

MANUFACTURERS MOTOR VEHICLE SPECIFICATIONS

METRIC (U.S. Customary)

1989

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

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

MVMA Specifications Form

METRIC (U.S. Customary)

Table of Contents

Ø	1	Vehicle Models / Origin	Ø Indicates Format Change From Previous Year
	2	Power Teams	
Ø	3-6	Engine	
	4	Lubrication System	
	4	Diesel Information	
	5	Cooling System	
	6	Fuel System	
Ø	7	Vehicle Emission Control	
	7	Exhaust System	
Ø	8-10	Transmission, Axles and Shafts	
Ø	11	Suspension	
	12-13	Brakes	
	13	Tires and Wheels	
	14-15	Steering	
Ø	15-16	Electrical	
Ø	17	Body – Miscellaneous Information	
Ø	18	Restraint System	
	18	Glass	
Ø	18	Headlamps	
	18	Frame	
Ø	19-20	Convenience Equipment	
	21-23	Vehicle Dimensions	
	24	Vehicle Fiducial Marks	
Ø	25	Vehicle Mass (Weight)	
	26	Optional Equipment Differential Mass (Weight)	
	27-33	Vehicle Dimensions Definitions - Key Sheets	
Ø	34	Index	

NOTE:

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

MVMA Specifications Form

METRIC (U.S. Customary)

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

☒ 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

☒ Vehicle Models

Model Description & Drive (FWD/RWD/4WD)*	Introduction Date	Make, Vehicle Models, Series, Body Type (Mfr's Model Code)	No. of Designated Seating Positions (Front/Rear)	Max. Trunk/Cargo Load-Kilograms (Pounds)
<u>FIREBIRD</u>				
2-Door Sport Coupe (RWD)		2FS87	4 (2/2)	45.4 (100.1)
<u>FIREBIRD TRANS AM</u>				
2-Door Sport Coupe (RWD)		2FW87	4 (2/2)	45.4 (100.1)

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

MVMA Specifications Form

Vehicle Line FIREBIRD

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

METRIC (U.S. Customary)

Power Teams (Indicate whether standard or optional)

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

SERIES AVAILABILITY	ENGINE						E x h a u s t S/D*	TRANSMISSION/ TRANSAXLE	AXLE RATIO (std. first)
	Code	Displ. Liters (in³)	Induction (FI, CARB/ BBL, etc.)	Compr. Ratio	SAE Net at RPM				
					Power kW (bhp)	Torque N • m (lb. ft.)			
Base - All Except TRANS AM	LB8	V6 2.8 (173)	MFI **	8.9:1	101 (135) @ 4900	217 (160) @ 3900	S	Man. 5-Spd. (MB1) Base Auto '700-R4 (MD8) Avail	3.42 3.42
Avail - All Except TRANS AM	L03	V8 5.0 (305)	EFI ***	9.3:1	127 (170) @ 4400	346 (255) @ 2400	S	Man. 5-Spd. (M39) Base Auto '700-R4' (MD8) Avail	3.08 2.73
Base-TRANS AM	LB9	V8 5.0 (305)	TPI @	9.3:1	160 (215) @ 4400	386 (285) @ 3200	S	Man. 5-Spd. (M39) Base	3.08
Avail - TRANS AM					142 (190) @ 4000	400 (295) @ 2800	S	Auto '700-R4' (MD8) Avail	2.73
					168 (225) @ 4600	407 (300) @ 3200	D	Man. 5-Spd. (MK6) Avail	3.45
Avail - TRANS AM	L98	V8 5.7 (350)	TPI @	9.3:1	168 (225) @ 4200	447 (330) @ 3200	S	Auto '700-R4' (MD8) Base	2.77
					175 (235) @ 4400	461 (340) @ 3200	D	Auto '700-R4' (MD8) Avail	3.27
** - Multi-Port Fuel Injection *** - Electronic Fuel Injection @ - Tuned Port Fuel Injection									

* Single/Dual

MVMA Specifications Form

Vehicle Line FIREBIRDModel Year 1989Issued 6-88

Revised (•) _____

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code2.8L V6 (173 CID)
(Multi-Port FI) RPO LB8

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)	60° V - Front - Longitudinal
Manufacturer	Chevrolet
No. of cylinders	6
Bore	89.0 (3.50)
Stroke	76.0 (2.99)
Bore spacing (C/L to C/L)	111.8 (4.40)
Cylinder block material & mass kg (lbs.) (machined)	Cast Iron 41.731 (91.9)
Cylinder block deck height	224 (8.82)
Cylinder block length	435.5 (17.1)
Deck clearance (minimum) (above or below block)	0.12 (.0047) below
Cylinder head material & mass kg (lbs.)	Cast iron 11.227 (24.8)
Cylinder head volume (cm ³)	--
Cylinder liner material	Not Applicable
Head gasket thickness (compressed)	.838 (.033)
Minimum combustion chamber total volume (cm ³)	51.546 (2.029)@
Cyl. no. system (front to rear)*	L. Bank 1-3-5
	R. Bank 2-4-6
Firing order	1-2-3-4-5-6
Intake manifold material & mass [kg (lbs.)]**	Cast alum./2.370 (5.1) Ctr, 3.810 (8.4) Lwr
Exhaust manifold material & mass [kg (lbs.)]**	Cast iron/3.610 (8.0) RH, 2.425 (5.3) LH
Fuel required unleaded, diesel, etc.	Unleaded
Fuel antiknock index (R + M) + 2	87
Engine mounts	Number
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)
	Added isolation (sub-frame, crossmember, etc.)
Total dressed engine mass (wt) dry***	195.7 (431.4) Auto, 206.9 (456.1) Man

Engine - Pistons

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

Engine - Camshaft

Location	In block above crankshaft
Material & mass kg (weight, lbs.)	Cast iron/3.098 (6.83)
Drive type	Chain / belt
	Width / pitch

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

** Finished state.

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

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

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

MVMA Specifications Form

Vehicle Line FIREBIRDModel Year 1989Issued 6-88

Revised (•) _____

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code5.0 Liter V8 (305 CID)
(Electronic Fuel Injection) RPO L03

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)	90° Front Longitudinal
Manufacturer	Chevrolet
No. of cylinders	8
Bore	94.89 (3.74)
Stroke	88.39 (3.48)
Bore spacing (C/L to C/L)	111.8 (4.40)
Cylinder block material & mass kg (lbs.) (machined)	Cast Iron 68.674 (151.4)
Cylinder block deck height	229.2 (9.025)
Cylinder block length	512.8 (20.19)
Deck clearance (minimum) (above or below block)	.635 (.025) below
Cylinder head material & mass kg (lbs.)	Cast iron 19.8 (43.7)
Cylinder head volume (cm³)	--
Cylinder liner material	Not Applicable
Head gasket thickness (compressed)	.533 (.021)
Minimum combustion chamber total volume (cm³)	55.2 (+2.2)
Cyl. no. system (front to rear)*	L. Bank 1-3-5-7 R. Bank 2-4-6-8
Firing order	1-8-4-3-6-5-7-2
Intake manifold material & mass [kg (lbs.)]**	Cast aluminum/6.900 (15.2)
Exhaust manifold material & mass [kg (lbs.)]**	Cast iron/4.345 (9.6) LH, 3.800 (8.4) RH
Fuel required unleaded, diesel, etc.	Unleaded
Fuel antiknock index (R + M) + 2	87
Engine mounts	Number
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)
	Added isolation (sub-frame, crossmember, etc.)
Total dressed engine mass (wt) dry***	275.1 (606.5) Auto, 290.8 (641.1) Man

Engine - Pistons

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

Engine - Camshaft

Location	In block above crankshaft
Material & mass kg (weight, lbs.)	Steel 4.124 (9.1)
Drive type	Chain / belt
	Chain
Width / pitch	15.976 (.625)/.5

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

** Finished state.

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

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

MVMA Specifications Form

Vehicle Line FIREBIRDModel Year 1989 Issued 6-88 Revised (●) _____

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code5.0 Liter V8 (305 CID)
(Tuned Port Fuel Injection) RPO 1B9

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)	90° Front Longitudinal
Manufacturer	Chevrolet
No. of cylinders	8
Bore	94.89 (3.74)
Stroke	88.39 (3.48)
Bore spacing (C/L to C/L)	111.8 (4.40)
Cylinder block material & mass kg (lbs.) (machined)	Cast Iron 68.674 (151.4)
Cylinder block deck height	229.2 (9.025)
Cylinder block length	512.8 (20.19)
Deck clearance (minimum) (above or below block)	.635 (.025) below
Cylinder head material & mass kg (lbs.)	Cast Iron 19.8 (44.7)
Cylinder head volume (cm³)	--
Cylinder liner material	Not Applicable
Head gasket thickness (compressed)	.533 (.021)
Minimum combustion chamber total volume (cm³)	55.2 (+2.2)
Cyl. no. system (front to rear)*	L. Bank 1-3-5-7
	R. Bank 2-4-6-8
Firing order	1-8-4-3-6-5-7-2
Intake manifold material & mass [kg (lbs.)]**	Cast aluminum/6.117 (13.5)
Exhaust manifold material & mass [kg (lbs.)]**	Cast iron/L.H. 4.46 (9.8) R.H. 3.800 (8.4)
Fuel required unleaded, diesel, etc.	Unleaded
Fuel antiknock index (R + M) + 2	91
Engine mounts	Number
	Material and type (elastomeric, hydroelastic, hydraulic damper, etc.)
	Added isolation (sub-frame, crossmember, etc.)
Total dressed engine mass (wt) dry***	254.1 (560.2) Auto., 297.9 (656.7) Man.
Engine - Pistons	282.4 (622.6)

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

Engine - Camshaft

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

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

** Finished state.

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

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

MVMA Specifications Form

Vehicle Line FIREBIRDModel Year 1989Issued 6-88

Revised (•) _____

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code5.7 Liter V8 (350 CID)
(Tuned Port Fuel Injection) RPO 198

ENGINE - GENERAL

Type & description (inline, V, angle, flat, location, front, mid, rear, transverse, longitudinal, sohc, dohc, ohv, hemi, wedge, pre-camber, etc.)	90° Front Longitudinal
Manufacturer	Chevrolet
No. of cylinders	8
Bore	94.89 (3.74)
Stroke	88.39 (3.48)
Bore spacing (C / L to C / L)	111.8 (4.40)
Cylinder block material & mass kg (lbs.) (machined)	Cast Alloy Iron 68.674 (151.5)
Cylinder block deck height	229.2 (9.025)
Cylinder block length	506.2 (19.93)
Deck clearance (minimum) (above or below block)	(.025) Below
Cylinder head material & mass kg (lbs.)	Cast Iron 19.8 (43.7)
Cylinder head volume (cm³)	--
Cylinder liner material	Not Applicable
Head gasket thickness (compressed)	(.021)
Minimum combustion chamber total volume (cm³)	75.47 Combustion chamber with piston at top dead center and all components in place torqued to specifications.
Cyl. no. system (front to rear)*	L. Bank 1-3-5-7 R. Bank 2-4-6-8
Firing order	1-8-4-3-6-5-7-2
Intake manifold material & mass [kg (lbs.)]**	Cast aluminum/6.117 (13.5)
Exhaust manifold material & mass [kg (lbs.)]**	Cast iron/L.H. 4.46 (9.8), R.H. 3.800 (8.4)
Fuel required unleaded, diesel, etc.	Unleaded
Fuel antiknock index (R + M) + 2	91
Engine mounts	Number Material and type (elastomeric, hydroelastic, hydraulic damper, etc.) Added isolation (sub-frame, crossmember, etc.)
Total dressed engine mass (wt) dry***	284.5 (627.3) Auto

Engine - Pistons

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

Impacted Cast Aluminum/.645 (1.4)

Engine - Camshaft

Location	In cylinder block "V" above crankshaft
Material & mass kg (weight, lbs.)	Steel 4.200 (9.3)
Drive type	Chain / belt Chain
	Width / pitch 15.976 (.625)/.5

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

** Finished state.

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

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

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

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

Engine - Valve System

Hydraulic lifters (std., opt., NA)	Standard
Valves	Number intake / exhaust
	Head O.D. intake / exhaust

Standard

6/6

43.64 (1.72)/36.20 (1.43)

Engine - Connecting Rods

Material & mass (kg., (weight, lbs.))*	Steel .399 (0.9)
Length (axes E to E) mm	144.78

Engine - Crankshaft

Material & mass (kg., (weight, lbs.))*	Nodular Cast Iron 14.170 (31.24)
End thrust taken by bearing (no.)	3
Length & number of main bearings	4
Seal (material, one, two piece design, etc.)	Front
	Rear

Nodular Cast Iron 14.170 (31.24)

3

4

Fluoroelastomer, one-piece, lip seal

Fluoroelastomer, one-piece, lip seal

Engine - Lubrication System

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

345-448 (50-65) @ 1200

Stationary

Full-flow

3.8 (4.0)

Engine - Diesel Information

Diesel engine manufacturer	Not
Glow plug, current drain at 0°F	Applicable
Injector nozzle	Type
	Opening pressure [kPa (psi)]
Pre-chamber design	
Fuel injection pump	Manufacturer
	Type
Fuel injection pump drive (belt, chain, gear)	
Supplementary vacuum source (type)	
Fuel heater (yes/no)	
Water separator, description (std., opt.)	
Turbo manufacturer	
Oil cooler-type (oil to engine coolant; oil to ambient air)	
Oil filter	

Not

Applicable

Type

Opening pressure [kPa (psi)]

Manufacturer

Type

Engine - Intake System

Turbo charger - manufacturer	Not
Super charger - manufacturer	Applicable
Intercooler	

Not

Applicable

*Finished State

MVMA Specifications Form

Vehicle Line FIREBIRD
Model Year 1989 Issued 6-88 Revised (•) 9-88

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

5.0 Liter V8 (305 CID)
(Electronic Fuel Injection) RPO L03

Engine - Valve System

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

Engine - Connecting Rods

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

Engine - Crankshaft

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

Engine - Lubrication System

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

Engine - Diesel Information

Diesel engine manufacturer	Not
Glow plug, current drain at 0°F	Applicable
Injector nozzle	Type
	Opening pressure [kPa (psi)]
Pre-chamber design	
Fuel injection pump	Manufacturer
	Type
Fuel injection pump drive (belt, chain, gear)	
Supplementary vacuum source (type)	
Fuel heater (yes/no)	
Water separator, description (std., opt.)	
Turbo manufacturer	
Oil cooler-type (oil to engine coolant; oil to ambient air)	
Oil filter	

Engine - Intake System

Turbo charger - manufacturer	Not
Super charger - manufacturer	Applicable
Intercooler	

*Finished State

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

5.0 Liter V 8 (305 CID)
(Tuned Port Fuel Injection) RPO LB9

Engine - Valve System

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

Engine - Connecting Rods

Material & mass [kg., (weight, lbs.)]*	Steel/.388 (0.85)
<input checked="" type="checkbox"/> Length (axes E to E) mm	144.78

Engine - Crankshaft

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

Engine - Lubrication System

Normal oil pressure [kPa (psi) at engine rpm]	345-450 (50-65) @ 2000 with auto trans.,*
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full-flow
Capacity of c/case, less filter-refill-L (qt.)	4.5 (5.0)

Engine - Diesel Information

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

Engine - Intake System

Turbo charger - manufacturer	Not
Super charger - manufacturer	Applicable
Intercooler	

*Finished State

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

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

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

Engine - Valve System

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

Engine - Connecting Rods

Material & mass (kg., (weight, lbs.))*	Steel/.388 (0.855)
Length (axes \perp to \perp) mm	144.78

Engine - Crankshaft

Material & mass (kg., (weight, lbs.))*	Nodular Cast Iron/22.900 (50.49)
End thrust taken by bearing (no.)	5
Length & number of main bearings	5
Seal (material, one, two piece design, etc.)	Front Fluoroelastomer, one-piece, lip seal
	Rear Fluoroelastomer, one-piece, lip seal

Engine - Lubrication System

Normal oil pressure (kPa (psi) at engine rpm)	485-585 (70-85) @ 2000
Type oil intake (floating, stationary)	Stationary
Oil filter system (full flow, part, other)	Full-flow (including engine oil cooler)
Capacity of c/case, less filter-refill-L (qt.)	4.5 (5.0)

Engine - Diesel Information

Diesel engine manufacturer	Not
Glow plug, current drain at 0°F	Applicable
Injector nozzle	Type Opening pressure (kPa (psi))
Pre-chamber design	
Fuel in-jection pump	Manufacturer Type
Fuel injection pump drive (belt, chain, gear)	
Supplementary vacuum source (type)	
Fuel heater (yes/no)	
Water separator, description (std., opt.)	
Turbo manufacturer	
Oil cooler-type (oil to engine coolant; oil to ambient air)	
Oil filter	

Engine - Intake System

Turbo charger - manufacturer	Not
Super charger - manufacturer	Applicable
Intercooler	

*Finished State

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

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

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)	Standard
Coolant fill location (rad., bottle)	Bottle, coolant recovery
Radiator cap relief valve pressure [kPa (psi)]	103.4 (15)
Circulation thermostat	Type (choke, bypass) Bypass
	Starts to open at °C (°F) 91°C (195°F)
Water pump	Type (centrifugal, other) Centrifugal
	GPM 1000 pump rpm 15.5
	Number of pumps One
	Drive (V-belt, other) Single belt poly 'V' accessory drive (serpentine)
	Bearing type Sealed ball-roller
	Impeller material Cast Iron
	Housing material Aluminum
By-pass recirculation [type (inter., ext.)]	Internal
Cooling system capacity	With heater-L(qt.) 12.3 (13.0) Man, 12.2 (12.9) Auto
	With air cond.-L(qt.) 12.1 (12.8) Man, 12.2 (12.9) Auto
	Opt. equipment [specify-L(qt.)] --
Water jackets full length of cyl. (yes, no)	Yes
Water all around cylinder (yes, no)	Yes
Water jackets open at head face (yes, no)	No
Radiator core	Std., A/C, HD Std. A/C
	Type (cross-flow, etc.) Cross-flow
	Construction (fin & tube mechanical, braze, etc.) Not Available
	Material, mass [kg (wgt. lbs.)] Aluminum, high efficiency radiator
	Width 599.5 599.5
	Height 437.8 437.8
	Thickness 23.5 23.5
	Fins per inch (d) 4.0 3.0
Radiator end tank material	Plastic
Fan	Std., elec., opt. Std., Electric
	Number of blades & type (flex, solid, material) 5, Plastic
	Diameter & projected width Solid 423.0 (16.7)
	Ratio (fan to crankshaft rev.) Not Applicable
	Fan cutout type ECM controlled
	Drive type (direct, remote) --
	RPM at idle (elec.) --
	Motor rating (wattage) (elec.) 150
	Motor switch (type & location) (elec.) Part ECM
	Switch point (temp., pressure) (elec.) 1900-2100
	Fan shroud (material) Plastic

* - Distance between top of fins.

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

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

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Standard
Coolant fill location (rad., bottle)		Bottle, coolant recovery
Radiator cap relief valve pressure [kPa (psi)]		103.4 (15)
Circulation thermostat	Type (choke, bypass)	Choke
	Starts to open at °C (°F)	90.6°C (195°F)
Water pump	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	14 (Total cooling system flow)
	Number of pumps	One
	Drive (V-belt, other)	Single belt poly 'V' accessory drive (serpentine)
	Bearing type	Sealed double row ball
	Impeller material	Steel
	Housing material	Cast Iron
By-pass recirculation [type (inter., ext.)]		Internal
Cooling system capacity	With heater-L(qt.)	15.52 (16.40)
	With air cond.-L(qt.)	15.90 (16.80)
	Opt. equipment [specify-L(qt.)]	--
Water jackets full length of cyl. (yes, no)		Yes
Water all around cylinder (yes, no)		Yes
Water jackets open at head face (yes, no)		No
Radiator core	Std., A/C, HD	Standard A/C or HD AC & HD
	Type (cross-flow, etc.)	Cross-flow
	Construction (fin & tube mechanical, braze, etc.)	Fin & Tube
	Material, mass [kg (wgt. lbs.)]	Aluminum, high efficiency radiator
	Width	667.5 667.5
	Height	437.8 437.8
	Thickness	23.5 34.0
	Fins per inch @	* 2.5
Radiator end tank material		Plastic
Fan	Std., elec., opt.	Standard Optional
	Number of blades & type (flex, solid, material)	5, Plastic, 5, Plastic, Solid Solid
	Diameter & projected width	423.0 (16.7) 423.0 (16.7)
	Ratio (fan to crankshaft rev.)	Not Applicable
	Fan cutout type	ECM controlled
	Drive type (direct, remote)	--
	RPM at idle (elec.)	--
	Motor rating (wattage) (elec.)	150
	Motor switch (type & location) (elec.)	Temp. switch, eng. cyl head
	Switch point (temp., pressure) (elec.)	1900-2100
Fan shroud (material)		Plastic

@ - Distance between top of fins.

* - 4.0 with manual trans.

3.5 with auto. trans.

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

5.0L V8 (305 CID) 5.7L V8 (350 CID)
Tuned Port Fuel Inj. RPO LB9 Tuned Port Fuel Inj. RPO L98

Engine - Cooling System

Coolant recovery system (std., opt., n.a.)		Standard
Coolant fill location (rad., bottle)		Bottle, coolant recovery
Radiator cap relief valve pressure [kPa (psi)]		103.4 (15)
Circulation thermostat	Type (choke, bypass)	Choke
	Starts to open at °C (°F)	90.6°C (195°F)
Water pump	Type (centrifugal, other)	Centrifugal
	GPM 1000 pump rpm	12 (Total cooling system flow)
	Number of pumps	One
	Drive (V-belt, other)	Single belt poly 'V' accessory drive (serpentine)*
	Bearing type	Sealed double row ball
	Impeller material	Steel
	Housing material	Cast Iron
By-pass recirculation [type (inter., ext.)]		Internal
Cooling system capacity	With heater-L(qt.)	16.78 (17.7)
	With air cond.-L(qt.)	16.28 (17.2)
	Opt. equipment [specify-L(qt.)]	--
Water jackets full length of cyl. (yes, no)		Yes
Water all around cylinder (yes, no)		Yes
Water jackets open at head face (yes, no)		No
Radiator core	Std., A/C, HD	Standard
	Type (cross-flow, etc.)	Cross-flow
	Construction (fin & tube mechanical, braze, etc.)	Fin & Tube
	Material, mass [kg (wgt, lbs.)]	Aluminum, high efficiency radiator
	Width	667.5
	Height	437.8
	Thickness	34.0
	Fins per inch @	2.5
Radiator end tank material		Plastic
Fan	Std., elec., opt.	Standard A/C
	Number of blades & type (flex, solid, material)	5, Plastic, Solid
	Diameter & projected width	423.0 (16.7) - 2 Fans 318.0 (12.5) - 2 fans
	Ratio (fan to crankshaft rev.)	Not Applicable
	Fan cutout type	ECM controlled
	Drive type (direct, remote)	--
	RPM at idle (elec.)	--
	Motor rating (wattage) (elec.)	150 Rt. & Lt.
	Motor switch (type & location) (elec.)	Temp switch engine cylinder head
	Switch point (temp., pressure) (elec.)	2100-2200 Rt. Lt.
	Fan shroud (material)	Plastic Plastic

@ - Distance between top of fins.

* - 21.36mm (0.84") wide, 5.20mm (0.20) thick, with uniform dynamic tensioner.

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

2.8L V6 (173 CID)
(Multi-Port Fuel Injection) RPO LB8

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

Induction type: carburetor, fuel injection system, etc.		Fuel Injection
Manufacturer		Rochester Products
<input checked="" type="checkbox"/> Carburetor no. of barrels		None
Idle A/F mix.		Pre-Set-No adjustment Provided
Fuel injection	Point of injection (no.)	Fuel Injection at Inlet Ports
	Constant, pulse, flow	Pulse
	Control (electronic, mech.)	ECM
	System pressure [kPa (psi)]	300 (45)
Idle spd. -rpm (spec. neutral or drive and propane if used)	Manual	--
	Automatic	--
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water
Air cleaner type		Dual elements
Fuel filter (type/location)		
<input checked="" type="checkbox"/> Fuel pump	Type (elec. or mech.)	Electric
	Location (eng., tank)	Fuel Tank
	Pressure range [kPa (psi)]	350 (50.8)
	Flow rate at regulated pressure (L (gal)/hr (cc kPa (psi)))	

Fuel Tank

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

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

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

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

Induction type: carburetor, fuel injection system, etc.		Fuel Injection
Manufacturer		Rochester Products
<input checked="" type="checkbox"/> Carburetor no. of barrels		None
Idle A/F mix.		Preset-No adjustment provided
Fuel injection	Point of injection (no.)	Fuel Injection at Inlet Ports
	Constant, pulse, flow	Pulse
	Control (electronic, mech.)	ECM
	System pressure [kPa (psi)]	
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	--
	Automatic	--
Intake manifold heat control (exhaust or water thermostatic or fixed)		
Air cleaner type		Replaceable element, single snorkel
Fuel filter (type/location)		
<input checked="" type="checkbox"/> Fuel pump	Type (elec. or mech.)	Electric
	Location (eng., tank)	Fuel Tank
	Pressure range [kPa (psi)]	14.5 - 31.0 (2.1-4.5)
	Flow rate at regulated pressure (L (gal)/hr (• kPa (psi))	

Fuel Tank

Capacity [refill L (gallons)]		58.7 (15.5)
Location (describe)		Rear center
Attachment		Underbody strap
Material & Mass [kg (weight lbs)]		Steel 8.765 (19.3)
Filler pipe	Location & material	Left rear quarter
	Connection to tank	Solder
Fuel line (material)		Steel
Fuel hose (material)		Rubber
Return line (material)		Steel
Vapor line (material)		Steel
Extended range tank	Opt., n.a.	Not Available
	Capacity [L (gallons)]	"
	Location & material	"
	Attachment	"
Auxiliary tank	Opt., n.a.	"
	Capacity [L (gallons)]	"
	Location & material	"
	Attachment	"
	Selector switch or valve	"
	Separate fill	"

MVMA Specifications Form

METRIC (U.S. Customary)

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

Engine Description/Carb.
Engine Code

**5.0L V8 (305 CID)
(Tuned Port Fuel Injection) RPO LB9**

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

Induction type: carburetor, fuel injection system, etc.		Fuel Injection
Manufacturer		Bosch
<input checked="" type="checkbox"/> Carburetor no. of barrels		None
Idle A/F mix.		Preset-No adjustment provided
Fuel injection	Point of injection (no.)	Fuel Injection at Inlet Ports
	Constant, pulse, flow	Pulse
	Control (electronic, mech.)	ECM
	System pressure [kPa (psi)]	300 (44)
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	--
	Automatic	--
Intake manifold heat control (exhaust or water thermostatic or fixed)		Replaceable dual elements
Air cleaner type		
Fuel filter (type/location)		Electric
<input checked="" type="checkbox"/> Fuel pump	Type (elec. or mech.)	Fuel Tank
	Location (eng., tank)	350 (50.8)
	Pressure range [kPa (psi)]	
	Flow rate at regulated pressure (L (gal))/hr @ kPa (psi)	

Fuel Tank

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

MVMA Specifications Form

Vehicle Line

FIREBIRD

Model Year

1989

Issued

6-88

Revised (e)

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

5.7L V8 (350 CID)

Tuned Port Injection (TPI) RPO L98

Engine - Fuel System

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

Induction type: carburetor, fuel injection system, etc.		Fuel Injection
Manufacturer		Bosch
<input checked="" type="checkbox"/> Carburetor no. of barrels		None
Idle A/F mix.		Preset-No adjustment provided
Fuel injection	Point of injection (no.)	Fuel Injection at Inlet Ports
	Constant, pulse, flow	Pulse
	Control (electronic, mech.)	Electronic - On Board Computer
	System pressure [kPa (psi)]	255 (37)
Idle spd.-rpm (spec. neutral or drive and propane if used)	Manual	--
	Automatic	--
Intake manifold heat control (exhaust or water thermostatic or fixed)		Water
Air cleaner type		Replaceable paper dual element
Fuel filter (type/location)		
<input checked="" type="checkbox"/> Fuel pump	Type (elec. or mech.)	Electric
	Location (eng., tank)	Fuel tank
	Pressure range [kPa (psi)]	350 (50.8)
<input checked="" type="checkbox"/>	Flow rate at regulated pressure (L (gal)/hr (a kPa (psi))	

Fuel Tank

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

MVMA Specifications Form

Vehicle Line FIREBIRD
 Model Year 1989 Issued 6-88 Revised (•) 9-88

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

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

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		Computer Command Control
	Air Injection	Pump or pulse	Pump - manual transmission only
		Driven by	Belt
		Air distribution (head, manifold, etc.)	Exhaust Manifold
		Point of entry	Exhaust Manifold
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Back Pressure Modulated Controlled Flow
		Exhaust source	Manifold Exhaust Crossover
		Point of exhaust injection (spacer, carburetor, manifold, other)	Inlet manifold
	Catalytic Converter	Type	Single bed oxidizing & reducing
		Number of	One
		Location(s)	Beneath RF underbody
		Volume [L (in³)]	2.78
		Substrate type	Monolith
Noble metal type		Platinum/Rhodium	
Noble metal concentration (g/cm³)		0.000838	
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction system
	Energy source (manifold vacuum, carburetor, other)		Manifold vacuum
	Discharges (to intake manifold, other)		Inlet manifold
	Air inlet (breather cap, other)		Air inlet duct
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	--
	Vapor storage provision		Canister
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single with dual tailpipes
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs)]		One reverse flow
Resonator no. & type		*(See Below)
Exhaust pipe	Branch o.d., wall thickness	@(See Below)
	Main o.d., wall thickness	Stainless Steel
	Material & Mass [kg (weight lbs)]	63.5 x 1.58 (2.5 x 0.06)
Inter-mediate pipe	o.d. & wall thickness	Aluminum coated steel
	Material & Mass [kg (weight lbs)]	57.15 x 1.09 (2.25 x 0.04)
Tail pipe	o.d. & wall thickness	Aluminum coated steel
	Material & Mass [kg (weight lbs)]	Aluminum coated steel 3.231 (7.1)

*Outer pipe 57.15x1.02 (2.25 x 0.04), inner pipe 50.08 x 0.086 (2.0x.003) (2.5 (0.1) air gap between pipes).

@Outer pipe 63.5x1 (2.5x0.04), inner pipe 57.15x0.086 (2.25x.003) (2.15 (0.08) air gap between pipes).

**Muffler and tailpipe unit 7.620 (16.8).

MVMA Specifications Form

Vehicle Line **FIREBIRD**

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

5.0L V8 (305 CID)
Electronic Fuel Injection RPO L03

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		Air injection with computer command control
	Air Injection	Pump or pulse	Vane Pump
		Driven by	V-Belt
		Air distribution (head, manifold, etc.)	Exhaust Manifold & Catalytic Converter
		Point of entry	Exhaust Manifold
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Back pressure modulated
		Exhaust source	Manifold Exhaust Crossover
		Point of exhaust injection (spacer, carburetor, manifold, other)	Inlet manifold
	Catalytic Converter	Type	Dual bed, oxidizing & reducing
		Number of	One
		Location(s)	Beneath RF underbody
		Volume [L (in ³)]	2.78
		Substrate type	Monolith
		Noble metal type	Platinum/Palladium/Rhodium
		Noble metal concentration (g/cm ³)	0.001096
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction system
	Energy source (manifold vacuum, carburetor, other)		Manifold vacuum
	Discharges (to intake manifold, other)		Throttle Body
	Air inlet (breather cap, other)		Air cleaner
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	Canister
	Vapor storage provision		Canister
Electronic system	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single with dual tailpipes
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs)]		One, reverse flow
Resonator no. & type		None
Exhaust pipe	Branch o.d., wall thickness	(a)
	Main o.d., wall thickness	(b)
	Material & Mass [kg (weight lbs)]	(See notes) 5.069 (11.2)
Intermediate pipe	o.d. & wall thickness	57.15 x 1.14 (2.25 x .045)
	Material & Mass [kg (weight lbs)]	Aluminum coated steel
Tail pipe	o.d. & wall thickness	63.5 x 1.07 (2.5 x 0.042)
	Material & Mass [kg (weight lbs)]	Aluminum coated steel

- (a) - Left hand branch - stainless steel; outer 57.15 x 1.02 (2.25 x 0.040), inner 50.8 x 0.86 (2.0 x 0.003) with 2.155 (0.085) air gap between pipes. Right hand branch - laminated; stainless steel otr tube, 50.8x0.86 (2.0x0.003), w/ steel inner tube.
- (b) - Stainless steel; outer, 63.5 x 1.02 (2.5 x 0.040), inner, 57.15 x 0.86 (2.25 x 0.003) with 2.155 (0.085) air gap between pipes.
- * Muffler and tailpipe unit 8.732 (19.3).

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

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

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

Vehicle Emission Control

Exhaust Emission Control	Type (air injection, engine modifications, other)		Air injection with computer command control
	Air Injection	Pump or pulse	Air Pump
		Driven by	Belt
		Air distribution (head, manifold, etc.)	Exhaust manifold & catalytic converter
		Point of entry	Exhaust Manifold
	Exhaust Gas Recirculation	Type (controlled flow, open orifice, other)	Back pressure modulated controlled flow
		Exhaust source	Manifold
		Point of exhaust injection (spacer, carburetor, manifold, other)	Inlet manifold
	Catalytic Converter	Type	Dual bed, oxidizing & reducing
		Number of	One
		Location(s)	Beneath RF underbody
		Volume [L (in ³)]	2.78 (170)
		Substrate type	Monolith
		Noble metal type	Platinum/Palladium/Rhodium
		Noble metal concentration (g/cm ³)	0.001096
Crankcase Emission Control	Type (ventilates to atmosphere, induction system, other)		Induction system
	Energy source (manifold vacuum, carburetor, other)		Manifold vacuum
	Discharges (to intake manifold, other)		Intake manifold
	Air inlet (breather cap, other)		Throttle body
Evaporative Emission Control	Vapor vented to (crankcase, canister, other)	Fuel tank	Canister
		Carburetor	--
Electronic system	Vapor storage provision		Canister
	Closed loop (yes/no)		Yes
	Open loop (yes/no)		No

Engine - Exhaust System

Type (single, single with cross-over, dual, other)		Single with dual tailpipes
Muffler no. & type (reverse flow, straight thru, separate resonator) Material & Mass [kg (weight lbs)]		One, reverse flow
Resonator no. & type		None
Exhaust pipe	Branch o.d., wall thickness	(a)
	Main o.d., wall thickness	(b)
	Material & Mass [kg (weight lbs)]	(See notes) 6.124 (13.5)
Inter-mediate pipe	o.d. & wall thickness	69.85 x 1.40 (2.75 x 0.05)
	Material & Mass [kg (weight lbs)]	Aluminum coated steel
Tail pipe	o.d. & wall thickness	63.5 x 1.07 (2.25 x .04)
	Material & Mass [kg (weight lbs)]	Aluminum coated steel

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

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

* Muffler & tailpipe unit 9.845 (19.5).

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

2.8 Liter - V6 (173 CID)
Multi-Port Fuel Injection RPO 1B8

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

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

Manual Transmission/Transaxle (MB1)

Number of forward speeds		5
Gear ratios	1st	4.03
	2nd	2.37
	3rd	1.50
	4th	1.00
	5th	0.76
	Reverse	3.76
Synchronous meshing (specify gears)		All forward gears
Shift lever location		Floor
Trans. case mat'l. & mass kg (lbs)*		Aluminum
Lubricant	Capacity [L (pt.)]	3.25l (6.87 pts.)
	Type recommended	Dextron II

Clutch (Manual Transmission)

Clutch manufacturer		Belleville
Clutch type (dry, wet; single, multiple disc)		Dry disc
Linkage (hydraulic, cable, rod, lever, other)		Hydraulic
Max. pedal effort (nom. spring load, new) N (lbs)	Depressed	130 n
	Released	
Assist (spring, power/percent, nominal)		None
Type pressure plate springs		Diaphragm
Total spring load (nominal, new) N (lbs)		5750 (1293)
Clutch facing	Facing mfr. & material coding	Valeo/F202
	Facing material & construction	Non-asbestos
	Rivets per facing	16
	Outside x inside dia. (nominal)	232.0 x 155.0 (9.125 x 6.125)
	Total eff. area [cm ² (in. ²)]	234.0 (36.28)
	Thickness (pressure plate side/fly wheel side)	3.2/3.2
	Rivet depth (pressure plate side/fly wheel side)	1.1 min
	Engagement cushion method	Driven plate, wave spoke springs
Release bearing type & method lub. Self		centering angular contact ball bearing pre-packed & sealed.
Torsional damping method, springs, hysteresis		Coil springs with non-metal friction control.

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

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

5.0 Liter V8 (305 CID)
(Electronic Fuel Injection) RPO L03

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

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

Manual Transmission/Transaxle (M39)

Number of forward speeds		5
Gear ratios	1st	2.95
	2nd	1.94
	3rd	1.34
	4th	1.00
	5th	0.63
	Reverse	2.76
Synchronous meshing (specify gears)		All forward gears
Shift lever location		Floor
Trans. case mat'l. & mass kg (lbs)*		Aluminum
Lubricant	Capacity [L (pt.)]	3.25L (6.87 pts.)
	Type recommended	

Clutch (Manual Transmission)

Clutch manufacturer	Belleville	
Clutch type (dry, wet; single, multiple disc)	Dry disc	
Linkage (hydraulic, cable, rod, lever, other)	Hydraulic	
Max. pedal effort (nom. spring load, new) N (lbs)	Depressed	150n
	Released	
Assist (spring, power/percent, nominal)	None	
Type pressure plate springs	Diaphragm	
Total spring load (nominal, new) N (lbs)	7750 (1742)	
Clutch facing	Facing mfr. & material coding	Valeo/F202
	Facing material & construction	Non-asbestos
	Rivets per facing	18
	Outside x inside dia. (nominal)	254.0 x 165.0 (10.0 x 6.5)
	Total eff. area [cm ² (in. ²)]	293.0 (45.43)
	Thickness (pressure plate side/fly wheel side)	3.45/3.45 (0.136)
	Rivet depth (pressure plate side/fly wheel side)	1.1 min (0.0433)
	Engagement cushion method	Driven plate, wave spoke springs
Release bearing type & method lub.	Self	centering angular contact ball bearing pre-packed & sealed.
Torsional damping method, springs, hysteresis	Coil springs with non-metal friction control.	

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

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

5.0 Liter V8 (305 CID)
(Tuned Port Fuel Injection) RPO 1R9

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

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

Manual Transmission/Transaxle (M39) (MK6)

Number of forward speeds		5	5
Gear ratios	1st	2.95	2.75
	2nd	1.94	1.94
	3rd	1.34	1.34
	4th	1.00	1.00
	5th	0.63	0.74
	Reverse	2.76	2.76
Synchronous meshing (specify gears)		All forward gears	
Shift lever location		Floor	
Trans. case mat'l. & mass kg (lbs)*		Aluminum	
Lubricant	Capacity (L (pt.))	3.25L (6.87 pts.)	
	Type recommended	5W-30	

Clutch (Manual Transmission)

Clutch manufacturer		Belleville
Clutch type (dry, wet; single, multiple disc)		Dry disc
Linkage (hydraulic, cable, rod, lever, other)		Hydraulic
Max. pedal effort (nom. spring load, new) N (lbs)	Depressed	150n
	Released	
Assist (spring, power/percent, nominal)		None
Type pressure plate springs		Diaphragm
Total spring load (nominal, new) N (lbs)		7750 (1742)
Clutch facing	Facing mfr. & material coding	Valeo/F202
	Facing material & construction	Non-asbestos
	Rivets per facing	18
	Outside x inside dia. (nominal)	267.0 x 165.0 (10.5 x 6.5)
	Total eff. area (cm ² (in. ²))	346.0 (53.6)
	Thickness (pressure plate side/fly wheel side)	3.45/3.45 (0.136)
	Rivet depth (pressure plate side/fly wheel side)	1.1 min (0.0433)
	Engagement cushion method	Driven plate, wave spoke springs
Release bearing type & method lub.		Self centering angular contact ball bearing pre-packed & sealed.
Torsional damping method, springs, hysteresis		Coil springs with non-metal friction control.

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

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
 Engine Code

5.7 Liter V8 (350 CID)
 (Tuned Port Fuel Injection) RPO L98

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

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

Manual Transmission/Transaxle

Number of forward speeds		
Gear ratios	1st	
	2nd	
	3rd	
	4th	Not
	5th	Available
	Reverse	
Synchronous meshing (specify gears)		
Shift lever location		
Trans. case mat'l. & mass kg (lbs)*		
Lubricant	Capacity [L (pt.)]	
	Type recommended	

Clutch (Manual Transmission)

Clutch manufacturer		
Clutch type (dry, wet; single, multiple disc)		
Linkage (hydraulic, cable, rod, lever, other)		Not
Max. pedal effort (nom. spring load, new) N (lbs)	Depressed	Available
	Released	
Assist (spring, power/percent, nominal)		
Type pressure plate springs		
Total spring load (nominal, new) N (lbs)		
Clutch facing	Facing mfr. & material coding	
	Facing material & construction	
	Rivets per facing	
	Outside x inside dia. (nominal)	
	Total eff. area [cm ² (in. ²)]	
	Thickness (pressure plate side/fly wheel side)	
	Rivet depth (pressure plate side/fly wheel side)	
	Engagement cushion method	
Release bearing type & method lub.		
Torsional damping method, springs, hysteresis		

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

MVMA Specifications FormVehicle Line FIREBIRD
Model Year 1989 Issued 6-88 Revised (•) _____**METRIC (U.S. Customary)**Engine Description/Carb.
Engine Code:2.8L V6 (173 CID)
(2.8 Multi-Port FI) RPO 1B8**Automatic Transmission/Transaxle**

Trade name		4-speed Automatic
Type and special features (describe)		Torque converter with clutch 700-R4
Selector	Location	On floor console
	Ltr./No. designation	P-R-N- D -D-2-1
Gear ratios	1st	3.06
	2nd	1.63
	3rd	1.00*
	4th	0.70*
	Reverse	2.29
Max. upshift speed - drive range [km/h (mph)]		1-2=61(38), 2-3-111(69)
Max. kickdown speed - drive range [km/h (mph)]		3-2=105(65), 2-1=50(31)
Min. overdrive speed [km/h (mph)]		72 (45)
Torque converter	Number of elements	3
	Max. ratio at stall	2.35
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	245 (9.65)
	Capacity factor "K"	
Lubricant	Capacity (refill L (pt.))	4.5L (9.5 PTS)
	Type Recommended	GM Dexron II
Oil cooler (std., opt., NA, internal, external, air, liquid)		Standard, integral with radiator
Transmission case material & mass kg (lbs)**		Aluminum 71.7 (158.1)

*Torque converter clutch in 3rd & 4th gears

Axle or Front Wheel Drive Unit

Type (front, rear)		Rear
Description		Semi-floating axle, overhung hypoid driven pinion and ring gear
Limited slip differential (type)		Not Available
Drive pinion offset		1.50
Drive pinion (type)		Hypoid gear
No. of differential pinions		Two
Pinion/differential adjustment (shim, other)		Shim
Pinion/differential bearing adjustment (shim, other)		Collapsible spacer
Driving wheel bearing (type)		Roller bearing
Lubricant	Capacity [L (pt.)]	1.66
	Type recommended	GL-5 gear lube

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

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

* Input speed + $\sqrt{\text{torque}}$

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

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

5.0L V8 (305 CID)
(Electronic Fuel Injection) RPO L03

Automatic Transmission/Transaxle

Trade name		4-speed Automatic
Type and special features (describe)		Torque converter with clutch 700-R4
Selector	Location	On floor console
	Ltr./No. designation	P-R-N- D -D-2-1
Gear ratios	1st	3.06
	2nd	1.63*
	3rd	1.00*
	4th	0.70*
	Reverse	2.29
Max. upshift speed - drive range (km/h (mph))		1-2=59(37), 2-3=113(70)
Max. kickdown speed - drive range (km/h (mph))		3-2=106(66), 2-1=42(26)
Min. overdrive speed (km/h (mph))		5.8 (36)
Torque converter	Number of elements	3
	Max. ratio at stall	1.91
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	298 (11.75)
	Capacity factor "K"	
Lubricant	Capacity (refill L (pt.))	4.5L (9.5 PTS)
	Type Recommended	GM Dexron II
Oil cooler (std., opt., NA, internal, external, air, liquid)		Standard, integral with radiator
Transmission case material & mass kg (lbs)**		Aluminum 71.1 (158.1)

*Torque converter clutch in 3rd & 4th gears.

Axle or Front Wheel Drive Unit

Type (front, rear)		Rear
Description		Semi-floating axle, overhung hypoid driven pinion and ring gear
Limited slip differential (type)		Not Available
Drive pinion offset		1.50
Drive pinion (type)		Hypoid gear
No. of differential pinions		Two
Pinion/differential adjustment (shim, other)		Shim
Pinion/differential bearing adjustment (shim, other)		Collapsible spacer
Driving wheel bearing (type)		Straight roller bearing
Lubricant	Capacity (L (pt.))	1.66
	Type recommended	GL-5 gear lubricant

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

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

* Input speed + $\sqrt{\text{torque}}$

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

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

5.0L V8 (305 CID)
(TPI) RPO LB9

5.7L V8 (350 CID)
(TPI) RPO L98

Automatic Transmission/Transaxle

Trade name		4-speed Automatic
Type and special features (describe)		Torque converter with clutch 700-R4
Selector	Location	On floor console
	Ltr./No. designation	P-R-N- D -D-2-1
Gear ratios	1st	3.06
	2nd	1.63*
	3rd	1.00*
	4th	0.70*
	Reverse	2.29
Max. upshift speed - drive range [km/h (mph)]		1-2=66(41), 2-3=122(76) 1-2=55(34), 2-3=105(65)
Max. kickdown speed - drive range [km/h (mph)]		3-2=116(72), 2-1=55(34) 3-2=88(55), 2-1=32(20)
Min. overdrive speed [km/h (mph)]		66 (41) 58 (36)
Torque converter	Number of elements	3
	Max. ratio at stall	2.15 1.91
	Type of cooling (air, liquid)	Liquid
	Nominal diameter	298 (11.75)
	Capacity factor "K"	
Lubricant	Capacity [refill L (pt.)]	4.5L (9.5 PIS)
	Type Recommended	GM Dexron II
Oil cooler (std., opt., NA, internal, external, air, liquid)		Standard, integral with radiator
Transmission case material & mass kg (lbs)**		Aluminum 71.1 (158.1)

*Torque converter clutch in 3rd & 4th gears

Axle or Front Wheel Drive Unit

Type (front, rear)		Rear
Description		Semi-floating axle, overhung hypoid driven pinion and rear gear
Limited slip differential (type)		Cone clutch
Drive pinion offset		1.50
Drive pinion (type)		Hypoid gear
No. of differential pinions		Two*, four @
Pinion/differential adjustment (shim, other)		Shim
Pinion/differential bearing adjustment (shim, other)		Collapsible spacer
Driving wheel bearing (type)		Straight roller bearing*, tapered roller bearings @
Lubricant	Capacity [L (pt.)]	1.66
	Type recommended	GL-5 gear lube

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

Axle ratio (or overall top gear ratio)		3.23	3.08	2.73	3.45
No. of teeth	Pinion	42	40	41	38
	Ring gear or gear	13	13	15	11
Ring gear o.d.		1.94 (7.625)		197 (7.75)	
Transaxle	Transfer gear ratio	Not Applicable			
	Final drive ratio	" "			

* Input speed + $\sqrt{\text{torque}}$

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

* 2.73, 3.08 and 3.23 axles.
@ 2.77, 3.27 and 3.45 axles.

MVMA Specifications Form

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

METRIC (U.S. Customary) 2.8L-V6 5.0L-V8 5.0L-V8 5.7L-V8

Engine Description/Carb.
 Engine Code

MFI (173 CID)	EFI (305 CID)	TPI (305 CID)	TPI (350 CID)
RPO LB8	RPO L03	RPO LB9	RPO L98

Propeller Shaft – Rear Wheel Drive

Manufacturer Type (straight tube, tube-in-tube, internal-external damper, etc.)		Straight tube - internal damper	
Outer diam. x length* x wall thickness	Manual 3-speed transmission		Not Available
	Manual 4-speed transmission		Not Available
	Manual 5-speed transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)
	Overdrive		Not Available
	Automatic transmission		63.5* x 1057 x 1.65 mm (2.5* x 41.6 x .065 in.)
Inter- mediate bearing	Type (plain, anti-friction)		None
	Lubrication (fitting, prepack)		None
Slip yoke	Type		Splined
	Number of teeth		27
	Spline o.d.		29.84 mm (1.174 in.)
Universal joints	Make and mfg. no.	Front	Saginaw size 44
		Rear	Saginaw size 44
	Number used		Two
	Type (ball and trunnion, cross)		Cross
	Rear attach (u-bolt, clamp, etc.)		Strap and bolts
	Bearing	Type (plain, anti-friction)	Anti-friction
Lubrication (fitting, prepack)		Prepacked	
Drive taken through (torque tube, arms or springs)			Torque arm
Torque taken through (torque tube, arms or springs)			Torque arm

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

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

MVMA Specifications Form

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

METRIC (U.S. Customary)

Body Type And/Or
Engine Displacement

All

☒ Suspension - General Including Electronic Controls

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

☒ Suspension - Front

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

☒ Suspension - Rear

Type and description		Salisbury axle w/torque arm, LCA, track bar, coil springs
Travel*	Full jounce	85.0mm (3.3)
	Full rebound	118.0mm (4.6)
Spring	Type (coil, leaf, other) & material	Coil, steel alloy
	Size (length x width, coil design height & i.d., bar length & dia.)	254.0 x 102.6; 2709.0 x 12.0mm (10.0 x 4.03); (27.9 x 0.472)
	Spring rate [N/mm (lb./in.)]	18 (159), 23 (204) (b)
	Rate at wheel [N/mm (lb./in.)]	(Spring Rate x 0.96)
	Insulators (type & material)	Rubber isolated
	If leaf	No. of leaves
		Shackle (comp. or tens.)
Stabilizer	Type (link, linkless, frameless)	Link
	Material & bar diameter	Steel-18.0mm(0.71)Base & V6; 23.0mm(0.91) (c)
Track bar (type)		'U' section w/rubber bushings

* Define load condition:

MVMA Specifications Form

METRIC (U.S. Customary)

SUPPLEMENTAL PAGE

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

-
- (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, LB9:23,WS6:23 (1.9) WS6
- (c) Trans Am Base
& V8; 24.0mm

MVMA Specifications Form

METRIC (U.S. Customary)

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

Body Type And/Or
Engine Displacement

All

Brakes - Service

Description			Single caliper disc front, duo-servo drum rear, Disc optional front/rear	
Manufacturer and brake type (std., opt., n.a.)	Front (disc or drum)		Disc	
	Rear (disc or drum)		Drum; disc optional	
Valving type (proportion, delay, metering, other)			Remote metering and proportioning, front/rear split	
Power brake (std., opt., n.a.)			Standard	
Booster type (remote, integral, vac., hyd., etc.)			Landem vacuum	
Vacuum	Source (inline, pump, etc.)		Inline	
	Reservoir (volume in. ³) and source		None	
	Pump-type (elec, gear driven, belt driven)		None	
Traction control	Operational speed range		"	
	Type engine intervention (electronic, mech.)		"	
Anti-lock device	Front/rear (std., opt., n.a.)		"	
	Manufacturer		"	
	Type (electronic, mech.)		"	
	Number sensors or circuits		"	
	Number anti-lock hydraulic circuits		"	
	Integral or add-on system		"	
	Yaw control (yes, no)		"	
Hydraulic power source (elect., vac. mtr., pwr. strg.)			"	
Effective area [cm ² (in. ²)]*			615.5 (95.4) total	
Gross lining area [cm ² (in. ²)]**(F/R)			691.6 (107.2) total	
Swept area [cm ² (in. ²)]*** (F/R)			1985.1 (307.7) total	
Rotor	Outerworking diameter	F/R	F/267.0mm (10.5); R/267.0mm (10.5)	
	Inner working diameter	F/R	F/171.5mm (6.75); R/171.5mm (6.75)	
	Thickness	F/R	F/26.2mm (1.03); R/26.2mm (1.03)	
	Material & type (vented/solid)	F/R	Cast iron, vented F/R	
Drum	Diameter & width	F/R	241.0mm (9.5) x 50.8mm (2.0)	
	Type and material	F/R	Cast iron finned (aluminum for selected applications)	
Wheel cylinder bore			F/64.0mm (2.5); R/19.0mm (.75) drum; 48.0mm (1.9) disc	
Master cylinder	Bore/stroke	F/R	Bore: 24.0mm (0.94) disc/drum; 25.4mm (1.0) disc/disc	
Pedal arc ratio			3.25:1	
Line pressure at 445 N(100 lb.) pedal load [kPa (psi)]				
Lining clearance			F/R	
Brake lining	Front wheel	Bonded or riveted (rivets/seg.)		Self adjusting F/R
		Rivet size		Riveted (8)
		Manufacturer		5.33 x 7.92mm (0.210 x 0.312)
		Lining code*****		Delco Moraine
		Material		DM8034
		****	Primary or out-board	Semi-metallic
		Size	Secondary or in-board	125.0 x 48.4 x 11.04mm (4.92 x 1.91 x 0.435)
	Rear wheel	Bonded or riveted (rivets/seg.)		125.0 x 48.4 x 10.55mm (4.92 x 1.91 x 0.415)
		Manufacturer		OB/3.42mm (0.135); IB 4.85mm (0.191)
		Lining code*****		Riveted 10 PRI, 12 sec drum
		Material		Riveted, 8 disc
		****	Primary or out-board	Inland
		Size	Secondary or in-board	Delco Moraine
		Shoe thickness (no lining)		In 4035/4050
Drum F/R 1.98mm(0.078), disc OB/3.42mm(0.135);				
IB/4.85mm (0.191)				

*Excludes rivet holes, grooves, chamfers, etc.

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

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

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

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

(a) Disc optional front/rear

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line FIREBIRD

Model Year 1989

Issued 6-88

Revised (●)

Body Type And/Or
Engine Displacement

Heavy Duty (Optional RPO J65)

Brakes - Service

Description			Front & rear disc brakes		
Manufacturer and brake type (std., opt., n.a.)	Front (disc or drum)		Disc		
	Rear (disc or drum)		Disc		
Valving type (proportion, delay, metering, other)			Remote proportioning, front/rear split		
Power brake (std., opt., n.a.)			Standard		
Booster type (remote, integral, vac., hyd., etc.)			200mm (7.87 in.) tandem vacuum		
Vacuum	Source (inline, pump, etc.)		Engine		
	Reservoir (volume in. ³) and source		Not Applicable		
	Pump-type (elec, gear driven, belt driven)		" "		
Traction control	Operational speed range		" "		
	Type engine intervention (electronic, mech.)		" "		
Anti-lock device	Front/rear (std., opt., n.a.)		" "		
	Manufacturer		" "		
	Type (electronic, mech.)		" "		
	Number sensors or circuits		" "		
	Number anti-lock hydraulic circuits		" "		
	Integral or add-on system		" "		
	Yaw control (yes, no)		" "		
Hydraulic power source (elect., vac. mtr., pwr. strg.)			" "		
Effective area [cm ² (in. ²)]*			717 cm ² (111.1 in. ²)		
Gross lining area [cm ² (in. ²)]**(F/R)			792 cm ² (122.9 in. ²)		
Swept area [cm ² (in. ²)]*** (F/R)			2980.74 cm ² (462.02 in. ²)		
Rotor	Outerworking diameter	F/R	F 301.25mm (11.86 in.) R 296.0mm (11.65 in.)		
	Inner working diameter	F/R	F 197.40mm (7.77 in.) R 211.0mm (8.31 in.)		
	Thickness	F/R	F 26.20mm (1.03 in.) R 20.0mm (0.79 in.)		
	Material & type (vented/solid)	F/R	Cast iron, vented		
Drum	Diameter & width	F/R	Not Applicable		
	Type and material	F/R	" "		
Wheel cylinder bore			F 2 x 38mm (1.50 in.) R 40.5mm (1.69 in.)		
Master cylinder	Bore/stroke	F/R	24.0mm (0.94 in.)		
Pedal arc ratio			3.25:1		
Line pressure at 445 N(100 lb.) pedal load [kPa (psi)]			--		
Lining clearance		F/R	Self adjusting		
Brake lining	Front wheel	Bonded or riveted (rivets/seg.)		Integrally molded	
		Rivet size		Not Available	
		Manufacturer		Japan Brake Industries	
		Lining code*****		CP26	
		Material		Semi-metallic	
		****	Primary or out-board	53.2 cm ² x 9.5mm(8.25 in. ² x .37 in.) area x thickness	
	Rear wheel	Size	Secondary or in-board	52.2 cm ² x 9.5mm(8.25 in. ² x .37 in.) area x thickness	
		Shoe thickness (no lining)		IB/6.0mm (.24 in.) OB 6.0mm (.24 in.)	
		Bonded or riveted (rivets/seg.)		Integrally molded	
		Manufacturer		Japan Brake Industries	
		Lining code*****		HB33	
		Material		Semi metallic	
****	Primary or out-board	28.4 cm ² x 8.2mm (4.4 in. ² x .32 in.) area x thickness			
Size	Secondary or in-board	28.4 cm ² x 8.2mm (4.4 in. ² x .32 in.) area x thickness			
Shoe thickness (no lining)		IB 5.5mm (.21 in.) OB 4.0mm (.16 in.)			

*Excludes rivet holes, grooves, chamfers, etc.

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

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

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

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

MVMA Specifications FormVehicle Line **FIREBIRD**
Model Year **1989** Issued **6-88** Revised (•) _____**METRIC (U.S. Customary)**Body Type And/Or
Engine Displacement

Base

Formula

Trans Am L03

Y99 W/LB8,

GTA

Tires And Wheels (Standard)

*+

*+

Tires	Size (load range, ply)		215/65R15	245/50ZR16	215/65R15	245/50ZR16
	Type (bias, radial, steel, nylon, etc.)		Steel Belted Radial			
	Inflation pressure (cold) for recommended max. vehicle load	Front [kPa (psi)]	207 (30)			
		Rear [kPa (psi)]	207 (30)			
	Rev./mile—at 70 km/h (45 mph)		498 R/Km	505 R/Km	498 R/Km	505 R/Km
Wheels	Type & material		Cast Alum.	Cast Alum.	Cast Alum.	Cast Aluminum
	Rim (size & flange type)		15" X 7" JJ	16" x 8" JJ	15" x 7" JJ	16" x 8" JJ
	Wheel offset		8mm	0mmF/16mmR	8mm	0mmF/16mmR
	Attachment	Type (bolt or stud)	Stud			
		Circle diameter	120.7mm (4.75)			
		Number & size	5-M12 x 1.5 - 6H - thd (metric)			
Spare	Tire and wheel		T125/70D15, 15" x 4" (except with G80 axle)			
	Storage position & location (describe)		Vertically, adjacent to RH quarter panel			

Tires And Wheels (Optional)

Tire size (load range, ply)	P245/50ZR16 * +
Type (bias, radial, steel, nylon, etc.)	Steel Belted Radial
Wheel (type & material)	Cast Alum, styled
Rim (size, flange type and offset)	16" x 8" JJ x 0mm Fr
Tire size (load range, ply)	x 16mm Rr
Type (bias, radial, steel, nylon, etc.)	
Wheel (type & material)	
Rim (size, flange type and offset)	
Tire size (load range, ply)	
Type (bias, radial, steel, nylon, etc.)	
Wheel (type & material)	
Rim (size, flange type and offset)	
Tire size (load range, ply)	
Type (bias, radial, steel, nylon, etc.)	
Wheel (type & material)	
Rim (size, flange type and offset)	
Ø Spare tire and wheel size (if configuration is different than road tire or wheel, describe optional spare tire and/or wheel location & storage position)	14 x 5; P195/75D14 (inflatable) used with G80 axle & 15 in. road tire 15 x 5; P195/75D15 (inflatable) use with 16 in. road tire

Brakes - Parking

Type of control		Hand Lever Application - push button reverse
Location of control		Between front seats
Operates on		Rear service brakes
If separate from service brakes	Type (internal or external)	
	Drum diameter	
	Lining size (length x width x thickness)	

* Directional tread

+ Non - "All seasons" tire

MVMA Specifications Form

Vehicle Line FIREBIRD

Model Year 1989

Issued 6-88

Revised (•) _____

METRIC (U.S. Customary)

Body Type And/Or
Engine Displacement

All

Steering

Manual (std., opt., n.a.)		Not Available		
Power (std., opt., n.a.)		Standard		
Adjustable steering wheel/column (tilt, telescope, other)	Type	Tilt, 6 position		
	Manufacturer	--		
	(Std., opt., n.a.)	Standard GTA, Optional others		
Wheel diameter** (WS) SAE J1100	Manual	Not Available		
	Power	368.0mm (14.5) Rim		
Turning diameter m (ft.)	Outside front	Wall to wall (l. & r.)	12.59 (41.3)	
		Curb to curb (l. & r.)	11.73 (38.5) 12.28 (40.3)	
	Inside rear	Wall to wall (l. & r.)	Not available	
		Curb to curb (l. & r.)	" "	
Scrub Radius*		" "		
Manual	Gear	Type	" "	
		Manufacturer	" "	
		Ratios	Gear	" "
			Overall	" "
	No. wheel turns (stop to stop)		" "	
Power	Type (coaxial, elec., hyd., etc.)		Coaxial recirculating ball	
	Manufacturer		Saginaw Steering Gear	
	Gear	Type	Acme worm recirculating ball	
		Ratios	Gear	14:1 (a) 12.7:1 (b) 12.7:1 (c)
			Overall	15.4:1 14:1 14:1
	Pump (drive)		Belt	
	No. wheel turns (stop to stop)		2.57 2.14 2.14	
Linkage	Type		Parallelogram	
	Location (front or rear of wheels, other)		Front	
	Tie rods (one or two)		Two	
Steering axis	Inclination at camber (deg.)		Not Available	
	Bearings (type)	Upper	Ball stud	
		Lower	Ball stud	
		Thrust	None	
Steering spindle & joint type		Steering knuckle w/spherical joints		
Wheel spindle/hub	Diameter	Inner bearing	31.73 - 31.74 (1.2493 - 1.2498)	
		Outer bearing	21.04 - 21.42 (0.83 - 0.84)	
	Thread (size)		3/4 - 20 UNEF - 3A (modified)	
	Bearing (type)		Tapered roller	

*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)

MVMA Specifications Form

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

METRIC (U.S. Customary)

Body Type And/Or
Engine Displacement

A11

Wheel Alignment

Front wheel at curb mass (wt.)	Service checking	Caster (deg.)	+4.7° (L/R side to be equal within 0.7°)
		Camber (deg.)	+0.3° +/- .5°
		Toe-in [outside track-mm (in.)]	0° +/- .2°
	Service reset*	Caster	+4.7° +/- .5° (L/R side to be equal within 0.7°)
		Camber	.3° +/- .5°
		Toe-in	0° +/- .2°
	Periodic M.V. inspection	Caster	4.7° +/- .5°
		Camber	0.3 +/- .5°
		Toe-in	0° +/- .2°
Rear wheel at curb mass (wt.)	Service checking	Camber (deg.)	Not Applicable
		Toe-in [outside track-mm (in.)]	"
	Service reset*	Camber	"
		Toe-in	"
	Periodic M.V. inspection	Camber	"
		Toe-in	"

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

Electrical – Instruments and Equipment

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

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

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

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line FIREBIRD

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

Engine Description/Carb.
Engine Code

2.8L V6 (173 CID)
Multi-Port Fuel Injection RPO 1B8

Electrical - Supply System

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

Electrical - Starting System

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

Electrical - Ignition System

Type	Electronic (std., opt., n.a.)	--
	Other (specify)	Computer controlled coil ignition (C ³ I)
Coil	Manufacturer	Delco Remy
	Model	Separate
	Current	Engine stopped - A 0
		Engine idling - A 5.5 max.
Spark plug	Manufacturer	AC
	Model	R42 CTS
	Thread (mm)	M14 x 1.25 SAE
	Tightening torque [N·m (lb, ft)]	9-20 (7-15)
	Gap	1.143 (0.045)
	Number per cylinder	One
Distributor	Manufacturer	Not Applicable
	Model	--

Electrical - Suppression

Locations & type	Internal alternator capacitor, non-metallic high-tension ignition cables, resistor spark plugs, ignition coil by-pass capacitor, internal AC blower motor by-pass capacitor & A/C compression diode, with radio provisions; hood grounding clip, engine to dash panel ground strap, fuse block capacitor and on "heater only" blower motors and coax capacitor.
------------------	---

- (a) - Standard battery
- (b) - With H.D. option UA1
- (c) - 85 amp with heater, 30 amp at idle.
- (d) - 100 amp with air conditioning, 36 amp at idle.

MVMA Specifications Form

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

METRIC (U.S. Customary)

Engine Description/Carb.
Engine Code

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

Electrical – Supply System

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

Electrical – Starting System

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

Electrical – Ignition System

Type	Electronic (std., opt., n.a.)		--
	Other (specify)		High energy ignition (HEI)
Coil	Manufacturer		Delco Remy
	Model		Integral with distributor
	Current	Engine stopped – A	0.5
		Engine idling – A	1.0
Spark plug	Manufacturer		AC
	Model		R45TS
	Thread (mm)		M14 x 1.25 SAE
	Tightening torque [N·m (lb, ft)]		9-20 (7-15)
	Gap		0.89 (0.035")
	Number per cylinder		One
Distributor	Manufacturer		Delco Remy
	Model		1103698

Electrical – Suppression

Locations & type	Internal alternator capacitor, non-metallic high-tension ignition cables, resistor spark plugs, ignition coil by-pass capacitor, internal AC blower motor by-pass capacitor & A/C compression diode, with radio provisions; hood grounding clip, engine to dash panel ground strap, fuse block capacitor and on "heater only" blower motors and coax capacitor.
------------------	---

- (a) 85 amp (& C41), (30 amp at idle)
- (b) 100 amp (& C60/C67), (36 amp at idle).
- (c) First five seconds of engine cranking at -20°F.

MVMA Specifications FormVehicle Line **FIREBIRD**Model Year **1989** Issued **6-88** Revised (•) **9-88****METRIC (U.S. Customary)**Engine Description/Carb.
Engine Code**5.0 Liter V8 (305 CID)
(TPI) RPO LB9****5.7 Liter V8 (350 CID)
(TPI) RPO L98****Electrical – Supply System**

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

Electrical – Starting System

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

Electrical – Ignition System

Type	Electronic (std., opt., n.a.)		--
	Other (specify)		High energy ignition (H.E.I.)
Coil	Manufacturer	Delco Remy	
	Model	Remote mounted	
	Current	Engine stopped – A	0.5
		Engine idling – A	1.0
Spark plug	Manufacturer	AC	
	Model	R45TS	
	Thread (mm)	M14 x 1.25 SAE	
	Tightening torque [N-m (lb, ft)]	9-20 (7-15)	
	Gap	0.89 (0.035")	
	Number per cylinder	One	
Distributor	Manufacturer	Delco Remy	
	Model	1103698	

Electrical – Suppression

Locations & type	Internal alternator capacitor, non-metallic high-tension ignition cables, resistor spark plugs, ignition coil by-pass capacitor, internal AC blower motor by-pass capacitor & A/C compression diode, with radio provisions; hood grounding clip, engine to dash panel ground strap, fuse block capacitor and on "heater only" blower motors and coax capacitor.
------------------	---

- (a) Standard Battery
(b) With H.D. option UA1

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Models **FIREBIRD**

Model Year **1989**

Issued **6-88**

Revised (•)

Body Type

A11

Body

Structure

Full unitized steel construction. Cowl, roof, underbody and body panels welded to form body shell. Bolt-in front suspension crossmember. Doors, roof, hood and hatch lid double panel construction.

☒ Bumper system front - rear

Body color soft facia, honeycomb absorber and heavy gauge reinforcement used front and rear. GM 5 mph protection.

Anti-corrosion treatment

Galvanized metals, zinc rich primers, wax coating and other corrosion resistant materials used throughout.

☒ Body - Miscellaneous Information

Type of finish (lacquer, enamel, other)	High solids acrylic enamel base coat/clear coat	
Hood	Material & mass	Steel
	Hinge location (front, rear)	Rear
	Type (counterbalance, prop)	Gas strut assist
	Release control (internal, external)	Internal
Trunk lid	Material & mass	Not Applicable
	Type (counterbalance, other)	" "
	Internal release control (elec., mech., n.a.)	" "
Hatch-back lid	Material & mass	Glass/steel
	Type (counterbalance, other)	Dual gas struts-elec. final closure
	Internal release control (elec., mech., n.a.)	Electric release optional
Tailgate	Material & mass	Not Applicable
	Type (drop, lift, door)	" "
	Internal release control (elec., mech., n.a.)	" "
Vent window control (crank, friction, pivot, power)	Front	Not Available
	Rear	" "
Window regulator type (cable, tape, flex, drive, etc.)	Front	Sector drive
	Rear	Sector drive
Seat cushion type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Bucket molded foam pad
	Rear	" " " "
	3rd seat	--
Seat back type (e.g., 60/40, bucket, bench, wire, foam etc.)	Front	Reclining bucket molded foam pad
	Rear	Folding bench, split back optional, molded foam pad
	3rd seat	--

MVMA Specifications Form

METRIC (U.S. Customary)

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

Body Type

All

☒ Restraint System

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

Glass	SAE Ref. No.	
Windshield glass exposed surface area [cm ² (in. ²)]	S1	9000.4 (1395.0)
Side glass exposed surface area [cm ² (in. ²)] - total 2-sides	S2	6519.8 (1010.6)
Backlight glass exposed surface area [cm ² (in. ²)]	S3	6232.0 (966.0)
Total glass exposed surface area [cm ² (in. ²)]	S4	21752.2 (3371.6)
Windshield glass (type)		Curved-laminated plate
Side glass (type)		Curved-tempered plate
Backlight glass (type)		Curved-tempered plate

☒ Lamps and Headlamp Locations

Headlamps	Description - sealed beam, halogen, replaceable bulb, etc.	Sealed beam - two lamp system
	Shape	Rectangular
	Lo-beam type (2A1, 2B1, 2C1, etc.)	2B
	Quantity	2
	Hi-beam type (1A1, 2A1, 1C1, 2C1, etc.)	(2B)
	Quantity	(2)

Frame

Type and description (separate frame, unitized frame, partially-unitized frame)	Full integral body frame, includes bolted on front suspension crossmember.
---	--

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Line **FIREBIRD**
 Model Year **1989** Issued **6-88** Revised (●) _____

Body Type

ATT

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

<input checked="" type="checkbox"/>	Air conditioning (manual, auto. temp control)	Manual controls std GTA - optional, sport coupe & Trans AM; electronic controls - optional GTA and Trans AM
	Clock (digital, analog)	Digital in radio
	Compass/thermometer	Not Available
	Console (floor, overhead)	Full length front console - standard
	Defroster, elec. backlight	Electric - Standard GTA; Optional others
Electronic	Diagnostic monitor (integrated, individual)	Optional for Trans AM and GTA
	Instrument cluster (list instruments)	Tachometer, speedometer, trip odometer, fuel, oil pressure*, temp, volt**
	Keyless entry	Not Available
	Tripminder (avg. spd., fuel)	Optional for Trans AM and GTA
	Voice alert (list items)	Not Available
	Other	" "
	Fuel door lock (remote, key, electric)	Not Available
Lamps	Auto head on/off delay, dimming	" "
	Cornering	" "
	Courtesy (map, reading)	Dome lamp/lighted mirror optional
	Door lock, ignition	Not Available
	Engine compartment	" "
	Fog	Standard Trans AM & GTA; not available base or Formula
	Glove compartment	Not Available
	Trunk	Standard GTA, Optional others
	Illuminated entry system (list lamps, activation)	Not Applicable
	Other	
Mirrors	Day/night (auto. man.)	Manual - standard
	L.H. (remote, power, heated)	Remote standard, power standard GTA; Optional, others
	R. H. (convex, remote, power, heated)	Manual-std., power Std. GTA; Opt. others; both convex
	Visor vanity (RH / LH, illuminated)	RH - Optional
<input checked="" type="checkbox"/>	Navigation system (describe)	
	Parking brake-auto release (warning light)	Hand release, warning light standard

Radio Options

- * Full gage package (non-electronic) standard on Trans AM, GTA & Formula; optional on Firebird.
- ** Seat belt warning, engine warning.

MVMA Specifications Form
METRIC (U.S. Customary)

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

Body Type

ATT

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

Power equipment	Deck lid (release, pull down)		Power door locks and hatch rel. std. GTA opt. others***
	Door locks (manual, automatic, describe system)		Manual - Standard Electric optional
	Seats	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)	N/A
		Lumbar, hip, thigh, support	
		Heated (R.H., L.H., other)	N/A
	Side windows		Standard GTA, Optional all others
	Vent windows		Not Available
	Rear windows		" "
Radio systems	Antenna (location, whip, w/shield, power)		R.F. fender fixed mast w/radio, pow. std. GTA; opt others
	Standard	AM, FM, stereo, tape, compact disc, graphic equalizer, theft deterrent, radio prep package, headphone jacks, etc.	AM/FM stereo standard
	Optional		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 (number, location)		6-2 in. I.P., 2 in sail panel, 2 subwoofers in sail panel.
	Roof open air fixed (flip-up, sliding, "T")		Hatch roof w/removable glass panels - optional
Speed control device		Cruise control with resume speed - Std. GTA; Opt. others	
Speed warning device (light, buzzer, etc.)		Not Available	
Tachometer (rpm)		Standard	
Telephone system (describe)		Not Available	
Theft deterrent system		Lock mounted on steering column - locks steering wheel, transmission shift levers and ignition. Electronic system (VATS II) standard.	

*** Power final hatch closure latch standard - all

MVMA Specifications Form

Vehicle Models **FIREBIRD**
 Model Year **1989** Issued **6-88** Revised (●) _____

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

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

Body Type	SAE Ref. No.	2FS87	2FW87
-----------	--------------	-------	-------

Width

All dimensions mm (in) unless noted

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	--
Front fender overall width	W106	1801 (70.9)
Rear fender overall width	W107	1832 (72.1)
Tumble-home (deg.)	W122	31.5°
Vehicle width including mirrors		

Length

Wheelbase	L101	2566 (101.0)	
Vehicle length	L103	4839 (190.5)	4781 (191.8)
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)	
Cowl point "X" coordinate	L125	108 (4.3)	
Front end length at centerline	L126	1692 (66.6)	
Rear end length at centerline	L129	345 (13.6)	

Height **

Passenger distribution (front/rear)	PD1,2,3	2 - 0	**
Trunk/cargo load			**
Vehicle height	H101	1263 (49.7)	
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)	
Bottom of door closed-front to ground	H133	250 (9.8)	
Rocker panel-rear to ground	H111	187 (7.4)	
Bottom of door closed-rear to ground	H135		**
Windshield slope angle	H122	62.0	
Backlight slope angle	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)	H106	15.7°
Angle of departure (degrees)	H107	15.6°
Ramp breakover angle (degrees)	H147	10.7°
Axle 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

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

MVMA Specifications Form

METRIC (U.S. Customary)

Vehicle Dimensions See Key Sheets for definitions

Vehicle Models FIREBIRD

Model Year 1989

Issued 6-88

Revised (•)

Body Type

2FS87

2FW87

SAE
Ref.
No.

Front Compartment

Sg RP 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	L40	26.5°
Hip angle	L42	98.0
Knee angle	L44	133.0
Foot angle	L46	87.0
Design H-point front travel	L17	192 (7.6)
Normal driving & riding seat track trvl.	L23	171 (6.7)
Shoulder room	W3	1458 (57.4)
Hip room	W5	1434 (56.5)
Upper body opening to ground	H50	1164 (45.8)
Steering wheel maximum diameter*	W9	370 (14.6)
Steering wheel angle	H18	18.0
Accel. heel pt. to steer. whl. cntr	L11	Not Available
Accel. heel pt. to steer. whl. cntr	H17	" "
Steering wheel to C/L of thigh	H13	89 (3.5)
Steering wheel torso clearance	L7	356 (14.0)
Headlining to roof panel (front)	H37	12 (0.5)
Undepressed floor covering thickness	H67	16 (0.6)

Front Compartment Interior Dimensions Are Measured With The Seating Reference Point (SgRP) _____ mm Forward And _____ mm Upward of Rearmost Position.

Rear Compartment

Sg RP Point couple distance	L50	668 (26.3)
Effective head room	H63	905 (35.6)
Min. effective leg room	L51	756 (29.8)
Sg RP (second to heel)	H31	183 (7.2)
Knee clearance	L48	-15 (-0.6)
Compartment room	L3	582 (22.9)
Shoulder room	W4	1430 (56.3)
Hip room	W6	1087 (42.8)
Upper body opening to ground	H51	--
Back angle	L41	28.0°
Hip angle	L43	68.5
Knee angle	L45	66.5
Foot angle	L47	116.5
Headlining to roof panel (second)	H38	--
Depressed floor covering thickness	H73	18 (0.7)

Luggage Compartment

Usable luggage capacity [L (cu. ft.)]	V1	
Liftover height	H195	879 (34.6)

Interior Volumes (EPA Classification)

Vehicle class		Sub-compact
Interior volume index (cu. ft.)		97.2
Trunk/cargo index (cu. ft.)		12.4

All linear dimensions are in millimeters (inches).

** EPA Loaded Vehicle Weight, Loading Conditions

MVMA Specifications FormVehicle Line **FIREBIRD**Model Year **1989**Issued **6-88**

Revised (•) _____

METRIC (U.S. Customary)**Vehicle Dimensions** See Key Sheets for definitions

Body Type

2FS87**2FW87**SAE
Ref.
No.**Station Wagon – Third Seat**

Seat facing direction	SD1	Not Applicable
Sg RP couple distance	L85	
Shoulder room	W85	
Hip room	W86	
Effective leg room	L86	
Effective head room	H86	
Sg RP to heel point	H87	
Knee clearance	L87	
Back angle	L88	
Hip angle	L89	
Knee angle	L90	
Foot angle	L91	

Station Wagon – Cargo Space

Cargo length (open front)	L200	Not Applicable
Cargo length (open second)	L201	
Cargo length (closed front)	L202	
Cargo length (closed second)	L203	
Cargo length at belt (front)	L204	
Cargo length at belt (second)	L205	
Cargo width (wheelhouse)	W201	
Rear opening width at floor	W203	
Opening width at belt	W204	
Min. rear opening width above belt	W205	
Cargo height	H201	
Rear opening height	H202	
Tailgate to ground height	H250	
Front seat back to load floor height	H197	
Cargo volume index (m ³ (ft. ³))	V2	
Hidden cargo volume index (m ³ (ft. ³))	V4	
Cargo volume, index-rear of 2-seat	V10	

Hatchback – Cargo Space

Cargo length at front seatback height	L208	886 (34.9)
Cargo length at floor (front)	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 (m ³ (ft. ³))	V3	879 (31.0)
Hidden cargo volume index (m ³ (ft. ³))	V4	--
Cargo volume index-rear of 2-seat	V11	350 (12.4)

Aerodynamics*

Wheel lip to ground, front	H172	
Wheel lip to ground, rear	H173	
Frontal area (m ² (ft. ²))	FA 1.95 (21.0)	1.96 (21.0)
Drag coefficient (Cd)	Not Available	

* EPA Loaded Vehicle Weight, Loading Conditions

MVMA Specifications Form

METRIC (U.S. Customary)

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

Body Type

2FS87

2FW87

Vehicle Fiducial Marks

Fiducial Mark Number*	Define Coordinate Location
Front	(1) X - Fiducial mark to vertical base grid line - front measured horizontally, from the base grid line to the front fiducial mark located on top of the front seat adjuster mounting bolt.
	Y - Fiducial mark to centerline of car - front, width measurement made from centerline car to fiducial mark located on top of the front seat adjuster mounting bolt.
	(2) Z - Fiducial mark to horizontal base grid line - front, measured vertically from base grid line to front fiducial mark located on top of the front seat adjuster mounting bolt.
Rear	(1) X - Fiducial mark to vertical base grid line - rear, measured horizontally from the base grid line to rear fiducial mark located on the right hand 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 right hand rail (compartment pan - longitudinal).
	(2) Z - Fiducial mark to horizontal base grid line - rear, measured vertically from body base grid line to rear fiducial mark located on the right hand rail (compartment pan - longitudinal).
Front	W21* 540 (21.3)
	L54* 688 (27.1)*
	H81* -32 (-1.3)#
	H161* 293 (11.5)
	** H163* 267 (10.5)
Rear	W22* 548 (21.6)
	L55* 2815 (110.8)*
	H82* 96 (3.8)#
	H162* 421 (16.6)
	** H164* 402 (15.8)
* Vertical base grid 2000 mm line. # Horizontal base grid 500 mm line.	

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

All linear dimensions are in millimeters (Inches).

** EPA Loaded Vehicle Weight, Loading Conditions

METRIC (U.S. Customary)

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

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

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

11. *Journal of the American Medical Association*, 2000; 283: 2689-2696.

METRIC (U.S. Customary)

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

[illegible]

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

METRIC (U.S. Customary)

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

[illegible]

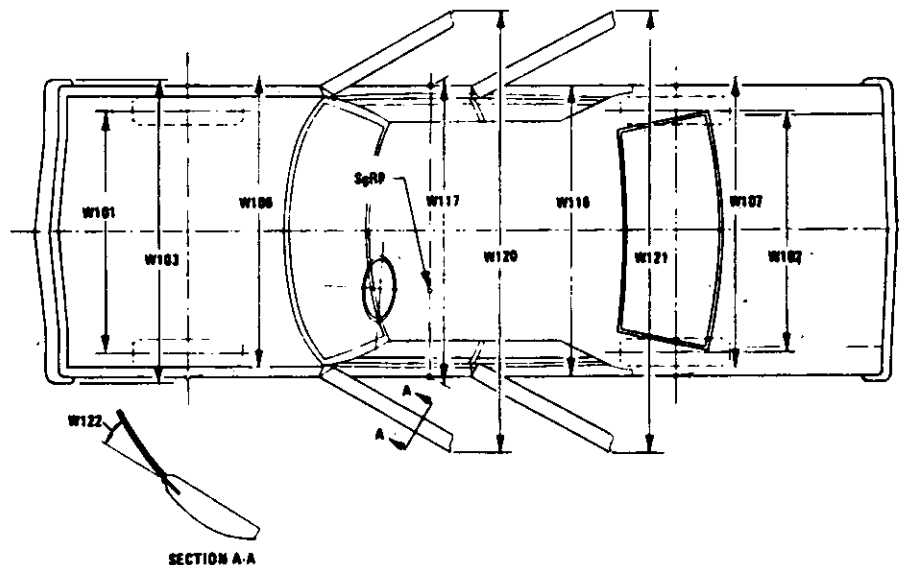
* Also see Engine - General Section for dressed engine mass (weight).

MVMA Specifications Form

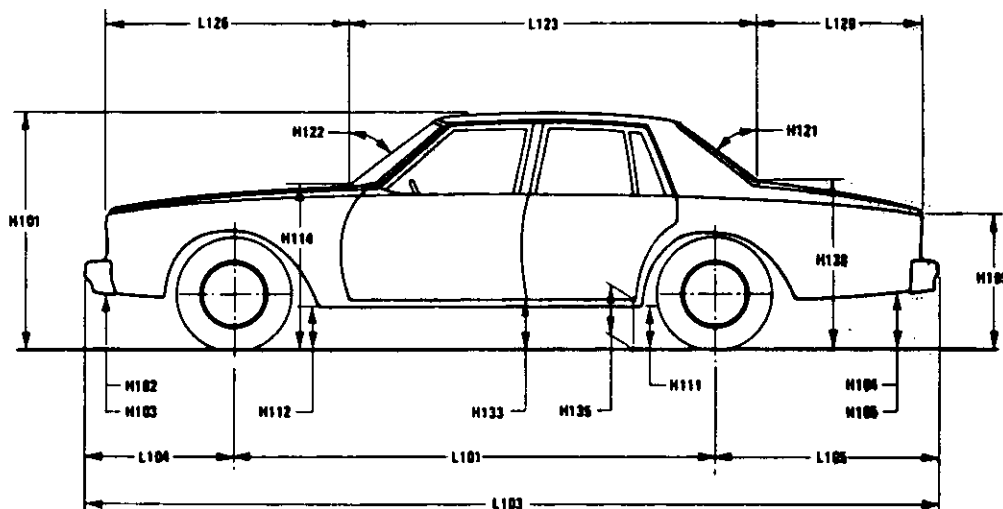
METRIC (U.S. Customary)

Exterior Vehicle And Body Dimensions – Key Sheet

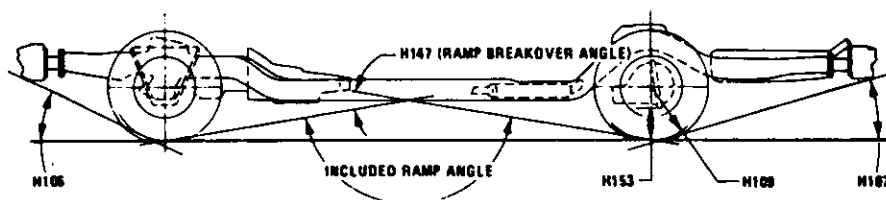
Exterior Width



Exterior Length & Height



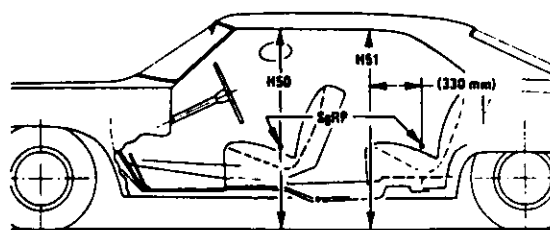
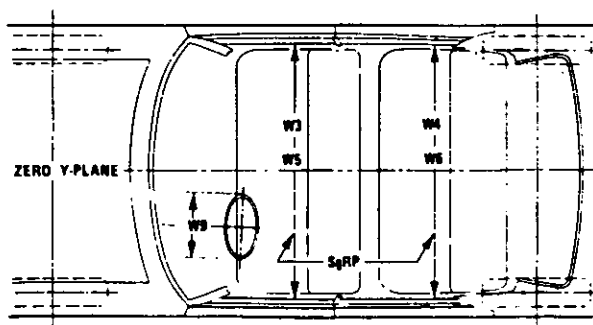
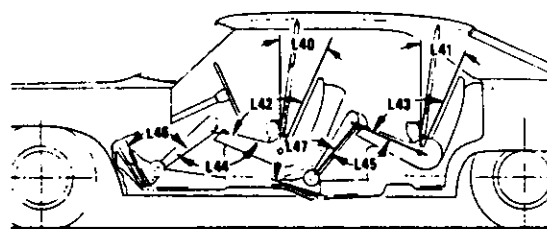
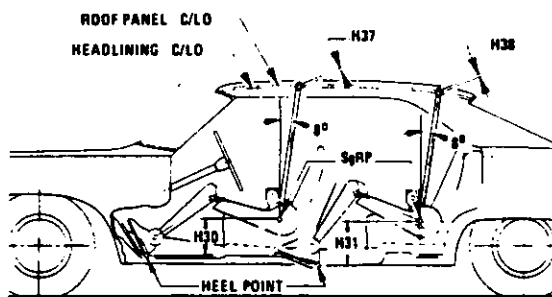
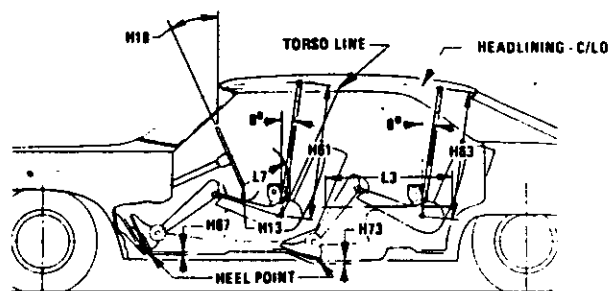
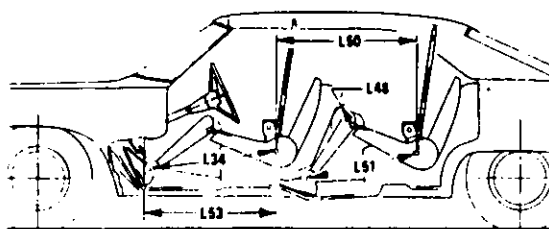
Exterior Ground Clearance



MVMA Specifications Form

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions – Key Sheet

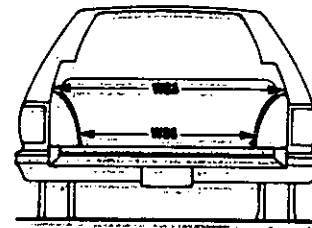
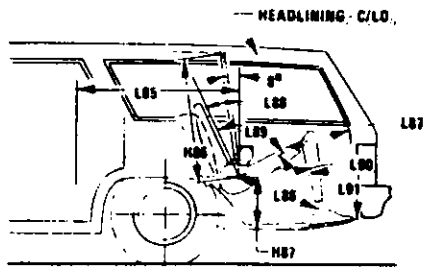


MVMA Specifications Form

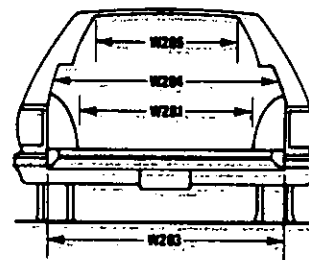
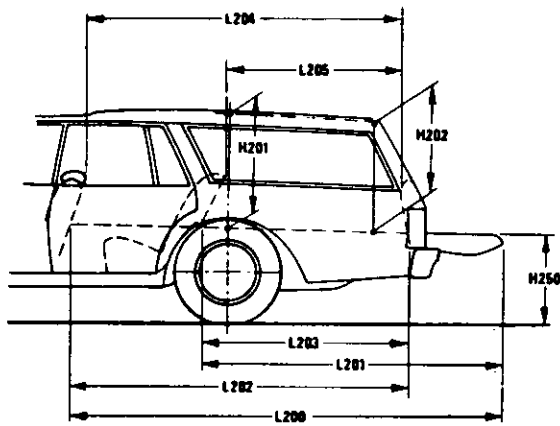
METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet

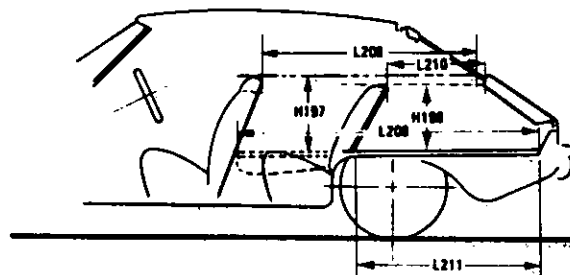
Third Seat



Cargo Space



Station Wagon



Hatchback

MVMA Specifications Form

METRIC (U.S. Customary)

Exterior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

Seating Reference Point

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

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

Width Dimensions

- W101 TREAD–FRONT. The dimension measured between the tire centerlines at the ground.
- W102 TREAD–REAR. The dimension measured between the tire centerlines at the ground. In case of dual wheels, the dimension will be measured to the centerline of tire and wheel assemblies.
- W103 VEHICLE WIDTH. The maximum dimension measured between the widest point on the vehicle, excluding exterior mirrors, flexible mud flaps, marker lamps, but including bumpers, moldings, sheet metal protrusions or dual wheels, if standard equipment.
- W106 FRONT FENDER WIDTH. The dimension measured between the widest points at the front wheel centerline, excluding moldings.
- W107 REAR FENDER WIDTH. The dimension measured between the widest points at the rear wheel centerline, excluding moldings.
- W117 BODY WIDTH AT SgRP–FRONT. The dimension measured laterally between the widest points on the body at the SgRP-front, excluding door handles, applied moldings, or appliques.
- W120 VEHICLE WIDTH–FRONT DOORS OPEN. The dimension measured between the widest point on the front doors in maximum hold-open position.
- W121 VEHICLE WIDTH–REAR DOORS OPEN. The dimension measured between the widest point on the rear doors in maximum hold-open position. For vehicles with a rear door on only one side, this dimension is to the zero "Y" plane.
- W122 TUMBLE–HOME. STRAIGHT SIDE GLASS. The angle measured from a vertical to the outside surface of the front door glass at the SgRP "X" plane.
CURVED SIDE GLASS. The angle measured from a vertical to a chord extending from the upper DLO to the lower DLO at the outside surface of the front door glass at the front SgRP "X" plane.

Length Dimensions

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

of dual rear axles, the dimension shall be the midpoint of the centerlines of the rear wheels, to the rearmost point on the vehicle including rear bumpers, bumper guards, tow hooks and rub strips, if standard equipment.

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

Height Dimensions

- H101 VEHICLE HEIGHT. The dimension measured vertically from the highest point on the vehicle body to ground.
- H111 ROCKER PANEL–REAR TO GROUND. The dimension measured vertically from the bottom of the rocker or side quarter panel at the front of the rear wheel opening, excluding flanges, to ground.
- H112 ROCKER PANEL–FRONT TO GROUND. The dimension measured vertically from the foremost point on the bottom of the rocker panels, excluding flanges, to ground.
- H114 COWL POINT TO GROUND. Measured at zero "Y" plane.
- H121 BACKLIGHT SLOPE ANGLE. The angle between the vertical reference line and the surface of backlight at vehicle zero "Y" plane. For curve backlight, the angle is to chord of backlight arc from lower DLO to upper DLO.
- H122 WINDSHIELD SLOPE ANGLE. The angle between the vertical reference line and a chord of the windshield arc running from the lower DLO to the upper DLO at the vehicle zero "Y" plane. In the case of wrap over glass, the angle to be measured will be formed by a chord 457 mm (18.0 in) long drawn from the lower DLO to the intersecting point on the windshield.
- H133 BOTTOM OF DOOR CLOSED–FRONT TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum closed position, to ground.
- H135 BOTTOM OF DOOR CLOSED–REAR TO GROUND. The dimension measured vertically from the bottom outside corner of the door on the lock pillar side, in maximum closed position, to ground.
- H138 DECK POINT TO GROUND. Measured at zero "Y" plane.
- H109 STATIC LOAD–TIRE RADIUS–REAR. Specified by the manufacturer in accordance with composite TIRE SECTION STANDARD.

Ground Clearance Dimensions

- H102 FRONT BUMPER TO GROUND. The minimum dimension measured vertically from the lowest point on the front bumper to ground, including bumper guards, if standard equipment.
- H103 FRONT BUMPER TO GROUND–CURB MASS (WT.). Measured in the same manner as H102.

MVMA Specifications Form

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet Dimensions Definitions

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

Glass Areas

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

Fiducial Mark Dimensions

- Fiducial Mark - Number 1**
- L54 "X" coordinate.
- W21 "Y" coordinate.
- H81 "Z" coordinate.
- H161 Height "Z" coordinate to ground at curb weight.
- H163 Height "Z" coordinate to ground.
- Fiducial Mark - Number 2**
- L55 "X" coordinate.
- W22 "Y" coordinate.
- W82 "Z" coordinate.
- H162 Height "Z" coordinate to ground at curb weight.
- H164 Height "Z" coordinate to ground.

Front Compartment Dimensions

- L7 STEERING WHEEL TORSO CLEARANCE. The minimum dimension measured in the side view from the rearmost edge of the steering wheel, with front wheels in the straight ahead position, to the torso line.
- L11 ACCELERATOR HEEL POINT TO STEERING WHEEL CENTER. The dimension measured horizontally from the AHP to the intersection of the steering column centerline and a plane tangent to the upper surface of the steering wheel rim.
- L17 DESIGN H-POINT-FRONT TRAVEL. The dimension measured horizontally between the design H-point-front in the foremost and rearmost seat track positions. (See SAE J1100)
- L23 NORMAL DRIVING AND RIDING SEAT TRACK TRAVEL. The dimension measured horizontally between a point on the design H-point travel line from the SgRP to the displaced point on the design H-point travel line with the seat moved to the foremost seat position, but not to include seat track travel used for purposes other than normal driving and riding positions. (See SAE J1100)

- L31 SgRP-FRONT. "X" COORDINATED.
- L34 MAXIMUM EFFECTIVE LEG ROOM-ACCELERATOR. The dimension measured along a line from the ankle pivot center to the SgRP-front plus 254 mm (10.0 in) measured with right foot on the undepressed accelerator pedal. For vehicles with SgRP to heel (H30) greater than 18 in., the accelerator pedal may be depressed as specified by the manufacturer. If the accelerator is depressed, the manufacturer shall place foot flat on pedal and note the depression of the pedal.
- L40 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.
- L42 HIP ANGLE-FRONT. The angle measured between torso line and thigh centerline.
- L44 KNEE ANGLE-FRONT. The angle measured between thigh centerline and lower leg centerline measured on the right leg.
- L46 FOOT ANGLE-FRONT. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the bare foot flesh line measured on the right leg. Ref SAE J826.
- L53 SgRP-FRONT TO HEEL. The dimension measured horizontally from the SgRP-front to the accelerator heel point.
- W3 SHOULDER ROOM-FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP-front at height between the belt line and 254 mm (10.0 in.) above the SgRP-front, excluding the door assist strap and attaching parts.
- W5 HIP ROOM-FRONT. The minimum dimension measured laterally between the trimmed surfaces on the "X" plane through the SgRP-front within 25 mm (1.0 in.) below and 76 mm (3.0 in.) above the SgRP-front and 76 mm (3.0 in.) fore and aft of the SgRP-front.
- W9 STEERING WHEEL MAXIMUM OUTSIDE DIAMETER. Define if other than round.
- H13 STEERING WHEEL TO CENTERLINE OF THIGH. The minimum dimension measured from the bottom of steering wheel, with front wheels in the straight position, to the thigh centerline.
- H17 ACCELERATOR HEEL POINT TO THE STEERING WHEEL CENTER. The dimension measured vertically from the AHP-front to the intersection of the steering column centerline to a plane tangent to the upper surface of the steering wheel rim.
- H18 STEERING WHEEL ANGLE. The angle measured from a vertical to the surface plane of the steering wheel.
- H30 SgRP-FRONT TO HEEL. The dimension measured vertically from the SgRP-front to the accelerator heel point.
- H37 HEADLINING TO ROOF PANEL-FRONT. The dimension measured from the intersection of the headlining and the extended effective head room line normal to the sheet metal.
- H50 UPPER BODY OPENING TO GROUND-FRONT. The dimension measured vertically from the trimmed body opening to the ground on the SgRP-front "X" plane.
- H61 EFFECTIVE HEAD ROOM-FRONT. The dimension measured along a line 8 deg. rear of vertical from the SgRP-front to the headlining plus 102 mm (4.0 in.).
- H67 FLOOR COVERING THICKNESS-UNDEPRESSED-FRONT. The dimension measured vertically from the surface of the undepressed floor covering to the underbody sheet metal at the accelerator heel point.

Rear Compartment Dimensions

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

MVMA Specifications Form

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions - Key Sheet Dimensions Definitions

- L41 BACK ANGLE-SECOND. The angle measured between a vertical line through the SgRP-second and the torso line.
- L43 HIP ANGLE-SECOND. The angle measured between torso line and thigh centerline.
- L45 KNEE ANGLE-SECOND. The angle measured between thigh centerline and lower leg centerline.
- L47 FOOT ANGLE-SECOND. The angle measured between the lower leg centerline and a line tangent to the ball and heel of the three-dimensional devices bare foot flesh line (Reference J826).
- L48 KNEE CLEARANCE-SECOND. The minimum dimension measured from the knee pivot center to the back of the front seatback minus 51 mm (2.0 in.).
- L50 SgRP COUPLE DISTANCE-SECOND. The dimension measured horizontally from the driver SgRP-front to the SgRP-second.
- L51 MINIMUM EFFECTIVE LEG ROOM-SECOND. The dimension measured along a line from the ankle pivot center to the SgRP-second plus 254mm (10.0 in.).
- W4 SHOULDER ROOM-SECOND. The minimum dimension measured laterally between door or quarter trimmed surfaces on the "X" plane through the SgRP-second at height between 254-406 mm (10.0-16.0 in.) above the SgRP-second, excluding the door assist straps and attaching parts.
- W6 HIP ROOM-SECOND. Measured in the same manner as W5.
- H31 SgRP-SECOND TO HEEL. The dimension measured vertically from the SgRP-second to the two dimensional device heel point on the depressed floor covering.
- H38 HEADLINING TO ROOF PANEL-SECOND. The dimension measured from the intersection of the headlining and the extended effective head room line normally to the roof sheet metal.
- H51 UPPER BODY OPENING TO GROUND-SECOND. The dimension measured vertically from the trimmed body opening to the ground on the "X" plane 330 mm (13.0 in.) forward of the SgRP-second.
- H63 EFFECTIVE HEAD ROOM-SECOND. The dimension measured along a line 8 deg. rear of vertical from the SgRP to the headlining, plus 102 mm (4.0 in.).
- H73 FLOOR COVERING-DEPRESSED-SECOND. The dimension measured vertically from the heel point to the underbody sheet metal.

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

Interior Volumes (EPA Classification)

The Interior Volume Index is listed for each body style except two seaters. The interior volume index estimates the space in a car. 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 51mm (2.0 in.). With rear-facing third seat, dimension is measured to closure.
- L88 BACK ANGLE-THIRD. Measured in the same manner as L41.
- L89 HIP ANGLE-THIRD. Measured in the same manner as L43.
- L90 KNEE ANGLE-THIRD. Measured in the same manner as L45.
- L91 FOOT ANGLE-THIRD. Measured in the same manner as L47.
- W85 SHOULDER ROOM-THIRD. Measured in the same manner as W4.
- W86 HIP ROOM-THIRD. Measured in the same manner as W5.
- H86 EFFECTIVE HEAD ROOM-THIRD. The dimension, measured along a line 8 deg. from the SgRP-third to the headlining rear of vertical plus a constant of 102 mm (4.0 in.).
- H87 SgRP-THIRD TO HEEL POINT.
- SD1 SEAT FACING DIRECTION-THIRD.

Station Wagon - Cargo Space Dimensions

- L200 CARGO LENGTH-OPEN-FRONT. The minimum dimension measured longitudinally from the back of the front seatback at the height of the 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 wheelhouseings at floor level. For any vehicle not trimmed, measure to the sheet metal.

MVMA Specifications Form

METRIC (U.S. Customary)

Interior Vehicle And Body Dimensions – Key Sheet Dimensions Definitions

- W203 REAR OPENING WIDTH AT FLOOR. The minimum dimension measured laterally between the limiting interferences of the rear opening at floor level.
- W204 REAR OPENING WIDTH AT BELT. The minimum dimension measured laterally between the limiting interferences of the rear opening at belt height or top of pick up box.
- W205 REAR OPENING WIDTH ABOVE BELT. The minimum dimension measured laterally between the limiting interferences of the rear opening above the belt height.
- H197 FRONT SEATBACK TO LOAD FLOOR HEIGHT. The dimension measured vertically from the horizontal tangent to the top of the seatback to the undeepressed floor covering.
- H201 CARGO HEIGHT. The dimension measured vertically from the top of the undeepressed floor covering to the headlining at the rear wheel "X" coordinate on the zero "Y" plane.
- H202 REAR OPENING HEIGHT. The dimension measured vertically from the top of the undeepressed floor covering to the upper trimmed opening on the zero "Y" plane with rear door fully open.
- H250 TAILGATE TO GROUND CURB MASS (WT.). The dimension measured vertically from the top of the undeepressed floor covering on the lowered tailgate to ground on the zero "Y" plane.
- V2 STATION WAGON
Measured in inches:

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

Measured in mm:

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

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

- V5 TRUCKS AND MPV'S WITH OPEN AREA.

Measured in inches:

$$\frac{L506 \times W500 \times H503}{1728} = \text{ft}^3$$

Measured in mm:

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

- V6 TRUCKS AND MPV'S WITH CLOSED AREA.

Measured in inches:

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

Measured in mm:

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

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

- V10 STATION WAGON CARGO VOLUME INDEX.

Measured in inches:

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

Measured in mm:

$$\frac{H201 \times L205 \times \frac{W4 + W201}{2}}{10^9} = \text{m}^3 \text{ (cubic meter)}$$

Hatchback – Cargo Space Dimensions

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

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

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

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

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

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

- H198 SECOND SEATBACK TO LOAD FLOOR HEIGHT: The dimension measured vertically from the second seat back to the undeepressed floor covering.

- V3 HATCHBACK.

Measured in inches:

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

Measured in mm:

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

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

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

Measured in inches:

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

Measured in mm:

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

MVMA Specifications Form

METRIC (U.S. Customary)

Index

Subject	Page No.
Aerodynamics	23
All Wheel Drive	10
Alternator	16
Automatic Transmission / Transaxle	8, 9
Axis, Steering	14
Axle, Drive, Front, Rear, All, Four	2, 9, 10
Axle Shafts	10
Battery	16
Body and Miscellaneous Information	17
Brakes—Parking, Service	12, 13
Camber	15
Camshaft	3
Capacities	
Cooling System	5
Fuel Tank	6
Lubricants	
Engine Crankcase	4
Transmission / Transaxle	8, 9
Rear Axle	10
Carburetor	2, 6
Caster	15
Clutch — Pedal Operated	8
Coil, Ignition	16
Connecting Rods	4
Convenience Equipment	19-20
Cooling System	5
Crankshaft	4
Cylinders and Cylinder Head	3
Diesel Information	4
Dimension Definitions	
Key Sheet — Exterior	27, 30, 31
Key Sheet — Interior	28, 29, 31, 32, 33
Electrical System	15, 16
Emission Controls	7
Engine—General	
Bore, Stroke, Type	3
Compression Ratio	2
Displacement	2, 3
Firing Order, Cylinder Numbering	3
General Information, Power & Torque	2
Intake System	4
Power Teams	2
Exhaust System	7
Equipment Availability, Convenience	19
Fan, Cooling	5
Filters — Engine Oil, Fuel System	4
Four Wheel Drive	10
Frame	18
Front Suspension	11
Front Wheel Drive Unit	10
Fuel System	6
Fuel Injection	6
Fuel Tank	6
Glass	18
Headlamps	18
Headroom — Body	22, 23
Heights	21
Horns	15
Horsepower — Brake	2
Ignition System	16
Inflation — Tires	13
Interior Volumes	22
Instruments	15
Legroom	22, 23
Lengths	21
Leveling, Suspension	11
Lifters, Valve	4
Linings — Clutch, Brake	8, 12
Lubrication — Engine Transmission / Transaxle	4, 8, 9
Luggage Compartment	22
Models	1
Motor Starting	16
Muffler	7

Subject	Page No.
Origin	1
Passenger Capacity	1
Passenger Mass Distribution	25
Pistons	3
Power Brakes	12
Power, Engine	2
Power Steering	14
Power Teams	2
Propeller Shaft, Universal Joints	10
Pumps — Fuel	6
Water	5
Radiator — Cap, Hoses, Core	5
Ratios — Axle, Transaxle	2, 9
Compression	2
Steering	14
Transmission / Transaxle	2, 8, 9
Rear Axle	2, 9, 10
Regulator — Alternator	16
Restraint System	18
Rims	13
Rods — Connecting	4
Scrub Radius	14
Seats	17
Shock Absorbers, Front & Rear	11
Spark Plugs	16
Speedometer	15
Springs — Front & Rear Suspension	11
Stabilizer (Sway Bar) — Front & Rear	11
Starting System	16
Steering	14
Suppression — Ignition, Radio	16
Suspension — Front & Rear	11
Tail Pipe	7
Theft Protection	20
Thermostat, Cooling	5
Tires	13
Toe-In	15
Torque Converter	9
Torque — Engine	2, 8, 9
Transaxle	9
Transmission — Types	2, 8, 9
Transmission — Automatic	2, 8, 9
Transmission — Manual	2, 8, 9
Transmission — Ratios	2, 9
Tread	21
Trunk Cargo Load	1
Trunk Luggage Capacity	22
Turning Diameter	14
Unitized Construction	18
Universal Joints, Propeller Shaft	10
Valve System	4
Vehicle Dimensions	
Width	21
Length	21
Height	21
Ground Clearance	21
Front Compartment	22
Rear Compartment	22
Luggage Compartment	22
Station Wagon — Third Seat	23
Station Wagon — Cargo Space	23
Hatchback — Cargo Space	23
Fiducial Marks	24
Voltage Regulator	16
Water Pump	5
Weights	25, 26
Wheel Alignment	15
Wheelbase	21
Wheels & Tires	13
Wheel Spindle	14
Widths	21
Windshield	18
Windshield Wiper and Washer	15