediate bearing	Lub. (fitting, prepack)			Not Applicable				
O.P.	Туре			Splined				
Slip yake	Number of	Number of teath		27				
	Spline o.d.			29.84 mm (1.174 in.)				
		_	Front	Saginaw Division				
	Make and r	Make and mfg. no.		Saginaw Division				
	Numberus	ed		2				
		ind trunnion,	_					
Universal	cross)			Cross				
joints	Ar. attach(	u-boft,clamp,etc)		Strap & Bolts				
		Type (plain, anti-friction)		Anti-Friction				
	Bearing			Prepacked				
Drive taken t arms or sprin	Drive taken through (torque tube, arms or springs)			Propeller Shaft Assembly				
Torque taken arma or sprin	through (torq gs)	ue tube,		Torque Arm Assembly				

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

<sup>\* 70</sup>mm (2.75 in) Dia. Aluminum Shaft replaces Base Steel Shaft Where Necessary For Weight Reduction.

MVM	Spec	ifications	•	Vehicle Line	FIRE	BIRD			
	. <b>-</b> p		•	Model Year	1990	Issued	6-89	Revised(*) _	9-89
ETRIC	(U.S. Cu	stomary)							
ngine De	scription			5.7 LITER V8 (305	CID)				
ngine Co	de			TUNED PORT INJ	ECTION R	PO L98			
xie Rat	io and To	oth Combin	ations	AUTOMATIC - MI	08				
	overall top gea			3.23 (2.26)		<del></del>	_1		
ling gear o.d				Not Available					
la. of	Pinion			#				-	
eth	Ring gear			W					
lear Axi	e Unit								
escription	,			Salisbury/Beam Ho	using				
	ifferential (typ	•)		Not Applicable			•		
	Тур			Hypoid					
noiniq <del>s</del> vin(	Offs			1.50					
o. of differe	ntial pinions			2					
inion/	Adju	stment (shim, etc.)		Shim					
ifferential	Bea	ring adjustment		Shim					
iving wheel bearing (type)		Cylindrical Roller Direct On Shafts, Drawn Cup							
	Capacity [L	(pt.)]		1.66					
ubricant	Type recom	mended		GL-5 Gear Lubrica	nt				
				<u> </u>					<del></del>
Aanufacturer		Rear Wheel	Drive	Saginaw Division	<del></del>			<del></del>	42
ternal-exte	mal damper, e	tc.)		Straight Tube W/Im	ternal Dam	per			
uter	Manual 3-s	peed transmission		Not Applicable	<u></u>			<del></del>	
iam. x ingth" x		peed transmission		Not Applicable					
rall hickness		peed transmission		<del>1</del>	63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)				
	Overdrive	. ,		Not Available					
-4	<del>}                                    </del>	ransmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)					
ter- tediate		anti-friction)		Not Applicable	Not Applicable				
earing	Lub. (fitting	, prepack)		Splined		-			
lip oke	Number of	teeth		27					
	Spline o.d.			29.84 mm (1.174 in.)					
		Spline o.d. Front		Saginaw Division		·			
	Make and n	ntg. no.	Rear	Saginaw Division				<del></del>	
	Number use	ed		2	_			<del>, ,                                    </del>	
niversal		nd trunnion,		Cross					
pint#	Rr. attachii	-boit,clamp,etc)		Strap & Bolts					
	, areacing	Type (plain, anti-friction)		Anti-Friction					
	Bearing	Lubrication (fitting, prepack)		Bronnellad		<u> </u>			

Prepacked

Propeller Shaft Assembly

**Torque Arm Assembly** 

Drive taken through (torque tube, arms or springs)

Torque taken through (torque tube, arms or springs)

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

<sup>\* 70</sup>mm (2.75 in) Dia. Aluminum Shaft Replaces Base Steel Shaft Where Necessary For Weight Reduction.

Vehicle Line	FIRE	BIRD			
Model Year	1990	Issued	6-89	Revised(*)	

METRIC (U.S. Customary) Body Type And/Or

Body Type And/Or	
Engine Displacement	

ALL

	Sto	I./opt./n.a.	Not Available
	Ma	nual/automatic control	В
	Туг	oe (air/hydraulic)	н
ar	Pri	mary/assist spring	n
veling	Re	ar only/4 wheel leveling	n
	Sin	gle/dual rate spring	H
	Sin	gle/dual ride heights	,
	Pro	vision for jacking	Body Pickup At Rocker Panels
	Std./opt./n.a.		Not Applicable
	Ma	nual/automatic control	n .
	Nu	mber of damping rates	*
hock bsorber amping	Ty	pe of actuation (manual/ ictric motor/air, etc.)	•
ntrois		Lateral acceleration	*
	n	Deceleration	n
	:	Acceleration	*
	•	Road surface	п
	Ту	pe	Direct, Double-Action, Hydraulic
hock bsorber	М	ske	Delco Products
ront & sar)	Pi	ston diameter	32.0mm(1.26in), 35.0mm(1.38in)W/WS6 Front; 25.0mm(.98in), 32.0mm(1.26in)W/WS6
•	Bo	od diameter	25mm (1.0 in.) Front; 12.5mm (0.5 in.) Rear. 25.0mm (1.0 in.) Rear

_		_		_
Sus	nen	qinn	_ F	ront.

Type and description		Independent W/Coil Springs, Modified MacPherson Strut			
Full jounce		75.0 mm (2.95 in.) Base & Trans Am; 57.0 mm (2.24 in.) GTA, Formula			
Travel*	Full rebound	104.0 mm (4.09 in.)			
	Type,(coil,leaf,other)&matl	Coil, Steel			
	insulators (type & mati)	Rubber (Top)			
Spring.	Size (coil design height	260.0 x 103.0; 2490.0 x 15.0 mm Base			
	& i.d.)	(10.2 x 4.06; 98.0 x 0.59 in.)			
	Spring rate [N/mm(lb./in.)]	64 (345.8), 96 (547.2) (a)			
	Rate @ wheel [N/mm(lb./in)]	Spring Rate x (2.455)			
	Type (link, inkless, frmiess)	Link			
Stabilizer	Material & bar diameter	STL-30.0mm(1.2 in.) Base & V6;34.0mm (1.34 in.) Trans Am;(Base);			

### Suspension - Rear

36.0 mm (1.4 in.) W/WS6 Opt.

ype and descri	iption		Salisbury Axle W/Torque Arm, LCA, Track Bar, Coll Springs
	Full jou	ince	85.0mm (3.3 in.)
ravel*	Fullre	bound	118.0mm (4.6 in.)
	Type(c	oil,isaf,other)&mati	Coil, Steel
	Size (le design	ingth x width, coll height & i.d.)	254.0 x 102.8; 2709.0 x 12.0mm (10.0 x 4.03; 27.9 x 0.472 in.)
Spring	Spring	rate [N/mm (lb/in)]	18 (159), 23 (204) (b)
	Rate 4	wheel (N/mm (lb/in))	(Spring Rate x 0.96)
	Insulat	ors(type & material)	Rubber isolated
	11	No. of leaves	Not Applicable
	loaf	Shackle(comp or tens)	,
	Type(link,lnkless,frmless)		Link
Stabilizer	Material & bar diameter		Steel-18.0mm(0.71 in.) Base & V6; 23.0mm(0.91 in.) (c); 24.0mm(.94 in.)W/WS6
Track bar (type	cook bas (turn)		'U' Section W/Rubber Bushings

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

 Vehicle Line
 FIREBIRD

 Model Year
 1990
 Issued
 6-89
 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 Formula And GTA: 23

Trans AM: 18; WS4:23; WS6:23

(C)

Trans AM Base & V8: 23.0mm (.91) WS4; 24.0mm (.94 in.) WS6 Formula, GTA

#### Vehicle Line MVMA Specifications Revised(\*) 6-89 1990 Issued Model Year **METRIC (U.S. Customary) Body Type And/Or** Engine Displacement Brakes - Service Single Caliper Disc Front, Duo-Servo Drum Rear, Disc Optional Front/Rear (RPO J65) Description Disc Manufacturer and brake type (std., opt., n.a.) Front (disc or drum) Drum; Disc Optional Rear (disc or drum) Remote Metering And Proportioning, Front/Rear Split Valving type(prop,delay,metering,other) Standard Power brake (std., opt., n.a.) Tandem vacuum Booster type(rmt,intgrl,vac.,hyd.,etc.) Inline Source (inline, pump, etc.) None Reservoir (volume cu. in.) Vacuum None Pump-type Traction Control Operational speed range Type angine intervention Front/rear (std., opt., n.a) n Manufactures Type (electronic, mech.) Number sensors or circuits Anti-lock device No. anti-lock hyd. circuits integral or add-on system Yaw control (yes, no) Hydraulic power source 615.5 (95.4) total Effective area [sq. cm. (sq. in.)]\* 691.6 (107.2) total Gross Lng area [sq cm (sq in)] \*\*(F/R) 1985.1 (307.7) total Swept area [sq cm (sq in)]\*\*\* (F/R) F/267.0mm (10.5); R/296.0 mm (11.65 in.) F/A Outer working diameter F/171.5mm (6.75); R/211.0 mm (8.31 in.) F/R Inner working diameter Retor F/26.2mm (1.03); R/20.0 mm (0.79 in.) -/R Thickness Cast Iron, Vented F/R F/R Matl & type (vented/sid) 241.0mm (9.5 in.) x 50.8mm (2.0 in.) Diameter & width Drum Cast Iron Finned (Aluminum For Selected Applications) F/R Type and material F/64.0mm (2.5 in.); R/19.0mm (.75 in.) Drum; 40.5mm (1.6 in.) Disc Wheel cylinder bore Bore: 24.0mm (0.94 in.) F/A Bore/stroke Master cylinder 3.25:1 Pedal arc ratio Line pressure at 445 N (100 lb.) pedal load [kPa (psi)] Self-Adjusting F/R Lining clearance Riveted (8) **Bonded or riveted** 5,33 x 7,92mm (0.210 x 0.312 in.) Rivet size Manufacturer **Bendix** 7161A Lining code \*\*\*\*\* Front Semi-Metallic Material 125.0 x 48.4 x 11.04mm (4.92 x 1.91 x 0.435 in.) Pri.or out-brd 125.0 x 48.4 x 10.55mm (4.92 x 1.91 x 0.415 in.) Sec. or in-brd OB/3.42mm (0.135 in.); IB 4.85mm (0.191 in.) Shoe thoknss.(no ing)

Prl. or out-brd

Sec. or in-brd

Shoe thaknes (no ing)

Bonded or riveted

Manufacturer

Material

Rear wheel

Lining code \*\*\*\*

Riveted 10 Primary, Secondary (Drum)

Inland (Drum)

IN 4035/4050

Organic

Molded (Disc)

Semi-Metallic

JBI (Disc)

**B33** 

192.5x50.8x4.98mm(7.58x2.0x0.198 in.)125.0x48.4x11.04mm(4.92x1.91x0.435 in.)

249.6x50.8x6.75mm(9.83x2.0x0.266 in.)125.0x48.4x10.55mm(4.92x1.91x0.435 in.)

Drum F/R 1.98mm (.078 in.), disc OB/4.0mm(0.16 in.); IB/5.5mm (0.21 in.)

Brake lining

**METRIC (U.S. Customary)** Body Type And/Or **Engine Displacement** Brakes - Service

Vehicle Line	FIREBIRD					
Model Year	1990	Issued	6-89	Revised(*)		

HEAVY DUTY (OPTIONAL RPO 1LE)

Description  Manufacturer and			Front & Rear Disc Brakes						
brake type (std.,			Disc						
opt., n.a.) Rear (disc or drum)			Disc						
Valving type	prop,dela	y,meterir	ng,other)		Remote Proportioning, Front/Rear Split				
Power brake	(std., opt.	, n.a.)			Standard				
Booster type	Krmt,intgr	vac., hy	d.,etc.)		200mm (7.87 in.) Tandem Vacuum				
	Source	(inline, p	ump, etc.)		Engine				
Vacuum	Reservoir (volume cu, in.)				Not Applicable				
	Ритр-туре								
Traction Control	Operat	ional spe	ed range		9				
	Туре е	Type engine intervention			•				
	Front/r	ear (std.	opt., n.a)		,				
	Manufe	cturer			•				
			, mech.)		,				
Anti-lock device	Numbe	r sensori	or circuits		*				
	No. ant	i-lock hy	rd. circuits						
	Integra	oradd-	on system		•				
	Yaw co	ntroi (yes	s, no)		,				
		lic powe	f source						
Effective are					717 (111.1)				
Gross Lng are	BA (SQ CM (	sq (n)) **(	F/A)		792 (122.9)				
Swept area (s	q cm (sq ii	r)]*** (F/F	3)		2980.74 (462.02)				
	Outer w	orking d	iameter	F/R	F 301.25mm (11.86 in.) R 296.0mm (11.65 in.)				
Rotor	Inner w	orking di	ameter	F/R	F 197.40mm (7.77 in.) R 211.0mm (8.31 in.)				
	Thickne	Thickness F/R			F 26.20mm (1.03 in.) R 20.0mm (0.79 in.)				
	Matl & 1	ype (ven	ted/sld)	F/R	Cast Iron, Vented				
Drum	Diamet	er & widt	h	F/R	Not Applicable				
	Туре ал	d materi	al	F/R					
Wheel cylinde	or bore				F 2 x 38mm (1.50 in.) R 40.5mm (1.69 in.)				
Master cylind	er	Bo	re/stroke	F/R	24.0mm (0.94 in.)				
Pedal arc ratio					3.25:1				
Line pressure load [kPa (psi)	at 445 N (*	100 łb.) p	edal						
					<del></del>				
Lining clearan	ce			F/R	Self-Adjusting				
	1	Bonde	d or riveted		Integrally Molded				
		Rivets	size		Not Available				
•	1	Manuf.	acturer		Japan Brake Industries				
	Front	Lining	code *****		CP26				
	wheel	Materi	al		Semi-Metallic				
			Pri.or out-brd		53.2 sq.cm. x 9.5mm (8.25 sq.in. x .37 in.) Area x Thickness				
		Size	Sec. or in-brd		52.2 sq.cm. x 9.5mm (8.25 sq.in. x .37 in.) Area x Thickness				
Brake		Shoet	hcknss.(no ing)		IB/6.0mm (.24 in.) OB 6.0mm (.24 in.)				
lining		Bonde	d or riveted		Integrally Molded				
		Manufa	ecturer		Japan Brake Industries				
	Rear		code ****	$\neg \neg$	HB33				
	wheel	Materia		$\neg \dagger$	Semi-Metallic				
		****	Pri. or out-brd	╌┤	28.4 sq.cm. x 8.2mm (4.4 sq.in. x .32 in.) Area x Thickness				
		Size	Sec. or in-brd		28.4 sq.cm. x 8.2mm (4.4 sq.in. x .32 in.) Area x Thickness				
			hcknss (no ing)		IB 5.5mm (.21 in.) OB 4.0mm (.16 in.)				
				1	The state of the s				

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

Vehicle Line	FIRE	BIRD				
Model Year	1990	Issued	6-89	Revised(*)	9-89	

Base   Formula   Trans Am Loa   Trans Am Loa   Trans Am Loa   Trans Am Understand   Tr	METRIC (U	.s. Custon	iary)								
BASE   FORMULA   Yee W/LBe   GTA	Body Type Ar	nd/Or			[	· · · · · · · · · · · · · · · · · · ·	TRANS AM L03	<u> </u>			
Size (load ange, pt)			BASE	FORMULA		GTA					
Size (load ange, pt)	Time And	Wheele (Ca				<u> </u>					
Type (bits, radial, sto.)   Steel Befed Radial	TIPES AND	1		ira)	Louisianus	<del></del>	045/05045				
Initiation preserve (coding)					<del></del>	<del></del>	215/65H15	245/50ZH16			
Infation preserve (commended face which serve (commended		Type (bias, rad	al, etc.	7	Steel Berted Radio	AJ					
load	Tires	sure (cold) for			207 (30)			<del> </del>			
Type & material Rim (tists \$Tange type)  Wheels  Type (blas, radial, steel, nylon, etc.)  Tire and wheel  Tire and wheels  Totation (arage, ph)  Tire size (load arage, ph)  Type (blas, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tire size (load arage, ph)  Type (blas, radial, steel, nylon, etc.)  Wheel (type & material)  Rim disz, flange type and offset)  Tire size (load arage, ph)  Type (blas, radial, steel, nylon, etc.)  Wheel (type & material)  Rim disz, flange type and offset)  Tire size (load arage, ph)  Tire size (					207 (30)	<u>.</u>	· -				
Rim (cirs & Stange type)		Rev/mile-at 70	km/h(4	(5mph)	498	505	498	505			
Wheels of the transport of trans		Type & materia	1		Cast Aluminum	Cast Aluminum	Cast Aluminum	Cast Aluminum			
Wheels Attachment Type(bon,stud) Stud Cried eliameter (2.75 in.)  Windows & Bond (2.75 in.)  Windows &		Rim (size & flan	ge type	)	15 x 7 JJ	16 x8 JJ	15 x 7 JJ	16" x 8" JJ			
Type Chear, racial, steel, nylon, etc.)   Tre size (load arrange, phy)   Type (blas, radial, steel, nylon, etc.)   Tre size (load range, phy)   Type (blas, radial, steel, nylon, etc.)   Tre size (load range, phy)   Tre size (load range, phy)   Type (blas, radial, steel, nylon, etc.)   Tre size (load range, phy)   Type (blas, radial, steel, nylon, etc.)   Tre size (load range, phy)   Type (blas, radial, steel, nylon, etc.)   Tre size (load range, phy)   Type (blas, radial, steel, nylon, etc.)   Tre size (load range, phy)   Type (blas, radial, steel, nylon, etc.)   Tre size (load range, phy)   Type (blas, radial, steel, nylon, etc.)   Tre size (load range, phy)   Type (blas, radial, steel, nylon, etc.)   Tre size (load range, phy)   Type (blas, radial, steel, nylon, etc.)   Tre size (load range, phy)   Type (blas, radial, steel, nylon, etc.)   Tre size (load range, phy)   Type (blas, radial, steel, nylon, etc.)   Type (blas, radial, stee	***	Wheel offset			8mm	0mm F/16mmR	8mm	0mm F/16mmR			
Pumber & size   S-M12 x 1.5 - 6H- thd (Metric)	Wheels		Type(I	bolt,stud)	Stud	<u>.                                    </u>	• •				
Pumber & size   S-M12 x 1.5 - 6H- thd (Metric)		Attachment	Circle	diameter	120.7mm (4.75 in	.)	· · · ·				
Tire and wheel   T125/70D15, 15 x 4 (Except With G80 Axie)		-	Numb	er & size	<del></del>	·					
Strings position & location (describe)   Vertically, Adjacent To RH Quarter Panel		Tire and wheel			T125/70D15, 15	x 4 (Except With G80	) Axie)				
Tire size (load range, pty)  P245/50ZR16 * +  Type (bias, radia, tate), nyion, etc.)  Steel Befted Radial  Wheel (type & materian)  In size (load range, pty)  Type (bias, radia), attech, nyion, etc.)  Wheel (type & materian)  Type (bias, radia), attech, nyion, etc.)  Wheel (type & materian)  Tire size (load range, pty)  Tire size (load range, pty)  Type (bias, radia), attech, nyion, etc.)  Wheel (type & materian)  Rim (size, flange type and offset)  Tire size (load range, pty)  Type (bias, radia), attech, nyion, etc.)  Wheel (type & materian)  Rim (size, flange type and offset)  Tire size (load range, pty)  Type (bias, radia), stech, nyion, etc.)  Wheel (type & materian)  Rim (size, flange type and offset)  Type (bias, radia), stech, nyion, etc.)  Wheel (type & materian)  Rim (size, flange type and offset)  Type (transperse)  Spare tire and wheel size  (if configuration is different than road tire of wheel (oscilon & storage position)  Brakes - Parking  Type of control  Hand Lever Application - Push Button Reverse - Self-Adjusting  Location of control  Between Front Seats  Rear Service Brakes  Type(internal or external)  Drum diameter  Lining size (langth x	Spare -	Storage position location (descr	n & ibe)								
Tire size (load range, pty)  P245/50ZR16 * +  Type (bias, radia, tate), nyion, etc.)  Steel Befted Radial  Wheel (type & materian)  In size (load range, pty)  Type (bias, radia), attech, nyion, etc.)  Wheel (type & materian)  Type (bias, radia), attech, nyion, etc.)  Wheel (type & materian)  Tire size (load range, pty)  Tire size (load range, pty)  Type (bias, radia), attech, nyion, etc.)  Wheel (type & materian)  Rim (size, flange type and offset)  Tire size (load range, pty)  Type (bias, radia), attech, nyion, etc.)  Wheel (type & materian)  Rim (size, flange type and offset)  Tire size (load range, pty)  Type (bias, radia), stech, nyion, etc.)  Wheel (type & materian)  Rim (size, flange type and offset)  Type (bias, radia), stech, nyion, etc.)  Wheel (type & materian)  Rim (size, flange type and offset)  Type (transperse)  Spare tire and wheel size  (if configuration is different than road tire of wheel (oscilon & storage position)  Brakes - Parking  Type of control  Hand Lever Application - Push Button Reverse - Self-Adjusting  Location of control  Between Front Seats  Rear Service Brakes  Type(internal or external)  Drum diameter  Lining size (langth x	Tires And	Wheels (O	otlon	al)		· · · · · · · · · · · · · · · · · · ·					
Type (bias, radial, steel, nylon, etc.)  Steel Befted Radial  Wheel (type & material)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tre size (load range, pty)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tre size (load range, pty)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Spare tire and wheel size  (flange type and offset)  14x5; P195/75D14 (Inflatable) Used With G80 Axie And 15 in. Road Tire.  15x5; P195/75D15 (Inflatable) Used With 16 in. Road Tire.  15x5; P195/75D15 (Inflatable) Used With 16 in. Road Tire.  Brakes - Parking  Type of control  Between Front Seats  Operates on  Type (nernal or external)  Drum diameter  Type (nernal or external)  Drum diameter  Front Seats  Type (nernal or external)  Drum diameter  Lining size (length x			J				P245/507R16 * +				
Wheel (type & material)  Rim (size, flange type and offset)  Tire size (load range, ply)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tire aize (load range, ply)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tire aize (load range, ply)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tire aize (load range, ply)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Spare tire and wheel size  (it configuration is different than road tire or wheel, describe optional spare sire and/or wheel (castion be optional spare sire and/or wheel (castion & storage position)  Spare tire and/or wheel location & storage position  Spare tire and/or wheel location & storage position  Type of control  Hand Lever Application – Push Button Reverse – Self-Adjusting  Between Front Seats  Operates on  Type(internal or external)  Drum diameter  Lining size (length x					- <del> </del>						
Rim (size, fiange type and offset)  Type (blas, racial, steel, nyton, etc.)  Wheel (type & material)  Rim (size, fiange type and offset)  Tire size (load range, ply)  Type (blas, racial, steel, nyton, etc.)  Wheel (type & material)  Rim (size, fiange type and offset)  Tire size (load range, ply)  Type (blas, racial, steel, nyton, etc.)  Wheel (type & material)  Rim (size, fiange type and offset)  Tire size (load range, ply)  Type (blas, radial, steel, nyton, etc.)  Wheel (type & material)  Rim (size, fiange type and offset)  Spare tire and wheel size  (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)  Brakes - Parking  Type of control  Hand Lever Application - Push Button Reverse - Self-Adjusting  Location of control  Between Front Seats  Type(instranal or external)  From Coparate from Coparate (langth x			•)	······································			• • • • • • • • • • • • • • • • • • • •				
Tire size (load range, ply)  Type (blas, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tire aize (load range, ply)  Type (blas, radial, ateel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tire aize (load range, ply)  Type (blas, radial, ateel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Type (blas, radial, ateel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Spare tire and wheel size  (if configuration is different than road tire or wheel, describe optional astorage position)  Brakes - Parking  Type of control  Beakes - Parking  Type of control  Between Front Seats  Type (number or Seats)				<del></del>		" "					
Type (bias, radial, ateal, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tire size (load range, pty)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tire size (load range, pty)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Spare tire and wheel size  (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)  Brakes - Parking  Type of control  Between Front Seats  Type flatanal or external)  Drum diameter  Type(Instranal or external)  Drum diameter  Lining size (length x					<del> </del>		16" X 8", Front: U, Res	J; 16			
Wheel (type & material)  Rim (size, flange type and offset)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tre size (load range, pity)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Spare tire and wheel size  If configuration is different than road tire or wheel, describe optional spare tire and offser wheel location & storage position   Brakes - Parking  Type of control  Between Front Seats  Operates on  Rear Service Brakes  Type(long)  Type(long)  Rear Service Brakes  Lining size (langth x						· · · · · · · · · · · · · · · · · · ·					
Rim (size, flange type and offset)  Tire size (load range, ply)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tire size (load range, ply)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Rim (size, flange type and offset)  Spare tire and wheel size  (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & atorage position)  Brakes - Parking  Type of control  Location of control  Departes on  Type(internal or external)  Drum diameter  Lining size (lange type and offset)  Type(internal or external)  Drum diameter  Lining size (lange type and offset)  Type(internal or external)  Drum diameter  Lining size (length x			•			<del>-</del>					
Tire size (load range, ply)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange, ply)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Spare tire and wheel size  (if configuration is different than road tire or wheel, discribe optional spare tire and/or wheel location & 15x5; P195/75D15 (Inflatable) Used With 16 in. Road Tire.  Brakes - Parking  Type of control  Location of control  Destween Front Seats  Operates on  Rear Service Brakes  Type(Internal or external)  Drum diameter  Lining size (length x	-	<del></del> _					<del></del>				
Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Tire size (load range, ply)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Spare tire and wheel size  (floorfiguration is different than road tire of wheel ice and/or wheel location & storage position)  Brakes — Parking  Type of control  Location of control  Describe on Rear Service Brakes  Type(internal or external)  Drum diameter  Lining size (length x							· · · · · · · · · · · · · · · · · · ·				
Wheel (type & material)  Rim (size, flange type and offset)  Tire size (load range, ply)  Type (blas, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Spare tire and wheel size  (floorfiguration is different than road tire on wheel, describe optional paper tire and/or wheel location & storage position)  Brakes - Parking  Type of control  Location of control  Derates on  Type(Internal or external)  Drum diameter  Lining size (length x					<del> </del>	<del>-</del>					
Rim (size, flange type and offset)  Tire size (load range, ply)  Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Spare tire and wheel size  (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & 15x5; P195/75D15 (Inflatable) Used With 16 in. Road Tire.  Brakes - Parking  Type of control  Location of control  Deprates on  Type(internal or external)  Type(internal or external)  Drum diameter  Lining size (length x			-,			·					
Tire size (load range, ply)  Type (bias, radial, steal, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Spare tire and wheel size  (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & 15x5; P195/75D15 (Inflatable) Used With 16 in. Road Tire.  Brakes - Parking  Type of control  Location of control  Detween Front Seats  Operates on  Type(Internal or external)  Drum diameter  Service Brakes  Lining size (length x						· · · · · · · · · · · · · · · · · · ·					
Type (bias, radial, steel, nylon, etc.)  Wheel (type & material)  Rim (size, flange type and offset)  Spare tire and wheel size  (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)  Brakes — Parking  Type of control  Location of control  Operates on  Type(Internal or external)  Drum diameter  Lining size (length x	<del></del>										
Wheel (type & material)  Rim (size, flange type and offset)  Spare tire and wheel size  (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)  Brakes — Parking  Type of control  Location of control  Operates on  Type(Internal or external)  Drum diameter  Lining size (length x			<u> </u>			<del></del>					
Rim (size, flange type and offset)  Spare tire and wheel size  (If configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)    Brakes - Parking   Type of control   Hand Lever Application - Push Button Reverse - Self-Adjusting			•,								
Spare tire and wheel size  (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & 15x5; P195/75D15 (Inflatable) Used With 16 in. Road Tire.    Brakes - Parking   Hand Lever Application - Push Button Reverse - Self-Adjusting						<del></del>					
(if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)    Brakes - Parking   Hand Lever Application - Push Button Reverse - Self-Adjusting				·	14VE: 0105/7501	4 (Inflatable) Lined V	Afth GOD Avio And 45 in 5	and Tire			
Type of control  Location of control  Detween Front Seats  Operates on  If separate from service brakes  Type(Internal or external)  Drum diameter  Lining size (length x  Hand Lever Application – Push Button Reverse – Self-Adjusting  Between Front Seats  Rear Service Brakes	(if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location &										
Location of control Between Front Seats  Operates on Rear Service Brakes  If separate from service brakes  Lining size (length x Between Front Seats Rear Service Brakes	Brakes - F	Parking				<del></del>	···				
Location of control Between Front Seats  Operates on Rear Service Brakes  If separate from service brakes  Lining size (length x Between Front Seats Rear Service Brakes					Hand Lever Appli	cation - Push Button	Reverse - Self-Adjustina				
Operates on Rear Service Brakes  If separate from service brakes  Lining size (length x		rol									
If separate from service brakes  Lining size (length x					<u> </u>						
If separate from Drum diameter  Service brakes  Lining size (length x		Typefinternal	rayter	ЛАП							
brakes Lining size (length x											
	service	Lining size (length x			·	<del></del>	<del></del>				

<sup>\*</sup> Directional Tread

<sup>+</sup> Non - "All Seasons" Tire

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

**Body Type And/Or Engine Displacement** 

ALL			

Steering

Steerin	g			<u> </u>				
Manual (std., opt., n.a.)				Not Available		<u> </u>		
Power (atd.	Power (std., opt., n.a.)			Standard		<del></del>		
Adjustable		Туря		Tilt, 5 Position			<del></del>	
steering wheel/ column (tilt,		Manufacturer		Saginaw Division				
telescope, other)		(std., opt., n.a.)		Standard				
Wheel diameter **		Manual		Not Available				
(W9) SAE J	100	100 Pawer		368.0mm (14.5 in.) Rim	l			
	Out-	Wall to w	all (l. & r.)	12.59 (41.3)				
Turning diameter	side front	Curb to curb (l. & r.)		11.73 (38.5)	12.28 (40.3)			
m (ft.)	In-	Wall to w	all (l. & r.)	Not Available				
	side rear	Curb to c	urb (i. & r.)	tr tr				
Scrub Radio	)5 <b>*</b>			н				
	1	Туре		н				
	Gear	Manufact	turer	H				
Manual	Gear		Gear	•				
		Ratios	Overall	*				
	No. whe	el turns(sto	p to stop)	п	···		<del>.</del>	
	Type (h)	draulic, ele	c., etc.)	Hydraulic				
	Manufac	Manufacturer		Saginaw Division				
	[	Туре		Recirculating Ball				
Power	Gear	Gear		14:1 (a)	12.7:1 (b)	12.7:1 (c)		
	Ĺ	Ratios	Overall	15.4:1	14:1	14:1		
	Pump (drive)			Belt			<del></del>	
	No. whe	ei turns(sto	p to stop)	2.57	2.14	2.14		
	Type			Parallelogram				
Linkage	Location (front or rear of wheels, other)		Front					
	Tie Rods	(one or two	o)	2				
	Inclinatio	n at cambe	r (deg.)	Not Available			<del></del>	
Steering		Upper		Ball stud				
axis	Bear- ings	Lower		Ball stud				
	(type)	Thrust		None			<del>_`</del>	
Steering spir	Steering spindle/knuckle & joint type		Steering Knuckle W/Sph	Steering Knuckle W/Spherical Joints				
Wheel	Dia-	Inner bea	aring	31.73 - 31.74 mm (1.249				
spindle/	meter	Outer be	aring	21.04 - 21.42 mm (0.83				
hub	Thread (s	iize)		3/4 - 20 UNEF - 3A (Mo				
	Bearing (	type)		Tapered Roller				

<sup>\*</sup> The horizontal distance in the front elevation between wheel centerline and kingpin (ball joint) axis at ground. \*\* See Page 22.

- (a) Base.
- (b) RPO F41 (Trans Am)
- (c) RPO FE2 (Formula)

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

Body Type And/Or Engine Displacement ALL

Wheel Alignment

		Caster (deg.)	+5.0 (L/R Side To Be Equal Within 0.7)		
	Service	Camber (deg.)	0.3 (+/-) .5		
	checking	Toe-in [outside track-mm (in.)]	0 (+/-) .2		
ront rheel at		Caster (deg.)	+5.0 (+/-) .5 (L/R Side To Be Equal With 0.7)		
ırb mass vt.) .	Service reset*	Camber (deg.)	.3 (+/-)5		
		Toe-in (deg.)	0 (+/-) .2		
	Periodic M.V. in- spection	Caster (deg.)	+5.0 (+/-) .5		
		Camber (deg.)	0.3 (+/-) .5		
		Toe-in (deg.)	0 (+/-) .2		
	Service checking	Camber (deg.)	Not Applicable		
ear .		Toe-in [outside track-mm (in.)]			
heelat urb mass	Service	Camber (deg.)	•		
(wt.)	reset*	Tos-in (deg.)	"		
	Periodic	Camber (deg.)	11		
	M.V. in- spection	Toe-in (deg.)	11		

<sup>\*</sup>Indicates pre-set, adjustable, trend set or other.

Electrical - Instruments and Equipment

Speed-	Type (analog, digital, std., opt.)	Round Dial, Pointer, 0-120 mph (a)			
ometer	· Trip odometer (std., opt., n.a.)	Standard			
EGR maintenan	ce indicator	Not Available			
	Туре	Gauge			
Charge indicator	Warning device (light, audible)	Not Available			
Temperature	Туре	Gauge			
indicator	Warning device	Not Available			
Oil	Туре	Gauge			
pressure indicator	Warning device	Not Available			
Fuel	Туре	Gauge			
indicator	Warning device	Not Available			
•	Type (standard)	Electric 2-Speed, Depressed Park			
Wind-	Type (optional)	Intermittent Standard			
shield wiper	Blade length	454.4mm (18 in.)			
	Swept area [sq cm (sq in)]	5792.0 (898.0)			
	Type (standard)	Pushbutton Wet Arm Standard			
Wind- shield	Type (optional)	Not Available			
washer	Fluid level indicator	Optional			
Rear window wi (std., opt., n.a.)	iper, wiper/washer	Not Available			
	Турв	Electric Vibrator			
Horn	Number used	Dual Standard			
Other		Tachometer Standard. Upshift Telltale On Manual Transmission. Check Engine, Headlamp High Beam, Turn Signals, Brake Warning Light, Fasten Seat Belts, Security, SIR.			

Vehicle Line FIREBIRD

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

Engine	Description
Engine	Code

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

Electrical - Supply System

	Manufacturer	Delco Remy		
•	Model, std., (opt.)	75-525		
Battery	Voltage	12		
	Amps at 0 deg F cold crnk	525		
	Minutes-reserve capacity	90		
	Amps/hrs 20 hr. rate			
	Location	Engine Compartment Left Front		
	Manufacturer	Delco Remy		
	Rating(idle/max rpm drive)	100 Amps (36 Amp At Idie)		
Itternator	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		
Motor	Current drain 20 deg F	325		
	Power rating [kw (hp)]	1.4 (1.9)		
*****	Engagement type	Positive Shift Solenoid		
Motor drive	Pinion engages from (front, rear)	Rear		

Electrical - Ignition System

Туре	Electronic (std, opt,n.a.)		Standard
	Other (spe	cify)	High Energy Ignition
	Manufactu	Jrer	Delco Remy
0-"	Model		Separate
Coil		Engine stopped-A	0
	Current	Engine idling - A	5.5 max.
	Manufacturer		AC/Rochester Products
	Model		R43TS
0	Thread (mm)		14 x 1.25
Spark plug	Tightening torque [Newton meters (lb. ft.)]		9-20 (7-15)
	Gap		1.14mm (.045 in.)
	Number per cylinder		1
D!-4-1b4	Manufactu	irer	Delco Remy
Distributor	Model		10455016

Electrical - Suppression

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

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

Engine Description
Engine Code

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

Electrical - Supply System

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

Electrical - Starting System

	Manufacturer	Delco Remy
Motor	Current drain 20 deg F	420
	Power rating [kw (hp)]	2.3 (3.1)
	Engagement type	Positive Shift Solenoid
Motor drive	Pinion engages from (front, rear)	Rear

Electrical - Ignition System

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

Electrical - Suppression

Internal Alternator Capacitor, Non-Metallic High-Tension Ignition Cables,
Resistor Spark Plugs, Ignition Coll By-Pass Capacitor, Internal AC Biower

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.

Vehicle Line	FIRE	BIRD			•
Model Year	1990	Issued	6-89	Revised(*)	

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

Engine	Description
Engine	Code

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

Electrical - Supply System

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

Electrical - Starting System

	Manufacturer	Delco Remy
Motor	Current drain -20 deg F	305
	Power rating [kw (hp))	1.9 (2.5)
84-4	Engagement type	Positive Shift Solenoid
Motor drive	Pinion engages from (front, rear)	Rear

Electrical - Ignition System

T	Electronic (std, opt,n.a.)			
Type:	Other (spe	city)	High Energy Ignition, (H.E.I.)	
	Manufacturer		Delco Remy	
oil	Model		Remote Mounted	<del></del>
.011	Current	Engine stopped-A	0.5	
	Current	Engine idling – A	1.0	
Manufacturer  Model  Thread (mm)	rer	AC		
		R45TS	· , ,, <u>-</u> .	
	m)	M14 x 1.25 SAE		
ipark lug	Tightening torque [Newton meters (ib. ft.)]	9-20 (7-15)	· · · · · · · · · · · · · · · · · · ·	
	Gap		0.89 (0.035")	· · · · · · · · · · · · · · · · · · ·
	Number pe	r cylinder	1	<u> </u>
Distributor	Manufactu	гег	Delco Remy	
Maurotor	Model		1103698	

Electrical - Suppression

	Internal Alternator Capacitor, Non-Metallic High-Tension Ignition Cables,	
	Resistor Spark Plugs, Ignition Coil By-Pass Capacitor, Internal AC Blower	
Locations & type	Motor By-Pass Capacitor & A/C Compression Diode, With Radio Provisions;	
	Engine To Dash Panel Ground Strap, Fuse Block Capacitor And On	
	"heater only" blower motors and coax capacitor.	

Vehicle Line	FIRE	BIRD			
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**METRIC (U.S. Customary)** 

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

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

Electrical - Starting System

100000		
-	Manufacturer	Delco Remy
Motor	Current drain -20 deg F	305
	Power rating [kw(hp)]	2.3 (3.1)
	Engagement type	Positive Shift Solenoid
Motor drive	Pinion engages from (front, rear)	Rear

Electrical - Ignition System

LIGCUICUI	n - Ignition Oyotom		
	pe Cher (specify)		
Туре			High Energy Ignition, (H.E.I.)
	Manufacturer		Delco Remy
	Model		Remote Mounted
Coil		Engine stopped-A	0.5
	Current	Engine idling - A	1.0
	Manufacturer	ırer	AC
Model		R45TS	
	rk Tightening torque (Newton meters (lb. ft.))	m)	M14 x 1.25 SAE
Spark plug		torque neters (lb. ft.)]	9-20 (7-15)
	Gap Number per cylinder		0.89 (0.035")
			1
	Manufacti		Delco Remy
Distributor Model			1103698

Electrical - Suppression

Internal Alternator Capacitor, Non-Metallic High-Tension Ignition Cables,
Resistor Spark Plugs, Ignition Coil By-Pass Capacitor, Internal AC Biower

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.

Vehicle Line	cle Line FIREBIRD				,
Model Year.	1990	Issued	6-89	Revised(*)	

### METRIC (U.S. Customary)

	. (	,,				
Body Ty	ре		ALL			
Body						
Structure	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.			
Burnper System Front - Rear			Body Color Soft Fascia, Honeycomb Absorber And Heavy Gauge Reinforcement Used Front And Rear.			
Anti-Corrosion Treatment			Galvanized Metals, Zinc Rich Primers, Wax Coating And Other Corrosion Resistant Materials Used Throughout.			
Body -	Miscellaneous In	formation				
Type of fini	sh (lacquer, enamel, other)		High Solids Acrylic Enamel Base Coat/Clear Coat			
	Material & mass		Steel			
	Hinge location (front, rea	r)	Rear			
Hood	Type (counterbalance, pr	op)	Gas Strut Assist			
	Reisase control (int., ext.	)	Internal			
	Material & mass		Not Applicable			
Trunk	Type (counterbalance, ot	her)	*			
lid	Internal release control (elec., mach., n.a.)		•			
	Material & mass	<del> </del>	Glass/Steel			
Hatch-	Type (counterbalance, ot	her)	Dual Gas Struts-Electric Final Closure Standard			
back lid	internal release control elec., mech., n.a.)		Electric Release Optional			
	Material & mass		Not Applicable			
T-:+	Type (drop, lift, door)		<b>"</b>			
i aligaze	Internal release control (elec., mech., n.a.)		*			
Vent windo friction, piv	w control (crank, ot, power)	Front	Not Available			
Mindowson	ulater tune	Rear	Contar Drive			
cable, tape	ulator type , flex drive,	Front	Sector Drive			
etc.)	· <del>-</del> · · · · · · · · · · · · · · · · · · ·	Rear	Sector Drive			
Seat cushio	n type	Front	Bucket Molded Foam Pad			
e.g., 60/40, wire, 10am,	bucket, bench etc.)	Rear				
	·	3rd seat	Particle Control Matter Company			
Seat back ty		Front	Reclining Bucket Molded Foam Pad			
e.g., 60/40, sench, wite	bucket, , foam, etc.)	Rear	Folding Bench, Molded Foam Pad			
		3rd seat				

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METRIC (U.S. Customary)

	_
Body	Type

ALL		
	•	

Seating Posit	tion		Left	Center	Right	
	Type & description (lap & shoulder belt, lap belt, etc.)	First seat	Lap & Shoulder Belt		Lap & Shoulder Belt	
Active		Second seat	Lap & Shoulder Belt		Lap & Shoulder Belt	
	Standard/ optional	Third seat				
	Type & description (air bag, motorized-2-point belt,	First seat		: .		
Passive	fixed belt, knee bolater, manual- lap belt)	Second seat				
	Standard/ optional	Third seat				
Glass	_1	SAE Ref No				
	glass exposed [sq. cm. (sq.	S1	9000.4 (1395.0)	•		
	xposed surface . (sq. in.)] – s	\$2	6519.8 (1010.6)			
Backlight gl surface area (sq. in.)]	ass exposed [sq. cm.	83	6232.0 (966.0)			
Total glass e area (sq. cm	xposed surface . (sq. in.)]	\$4	21752.2 (3371.6)			
Windshield	glass (type)		Curved-Laminated Plate	· · · · · ·		
Side glass (t	уре)		Curved-Tempered Plate			
Backlight gl	ass (type)		Curved-Tempered Plate			
Headlar	nps					
Description halogen, rep	- sealed beam, placeable bulb, etc.		Sealed Beam - Two Lamp Syste	em		
Shape	<del>-</del>		Rectangular			
Lo-beam ty 2C1, etc.)	pe (2A1, 2B1,	<u> </u>	28			
Quantity	-		2			
Hi-beam typ 2C1, etc.)	pe (1A1, 2A1, 1C1,		(2B)			
Quantity	· · · · · · · · · · · · · · · · · · ·		(2)	-		
Frame			<u></u>			
Type and de frame, unitized frame	escription (separate zed frame, partially— me)		Full Integral Body Frame, includ Front Suspension Crossmembe			

Vehicle Line	FIRE	BIRD			•
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METRIC (U.S. Customary)

Body Type	ALL	-	

Air conditioni auto, temp co	ing (manual, entrol)	
,		Manual Controls Std GTA - Optional, Sport Coupe & Trans AM
Clock (digital	, analog)	Digital, In Radio
Compass / th	armometer	Not Available
Console (floo	r, overhead)	Full Length Front Console - Standard Floor; Overhead Not Available
Defroster, ele	c. backlight	Electric - Standard GTA; Optional Others
	Diagnostic monitor (integrated, individual)	Not Available
:	Instrument cluster (list instruments)	Tachometer, Speedometer, Trip Odometer, Fuel, Oli Pressure*, Temp, Volt, Seat Belt Warning, Engine Warning
	Keyless entry	Not Available
Electronic	Tripminder (avg. spd. fuel)	,
	Voice alert (list items)	,
	Other	
Fuel door lock	(remote, key, electric)	Not Available
	Auto head on/off delay, dimming	•
	Cornering	,
	Courtesy (map, reading)	Included In Optional Lamp Group (Under Dash); Lighted Mirror Standard GTA
	Door lock, ignition	Not Available
	Engine compartment	9
Amps	Fog	Standard Trans AM & GTA; Not Available Base Or Formula
	Glove compartment	Standard (Compartment In Floor Console)
	Trunk	(Rear Compartment) Standard GTA, Optional Others
	illuminated entry system (list lamps, activation)	Not Applicable
	Other	
<u>.                                    </u>		
	Day / night (auto. man.)	Standard - Manual
4:	L.H. (remote, pwr., heated)	Remote Standard, Power Standard GTA; Optional, Others - Not Heated
Airrors	R.H.(convex, rmt, pwr, htd)	Manual - Std., Power Standard GTA; Opt. Others; Both Convex - Not Heated
	Visor vanity (RH/LH illum.)	RH - Optional (Non-Illuminated)
lavigation sys	stem (describe)	
-	uto release (warn, light)	Hand Release, Warning Light Standard

### Radio Options

\* Full Gauge Package Standard

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### METRIC (U.S. Customary)

Engine Description Engine Code

ALL		

	Deck lie	d(release, pull down)	Power Door Locks And Hatch Rel. Std. GTA Opt. Others***
	Door locks (manual, auto., describe system		Manual - Standard
	describe system		Electric - Optional
	2 - 4 - 6 way, etc.		Ultima Seat - Base GTA, Opt. Trans AM 4-Way
		Reclining(R.H., L.H.)	Driver/Passenger - Standard
!		Memory (R.H., L.H., preset, recline)	Not Available
ower quipment	Seats	Lumbar, hip, thigh, support	n
		Heated (R.H., L.H., other)	
	Side wi	ndows	Standard GTA, Optional All Others
	Vent wi	ndows	Not Available
	Rear wi	ndows	11
		a (location, whip, d, power)	R.F. Fender Fixed Mast W/Radio, Pow. Std. GTA; Opt. Others
	Stan.		AM/FM Stereo Standard
iadio ystems	Opt.	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	r (number, location)	6.2 In. I.P., 2 In Sail Panel, 2 Subwoofers In Sail Panel
loof: open a liding, 'T'}	r or fixed (1	lip-up,	Hatch Roof W/Removable Acrylic Panels - Optional
peed contro	l device		Cruise Control With Resume Speed - Std GTA; Opt. Others
seed warn.	dev. (light,	buzzer, etc.)	Not Available
chometer (	rpm)		Standard
		-14 -1	Not Available
lephone sy	atem (desc	ribe)	

<sup>\*\*\*</sup> Power Final Hatch Closure Latch Standard - All

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

**Vehicle Dimensions** 

See Key Sheets for definitions

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

Body Type		2FS87	2FW87	•
o Width	SAE Ref. N	o.		
Tread (front)	W101	1541 (60.7)		

O WIGHT	SAE NOI.	no.
Tread (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)
Vehicle width (rear doors open)	W121	
Tumble-home (deg.)	W122	
Outside mirror width	W410	

#### o Length

Wheelbase	L101	2566 (101.0)	
Vehicle length	L103	4777 (188.1)	4867 (191.6)
Overhang (front)	L104	1150 (45.3)	1182 (46.5)
Overhang (rear)	L105	1123 (44.2)	
Upper structure length	L123	2669 (105.1)	
Rear wheel C/L 'X' coordinate	L127	2138 (84.2)	

#### O Height \*\*

Passenger distribution (front/rear)	PD1,2,3	2-2	##	
Trunk/cargo load			**	
Vehicle height	H101	1271 (50.0)		
Cowl point to ground	H114	887 (34.9)		
Deck point to ground	H138	912 (35.9)		
Rocker panel-front to ground	H112	184 (7.2)		
Rocker panel-rear to ground	H111	187 (7.4)		
Windshield slope angle (deg.)	H122	62.0		
Backlight slope angle (deg.)	H121	71.0		

#### Ground Clearance \*\*

-		
Front bumper to ground	H102	273 (10.7)
Rear bumper to ground	H104	359 (14.1)
Bumper to ground (front at curb mass (wt.))	H103	304 (12.0)
Bumper to ground (rear at curb mass (wt.))	H105	378 (14.9)
Angle of approach (degrees)	. H108	15.7
Angle of departure (degrees)	H107	15.6
Ramp breakover angle (degrees)	H147	10.7
Axis differential to ground (front/rear)	H153	305 (12.0)
Min. running ground clearance	H156	115 (4.5)
Location of min. run. grd. clear.	_	Front Crossmember

<sup>\*\*</sup> All Vehicle Height And Ground Clearance Are Made Using EPA Loaded Vehicle Weight, Loading Conditions.

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

All linear dimensions are in millimeters (inches)

FIREBIRD Vehicle Line Model Year 1990 Revised(\*) Issued 6-89 9-89

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

Vehicle Dimensions

See Key Sheets for Definitions

**Body Type** 

o Front Compartment	SAE Ref.	No
SgRP front, 'X' coordinate	L31	1050 (41.3)
Effective head room	H61	940 (37.0)
Max. eff. leg room (accelerator)	L34	1092 (43.0)
SgRP to heel point	H30	181 (7.1)
SgRP to heel point	L53	911 (35.9)
Back angle (deg.)	L40	26.5
Hip angle (deg.)	L42	98.0
Knee angle (deg.)	L44	133.0
Footangle (deg.)	L48	87.0
Design H-point front travel	L17	192 (7.6)
Normal driving & riding seat track trvl.	L23	171 (6.7)
Shoulder room	W3	1460 (57.7)
Hip room	W5	1430 (56.3)
Upper body opening to ground	H50	1164 (45.8)
Steering wheel maximum diameter*	W9	370 (14.6)
Steering wheel angle (deg.)	H18	18.0
Accel, heel pt. to steer, whil cotr	L11	Not Available
Accel, heel pt. to steer, whi, ontr	H17	n
Undepressed floor covering thickness	H67	16 (0.6)

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

		Train demperation in a binit rate instable on that the deating from the				
O Rear Compartment		(SgRP) mm Forward And	mm Upward of Rearmost Position.			
SgRP point couple distance	L50	668 (26.3)				
Effective head room	H63	905 (35.6)				
Min. effective leg room	L51	756 (29.8)				
SgRP (second to heel)	H31	183 (7.2)				
Knee clearanca	L48	-15 (-0.6)				
Shoulder room	W4	1430 (56.3)				
Hip room	We	1087 (42.8)				
Upper body opening to ground	H51					
Back angle (deg.)	L41	28.0				
Hip angle (deg.)	L43	68.5				
Knee angle (deg.)	L45	66.5				
Foot angle (deg.)	L47	116.5				
Depressed floor covering thickness	H73	18 (0.7)	•			

**Luggage Compartment** 

Usable luggage capacity (L (cu. ft.)]	V1	879 (31.)
*** Liftover height	H195	•

Interior Volumes (EPA Classification)

Vehicle class	Sub-Compact
Interior valume index (cu. ft.)**	97.2
Trunk / cargo index (cu. ft.)	 12.4

 $<sup>^{\</sup>circ}$  See page 14.  $^{\circ\circ}$  Includes passenger and trunk / cargo index – see definition page 32.

<sup>\*\*\*\*</sup> EPA Loaded Vehicle Weight, Loading Conditions All Linear Dimensions Are in Millimeters (Inches)

MVMA S	Specifications
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Vehicle Line	FIREBI	FIREBIRD			
Model Year	1990	Issued	6-89	Revised(*)	

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for Definitions						
Body Type		2FS87	2FW87			
Station Wagon - Third Seat	SAE Ref.	No. (NOT APPLICABLE	)			
Seat facing direction	SD1					
SgRP couple distance	L85					
Shoulder room	W85		- · · · · · · · · · · · · · · · · · · ·			
Hip Room	W86					
Effective leg room	L66					
Effective head room	H86					
SgRP to heel point	H87					
Knee clearance	L87					
Back angle	L88					
Hip angle	L89					
Knee angle	L90					
Foot angle	L91					
Station Wagon - Cargo Space		(NOT APPLICABLE)				
Cargo length (open front)	L200			<u> </u>		
Cargo length (open second)	L201					
Cargo length (closed front)	L202					
Cargo length (closed second)	L203	·				
Cargo length at belt (front)	L204					
Cargo length at belt (second)	L205					
Cargo width (wheelhouse)	W201			······································		
Rear opening width at floor	W203					
Opening width at belt	W204					
Min. rear opening width above belt	W205					
Cargo height	H201					
Rear opening height	H202	<u> </u>				
Tailgate to ground height	H250	<u></u>				
Front seat back to load floor height	H197					
Cargo volume index [cu. m.(cu.ft.)]	V2					
Hidden cargo vol. index [cu.m.(cu.ft.)]	V4					
Cargo volume index-rear of 2-seat	V10					
Hatchback - Cargo Space						
Cargo length at front seatback height	L208	886 (34.9)				
Cargo length at floor (front)	L209	1556 (61.3)				
Cargo length at second seatback height	L210	610 (24.0)				
Cargo length at floor (second)	L211	845 (33.3)				
Front seatback to load floor height	H197	360 (14.2)				
Second seatback to load floor height	H198	242 (9.5)				
Cargo volume index [cu. m. (cu. ft.)]	V3	879 (31:0)				
Hidden cargo vol. index (cu.m.(cu.ft.))	V4					

Cargo volume index-rear of 2-seat

All Linear Dimensions Are in Millimeters (inches)

292 (10.3)

V11

<sup>\*</sup>EPA Loaded Vehicle Weight, Loading Conditions

Vehicle Line	FIREBIRD				
Model Year	1990	Issued	6-89	Revised(*)	

METRIC (U.S. Customary)

Body	Type
DULLY	YPE

	*		
2FW87		2FW87	

### Vehicle Fiducial Marks

lumber*		Define Coordinate Location
		X - Fiducial Mark To Vertical Zero Grid Line - Front Measured Horizontally, From The Zero Grid Line To The Front Fiducial Mark Located On Top Of The Front Seat Adjuster Mounting Bolt.
ront		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 Block.
		Z - Fiducial Mark To Horizontal Zero Grid Line - Front Measured Vertically From Zero Grid Grid Line To Front Fiducial Mark Located On Top Of The Front Seat Adjuster Mounting Block.
		X - Fiducial Mark To Vertical Zero Grid Line - Rear, Measured Horizontally From The Zero Grid Line To Rear Fiducial Mark Located On The Rail (Compartment Pan - Longitudinal).
		Y - Fiducial Mark To Centerline Of Car - Rear, Width Measurement Made From Centerline Of Car To Fiducial Mark Located On The Rail (Compartment Pan - Longitudinal).
isar		Z - Fiducial Mark To Horizontal Zero Grid Line - Rear, Measured Vertically From The Zero Grid Line To Rear Fiducial Mark Located On The Rail (Compartment Pan - Longitudinal).
iduciai fark lumber		
-	W21*	540 (21.3)
	L54*	688 (27.1)*
ront	H81*	-32 (-1.3)#
	H161*	293 (11.5)
**	H163*	267 (10.5)
	W22*	548 (21.6)
	L55*	2815 (110.8)*
ear .	H82*	96 (3.8)#
:	H162*	421 (16.6)
**	H164*	402 (15.8)
		* Vertical Base Grid 2000 mm Line
		# Horizontal Base Grid 500 mm Line
		H HONZONTAL BASE GIRD SOC ITEN LINE

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

<sup>\*\*\*</sup> EPA Loaded Vehicle Weight, Loading Conditions
All Linear Dimensions Are in Millimeters (Inches)

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

Vehicle Line	FIREBIRD					,
Model Year	1990	Issued	6-89	Revised(*)	9-89	

	Vehicle Mass (weight)									
	CURB	CURB MASS, kg. (ib.)*			% PASS MASS DISTRIBUTION					
				Pass in	Front	Pass in	Rear	٦		
Code Model	Front	Rear	Total	Front	Rear	Front	Rear	ETWC**		
FIREBIRD	770	639	1409							
2FS87 2-Door Coupe (LHO & MB1)	(1697)	(1409)	(3106)					3500		
FIREBIRD TRANS AM	852	662	1514							
2FW87 2-Door Coupe (LB9 & M39)	(1878)	(1460)	(3338)					3750		
								<u> </u>		
FIREBIRD FORMULA	839	675	1514				[			
2FS87 W/W66 2-Door Coupe (L03 & M39)	(1850)	(1488)	(3338)	1.	ļ			3750		
FIREBIRD GTA	909	703	1612					<u> </u>		
2FS87 W/Y84 2-Door Coupe (LB9 & MK6)	(2004)	(1550)	(3554)					3875		
					-					
								<u> </u>		
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					- <u></u>					
10-10-10-10-10-10-10-10-10-10-10-10-10-1										
			L							

Curb Mass - The calculated mass of a vehicle with standard equipment only as designed with the additional load of oil, lubes, coolants, and fuel all filled to capacity.

Shipping Mass - Same as base curb weight, except 3 gallons of gasoline.

\* Reference – SAE J1100 Motor vehicle dimensions, curb weight definition.
\*\* ETWC – Equivalent Test Weight Class – basis for U.S. Environmental Protection Agency emission certifications.
Refer to ETWC code legend below for test weight class.

ETWCLEGEND									SHIPPING MASS (weight) Calculation (Kg. (lbs.)
ABCDEFGH	= 1125 = 1250 = 1375 = 1500 = 1625 = 1750	ZETAC	= 2000 = 2125 = 2250 = 2375 = 2500 = 2625 = 2750 = 2875	QASTUV¥x	= 3000 = 3125 = 3250 = 3375 = 3500 = 3625 = 3750 = 3875	YZAA BBCCDEE	:	4000 4250 4500 4750 5000 5250 5500 5750	Shipping Mass (weight) = Curb Mass (weight) Less:  35 (77)
F G	= 1625 = 1750	N	- 2625 - 2750	V	= 3625 = 3750	DD EE	-	5250 5500	35 (77)

Vehicle Line Model Year FIREBIRD

el Year 1990

Issued

6-89 Revised(\*)

9-89

METRIC (U.S. Customary)

		Optional Equipment Differential Mass (weight)*						
			MASS, kg. (Ib	Remarks				
ode	Equipment	Front	Rear	Total	Restrictions, Requirements			
<del></del>					•			
	Davis Madaus	1.2	1.0	2.2	· · · · · · · · · · · · · · · · · · ·			
<b>\31</b>	Power Windows	(2.6)	(2.2)	(4.8)				
					•			
320	Luxury Interior	-0.2	-0.2	-0.4				
		(-0.4)	(-1.4)	(-1.8)				
CC1	Hatch Roof	5.8	9.6	15.4	Integral Locks			
		(12.8)	(21.1)	(33.9)				
C60	Air Conditioning	18.0 (39.7)	1.4 (3.1)	19.4 (42.8)	With RPO LB9 Engine			
		. (35.7)	\ <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>	(12.0)				
		17.6	1.4	19.0	With RPO LB8 Engine			
		(38.8)	(3.1)	(41.9)				
					New DEC LOS Engine			
		15.8 (34.8)	1.4 (3.0)	17.2 (37.8)	With RPO LO3 Engine			
•								
		17.4	1.2	18.8	With RPO L98 Engine			
		(38.4)	(2.6)	(41.0)	1			
D04	Speller-Acro Wind	8	8.0	7.2	2FW87 Only			
D81 .	Spoiler-Aero Wind	(-1.8)	(17.7)	(15.9)				
J65	4-Wheel Disc Brakes	(0)	8 (18.9)	8.6 (18.9)				
		(0)	10.0)	(10.0)				
K34	Cruise Control	2.2	0	2.2				
-		(4.9)	(0)	(4.9)				
			<u> </u>	ļ				

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

METRIC (U.S. Customary)

Vehicle Line	FIRE	BIRD		_		
Model Year	1990	Issued	6-89	Revised(*)	9-89	

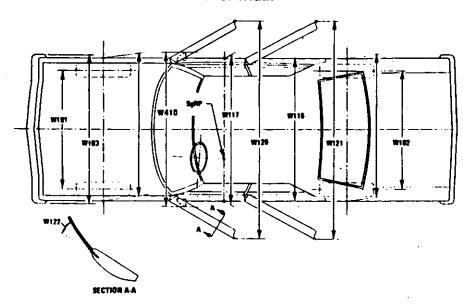
	•	Op	otional E	nt Differential Mass (weight)*			
	· · · · · · · · · · · · · · · · · · ·		MASS, kg. (	(lb.)	Ba-sala		
Code	Equipment	Front	Rear	Total	Remarks Restrictions, Requirements		
LO3.	5.0 Liter V8 (305 CID)	70.2	2.2	72.4	For Manual Transmission		
		(154.8)	(4.8)	(159.6)			
LO3	5.0 Liter V8 (305 CID)	53.4	1.8	55.2	For Automatic Transmission		
	,	(117.8)	(4.0)	(121.8)			
LB9	5.0 Liter V8 (305 CID)	75.0	7.4	82.4	For Manual Transmission		
	5.5 <u>Juli 75 (555 515)</u>	(165.3)	(16.3)	(181.6)	TO Wallas Hallshisson		
			(10.0)	,			
LB9	5.0 Liter V8 (305 CID)	63.8	6.4	70.2	For Automatic Transmission		
·		(140.7)	(14.1)	(154.8)			
L98	5.7 Liter V8 (350 CID)	68.0	6.8	74.8	For Automatic Transmission		
	5.7 Dia 40 (300 OID)	(149.9)	(15.0)	(164.9)	TO AUTOMATIC HAMSTINSSION		
	<del> </del>	(143.0)	(13.0)				
MD8	Automatic Transmission With Overdrive	12.8	4.4	17.2	With LHO Engine		
<del></del>	<del> </del>	(28.2)	(9.7)	(37.9)			
	· · · · · · · · · · · · · · · · · · ·	31.4	10.0	41.4	With LO3, LB9, L98 Engines		
		(69.2)	(22.0)	(91.2)	With ECO, EDS, ESO Eligines		
		(333)		(5.1,2)			
N33	Steering Column Tilt	.8	.2	1.0			
		(1.8)	(.4)	(2.2)			
			<u> </u>				
				<u> </u>			
				<u> </u>			
· · · · · · · · · · · · · · · · · · ·				1.			
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<del></del>				<del>                                     </del>			
· · · · · · · · · · · · · · · · · · ·				<u> </u>			
				<u> </u>			

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

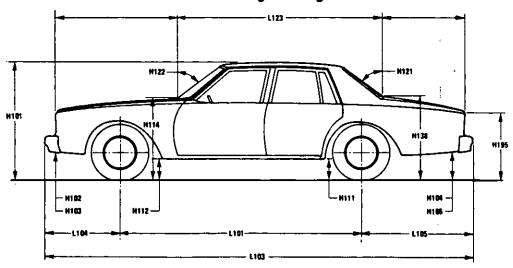
METRIC (U.S. Customary)

### Exterior Vehicle And Body Dimensions - Key Sheet

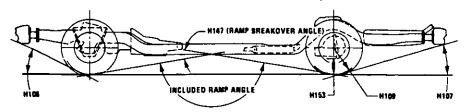
### **Exterior Width**



# Exterior Length & Height



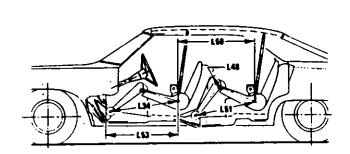
### **Exterior Ground Clearance**

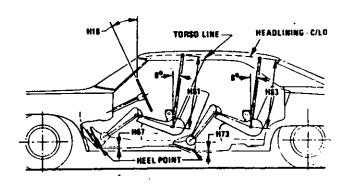


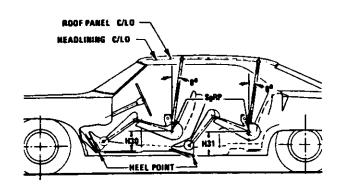
# **MVMA Specifications Form**

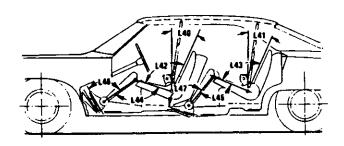
METRIC (U.S. Customary)

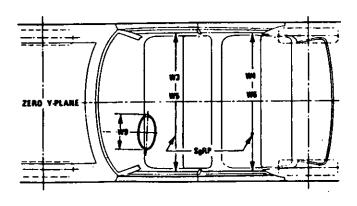
Interior Vehicle And Body Dimensions - Key Sheet

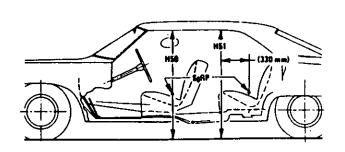










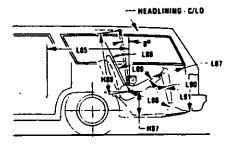


# **MVMA Specifications Form**

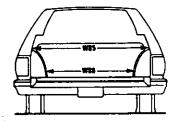
**METRIC (U.S. Customary)** 

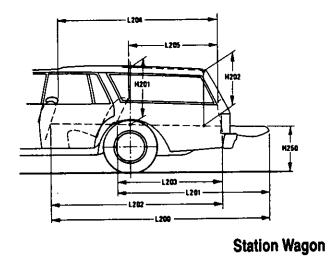
### Interior Vehicle And Body Dimensions — Key Sheet

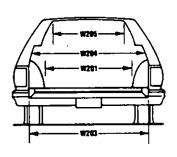
### **Third Seat**

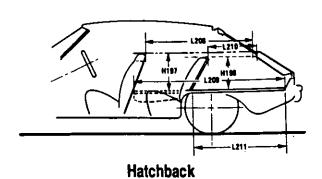


Cargo Space









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.

W102 TREAD - REAR. The dimension measured between the tire centerlines at the ground. In case of dual wheels, the dimension will be measured to the centerline of tire and wheel assemblies.

W103 VEHICLE WIDTH. The maximum dimension measured between the widest point on the vehicle, excluding exterior mirrors, flexible mud flaps, marker lamps, but including bumpers, moldings, sheet metal protrusions or dual wheels, if standard equipment.

W117 BODY WIDTH AT SgRP-FRONT. The dimension measured laterally between the widest points on the body at the SgRP-front, excluding door handles, applied moldings, or

appliques

VEHICLE WIDTH - FRONT DOORS OPEN. The dimension W120 measured between the widest point on the front doors in

maximum hold-open position.

W121 VEHICLE WIDTH - REAR DOORS OPEN. The dimension measured between the widest point on the rear doors in maximum hold-open position. For vehicles with a rear door

on only one side, this dimension is to the zero "Y" plane. TUMBLE - HOME. STRAIGHT SIDE GLASS. The angle W122 measured from a vertical to the outside surface of the front door glass at the SgRP "X" plane. CURVED SIDE GLASS. The angle measured from a vertical

to a chord extending from the upper DLO to the lower DLO at the outside surface of the front door glass at the front

SgRP "X" plane.
OUTSIDE MIRROR WIDTH: The dimension between the W410 widest point on the outside mirrors. The standard right and left mirror adjusted for normal driving will be shown unless otherwise noted. When only one outside mirror is standard, the dimension will be to the zero "Y" plane.

#### **Length Dimensions**

WHEELBASE (WB). The dimension measured longitudi-L101 nally between front and rear wheel centerlines. In case of dual rear axles, the dimension shall be to the midpoint of the centerlines of the rear wheels.

L103 VEHICLE LENGTH. The maximum dimension measured longitudinally between the foremost point and the rearmost point on the vehicle, including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.

L104 OVERHAND - FRONT. The dimension measured longitudinally from the centerline of the front wheels to the foremost

point on the vehicle including bumper, bumper guards, tow hooks and/or rub strips, if standard equipment.

OVERHANG – REAR. The dimension measured longitudi-L105 nally from the centerline of the rear wheels; or in the case of dual rear axles, the dimension shall be the midpoint of the centerlines of the rear wheels, to the rearmost point on the vehicle including rear bumpers, bumper guards, tow hooks and rub strips, if standard equipment.

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

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

#### **Height Dimensions**

VEHICLE HEIGHT. The dimension measured vertically from H101 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,

excluding 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.

H114

COWL POINT TO GROUND. Measured at zero "Y" plane. BACKLIGHT SLOPE ANGLE. The angle between the vertical reference line and the surface of backlight at vehicle zero "Y" plane. For curve backlight, the angle is to chord H121 of backlight arc from lower DLO to upper DLO.

WINDSHIELD SLOPE ANGLE. The angle between the vertical reference line and a chord of the windshield arc H122 running from the lower DLO to the upper DLO at the vehicle zero "Y" plane. In the case of wrap over glass, the angle to be measured will be formed by a chord 457 mm (18.0 in.) long drawn from the lower DLO to the intersecting point on the windshield.

H138 DECK POINT TO GROUND. Measured at zero "Y" plane.

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

#### **Ground Clearance Dimensions**

FRONT BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the front bumper to ground, including bumper guards, if standard equipment.

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

H104 REAR BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the rear bumper to ground, including bumper guards, if standard equipment

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

H107 ANGLE OF DEPARTURE. The angle measured between a line tangent to the rear tire static loaded radius arc and the initial point structural interference rearward of the rear tire

to ground. The limiting component shall be designated. 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.

H153 REAR AXLE DIFFERENTIAL TO GROUND. The minimum dimension measured from the rear axle differential to

ground.

H156 MINIMUM RUNNING GROUND CLEARANCE. The minimum dimension measured from the sprung vehicle to ground. Specify location.

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

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

	Gla	88	Аг	eas
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**S1** Windshield area.

Side windows area. Includes the front door, rear door, vents, S2 and rear quarter windows on both sides of the vehicle.

53 **Backlight areas** 

**S4** Total area. Total of all areas (S1 + S2 + S3).

#### Fiducial Mark Dimensions

#### Fiducial Mark - Number 1

L54 "X" coordinate. W21 "Y" coordinate.

H81 "Z" coordinate.

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. W82 "Z" coordinate.

Height "Z" coordinate to ground at curb weight. H162

Height "Z" coordinate to ground. H164

#### Front Compartment Dimensions

L11 ACCELERATOR HEEL POINT TO STEERING WHEEL CENTER. The dimension measured horizontally from the AHP to the intersection of the steering column centerline and a plane tangent to the upper surface of the steering

DESIGN H-POINT - FRONT TRAVEL. The dimension meas-L17 ured horizontally between the design H-point-front in the foremost and rearmost seat track positions. (See SAE

J11001

L23 NORMAL DRIVING AND RIDING SEAT TRACK TRAVEL. The dimension measured horizontally between a point on the design H-point travel line from the SgRP to the displaced point on the design H-point travel line with the seat moved to the foremost seat position, but not to include seat track travel used for purposes other than normal driving and riding

L31

positions. (See SAE J1100).
SgRP - FRONT. "X" COORDINATED.
MAXIMUM EFFECTIVE LEG ROOM - ACCELERATOR. L34 The dimension measured along a line from the ankle pivot center to the SgRP – front plus 254 mm (10.0 in.) measured with right foot on the undepressed accelerator pedal. For vehicles with SgRP to heel (H30) greater than 18 in., the accelerator pedal may be depressed as specified by the manufacturer. If the accelerator is depressed, the manufacturer shall place foot flat on pedal and note the depression of the pedal.

1-40 BACK ANGLE-FRONT. The angle measured between a vertical line through the SgRP-front and the torso line. If the seatback is adjustable, use the normal driving and riding

position specified by the manufacturer.
HIP ANGLE - FRONT. The angle measured between torso L-42 \* line and thigh centerline

KNEE ANGLE-FRONT. The angle measured between L44 thigh centerline and lower leg centerline measured on the

right leg

FOOT ANGLE - FRONT. The angle measured between the L46 lower leg centerline and a line tangent to the ball and heel of the bare foot flesh line measured on the right leg. Ref

SgRP-FRONT TO HEEL. The dimension measured L53 horizontally from the SgRP-front to the accelerator heel

W3 SHOULDER ROOM - FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP-front at height between the belt line and 254 mm (10.0 in.) above the SgRP-front, excluding the door assist strap and attaching parts.

W5 HIP ROOM-FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP-front within 25 mm (1.0 in.) below and 76 mm (3.0 in.) above the SgRP-front and 76 mm (3.0 in.) fore and aft of the SgRP-front.

W9 STEERING WHEEL MAXIMUM OUTSIDE DIAMETER.

Define if other than round.

ACCELERATOR HEEL POINT TO THE STEERING WHEEL **H7** 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

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.

UPPER BODY OPENING TO GROUND-FRONT. The H30

H50 dimension measured vertically from the trimmed body opening to the ground on the SgRP-front "X" plane. EFFECITVE HEAD ROOM-FRONT. The dimension meas-

H61 ured along a line 8 deg. rear of vertical from the SgRP - front

to the headlining plus 102 mm (4.0in.).
FLOOR COVERING THICKNESS - UNDEPRESSED -**H67** FRONT. The dimension measured vertically from the surface of the undepressed floor covering to the underbody sheet metal at the accelerator heel point.

#### **Rear Compartment Dimensions**

BACK ANGLE-SECOND. The angle measured between

a vertical line through the SgRP – second and the torso line. HIP ANGLE – SECOND. The angle measured between L43 torso line and thigh centerline.

KNEE ANGLE-SECOND. The angle measured between L45

thigh centerline and lower leg centerline. FOOT ANGLE-SECOND. The angle measured between L47 the lower leg centerline and a line tangent to the ball and heel of the three-dimensional devices bare foot flesh line (Reference J826)

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 254 mm (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

SgRP-SECOND TO HEEL. The dimension measured vertically from the SgRP-second to the two dimensional H31

device heel point on the depressed floor covering.

UPPER BODY OPENING TO GROUND – SECOND. The dimension measured vertically from the trimmed body opening to the ground on the "X" plane 330 mm (13.0 in.) H51 forward of the SgRP - second.

EFFECTIVE HEAD ROOM-SECOND. The dimension H63 measured along a line 8 deg. rear of vertical from the SgRP

to the headlining, plus 102 mm (4.0 in.).

FLOOR COVERING - DEPRESSED - SECOND. The di-H73 mension measured vertically from the heel point to the underbody sheet metal.

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

# Interior Vehicle And Body Dimensions — Key Sheet Dimensions Definitions

#### **Luggage Compartment Dimensions**

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

#### **Interior Volumes (EPA Classification)**

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

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

#### Station Wagon - Third Seat Dimensions

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

  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.

MVMA-90

#### Station Wagon - Cargo Space Dimensions

- L200 CARGO LENGTH OPEN FRONT. The minimum dimension measured longitudinally from the back of the front seatback at the height of the 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.
- L203 CARGO LENGTH CLOSED SECOND. The dimension measured horizontally from the back of the second seat at the height of the undepressed floor covering to the rearmost point on the undepressed floor covering on the closed tailgate or taildoor for station wagons, trucks and mpv's at the zero "Y" plane.
- L204 CARGO LENGTH AT BELT FRONT. The minimum dimension measured horizontally from the back of the front seatback at the seatback top to the foremost normal surface of the closed tailgate or inside surface of the cab backpanel at the height of the belt, on the zero "Y" plane.
- L205 CARGO LENGTH AT BELT SECOND. The minimum dimension measured horizontally from the back of the second seatback at the seatback top to the foremost normal surface of the closed tailgate at the height of the belt, on the zero "Y" plane.
- W201 CARGO WIDTH WHEELHOUSE. The minimum dimension measured laterally between the trimmed wheelhousings at floor level. For any vehicle not trimmed, measure to the sheet metal.
- W203 REAR OPENING WIDTH AT FLOOR. The minimum dimension measured laterally between the limiting interferences of the rear opening at floor level.
- W204 REAR OPENING WIDTH AT BELT. The minimum dimension measured taterally 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:

W4 x H201 x L204 1728 = ft<sup>2</sup>

Measured in mm:

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

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

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

HIDDEN LUGGAGE CAPACITY - REAR OF FRONT SEAT. **V**4 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.

TRUCKS AND MPV'S WITH OPEN AREA. **V**5

Measured in inches:

Measured in mm:

L506 x W500 x H503 = m<sup>3</sup> (cubic meter)

TRUCKS AND MPV'S WITH CLOSED AREA. **V6** 

Measured in inches:

Measured in mm:

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

HIDDEN LUGGAGE CAPACITY-REAR OF SECOND V8 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:

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 electronically adjusted seats, see the manufacturer's specifications for Design "H" Point).

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. 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.

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

CARGO LENGTH AT FLOOR-SECOND HATCHBACK. 1211 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.

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

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

**V3** HATCHBACK.

Measured in inches:

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

Measured in mm:

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

HIDDEN LUGGAGE CAPACITY - REAR OF FRONT SEAT. **V4** 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.

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

Measured in inches:

Measured in mm:

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

### METRIC (U.S. Customary)

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