



GENERAL

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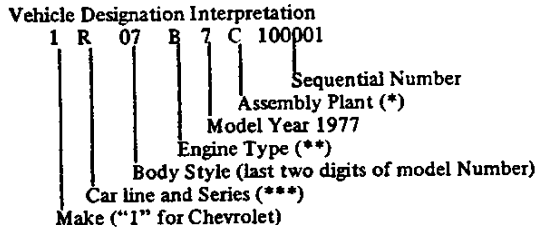
MODEL IDENTIFICATION

BODY	SERIES NAME	BODY STYLE	MODEL DESIGNATION	PASSENGERS
H-SPECIAL	MONZA 2 + 2	2-Door Hatchback Coupe	1HR07	4
	MONZA TOWNE COUPE	2-Door Notchback Coupe	1HM27	4

SERIAL NUMBERS AND IDENTIFICATION

ONLY BASIC DESIGNATIONS SHOWN

VEHICLE SERIAL NUMBER



- *C - Southgate Canadian Plant
- GMAD No. 2 - St. Therese
- **B - L4-140 (84 H.P.) (RPO L11)
- U - V8-305 (145 H.P.) (RPO LG3)
- ***R - Monza 2 + 2
- M - Monza Towne Coupe

EXAMPLE: The twenty-fifth Chevrolet vehicle built at Chevrolet St. Therese if it were a 1HR07 model (Monza 2 + 2 Coupe) with a L4-140 (84 H.P.) engine would bear VIN Number 1R07B7210025.

Location Stamped on plate attached to left hand windshield pillar.

TRANSMISSION IDENTIFICATION

Example: ZNR7E01D

Type Designation	Source Designation	Model Year 1977	Production ^o Month & Date
ZN	R (Muncie)	7	E01D*
ZN	4-Speed	L-4 engine	R - Muncie
DH	5-Speed	L-4 engine	Warner Gear
AP	Turbo Hydra-matic	L-4 engine	D - Parma
RH	4-Speed	V-8 engine	Y - Toledo
CD	Turbo Hydra-matic	V-8 engine	R - Muncie
			D - Parma
			Y - Toledo

Location:
 4 & 5-speed Stamped on lower rear LH side of transmission below cover.
 Turbo Hydra-matic Stamped on left hand side of pan.

- ^oMonth: E denotes May; 01 denotes 1st day.
 -Alpha Characters used in identifying the Calendar Month
- | | | | |
|--------------|-----------|---------------|--------------|
| A - January | D - April | K - July | R - October |
| B - February | E - May | M - August | S - November |
| C - March | H - June | P - September | T - December |

*-The letter "D" or "N" following the date numerals indicates day or night shift, on automatic only.

ENGINE IDENTIFICATION

Example: T1210CBL

Source Designation	Production* Month & Date	Type Designation
T (Tonawanda)	1210	CBL

140 Cubic Inch L-4, Base Engine (RPO L11)

- CBL - Regular production engine, Turbo Hydra-matic, 2-bbl. carb.
- CBS - Regular production engine, 4-speed, 2-bbl. carb.
- CAZ - Regular production engine, 5-speed, 2-bbl. carb.

5.0 Litre, 305 Cubic Inch V-8 (RPO LG3)

- CPK - Optional, Turbo Hydra-matic, 2-bbl. carb.

Location:
 4-Cylinder engine Stamped opposite the number three cyl. on the right side of case.
 8-Cylinder engine Stamped on pad at front right side of cylinder block.

*-Month: December, 12; 10th day of December, 10.

REAR AXLE IDENTIFICATION

- EZ - 2.29 Axle
- EY - 2.56 Axle
- ER - 2.73 Axle
- EX - 2.93 Axle
- EU - 3.42 Axle
- ET - 3.73 Axle

Location, Identification Number
 Bottom left or right of axle tube adjacent to carrier housing.

See Power Train Section for additional information.

EXTERIOR EQUIPMENT

EXTERIOR EQUIPMENT

	2 + 2 Hatchback 1HR07	Towne Coupe 1HM27	Towne Coupe Sport Equipment 1HM27/Z60	Towne Coupe Cabriolet Equipment 1HM27/Z60 & Z87
FRONT				
Front Header Panel	-	X	X	-
Body Color Plastic Slotted Front End Panel	X	-	-	X
Front Header Panel 'Chevrolet' Nameplate	X	X	X	X
Front Header Panel Bow-Tie Medallion	X	-	-	X
Radiator Grille				
Bright Chrome	X	X	X	X
Body Color Plastic Lower Valance Panel	-	X	X	-
Windshield Reveal Moldings				
Bright	-	X	-	-
Bright & Black	X	-	X	X
Headlamps				
Quad Rectangular (Bright Bezel)	X	-	-	X
Two Round (Bright Bezel)	-	X	X	-
Clear Parking Lamp Lens & Amber Bulb	X	-	X	X
Amber Parking Lamp Lens and Clear Bulb	-	X	-	-
Windshield Wipers				
Brushed Metallic	-	X	-	-
Black	X	-	X	X
Front Bumper				
Soft Fascia, Integral Impact Strips & Guards	X	-	-	X
Chrome	-	X	X	-
SIDE				
Ornamentation				
Front Fender 'Monza' Nameplate	X	X	X	X
Front Fender '2 + 2' Nameplate	X	-	-	-
Black Painted Rocker Panel, Lower Fender & Quarter Panel	-	-	X	X
Body Color Door Handle Insert	X	-	X	X
Moldings				
Bright Door Belt	X	-	-	-
Bright Door & Rear Quarter Belt	-	-	X	X
Bright Door Frame	X	-	-	-
Black Door Frame	-	-	X	X
Bright Roof & Quarter Window Drip	-	X	X	X

EXTERIOR EQUIPMENT

EXTERIOR EQUIPMENT

SIDE	2 + 2 Hatchback 1HR07	Towne Coupe 1HM27	Towne Coupe Sport Equipment 1HM27/Z60	Towne Coupe Cabriolet Equipment 1HM27/Z60 &Z87
Moldings – Continued				
Bright & Black Rear Quarter Window	X	–	–	–
Black Rear Quarter Window	–	X	X	X
Black Door Window Frame	–	X	–	–
Black Door & Rear Quarter Pillar Applique – Argent Edges	X	–	–	–
Black Rear Quarter Pillar Applique – Argent Edges	–	–	X	X
Black Rear Quarter – No Applique	–	X	–	–
Wheel Trim				
Metallic Wheel Covers	–	X	–	–
Argent Finned Plastic Wheel Cover & Center Hub Cap	X	–	–	–
Body Color Finned Plastic Wheel With Argent Edges & Center Hub Cap	–	–	X	X
Fixed Large Rear Quarter Window	X	–	–	–
Fixed Large Rear Quarter Window	–	X	X	X
Amber Front Fender Marker Lamp	X	X	X	X
Red Rear Quarter Marker Lamp	X	X	X	X
Rectangular L.H. Outside Rear View Mirror	X	X	X	X
L.H. Rear Quarter Gas Cap	X	X	X	X

EXTERIOR EQUIPMENT

EXTERIOR EQUIPMENT

REAR	2 + 2 Hatchback 1HR07	Towne Coupe 1HM27	Towne Coupe Sport Equipment 1HM27/Z60	Towne Coupe Cabriolet Equipment 1HM27/Z60 & Z87
Hatch Lid 'Chevrolet' Nameplate	X	-	-	-
Deck Lid 'Chevrolet' Nameplate	-	X	X	X
Rear End Panel Key Lock Medallion & Bow Tie Cover	X	-	-	-
Moldings				
Bright Back Window Reveal	-	X	-	-
Bright & Black Back Window Reveal	X	-	X	X
Bright Rear End Panel Lower	-	-	X	X
Swing-Up Hatch Panel	X	-	-	-
Taillamps				
Red Wrap-Around Taillamp with Back-Up Lamp & Bright Trim	X	-	-	-
Tri-Color Rectangular Design with Back-Up Lamp and Bright Bezel	-	X	X	X
Rear Bumper				
Soft Fascia Rear Bumper, Integral Impact Strips & Guards	X	-	-	-
Chrome Rear Bumper	-	X	X	X
Black Painted Rear Bumper Cove Area (Behind Face Bar)	-	-	X	X
Black Bumper Impact Strip Applied	-	-	-	X

INTERIOR EQUIPMENT

INTERIOR EQUIPMENT

	2 + 2 Hatchback 1HR07	Towne Coupe 1HM27	Towne Coupe Sport Equipment 1HM27/Z60	Towne Coupe Cabriolet Equipment 1HM27/Z60 & Z87
DOORS AND QUARTER PANELS				
Molded soft door trim panel with bright bead, pleated map pockets, recessed door handles	X	X	X	X
Door armrests, integral bright door lock buttons	X	X	X	X
Form molded rear quarter trim panel integral armrest and quarter pillar	X	X	X	X
Rear quarter panel ash trays	X	-	X	X
Bright remote door handles	X	X	X	X
Bright window regulator handle, black knob	X	X	X	X
Bright aluminum sill plates	X	X	X	X
INSTRUMENT PANEL AND STEERING WHEEL				
Instrument panel knobs, bright aluminum with wood grain insert	X	X	X	X
Heater control levers, bright	X	X	X	X
2-Speed electric windshield wipers and washers	X	X	X	X
Vent control knobs, cowl kick pad - bright	X	X	X	X
Instrument cluster with tel-tales	X	X	X	X
Instrument panel pad, stitched	-	X	X	X
Instrument panel pad, 'stitched' with woodgrain applique, 'Monza' nameplate	X	-	-	-
Audio and visual seat/shoulder belt warning system - driver's side only	X	X	X	X

INTERIOR EQUIPMENT

INTERIOR EQUIPMENT

	2 + 2 Hatchback 1HR07	Towne Coupe 1HM27	Towne Coupe Sport Equipment 1HM27/Z60	Towne Coupe Cabriolet Equipment 1HM27/Z60 & Z87
INSTRUMENT PANEL AND STEERING WHEEL - Cont.				
Two-spoke steering wheel, shroud has plastic covered wood grained insert with bright "Chevrolet" nameplates. Wheel, shroud and column color keyed	X	-	-	-
Two-spoke steering wheel, shroud has bright embossed "Monza" name. Wheel, shroud and column are black	-	X	-	-
Two-spoke steering wheel, shroud has bright embossed "Monza" name. Wheel, shroud and column color keyed	-	-	X	X
Steering column ignition lock	X	X	X	X
Cigarette lighter	X	X	X	X
Instrument panel and cluster woodgrain with bright accent	X	X	X	X
Instrument panel glove box, bright chrome door latch	X	X	X	X
SEATS AND FLOORS				
High back front bucket seats, full foam	X	-	X	X
Vega style front bucket seats	-	X	-	-
Folding rear seat, carpeted back	X	-	-	-
Painted metal rear seat linkage	X	-	-	-
Passenger and load compartment floor, carpeted	X	-	-	-
Passenger compartment floor, carpeted	-	X	X	X
Colored plastic front arm rest cover	X	X	X	X
Floor mounted transmission control lever boot with bright trim ring	X	X	X	X
Bright parking brake lever, black plastic handle	X	X	X	X
Parking brake cover, color keyed	X	X	X	X
Passenger seat adjuster	X	-	X	X
Front and rear seat back locks, bright	X	X	X	X
Spare tire cover	X	X	X	X
Color-keyed automatic transmission mini floor console with high gloss rosewood woodgrain	X	X	X	X
Luggage Compartment mat	-	X	X	X

INTERIOR-EXTERIOR EQUIPMENT

INTERIOR AND EXTERIOR EQUIPMENT

ROOF AND PILLARS	2 + 2 Hatchback 1HR07	Towne Coupe 1HM27	Towne Coupe Sport Equipment 1HM27/Z60	Towne Coupe Cabriolet Equipment 1HM27/Z60 & Z87
Foam core headlining with vinyl coated paper finish	X	X	X	X
Windshield pillar, side and rear quarter window moldings, colored plastic	X	X	X	X
Rear window moldings, colored plastic	X	X	X	X
Dual vinyl sunshades	X	X	X	X
Rear view mirror, windshield mounted (non-tilting)	X	X	X	X
Roof shoulder harness retractor covers, colored plastic	X	X	X	X
Center dome lamp	X	X	X	X
Front door jamb switch, L.H.	-	X	-	-
Front Door Jamb Switch L.H. & R.H.	X	-	X	X
FUNCTIONAL FEATURES				
Special acoustical package	X	X†	X	X
Front stabilizer (1" L4) (1-1/16" V8)	X	-	X	X
Front stabilizer deleted	-	X††	-	-
Rear stabilizer deleted	X	X	X	X
Engine 140 L4, 2-bbl carburetor (L11)	X	X	X	X
Transmission, 4-speed manual (M20)	X	X	X	X
Tires, A78-13B bias ply blackwall	X	X	X	X
Tires BR70-13C base with V8	X	X	X	X

† Without Hood panel insulator
 †† Included with Radial Tire Options

EXTRA COST EQUIPMENT

<u>EQUIPMENT</u>	<u>RPO</u>	<u>ACC</u>
<u>MODEL OPTIONS</u>		
Spyder Appearance Equipment (See page 12 for content)	Z02	
<u>POWER TEAMS</u>		
Axle Rear, Positraction	G80	
Axle Rear, Hi-Altitude	G92	
Axle Rear, Highway	G95	
Engine, V8-5.0 Litre (305 Cu.In.)	LG3	
Transmission, 3-Speed Automatic	M40	
Transmission, 5-Speed	M75	
<u>POWER ASSISTS</u>		
Brakes, Power	J50	
Steering, Power	N41	
<u>FACTORY INSTALLED REGULAR PRODUCTION TIRES</u>		
BR 70 x 13C Radial Ply Blackwall Tire	QKX	
BR 70 x 13C Radial Ply White Stripe Tire	QKY	
BR 70 x 13C Radial Ply White Lettered Tire	QKZ	
BR 78 x 13B Radial Ply White Stripe Tire	QBY	
A 78 x 13B Bias Ply White Stripe Tire	QAG	
BR 78 x 13B Radial Ply Blackwall	QBR	

EXTRA COST EQUIPMENT

EQUIPMENT	RPO	ACC
<u>OTHER OPTIONS</u>		
Air Conditioner (See page 13 for content)	C60	
Alarm, Auto Theft		ACC
Antenna, Windshield	U76	
Antenna, Radio - Rod and Mast		ACC
Battery, Heavy Duty 'Freedom'	UA1	
Clock, Digital	UE8	
Compass, Auto		ACC
Container, Tissue/Litter (4-Colors: Black, Beige, Dk. Blue, Dk. Green)		ACC
Defogger, Rear Window Electric	C49	
Gauges, Instrument Panel	UE8	
Glass, Tinted Body	A01	
Guards, Door Edge	B93	ACC
Harness, Rear Seat Shoulder		ACC
Hitch, Trailer		ACC
Lighting, Auxiliary	Z19	
Engine Compartment Lamp (RPO U26)		
Glove Box Lamp (RPO U27)		
Headlamp On Buzzer (RPO T63)		
Lamp, Portable Spot		ACC
Lighter, Cigarette		ACC
Mats, Floor, Front and Rear (Color Keyed)	B37	ACC
Mat, Front Floor		ACC
Mat, Rear Floor		ACC
Mirrors, Fender Mounted Trailering (Package contains 2 mirrors)		ACC
Mirrors, Dual Sport, L.H. Remote, R.H. Manual	D35	
Mirror, Sport, LH Remote		ACC
Moldings, Body Side Protective (Vinyl insert)	B84	ACC
Moldings, Vinyl Body Side (Adhesive Back)		ACC
Radiator, Heavy Duty	V01	
Radio, AM-FM Stereo	U58	ACC
Radio, AM with Stereo Tape System	UM1	ACC
Radio, AM/FM with Stereo Tape System	UM2	ACC
Radio, AM	U63	ACC
Radio, AM-FM	U69	ACC
Seat Belts, Deluxe	AK1	
Seat Back, Adjustable Drivers	AN6	
Speaker, Auxiliary (Requires U63 or U69)	U80	
Steering, Comfort Tilt	N33	
Warmer, Car Interior		ACC
Wheels, 4-Forged Aluminum, Hub Caps and Wheel Nuts	N77	

SPYDER APPEARANCE EQUIPMENT, RPO Z02

AVAILABILITY

Monza 2 + 2 (1HR07 with RPO Z01)

CONTENT (In addition to or in place of standard equipment)

EXTERIOR

FRONT

Black Headlamp Bezels
Black Headlamp Openings
Black Upper Louvers (From leading edge rearward)
Black Parking Lamp Opening
Front Air Dam, Body Colored
Black Windshield Moldings
"Spyder" Emblem (Included in RPO Z01)
"Spyder" Hood Decal

SIDE

Black Painted Fender, Rocker and Quarter Panel
(Below door bottom line, wheel opening to wheel opening)
Rally II Wheels, Black Painted with Bright Trim Rings (RPO N98 and P06)
Black Door, Quarter Window, and Belt Moldings
Black Door and Pillar Louvers
Sport Mirrors, Black Painted
Black or Gold Body Side Lower Stripes with "Spyder"
Outlined in Red, White or Gold to Suit Body Color
"Spyder" Nameplate (delete, included in RPO Z01)
Wheel Opening Moldings (delete, included in RPO Z01)

REAR

Black or Gold Painted Rear End Panel and Taillamp openings
Black Rear Window Moldings
Spoiler, Body Color
"Spyder" Emblem on Lock Cover (Included in RPO Z01)
"Spyder" Identification on Spoiler

INTERIOR

"Spyder" Horn Button Cap
"Spyder" Instrument Panel Plaque - R.H. Black and Gold

AIR CONDITIONING

FOUR SEASON (RPO C60)

Integral air cooling and heater system. Manually controlled by two horizontal levers on instrument control panel, plus 4-speed fan switch. Upper lever operates compressor and air selector doors; lower lever controls air temperature from instrument panel and side outlets.

BASIC COMPONENTS

Control panel, evaporator, blower, condenser, receiver-dehydrator, refrigerant (freon) tank, air intake assembly and duct assembly for both systems.

EQUIPMENT (Used in addition to or in place of base equipment)

CHASSIS

Rear Axle Ratio – Refer to Power Trains Section

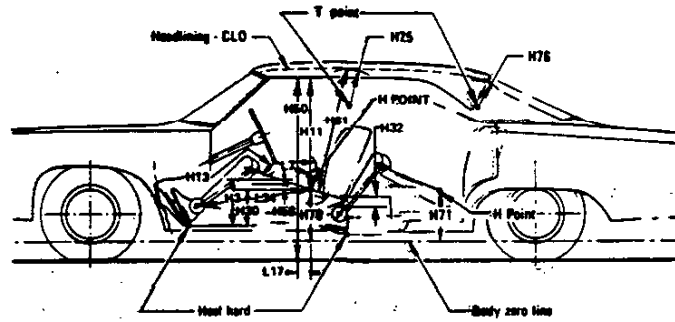
POWER TRAINS

Fan	5 Flex-blade, plastic
Crankshaft Pulley	Single two groove pulley
Compressor & Crankshaft Belt	One
Generator	55 Ampere
Radiator	Heavier duty

DIMENSIONS AND WEIGHTS

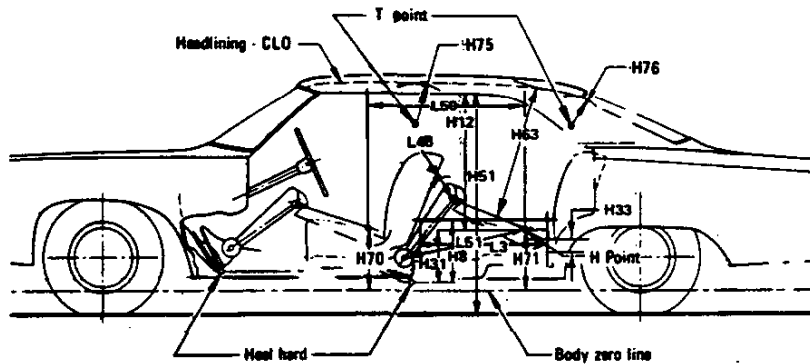
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INTERIOR DIMENSIONS



FRONT COMPARTMENT

CODE	DESCRIPTION	2-DOOR	
		HATCHBACK COUPE 1HR07	NOTCHBACK COUPE 1HM27
H-3	Seat cushion height		9.9
H11	Entrance height	29.8	29.4
H13	Steering wheel thigh clearance		4.0
H30	H point to heel point		7.3
H32	Seat cushion deflection		3.1
H50	Upper body opening to ground	45.7	45.3
H58	H point rise	1.0	1.1
H61	Effective headroom	37.7	37.5
H70	H point to body O line		10.9
H75	Effective 'T' point headroom	37.9	37.7
W3	Shoulder room	51.0	51.7
W5	Hip room	47.5	48.6
L7	Steering wheel torso clearance		14.7
L17	H point travel		6.5
L34	Effective leg room		42.8



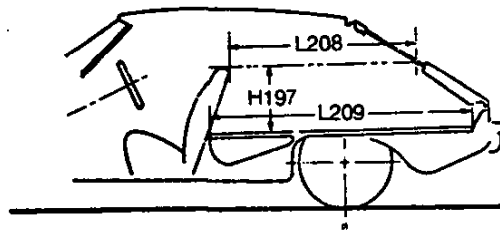
REAR COMPARTMENT

CODE	DESCRIPTION	2-DOOR	
		HATCHBACK COUPE 1HR07	NOTCHBACK COUPE 1HM27
H8	Seat cushion height	9.1	9.6
H12	Entrance height	-	-
H31	H point to heel point	8.4	8.9
H33	Seat cushion deflection	2.9	4.2
H51	Upper body opening to ground	-	-
H63	Effective headroom	35.3	37.2
H71	H point to body O line	9.4	9.9
H76	Effective 'T' point headroom	35.6	36.9
W4	Shoulder room	51.2	50.8
W6	Hip room		42.0
L3	Rear compartment room	24.4	24.1
L50	H point couple distance	27.3	27.0
L51	Effective leg room	29.6	28.2

INTERIOR DIMENSIONS

LUGGAGE COMPARTMENT

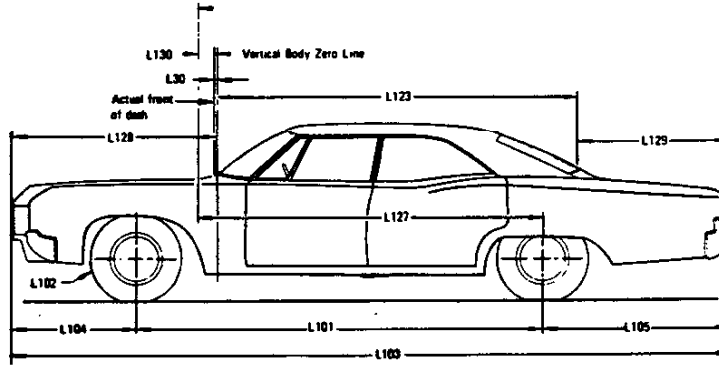
CODE	DESCRIPTION	2-DOOR HATCHBACK COUPE 1HR07	2-DOOR NOTCHBACK COUPE 1HM27
		H195	Liftover height	28.8	22.8
V1	Usable luggage capacity (cu. ft.)	-	6.6



HATCHBACK CARGO SPACE

W4	Shoulder room - Rear	51.2
H197	Front seat back to load floor height	18.3
L208	Cargo length at front seat back height	40.5
L209	Cargo length at floor - front seat	61.9
V3	Total hatchback - cargo index volume (cu.ft.)	30.2

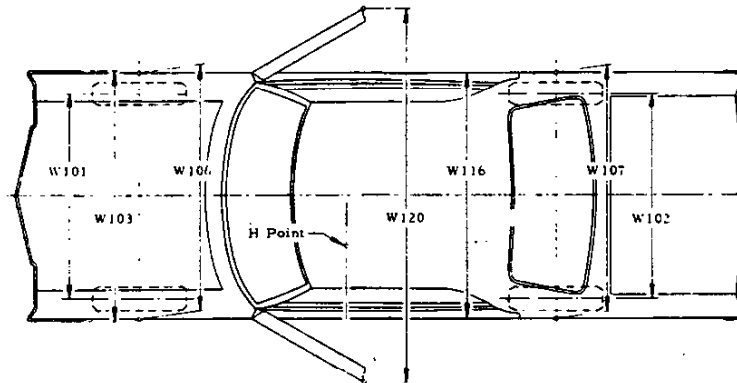
EXTERIOR DIMENSIONS



LENGTH

CODE	DESCRIPTION	2-DOOR	
		HATCHBACK COUPE 1HR07	NOTCHBACK COUPE 1HM27
L101	Wheelbase	97.0	
L102	Tire size (standard)	A78-13*	
L103	Overall length	179.3	177.8
L104	Overhang, front	36.8	35.8
L105	Overhang, rear	45.5	45.0
-	Overall length - less bumpers	175.2	171.2
L123	Body upper structure length at car center line	100.9	87.2
L127	Body O line to C/L of rear wheels	86.0	
L128	Front end length at center line	57.9	
L129	Rear end length at center	14.8	29.6
L125	Body zero plane to windshield cowl point	12.0	10.9
L30	Body O line to actual front of dash	- 0.8	- 0.1

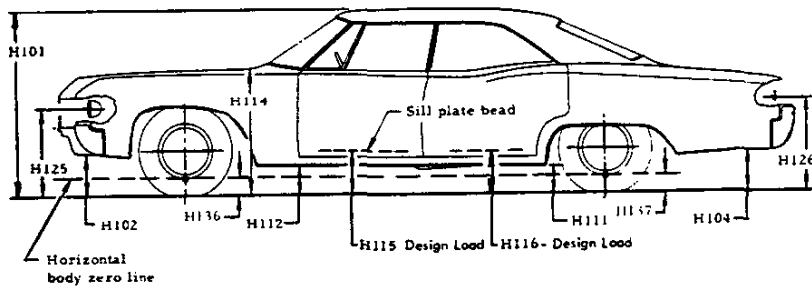
*BR70-13C with V8 305 cu. in. engine.



WIDTHS

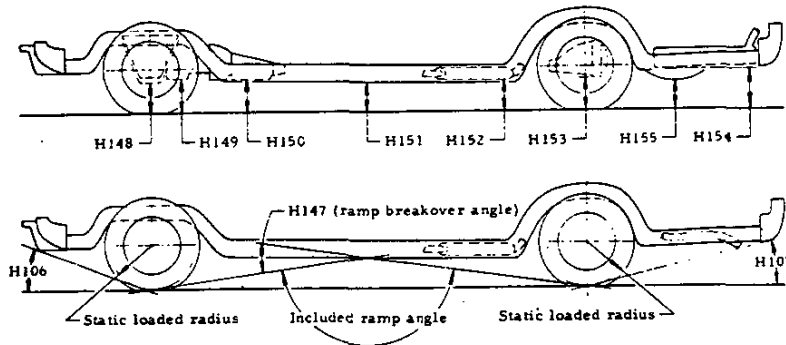
W101	Tread - front	54.8	
W102	Tread - rear	53.6	
W103	Maximum overall width of car	65.4	
W106	Front fender overall width	65.4	
W107	Rear fender overall width	65.3	
W116	Maximum overall width of body	65.4	
W120	Overall car width, front doors open	150.4	148.0

EXTERIOR DIMENSIONS



HEIGHTS

CODE	DESCRIPTION	2-DOOR	
		HATCHBACK COUPE IHR07	NOTCHBACK COUPE IHM27
H101	Overall height (design)	50.2	49.8
H102	Front bumper to ground	9.9	14.2
H104	Rear bumper to ground	10.4	13.5
H111	Rocker panel to ground - rear		6.2
H112	Rocker panel to ground - front		6.6
H114	Hood at rear to ground		35.1
H115	Step height - front (design)		11.4
H125	Headlamp to ground	26.2	
H126	Tail lamp to ground	26.0	24.8
H136	Body O line to ground - front	5.1	5.1
H137	Body O line to ground - rear	4.9	4.9



CLEARANCES

H106	Angle of approach (degrees)	17°28'	20°07'
H107	Angle of departure (degrees)	17°38'	20°09'
H147	Ramp breakover angle (degrees)		15°7'
H148	Front suspension to ground		6.1
H149	Oil pan to ground		5.2
H150	Flywheel housing to ground		5.4
H151	Frame to ground		6.4
H152	Exhaust system to ground		4.9
H153	Rear axle to ground		6.1
H154	Fuel tank to ground		9.1
H156	Minimum ground clearance		4.9(a)

(a) Catalytic converter.

VEHICLE WEIGHTS

MONZA

MODEL SYMBOL	VEHICLE TYPE Description	SHIPPING WEIGHT			CURB WEIGHT		
		Front	Rear	Total	Front	Rear	Total
4-Cyl							
1HR07	2-Door Hatchback (Coupe)	1463	1208	2671	1441	1325	2766
1HM27	2-Door Notchback (Coupe)	1424	1156	2580	1402	1273	2675

SHIPPING WEIGHT: Weight of basic vehicle with regular equipment, including grease, oil and (3) gallons of gasoline, and engine coolant to capacity.

CURB WEIGHT: Shipping weight plus gasoline to capacity.

For total shipping, and curb, weights of vehicles equipped with the following options, add to, or deduct from, the base vehicle weight (lbs.)

OPTIONAL EQUIPMENT

RPO	OPTION	WITH	WEIGHT
B37	Floor Mats Front and Rear		+ 7
C60	Air Conditioning	With 4 Cyl Engine	+ 70
		With V8 Engine	+ 94
J50	Power Brakes		+ 8
N41	Power Steering		+ 30
UM1	Radio AM Stereo	With Tape System	+ 10
UM2	Radio AM/FM Stereo	With Tape System	+ 10
US8	Radio AM/FM Stereo		+ 9
U63	Radio AM Pushbutton		+ 6
U69	Radio AM/FM Pushbutton		+ 7
UA1	Battery, Heavy Duty		+ 2
L11	140 Cu.In. L4 Engine	With 5-Speed Transmission	- 14
		With Turbo Hydra-matic Trans.	+ 13
LG3	305 Cu.In. V8 Engine	1HM27 with Turbo Hydra-matic Trans.	+321
		1HR07 with Turbo Hydra-matic Trans.	+310

BODY

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EXTERIOR PAINT PROCESS

ELPO PAINT PROCESS

Major advances in the painting process of Monza 2+2 bodies contribute significantly to elimination of rust and corrosion. This technique, called "Elpo", paints the bodies by electricity. Technically the name is "Electrophoretic Deposition of Polymers". It applies a smooth, even, and continuous prime coat to the entire body including hidden inner surfaces and corners automatically without conventional spraying.

Elpo deposits prime coat to the complete body surface by submerging it into a large tank filled with a solution composed of paint particles suspended in water. The paint primer particles are given a negative electrical charge by the tank which also serves as a cathode, with the body itself receiving a positive electrical charge. As the body is submerged, charged primer particles are attracted to the metal surfaces through a principle known as "Electrophoresis".

A seven-stage zinc phosphate rustproofing process is given the body before it reaches the Elpo installation. A conveyor then transports the bodies downward into a tank for the primer coating. The body is submerged for about two minutes and upon emerging goes through a rocking movement to carry away excess liquid.

The electro-coating process causes even the most remote inner surfaces to be coated with dark brown primer, and all edges and complex shapes coated with the same thickness as exposed flat surfaces.

The new primer paint system replaces the spray gun and paint booth priming operations.

Subsequent stages of the paint process include application of a primer-surfacer baking, wet sanding and sealer coating, ending with a topcoat of long lasting acrylic lacquer which is baked in an oven at 300 degrees.

EXTERIOR-INTERIOR COLORS

1977 CHEVROLET MONZA 'H' HATCHBACK INTERIOR-EXTERIOR COLOR COMBINATIONS

MODEL	Seat Type	INTERIOR TRIM														
		Black			Black /Firehorn	Light Buckskin			Lt. Buckskin /Black	Dark Firehorn		White				
		Cloth	Vinyl	Leather	Cloth	Cloth	Vinyl	Leather	Cloth	Cloth	Vinyl	Vinyl /Black	Vinyl /Dark Blue	Vinyl /Dark Firehorn	Vinyl /Dark Aqua	Vinyl /Dark Saddle
Monza Standard - 1HM00 Notchback (27)	(A51) Bucket	19G			17G	64G			62G							
Monza Deluxe - 1HM00 Notchback (27)	(A51) Bucket	19J	19V	193		64J	64V	643		71J	71V	11V	02V	07V	03V	06V
Monza Luxury - 1HM00 Notchback (27)	(A51) Bucket					64E				71E						
EXTERIOR COLOR	Color Code	Black			Light Buckskin			Dark Firehorn	White/Black	White/Dk. Blue	White/Dk. Firehorn	White/Dk. Aqua	White/Dk. Saddle			
White	11	R				R		R	R	R	R	R	R			
Silver Metallic	13	R						R	R							
Black	19	R				R		R	R			R	R			
Lt. Blue Metallic	22	R							A	R						
Dark Blue Metallic	29	A							A	R						
Firehorn Metallic	36	A				R		R	A		R					
Dark Aqua Metallic	38	A				A			R			R				
Med. Green Metallic	44	A				A			A							
Bright Yellow	51	R							R							
Light Buckskin	61	R				R		R	A				R			
Buckskin Metallic	63	R				R			A				R			
Brown Metallic	69					R			A				R			
Red	75	A				R		R	A		R					
Orange Metallic	78	R				R			R							

R - Recommend
A - Acceptable

Override RPO ZP2 will be provided to permit ordering of any interior-exterior color combination.

NOTES: 11V † - White vinyl interior with Black Instrument Panel upper and lower, Carpet, Cowl Kick Panel, and Load Area or Package Shelf.
02V † - White vinyl interior with Dark Blue Instrument Panel upper and lower, Carpet, Cowl Kick Panel, and Load Area or Package Shelf.
07V † - White vinyl interior with Dark Firehorn Instrument Panel upper and lower, Carpet, Cowl Kick Panel, and Load Area or Package Shelf.
03V † - White vinyl interior with Dark Aqua Instrument Panel upper and lower, Cowl Kick Panel, and Load Area or Package Shelf.
06V † - White vinyl interior with Dark Saddle Instrument Panel upper and lower, Cowl Kick Panel, and Load Area or Package Shelf.

CLOTH AND VINYL USAGE

V - Wallaby vinyl; Wallaby bolster
J - Durham, 710 WC, knit cloth; Wallaby bolster
E - Regis, 723 WC, knit cloth; Dover, 605 WC, bolster
G - Paddock, 509 WC, woven cloth; Wallaby bolster
3 - Leather, C/O 76 trim available until stock is exhausted

EXTERIOR-INTERIOR COLORS

1977 CHEVROLET MONZA 'H' HATCHBACK INTERIOR-EXTERIOR COLOR COMBINATIONS

MODEL	Seat Type	INTERIOR TRIM										
		Black		Light Buckskin		Dark Firethorn		White				
		Cloth	Vinyl	Cloth	Vinyl	Cloth	Vinyl	† Vinyl /Black	† Vinyl /Dark Blue	† Vinyl /Dark Firethorn	† Vinyl /Dark Aqua	† Vinyl /Dark Saddle
Monza Deluxe - 1HR00 Hatchback (07)	(A51) Bucket	19J	19V	64J	64V	71J	71V	11V	02V	07V	03V	06V
Monza Luxury - 1HR00 Hatchback (07)	(A51) Bucket			64E		71E						
EXTERIOR COLOR	Color Code	Black		Light Buckskin		Dark Firethorn		White/Black	White/Dk. Blue	White/Dk. Firethorn	White/Dk. Aqua	White/Dk. Saddle
White	11	R		R		R		R	R	R	R	R
Silver Metallic	13	R		-		R		R	-	-	-	-
Black	19	R		R		R		R	-	R	R	R
Lt. Blue Metallic	22	R		-		-		A	R	-	-	-
Dark Blue Metallic	29	A		-		-		A	R	-	-	-
Firethorn Metallic	36	A		R		R		A	-	R	-	-
Dark Aqua Metallic	38	A		A		-		R	-	-	R	-
Med. Green Metallic	44	A		A		-		A	-	-	-	-
Bright Yellow	51	R		-		-		R	-	-	-	-
Light Buckskin	61	R		R		R		A	-	-	-	R
Buckskin Metallic	63	R		R		-		A	-	-	-	R
Brown Metallic	69	-		R		-		A	-	-	-	R
Red	75	A		R		R		A	-	R	-	-
Orange Metallic	78	R		R		-		R	-	-	-	-

R - Recommended
A - Acceptable

Override RPO ZP2 will be provided to permit ordering of any interior-exterior color combination.

- NOTES: 11V † - White vinyl interior with Black Instrument Panel upper and lower, Carpet, Cowl Kick Panel, and Load Area or Package Shelf.
 02V † - White vinyl interior with Dark Blue Instrument Panel upper and lower, Carpet, Cowl Kick Panel, and Load Area or Package Shelf.
 07V † - White vinyl interior with Dark Firethorn Instrument Panel upper and lower, Carpet, Cowl Kick Panel, and Load Area or Package Shelf.
 03V † - White vinyl interior with Dark Aqua Instrument Panel upper and lower, Cowl Kick Panel, and Load Area or Package Shelf.
 06V † - White vinyl interior with Dark Saddle Instrument Panel upper and lower, Cowl Kick Panel, and Load Area or Package Shelf.

CLOTH AND VINYL USAGE

- V-Wallaby vinyl; Wallaby bolster
 J-Durham, 710 WC, knit cloth; Wallaby bolster
 E-Regis, 723 WC, knit cloth; Dover, 605 WC, bolster
 G-Paddock, 509 WC, woven cloth; Wallaby bolster
 3-Leather, C/O 76 trim available until stock is exhausted

EXTERIOR-INTERIOR COLORS

1977 MONZA 1HR07 "SPYDER" (RPO Z02) COLOR COMBINATIONS

EXTERIOR BODY COLOR	SPYDER PACKAGE COLOR
White 11	Black (1)
Silver Met. 13	Black (1)
Black 19	Gold
Lt. Blue Met. 22	Black (3)
Dk. Blue Met. 29	Black (2)
Firethorn Met. 36	Black (2)
Dk. Aqua Met. 38	Black (3)
Med. Green Met. 44	Black (3)
Bright Yellow 51	Black (1)
Lt. Buckskin 61	Black (1)
Buckskin Met. 63	Black (3)
Brown Met. 69	Gold
Red (Light) 75	Black (2)
Orange Met. 78	Black (2)

"SPYDER" PACKAGE COLORS

	DUAL SIDE STRIPE	SPOILER LETTERING	HOOD-SPYDER DESIGN
BLACK (1)	Black (Hi Gloss) with Red Lettering Accent	"MONZA" – Black (Hi Gloss) "SPYDER" – Red with Black Accent	SPYDER BODY – Black (Low Gloss) SPYDER BORDER – Gold (Hi Gloss) ACCENT BORDER – Red WEB/STRIPE – Black (Hi Gloss)
BLACK (2)	Black (Hi Gloss) with Gold Lettering Accent	"MONZA" – Black (Hi Gloss) "SPYDER" – Gold with Black Accent	SPYDER BODY – Black (Low Gloss) SPYDER BORDER – Dk. Gold ACCENT BORDER – Gold WEB/STRIPE – Black (Hi Gloss)
BLACK (3)	Black (Hi Gloss) with White Lettering Accent	"MONZA" – Black (Hi Gloss) "SPYDER" – White with Black Accent	SPYDER BODY – Black (Low Gloss) SPYDER BORDER – Gold ACCENT BORDER – White WEB/STRIPE – Black (Hi Gloss)
GOLD	Gold (Hi Gloss) with White Lettering Accent	"MONZA" – Gold (Hi Gloss) "SPYDER" – White with Gold Accent	SPYDER BODY – Gold (Low Gloss) SPYDER BORDER – Brt. Orange ACCENT BORDER – White WEB/STRIPE – Gold (Hi Gloss)

COLOR IDENTIFICATION

Black-Hi Gloss	WMH 848 (60-75 units)	Gold-Hi Gloss	WMH 4948 (60-75 units)
Black-Low Gloss	WMH 848 (15-30 units)	Gold-Low Gloss	WMH 4948 (15-30 units)
Red	WMH 4408	Dk. Gold	WMH 7050
White	WMH 3967	Brt. Orange	WMH 7049

BODY CONSTRUCTION AND GLASS AREA

GENERAL

Construction Body-frame integral, using large individual body panels welded together forming complete sub-assemblies. All major sub-assemblies are double panel construction except underbody and rear end panel. The full roof panel subassembly is formed to provide front and rear headers and side rails. Exterior front end sheet metal panels are removable with bolt on fenders. Main front end structure is welded to body proper and forms the base for attachment of engine, front suspension, steering and front end sheet metal. The flush-dry rocker panel system, plastic valance inner fender panels and the Elpo paint process provide corrosion protection to the entire body.

DOORS

Type Double panel construction, hinged at front. Side guard beams. Standard spring loaded hold-open feature with two position detent. Welded-on strap type hinges.
 Handles Flush lift bars
 Glass Full, curved ventless

HOOD AND TRUNK LID

Type Double panel construction, rear hinged, pop-up springs over-center, prop rod holds hood open for engine compartment access, on trunk lid telescoping gas springs.
 Release External, lever located under hood lock assembly.

VENTILATION

High Level Air Intake for Passenger Compartment Double wall plenum chamber, providing washing and air drying of rocker panels for corrosion resistance.
 High Level Power Ventilation Passenger compartment air is obtained by outside air taken in the cowl, top louvers. The air is then routed through the plenum and channeled through side vents in the kick panels. Air flow is circulated into the rear compartment back, down and up through body center pillar channel. The air is then exhausted at the louvered upper portion of the channeled pillar.

SEATS

Type Bucket seats, high back, built-in head restraints, full foam construction, folding second seat standard equipment.
 Belts Three-point ignition interlock seat belt and shoulder harness system.

WINDSHIELD WIPERS AND WASHERS

Type Dual 2-speed electric with 16" blades
 Linkage Parallel acting
 Washer System Electric, dual spray

HEADLIGHTS

Type Single, oval on 1HM27 and dual, rectangular on 1HR07 headlamps mounted in soft plastic front end panel.

SPARE TIRE MOUNT

Location
 Base space saver tire Stored in right rear quarter panel well with a carpeted tire cover.
 Optional tire Stowed up-side down on the rear compartment pan on top of the load floor and covered by the floor carpet.

BODY GLASS VISIBILITY AREA

	1HR07	1HM27	
Windshield		1229.9	
Front Door	1111.6	1070.7	
Rear Quarter	444.9	Base 384.3	Formal 214.8
Rear Window	1361.9	800.6	
Total Area (Sq. In.)	4148.3	3485.5	3316.0

Type, Windshield Curved thin laminated plate
 Sides and Rear Curved tempered safety plate
 Rear Quarter Windows Curved stationary

CHASSIS

FRAME AND FRONT SUSPENSION	2
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FRONT SUSPENSION

FRAME

Description Body-frame integral

FRONT SUSPENSION

Description Independent, SLA type, coil springs with center mounted shock absorbers, spherical joint steering knuckle.

Wheel Travel (design)

Total 5.44
 Jounce 1.94
 Rebound 3.50
 Wheel to spring travel ratio 1.977

CONTROL ARMS

Description Reinforced steel stamping with pre-loaded steel encased rubber bushings at pivot.

STEERING KNUCKLES

Description Cast nodular iron with pressed-in spindle, integral brake caliper mounting pads and integral steering knuckle arm.

Spindle Diameters

Inner bearing 1.25
 Outer bearing 0.6875

Spindle Thread Size 11/16-20 NEF-3 (modified)

Wheel Bearings

Type, inner & outer Taper roller

SPHERICAL JOINTS

Type Ball stud
 Upper Compression
 Lower Tension
 Bearing Surfaces
 Upper & Lower Sintered iron

SHOCK ABSORBERS

Type Direct, double acting, hydraulic
 Piston Diameter 1.00

FRONT WHEEL ALIGNMENT (Design)

Caster (degrees) $N3/4 \pm 1$
 Camber (degrees) $P1/2 \pm 3/4$
 Toe-In (total) $1/4 \pm 1/16$
 Steering axis inclination $8.55 @ 25^\circ$ camber

STABILIZER BAR

Type Link
 Material HR steel
 Diameter
 With L4-140 Cu.In. 1.00
 With V8-305 Cu.In. 1.06
 Bushing Material Rubber

GENERAL SUSPENSION PROVISIONS

Anti-dive control Angle of front upper control arm

FRONT SPRINGS

Selected from a family of coil springs by Electronic Data Processing which identifies the correct springs for the weight of the vehicle including optional equipment ordered by the customer.

FRONT SPRING SPECIFICATIONS

Part Number	Assy. Code	Cut-Off Length	Wire Dia.	Total Coils	Deflection Rate (Lbs./In.)	HEIGHTS	
						Free	Working (In. @ Lbs.)
346952	DD	107.33	.574	8.50	325	13.51	8.70 @ 1555
346953	FA	107.36	.574	8.50	325	13.71	8.70 @ 1620
346954	FB	107.39	.574	8.50	325	13.91	8.70 @ 1685
354135	AOJ	98.58	.562	7.61	325	12.91	8.70 @ 1360
354136	ANB	98.61	.562	7.61	325	13.11	8.70 @ 1425
354137	ANC	98.63	.562	7.61	325	13.31	8.70 @ 1490
362199	AOK	98.88	.573	7.61	350	13.10	8.70 @ 1530
362200	AOM	98.91	.573	7.61	350	13.30	8.70 @ 1600
370904	AON	107.64	.586	8.50	350	13.50	8.70 @ 1670
370906	AOR	107.67	.586	8.50	350	13.70	8.70 @ 1740
370907	AOS	114.40	.599	9.00	350	13.90	8.70 @ 1810
370908	AOT	114.70	.610	9.00	375	13.74	8.70 @ 1880
370909	AOU	116.08	.613	9.10	375	13.93	8.70 @ 1950
370910	AOW	121.51	.622	9.50	375	14.11	8.70 @ 2020
370911	AOX	121.53	.622	9.50	375	14.30	8.70 @ 2090
378524	AOZ	116.77	.591	9.20	325	14.10	8.70 @ 1750

STEERING, DRIVELINE, WHEELS AND TIRES

STEERING

Wheel	
Type	Oval, 4-spoke splayed
Diameter	14.25 x 14.75
Column Energy absorbing - mast jacket, tube and steering shaft designed to collapse under various front impact conditions.	
Gear - Type	
Manual (Std.)	Semi-reversible gear with ball-nut driven by recirculating anti-friction bearings
Power (Optional)	Same as manual except also has integral power piston. Hydraulic pressure provided from a vane type pump.
Ratios, Gear	
Manual	20.9:1
Power	16.0:1 on center to 13.0:1
Ratios, Overall	
Manual	22.5:1
Power	16.5:1 on center to 13.5:1
Number of wheel turns, lock to lock	
Manual	4.4
Power	2.82
Linkage	Parallelogram type, ahead of front wheels
Turning Diameters	
Outside front, wall to wall	38.4
Outside front, curb to curb	35.8
Inside rear, wall to wall	11.03
Inside rear, curb to curb	10.69

DRIVELINE

Propeller Shaft	Tubular
Number Used	One
Diameter (O.D.)	2.75
Wall Thickness	0.065
Length (C/L of U joints)	
With L4-140 Cu.In.	
5-Spd. Trans.	44.78
4-Spd. Man. & Auto.	47.44
With V8-305 Cu.In.	45.34
Universal Joints	
Type	Cross
Number Used	Two
Bearings	Prepacked, anti-friction

WHEELS

Type	Short spoke spider
Rim Size	13 x 6
Offset	0.45
Attachment to Hub	4 hex nuts
Thread Size	7/16-20 UNF 2B
Bolt circle diameter	4.00

TIRES, STANDARD EQUIPMENT

With L4 engine models	
A78 x 13B Bias Ply	
Static loaded radius	10.98
Loaded rev/mi @ 45 mph	889
Capacity @ 24 psi	900
With V8 engine models	
BR70-13C Steel Belted Radial	
Static loaded radius	10.91
Loaded rev/mi @ 45 mph	870
Capacity @ 24 psi	980

TIRES, OPTIONAL EQUIPMENT

With L4 engine	
BR78 x 13B Steel Belted Radial	
Static loaded radius	10.71
Loaded rev/mi @ 45 mph	876
Capacity @ 24 psi	980
BR70 x 13C Steel Belted Radial	
Static loaded radius	10.91
Loaded rev/mi @ 45 mph	870
Capacity @ 24 psi	980

REAR AXLE AND SUSPENSION

REAR AXLE

Description Three-piece housing includes integral cast iron differential carrier and housing with two pressed-in and welded steel tubes. Semi-floating axle shafts. Differential carrier contains hypoid overhung pinion and ring gear. Drive pinion supported by two taper roller bearings.

Drive Pinion Vertical Offset 1.50
 Drive Pinion Bearing Adjustment Shim
 Lubricant
 Type Military spec. MIL-L-2105B
 Viscosity SAE-80-90
 Capacity (pints) 2.8

AXLE SHAFT

Description Forged and hardened steel with integral drive flange
 Wheel Bearings Single row cylindrical roller
 Oil Seal Steel encased, spring loaded synthetic rubber

RING AND PINION GEAR TOOTH COMBINATIONS

Ring Gear Diameter 7.50 in.
 Axle Ratio
 2.29 17, 39
 2.56 16, 41
 2.73 15, 41
 2.93 14, 41
 3.42 12, 41
 3.73 11, 41

POSITRACTION DIFFERENTIAL

Type Cone clutches

REAR SUSPENSION

Description Torque arm with track bar, Salisbury rear axle and coil springs; parallel lower control arms.

Wheel Travel (Design)
 Total 7.39
 Jounce 2.75
 Rebound 4.64
 Wheel to spring, travel ratio 0.96:1

SHOCK ABSORBERS

Type Direct, double acting hydraulic
 Diameter, Piston 1.00

STABILIZER BAR

Type Link
 Material HR Steel
 Diameter
 With Sport Suspension 0.750
 With Spyder Equipment 0.8125

REAR SPRINGS

Selected from a family of coil springs by Electronic Data Processing which identifies the correct springs for the weight of the vehicle including optional equipment ordered by the customer.

REAR SPRING SPECIFICATIONS

Part Number	Assy. Code	Cut-Off Length	Wire Dia.	Total Coils	Deflection Rate (Lbs./In.)	HEIGHTS	
						Free	Working (In. @ Lbs.)
336877	RW	107.22	.459	7.39	130	14.11	10.24 @ 500
3988080	HS	107.06	.499	7.39	130	12.95	10.24 @ 350
3988081	HT	107.11	.499	7.39	130	13.34	10.24 @ 400
3988082	HW	107.17	.499	7.39	130	13.72	10.24 @ 450

BRAKES

GENERAL	Type	Front - Disc; Rear - Drum		
		Manual - Standard	Power - Optional	
	System	Dual circuit hydraulic system with warning light and self-adjusting features		
Front Brakes	Type	Disc - single piston floating caliper		
	Material	Cast iron - solid, integral with hub		
	Diameter and Width	9.74 x 0.88		
	Lining Material	Molded asbestos		
	Method of attachment	Integral bonding		
	Lining size (length x width x thickness)	Inboard	5.26 x 1.54 x 0.430	
		Outboard	5.26 x 1.54 x 0.430	
	Lining area (sq. in.)	31.00		
	Effective area (sq. in.)	31.00		
	Swept area (sq. in.)	146.94		
Piston diameter	2.50			
Rear Brakes	Type	Drum - composite web cast into rim		
	Material	Web - HR steel; Rim - Cast alloy iron		
	Diameter and Width	9.5 x 2.0		
	Lining material	Molded asbestos		
	Method of attachment	Riveted		
	Lining size (length x width x thickness)	Primary	7.30 x 1.08 x .23	
		Secondary	9.46 x 1.99 x .30	
	Lining area (sq. in.)	62.98		
	Effective area (sq. in.)	59.60		
Swept area (sq. in.)	117.77			
Piston diameter	0.6875			
Apply System	Master cylinder diameter	0.875		
	Piston travel	1.352	1.310	
	Pedal travel	7.50	5.60	
	Pedal ratio	5.72:1	4.00:1	
	Line pressure @ 100 lb. pedal load	1270		
Parking Brake	Type	Mechanical pull rods and cables operate rear service brakes. 'ON' warning lamp provided.		
	Control	Lever, floor mounted in center console		
	Total effective area	59.60		

BULBS AND LAMPS

BULBS AND LAMPS	NUMBER REQUIRED AND TRADE NUMBER	CANDLE POWER PER LAMP	
Automatic transmission quadrant	1-194	2	
Back-up	2-1156	32	
Brake warning	1-194	2	
Coolant warning - Low	1-194	2	
Directional signal indicators	2-194	2	
Dome	1-561	12	
Engine warning - Stop	1-194	2	
Generator indicator	1-194	2	
Glove Box	1-1891	2	
Headlamp	Single 1HM27	2-6012	High beam 60W Low beam 50W
	Dual 1HR07	2-4651 (Inner)	High beam 50W Low beam 60W
		2-4652 (Outer)	High beam 40W
	Headlamp hi-beam indicator	1-194	2
Heater or A/C control	1-194	2	
Instrument cluster	4-194	2	
License plate, rear	2-194	2	
Parking			
Park	2-1157	3	
Turn		32	
Radio - AM	1-1893	2	
Radio AM/FM	1-216	1	
Radio - RPO U58	1-216 (dial)	1	
	1-66	.1	
Radio - UM1 & UM2	1-1893 (dial)	2	
	1-DS410 (ind.)	Led (a)	
Rear window defogger indicator	1-168	3	
Seat belt warning	1-194	2	
Side marker - front	2-194	2	
Side marker - rear	2-194	2	
Tail			
Tail	2-1157	3	
Stop & turn		32	
Underhood lamp	1-93	15	
Windshield Washer	1-194	2	

(a) Light emitting diode.

FUSES AND CIRCUIT BREAKERS

CIRCUIT	TYPE OF PROTECTION	LOCATION AND CIRCUIT *
Air Conditioning	30 amp fuse	In line
	25 amp fuse	Fuse panel (h)
Automatic trans. indicator	4 amp fuse	Fuse panel (f)
Back-up lamps	20 amp fuse	Fuse panel (b)
Brake warning lamp	10 amp fuse	Fuse panel (c)
Choke pull off solenoid	10 amp fuse	Fuse panel (g)
Cigarette lighter	20 amp fuse	Fuse panel (e)
Clock	20 amp fuse	Fuse panel (e)
Direction signal indicator	20 amp fuse	Fuse panel (b)
Direction signal indicator lamps	20 amp fuse	Fuse panel (b)
Dome lamp	20 amp fuse	Fuse panel (e)
Electric fuel pump	1 amp fuse	Fuse panel
Fuel gauge	10 amp fuse	Fuse panel (c)
Generator indicator lamp	10 amp fuse	Fuse panel (c)
Glove box	20 amp fuse	Fuse panel (e)
Headlamps	Circuit breaker	Light switch
Headlight buzzer	10 amp fuse	Fuse panel (c)
Headlamp hi-beam indicator lamp	Circuit breaker	Light switch
Heater	25 amp fuse	Fuse panel (h)
Heater control lamps	4 amp fuse	Fuse panel (f)
Instrument cluster lamps	4 amp fuse	Fuse panel (f)
Key warning buzzer	20 amp fuse	Fuse panel (e)
License plate lamp	20 amp fuse	Fuse panel (d)
Override relay - headlight	10 amp fuse	Fuse panel (c)
Oil pressure indicator lamp	10 amp fuse	Fuse panel (c)
Park and turn lamp	20 amp fuse	Fuse panel (d)
Radio	10 amp fuse	Fuse panel (g)
Radio lamp	4 amp fuse	Fuse panel (f)
Rear window defogger	Circuit breaker	Firewall
Seat belt warning lamp	10 amp fuse	Fuse panel (c)
Seat belt warning buzzer	10 amp fuse	Fuse panel (c)
Side marker lamps	20 amp fuse	Fuse panel (d)
Stop lamps	20 amp fuse	Fuse panel (a)
Tail, turn lamps	20 amp fuse	Fuse panel (d)
Temperature gauge	10 amp fuse	Fuse panel (c)
Temperature indicator lamp	10 amp fuse	Fuse panel (c)
Traffic hazard indicator	20 amp fuse	Fuse panel (a)
Windshield wiper	25 amp fuse	Fuse panel
Windshield wiper switch	4 amp fuse	Fuse panel (f)
Windshield washer pump	25 amp fuse	Fuse panel
Vacuum advance solenoid	10 amp fuse	Fuse panel (g)

* Letter suffix indicates same circuit



POWER TRAINS

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POWER TEAM COMBINATIONS

ENGINE	TRANSMISSION	MODEL APPLICATION	AXLE RATIOS*			RING GEAR
			BELOW 4000 FT.		ABOVE 4000 FEET	
			BASE	OPT.		
L4-140 Cu. In. (2.3 Litres) Base - all states	4-Speed (3.11 Low)	All	3.42:1	2.93:1	3.42:1	7.50
	5-Speed (3.40 Low)		3.42:1	3.73:1	-	
	Turbo Hydra-matic		3.42:1	2.93:1	3.42:1	
V8-305 Cu. In. (5.0 Litres) RPO LG3 Optional - All states	4-Speed (2.85 Low) (a)	All	2.73:1	-	-	7.50
	Turbo Hydra-matic		2.29:1	-	2.56:1	

(a) Not available in California.

MULTIPLICATION FACTORS

WITH MANUAL TRANSMISSIONS

ENGINE	CARBURETION	TRANSMISSION	TOTAL GEAR REDUCTION						AXLE RATIO
			1st	2nd	3rd	4th	5th	Rev.	
L4-140 Cu.In. (L11)	2-Barrel	4-Speed	10.64	7.52	5.03	3.42	-	10.64	3.42:1
		5-Speed	11.63	7.11	4.75	3.42	2.74	11.49	3.42:1
V8-305 Cu.In. (LG3)	2-Barrel	4-Speed	8.49	6.01	4.01	2.73	-	8.49	2.73:1

WITH AUTOMATIC TRANSMISSION

ENGINE	TRANSMISSION	SELECTOR POSITION	TOTAL TORQUE MULTIPLICATION	AXLE RATIO
140 Cu.In. L4 (RPO L11)	Turbo Hydra-matic	Drive	22.40:1 - 3.42:1	3.42:1
		Low	22.40:1 - 8.62:1	
		Second	22.40:1 - 5.20:1	
		Reverse	17.24:1 - 6.63:1	
305 Cu.In. V8 (RPO LG3)	Turbo Hydra-matic	Drive	11.54:1 - 2.29:1	2.29:1
		Low	11.54:1 - 5.77:1	
		Second	11.54:1 - 3.48:1	
		Reverse	8.88:1 - 4.44:1	

ENGINE DATA AND RATINGS

GENERAL DATA

Engine Type		L-4 In-Line	V8-OHV
Piston Displacement (Cu. In.)		140	305
Availability		RPO L11	RPO LG3
Number of Cylinders		Four	Eight
Bore and Stroke (Nominal)		3.501 x 3.625	3.736 x 3.48
Compression Ratio		8.0:1	8.5:1
Taxable (SAE) Horsepower		19.6	44.7
Firing Order		1-3-4-2	1-8-4-3-6-5-7-2
Idling Speed	Manual (in neutral)	700	600
	Automatic (in drive)	650	500
Compression Press. (PSI) @ Cranking Speed Engine Hot		-150	160
Power Plant Mounting		Two front and one rear	
Measurement	Fan rear of engine block	25.40	31.55
	Top air cleaner to bottom oil pan	26.24	29.60
	Starter motor to oil filter	16.24	—
	Exhaust manifold to generator	—	28.53

ADVERTISED ENGINE RATING

Engine		RPO L11 (a)	RPO LG3
Net Brake HP @ RPM	Federal	84 @ 4400	145 @ 3800
	California	—	135 @ 3800 (a)
Net Torque @ RPM (lb. ft.)	Federal	117 @ 2400	245 @ 2400
	California	—	240 @ 2000 (a)

(a) Also Federal ratings above 4000 feet altitude.

ENGINE SPEED AND PISTON TRAVEL

Engine		L4-140 RPO L11		
Transmission		4-Speed	5-Speed	Turbo Hydra-matic
Rear Axle Ratio		3.42:1		
Tire Size		A78-13B		
Crankshaft Revolutions per Mile		3040.4		
Crankshaft RPM @ MPH	Low	157.7	172.4	127.8
	Second	111.5	105.4	77.1
	Third	74.5	70.5	50.7
	Fourth	50.7	50.7	—
	Fifth	—	40.6	—
	Reverse	157.7	170.3	98.3
Piston Travel (Ft./Mile)		1836.9		

Engine		V8-305 RPO LG3	
Transmission		4-Speed	Turbo Hydra-matic
Rear Axle Ratio		2.73:1	2.29:1
Tire Size		BR70 x 13C	
Crankshaft Revolutions per Mile		2375.1	1992.3
Crankshaft RPM @ MPH	Low	112.9	91.0
	Second	80.0	52.1
	Third	53.5	53.2
	Fourth	39.6	—
	Reverse	112.9	91.0
Piston Travel (Ft./Mile)		1377.5	1155.5

VEHICLE PERFORMANCE FACTORS

ENGINE MODEL	140 CU. IN. 1HM27	140 CU. IN. 1HR07	305 CU. IN. 1HM27	305 CU. IN. 1HR07
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4-SPEED TRANSMISSION

Performance Weight (pounds)	3275	3366	3583	3663	
Pounds/Net Horsepower	Federal	38.99	40.07	24.71	25.26
	California	38.99	40.07	26.54	27.13
Pounds/Cu. In. Displacement	23.39	24.04	11.75	12.01	
Net HP/Cu. In. Displacement	Federal	.600	.600	.475	.475
	California	.600	.600	.443	.443
Power Displacement (cu.ft./mile)	123.16	123.16	209.61	209.61	
Displacement Factor (cu.ft./ton mile)	75.17	73.18	117.00	114.44	

5-SPEED TRANSMISSION

Performance Weight (pounds)	3261	3352	
Pounds/Net Horsepower	Federal	38.82	39.90
	California	38.82	39.90
Pounds/Cu. In. Displacement	23.29	23.94	
Net HP/Cu. In. Displacement	Federal	.600	.600
	California	.600	.600
Power Displacement (cu.ft./mile)	123.16	123.16	
Displacement Factor (cu.ft./ton mile)	75.53	73.48	

TURBO HYDRA-MATIC

Performance Weight (pounds)	3288	3379	3596	3676	
Pounds/Net Horsepower	Federal	39.14	40.23	24.80	25.35
	California	39.14	40.23	26.64	27.23
Pounds/Cu. In. Displacement	23.48	24.13	11.77	12.05	
Net HP/Cu. In. Displacement	Federal	.600	.600	.475	.475
	California	.600	.600	.443	.443
Power Displacement (cu.ft./mile)	123.16	123.16	175.82	175.82	
Displacement Factor (cu.ft./ton mile)	74.91	72.90	97.79	95.66	

GLOSSARY

Performance Weight	Curb Weight plus 600 lb. (weight of four 150 lb. passengers)
Power Displacement	$\frac{\text{Crankshaft Revs/Mi} \times \text{Piston Displacement}}{2 \times 1728}$
Displacement Factor	$\frac{\text{Power Displacement}}{\text{Performance Wt (tons)}}$

PRINCIPAL COMPONENTS

CYLINDER BLOCK

Material	
L4-140 Cu.In.	Die cast high-silicon aluminum alloy
V8-305 Cu.In.	Cast alloy iron
Bore Diameter	
L4-140 Cu.In.	3.500-3.520
V8-305 Cu.In.	3.7355-3.7385
Bore Spacing	
L4-140 Cu.In.	4.00
V8-305 Cu.In.	4.40
Bearings Caps	5 cast iron, 2-bolt
Water Jackets	Full length around each cylinder

CYLINDER HEAD

Material		High chrome cast alloy iron
Construction		
L4-140 Cu.In.	Integral valve guide, and camshaft support	
V8-305 Cu.In.	Valve-in-head	
Bolt No. and Size		
L4-140 Cu.In.	10; .4375 dia.; 14 threads/inch	
V8-305 Cu.In.	34; .4375 dia.; 14 threads/inch	

COMBUSTION CHAMBER VOLUME

Total chamber volume of assembled engine with piston at top center	
L4-140 Cu.In.	5.04 cu. in.
V8-305 Cu.In.	5.13 cu.in.

INLET MANIFOLD

Material		Cast alloy iron
Type		
L4-140 Cu.In.	4-port design	temperature controlled by engine coolant
V8-305 Cu.In.	8 port, double deck	

EXHAUST MANIFOLD

Material		Cast alloy iron
Type		
L4-140 Cu.In.	4-port, center rear takedown	
V8-305 Cu.In.	Dual, 4 port rear takedown	
Outlet Diameter		
L4-140 Cu.In.	1.88	
V8-305 Cu.In.	2.00	

CRANKSHAFT

Material		Cast nodular iron
Counter Weights		
L4-140 Cu.In.	4	
V8-305 Cu.In.	6	
Crank Arm Length		
L4-140 Cu.In.	1.8125	
V8-305 Cu.In.	1.550	
End Play		
L4-140 Cu.In.	.002-.008	
V8-305 Cu.In.	.002-.007	
Drive and/or Timing Gear		
Material		
L4-140 Cu.In.	Sintered iron sprocket	
V8-305 Cu.In.	Steel; sprocket and chain	
Pitch Diameter		
L4-140 Cu.In.	2.865	
V8-305 Cu.In.	6.64	

MAIN BEARINGS

Material		Premium Aluminum	
Type			Precision removable
Thrust Against Bearing No. - No. 4 (L4-140),			No. 5 (V8-305)
Clearance			
L4-140 Cu.In.	.0003-.0029		
V8-305 Cu.In.			
No. 1	.0008-.0020		
No. 2, 3 & 4	.0011-.0023		
No. 5	.0017-.0033		

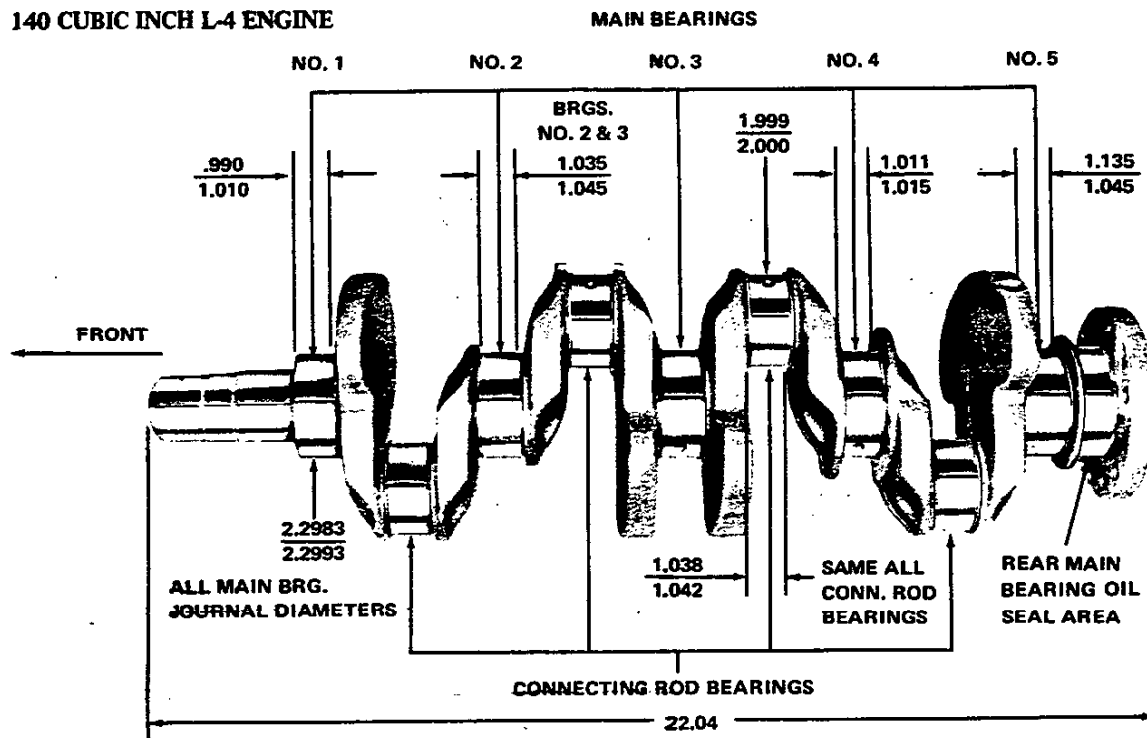
Dimensions

	Theoretical Inner Dia.	Effective Length	Projected Area
L4-140 Cu.In.			
Bearing No. 1,2,3	2.3004	.752	1.7299
Bearing No. 4	2.3004	.760	1.7483
Bearing No. 5	2.3004	.864	1.9875
V8-305 Cu.In.			
Bearing No. 1-4	2.4502	.752	1.8425
Bearing No. 5	2.4508	1.180	2.8919

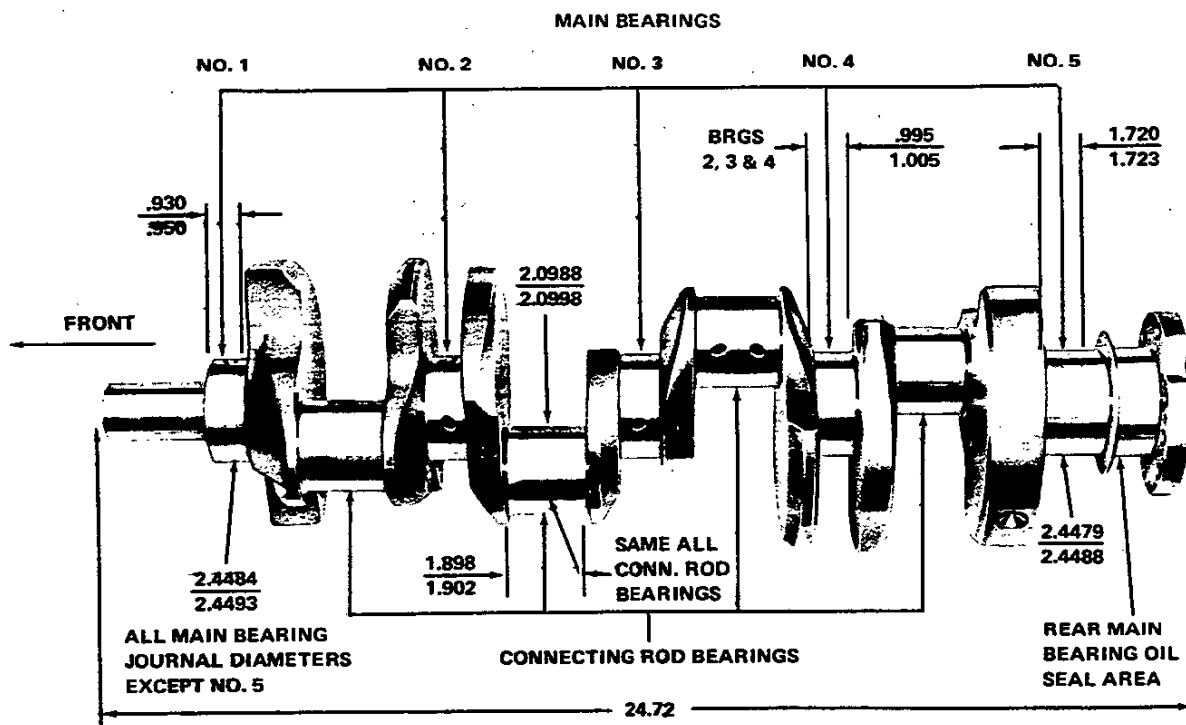
PRINCIPAL COMPONENTS

CRANKSHAFTS AND BEARINGS

140 CUBIC INCH L-4 ENGINE



305 CUBIC INCH V-8 ENGINE



PRINCIPAL COMPONENTS

CAMSHAFT

Material	Cast alloy iron
Location	
L4-140 Cu.In.	In cylinder head
V8-305 Cu.In.	In block above crankshaft
Type of Drive	
L4-140 Cu.In.	Fiberglass reinforced rubber timing belt with sintered iron drive sprockets.
V8-305 Cu.In.	Sintered iron; chain
Lobe Lift	
L4-140 Cu.In.	.4000 Inlet; .4150 Exhaust
V8-305 Cu.In.	.2484 Inlet; .2667 Exhaust
Bearings	5; steel backed babbit

VALVE TRAIN

Type	
L4-140 Cu.In.	Direct action, cam lobes drive tappets that are lash adjusted.
V8-305 Cu.In.	Individually mounted, overhead rocker arms, push rod actuated.
Valve Lifters	
L4-140 Cu.In.	Hydraulic
V8-305 Cu.In.	Hydraulic
Rocker Arm Ratio (V8-305 Cu.In.)	1.50:1
Push Rods (V8-305 Cu.In.)	
Type	Hollow steel
Ends	Hardened
Rotators (V8-305 Cu.In.)	Exhaust
Valve Lift	
L4-140 Cu.In.	.4000 Inlet; .4150 Exhaust
V8-305 Cu.In.	.3900 Inlet; .4100 Exhaust

VALVE SPRINGS

Diameter (I.D.)	
L4-140 Cu.In.	.842
V8-305 Cu.In.	.868-.884
Free Length	
L4-140 Cu.In.	2.03
V8-305 Cu.In.	2.03

VALVE SPRINGS (Cont.)

Installed length (lb. @ in.)	
Valves closed	
L4-140 Cu.In.	71-79 @ 1.746
V8-305 Cu.In.	
Inlet	76-84 @ 1.70
Exhaust	76-84 @ 1.61
Valves opened	
L4-140 Cu.In.	183-197 @ 1.310
V8-305 Cu.In.	
Inlet	174-186 @ 1.25
Exhaust	184-196 @ 1.16
Damper	
L4-140 Cu.In.	Flat steel, 4.5 coils
V8-305 Cu.In.	Flat steel, 4 coils

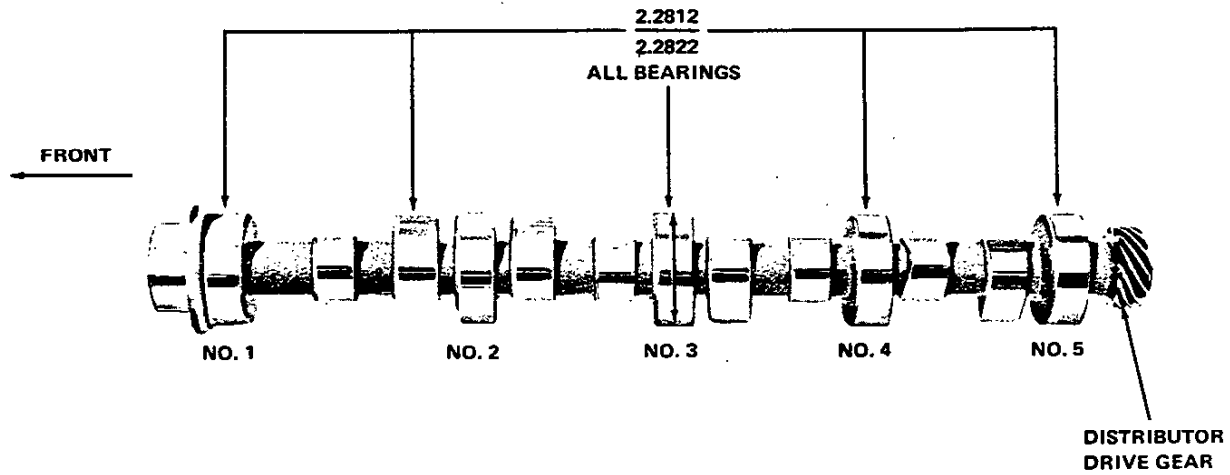
VALVE TIMING (Crankshaft Degrees - Excluding Ramps)

L4-140 Cu.In.	
Inlet Valve	
Opens - BTC	34°
Closes - ABC	74°
Duration	288°
Exhaust Valve	
Opens - BBC	76°
Closes - ATC	36°
Duration	292°
V8-305 Cu.In.	
Inlet Valve	
Opens - BTC	28°
Closes - ABC	64°
Duration	272°
Exhaust Valve	
Opens - BBC	78°
Closes - ATC	30°
Duration	288°

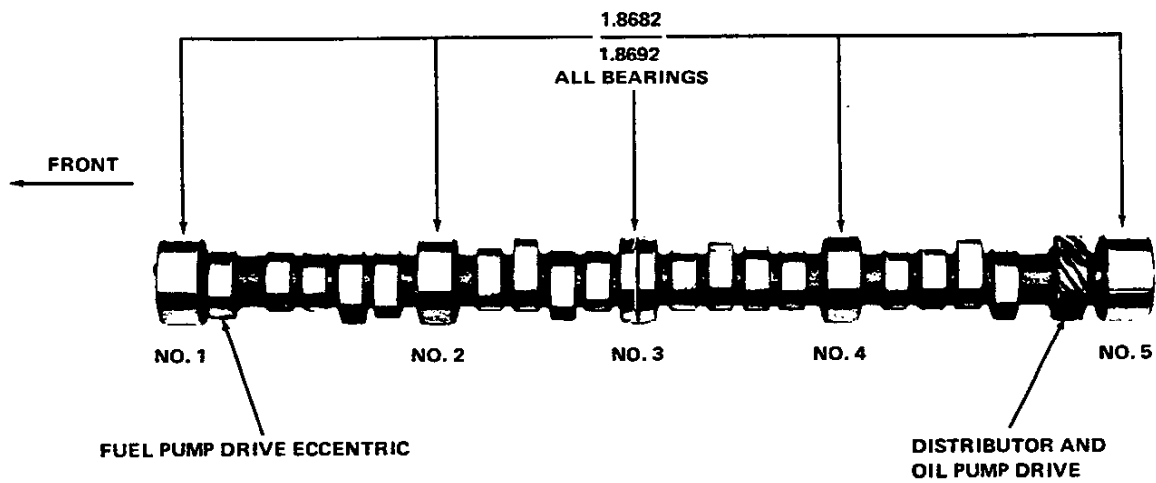
PRINCIPAL COMPONENTS

CAMSHAFT AND BEARINGS

140 CUBIC INCH L-4 ENGINE



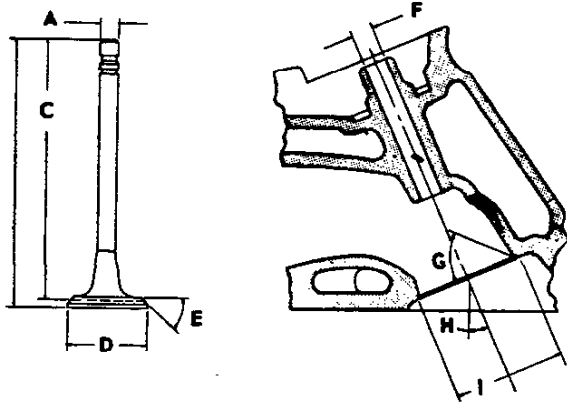
305 CUBIC INCH V-8 ENGINE



PRINCIPAL COMPONENTS

VALVES – INLET

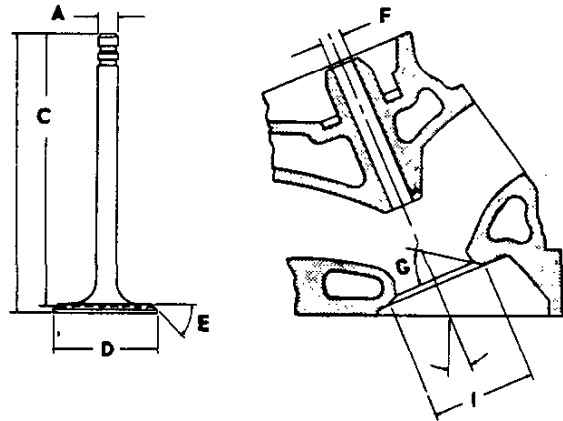
Material	
L4-140 Cu.In.	High alloy steel with aluminized face
V8-305 Cu.In.	Alloy steel, aluminized face
All stems	Chrome flash



A – Stem Diameter	
L4-140 Cu.In.	.3410-.3417
V8-305 Cu.In.	.3410-.3417
B – Overall Length	
L4-140 Cu.In.	4.590-4.610
V8-305 Cu.In.	4.902-4.922
C – Gage Length	
L4-140 Cu.In.	4.503-4.513
V8-305 Cu.In.	4.785-4.795
D – Overall Head Diameter	
L4-140 Cu.In.	1.615-1.625
V8-305 Cu.In.	1.715-1.725
E – Angle of Face	45°
F – Guide Diameter	
L4-140 Cu.In.	.3427-.3437
V8-305 Cu.In.	.3427-.3437
G – Angle of Seat	46°
H – Valve Angle	
L4-140 Cu.In.	4°
V8-305 Cu.In.	23°
I – Valve Seat Diameter	
L4-140 Cu.In.	1.575
V8-305 Cu.In.	1.823-1.829

VALVE – EXHAUST

Material	
L4-140 Cu.In.	High alloy steel with stellite seat.
V8-305 Cu.In.	High alloy steel with aluminized face.
All stems	Chrome flash



A – Stem Diameter	
L4-140 Cu.In.	.3410-.3417
V8-305 Cu.In.	.3410-.3417
B – Overall Length	
L4-140 Cu.In.	4.576-4.596
V8-305 Cu.In.	4.913-4.933
C – Gage Length	
L4-140 Cu.In.	4.488-4.498
V8-305 Cu.In.	4.781-4.791
D – Overall Head Diameter	
L4-140 Cu.In.	1.370-1.380
V8-305 Cu.In.	1.495-1.505
E – Angle of Face	45°
F – Guide Diameter	
L4-140 Cu.In.	.3427-.3437
V8-305 Cu.In.	.3427-.3437
G – Angle of Seat	46°
H – Valve Angle	
L4-140 Cu.In.	4°
V8-305 Cu.In.	23°
I – Valve Seat Diameter	
L4-140 Cu.In.	1.319
V8-305 Cu.In.	1.321-1.327

PRINCIPAL COMPONENTS

PISTONS

Material	Cast aluminum alloy
Head Type	
L4-140 Cu.In.	Flat
V8-305 Cu.In.	Sump
Skirt	
L4-140 Cu.In.	Iron plated open skirt
V8-305 Cu.In.	Slipper
Top land clearance	
L4-140 Cu.In.	.0300-.0360
V8-305 Cu.In.	.0235-.0325
Skirt clearance	
L4-140 Cu.In.	.0018-.0028
V8-305 Cu.In.	.0017-.0042
Compression ring groove depth	
L4-140 Cu.In.	.1800-.1865
V8-305 Cu.In.	.2003-.2073
Oil ring groove depth	
L4-140 Cu.In.	.2050-.2110
V8-305 Cu.In.	.055-.065
Pin bore offset	.055-.065
Compression height	
L4-140 Cu.In.	1.498-1.502
V8-305 Cu.In.	1.558-1.562

PISTON PINS

Material	Chromium steel
Pin mounting	Locked in rod by shrink fit
Length	
L4-140 Cu.In.	2.740-2.760
V8-305 Cu.In.	2.990-3.010
Diameter	.9270-.9273
Clearance in piston	
L4-140 Cu.In.	.00030-.00040
V8-305 Cu.In.	.00025-.00035

COMPRESSION RINGS – UPPER

Material	Cast alloy iron
Type	Straight edge inside of ring
Face	Barrel
Coating	
L4-140 Cu.In.	Chrome plated
V8-305 Cu.In.	Chrome flash
Width	.0775-.0780
Wall Thickness	
L4-140 Cu.In.	.154-.164
V8-305 Cu.In.	.167-.177
Gap	
L4-140 Cu.In.	.015-.025
V8-305 Cu.In.	.010-.020

COMPRESSION RINGS – LOWER

Material	Cast alloy iron
Type	
L4-140 Cu.In.	Inside bevel (top of ring 30 degrees to piston vertical axis)
V8-305 Cu.In.	Reverse twist
Face	
L4-140 Cu.In.	Barrel
V8-305 Cu.In.	Tapered
Coating	
L4-140 Cu.In.	Chrome flash
V8-305 Cu.In.	Wear resistant
Width	
L4-140 Cu.In.	.0775-.0780
V8-305 Cu.In.	.0770-.0780
Wall Thickness	
L4-140 Cu.In.	.154-.164
V8-305 Cu.In.	.167-.177
Gap	
L4-140 Cu.In.	.009-.019
V8-305 Cu.In.	.013-.025

OIL CONTROL RINGS

Type	Multi-piece (two rails and one spacer)
Material	
Rails	Steel
Spacer	Stainless steel
Width (assembled)	
L4-140 Cu.In.	.1870-.1890
V8-305 Cu.In.	.1859-.1879
Wall Thickness	
L4-140 Cu.In.	.154-.164
V8-305 Cu.In.	.138-.143
Gap	
L4-140 Cu.In.	.010-.030
V8-305 Cu.In.	.010-.035

CONNECTING RODS

Material	Drop forged steel
Length (center to center)	5.695-5.705

CONNECTING ROD BEARINGS

Material	
L4-140 Cu.In.	Premium aluminum
V8-305 Cu.In.	Premium aluminum
Type	Precision removable
Clearance	
L4-140 Cu.In.	.0007-.0027
V8-305 Cu.In.	.0013-.0035
Theoretical Diameter	
L4-140 Cu.In.	2.0017
V8-305 Cu.In.	2.1019
Effective Length	
L4-140 Cu.In.	.807
V8-305 Cu.In.	.797
End Play	
L4-140 Cu.In.	.009-.013
V8-305 Cu.In.	.008-.014

FUEL SYSTEM

FUEL TANK

Capacity (gal.) 18.5 (approximately)
 Location In recessed well of rear underbody
 Filler Location Right rear quarter

FUEL FILTERS – DUAL

In fuel tank Mesh strainer
 In carburetor inlet Paper element

FUEL PUMP

Type Electric
 Location Mounted in fuel tank
 Pressure Range 3.0-4.5 PSI @ 12.5 volts

AIR CLEANER

Type
 L4-140 Cu.In. One piece welded unit
 V8-305 Cu.In. Cylindrical, single air horn
 Filter element Oil-wetted paper

CHOKE

Type Automatic

CARBURETORS

L4-140 Cu.In.	.....	Two barrel; downdraft
V8-305 Cu.In.	.....	Two barrel; downdraft
SAE Flange Size		
L4-140 Cu.In.	.....	1.25
V8-305 Cu.In.	.....	1.50
Throttle bore		
L4-140 Cu.In.	.....	Primary 1.24
		Secondary 1.40
V8-305 Cu.In.	.....	1.69
Venturi Diameter		
L4-140 Cu.In.	.....	Primary 1.02
		Secondary 1.06
V8-305 Cu.In.	.....	1.09

EXHAUST SYSTEM

TYPE Single exhaust system with converter

MUFFLERS

Type Oval, reverse flow
 Construction Heads and body joined
 by rolled lock seam construction
 Head056 sheet steel aluminized
 Shell031 sheet steel aluminized
 Wrap030 indented asbestos sheet
 Cover017 sheet steel aluminized
 Length - body 16.00
 Height (I.D.) 4.83
 Width (I.D.) 9.13

EXHAUST PIPE TO CONVERTER

Material Seamless steel tubing
 Dimension (O.D.) and Wall Thickness
 L4-140 Cu.In. 2.00 x .045 laminated
 V8-305 Cu.In. (To Converter) 2.25 x .071
 Crossover 2.00 x .071

EXHAUST PIPE – CONVERTER TO MUFFLER

Dimension (O.D.) and Wall Thickness
 L4-140 Cu.In. 2.00 x .072 laminated
 V8-305 Cu.In. 2.25 x .071

TAIL PIPE

Material Steel tubing aluminum coated
 Dimensions (O.D.)
 L4-140 Cu.In. 2.00
 V8-305 Cu.In. 2.25
 Wall thickness062

EMISSION CONTROL EQUIPMENT

SYSTEM APPLICATION

System Type	Engine Adaptation	
	L4-140 (L11) Cu.In.	V8-305 Cu.In.
PCV - Positive Crankcase Ventilation	***	***
EGR - Exhaust Gas Recirculation	***	***
CHA - Carburetor Hot Air	***	***
FEC - Fuel Evaporation Control System	***	***
CCS - Controlled Combustion System	-	-
PAI - Pulse Air Injection	***	-
UFC - Underfloor Converter	***	***
EFE - Early Fuel Evaporation	-	***
MAI - Manifold Air Injection	-	***

*-Not available in California.

** -California only.

*** -Available - all states.

BASIC FUNCTION OF SYSTEMS

POSITIVE CRANKCASE VENTILATION

Withdraws oil and gas vapors from the various cavities throughout the engine for burning in the combustion cycle.

EXHAUST GAS RECIRCULATION SYSTEM

Meters exhaust gas into induction system for recirculation throughout the combustion cycle to reduce oxides of nitrogen emissions.

CARBURETOR HOT AIR

Meters and mixes heated air with incoming cold air to optimize fuel evaporation.

PULSE AIR INJECTION

Utilizes engine exhaust pulsation to supply air into the cylinder head at the exhaust port.

EARLY FUEL EVAPORATION

System is designed to produce a very short engine warm-up cycle to improve vehicle driveability and reduce exhaust emission.

FUEL EVAPORATION CONTROL SYSTEM

Controls emission of gasoline vapors to the atmosphere by means of an integral separator with the fuel tank that separates vapor from liquid fuel - a filler cap that doesn't permit venting into the atmosphere - a canister for storage of vapors - lines, hoses and valves to control and transport vapors from fuel tank to storage, and finally, to the carburetor for utilization in running the engine.

CONTROLLED COMBUSTION SYSTEM

Increased combustion efficiency through leaner carburetor mixtures and revised distributor calibration. Special thermostatically controlled damper, in the air cleaner snorkel maintains warm air intake to carburetor.

UNDERFLOOR CONVERTER

The flow of exhaust gases down through the catalyst within the converter effectively controls the hydrocarbon and carbon monoxide to a more desirable emission.

MANIFOLD AIR INJECTION

Compresses, regulates and distributes quantities of air to the manifold to more completely burn carbon monoxide and hydrocarbon emissions.

LUBRICATION SYSTEM AND COOLING SYSTEM

LUBRICATION SYSTEM

GENERAL

Type	Controlled full pressure
Main Bearings	Pressure
Piston Pins	Splash
Cylinder walls	
L4-140 Cu. In.	Splash
V8-305 Cu.In.	Pressure jet cross sprayed
Camshaft bearings	Pressure
Hydraulic lifters	Splash
Connecting Rods	Pressure
Oil pressure sending unit	Electric
	opens or closes circuit @ 2 to 6 PSI
Oil Filler	
Cap	Positive seal
Location	Top left rear of valve cover

OIL PUMP

Type	Eccentric inside-outside gear;
	driven by crankshaft
Regulator Valve	Opens between 40-45 lbs.
Oil Pressure (lbs. @ engine RPM)	
L4-140 Cu. In.	27-41 @ 1000
V8-305 Cu. In.	32-40 @ 2000
Intake type	Fixed pickup with screen
Capacity (GPM @ engine RPM)	4.5 gals. @ 2000 RPM

OIL FILTER

Type	Full flow throwaway type
Location	Lower front-left side
Capacity	One pint
By pass valve	Opens between 9 to 11 PSI drop in pressure

LUBRICANT GRADES AND TEMPERATURES

20°F and above	10W-30, 10W-40, 20W-20, 20W-40, 20W-50
0° to 60°F	10W, 5W-30, 10W-30, 10W-40
Below 20°F	5W-20, 5W-30

OIL PAN CAPACITIES (Quarts)

Refill	
L4-140 Cu.In.	3.5
V8-305 Cu.In.	4.0
Refill with filter change	
L4-140 Cu.In.	4
V8-305 Cu.In.	4.5

COOLING SYSTEM

GENERAL

Type	Pressure, vented thru coolant recovery system
Capacity	
L4-140 Cu. In.	8 qts.
V8-305 Cu. In.	18 qts.

RADIATOR

Type	Tube and center; cross flow
Distance between fins	
L4-140 Cu.In.	.18 Syn. & Auto.
V8-305 Cu.In.	.16 Syn.
Distance bwtween tubes	.55
Thickness of Core	1.24
Frontal area (sq.in.)	
L4-140 Cu.In.	177
V8-305 Cu.In.	300
Radiator cap relief valve	Opens at approximately 15 PSI
Overflow	Separate coolant bottle

THERMOSTAT

Type	Pellet
Begins to open	180°

RADIATOR HOSE

Outlet, Lower (Radiator to Water Pump)	
Type	One, molded; 1.75 I.D.
Inlet, Upper (Thermostat Housing)	
Type	One, molded; 1.28 I.D. (140 Cu.In.) 1.50 I.D. (V8-305 Cu.In.)

FAN

Type	
L4-140 Cu.In.	5 blade, staggered
V8-305 Cu.In.	4-steel
Diameter	
L4-140 Cu.In.	14.0
V8-305 Cu.In.	16.0

WATER PUMP

Type	Centrifugal
Capacity	
L4-140 Cu.In.	14.7 GPM @ 2000 engine RPM
V8-305 Cu.In.	22.7 GPM @ 2000 engine RPM
Drive	
L4-140 Cu.In.	Water pump/fan drive multiple 'V' drive in back side of camshaft timing belt.
V8-305 Cu.In.	Fan belt
Ratio (Pump to Engine RPM)	
L4-140 Cu.In.	1.16:1
V8-305 Cu.In.	0.949:1

DRAIN LOCATIONS

Engine Block-Plug	
L4-140 Cu.In.	Left side of engine block
V8-305 Cu.In.	Right and left center
Radiator-Petcock	Lower, left rear face

ELECTRICAL SYSTEM

SUPPLY SYSTEM

BATTERY

Voltage Rating	12
Watts	
L4-140 Cu. In.	2500
V8-305 Cu. In.	3200
Number of plates	54 (L4); 66 (V8)
Number of cells	6
Cold Cranking Rating	
L4-140 Cu. In.	0° @ 210 amps;
-20° @ 270 amps @ 60 minute reserve capacity	
V8-305 Cu. In.	0° @ 350 amps;
-20° @ 270 amps @ 80 minute reserve capacity	
Terminal grounded	Negative
Location	Right side front of engine compartment

GENERATOR

Type	Diode rectified with integral regulator
Rating	
Amps	37
Volts	12
Drive	By fan belt
Pulley Pitch Diameter	2.70
Ratio (Gen to Engine Speed)	2.73:1

REGULATOR

Type	Micro-circuit unit, integral with generator
Voltage Regulator	
Voltage	13.8-14.8 @ 85°F

IGNITION SYSTEM

TYPE	High Energy Ignition (H.E.I.)
DISTRIBUTORS	Refer to chart below

STARTING SYSTEM

STARTING MOTOR

Rotation (Drive End View)	Clockwise
Test Conditions	Engine at operating temperature
No Load Test	
RPM	
L4-140 Cu.In.	6750-10500
V8-305 Cu.In.	7800-12000
Volts	10.6
Amps	
L4-140 Cu.In.	58-80
V8-305 Cu.In.	70-99
Motor Drive	
Engagement	Solenoid
Pinion Meshes at	Rear
Pinion Tooth No.	9
Flywheel Tooth No.	153
Mounting	Bolted to clutch housing

COIL

Type	Integral with distributor
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SPARK PLUGS

Make & Type	
L4-140 Cu.In.	ACR43TS
V8-305 Cu.In.	ACR45TS
Thread Size (mm)	14
Gap	.035 (L4); .045 (V8)
Torque	25 lb. ft.

CABLE	Linen core impregnated with electrical conducting material and insulation of rubber with silicone rubber jacket
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DISTRIBUTORS	L4-140 Cu.In.		V8-305 Cu.In.	
	1110538	1110539	1103236	1103244
Centrifugal Advance Begins (RPM)	0° @ 850	0° @ 850	0° @ 1200	0° @ 1000
Max Degrees @ RPM	33° @ 4600	32° @ 4400	20° @ 4200	20° @ 3800
Vacuum Advance Begins (in. Hg.)	0° @ 5	0° @ 5	0° @ 4	0° @ 4
Max Degrees @ In. Hg.	24° @ 10	24° @ 10	10° @ 8	20° @ 10
Timing (Initial Design Setting)	0° @ 700	2° BTC @ 650	8° BTC @	6° BTC @ 500
Cranking Degrees @ RPM (with Vacuum spark line disconnected)	(2° ADC @ 800) Manual	(0° @ 650) Automatic	600 Manual 500 Automatic	Automatic
Timing Mark Location	Crankshaft Pulley			

(a) California 0° @ 600

NOTE: Items bracketed () are specific to California.

CLUTCHES AND TRANSMISSIONS

CLUTCHES

Engine		L4-140 Cu.In. L11	V8-305 Cu.In. LG3	
Clutch for		4 and 5-Speed		
Type		Single dry disc centrifugal		
Clutch cover & pressure plate	Eff. plate load, lbs.	1250-1450	2100-2300	
	Press. plate matl.	Cast iron		
	Clutch spring type	Diaphragm, bent finger design		
	Clutch spring matl.	Heat treated spring steel		
Driven plate	Type	Single disc with two friction surfaces		
	Cushions	Flat spring steel between friction rings		
	Dampers	8 coil springs (4 sets of two)		
	Friction rings	OD	9.12	10.40
		ID	6.12	6.50
		Total area sq. in.	71.82	101.5
Flywheel	Material	Woven type asbestos		
		Nodular iron		
	Ring gear	Heat treated HR steel		
		No. of teeth	153	
		PD	12.75	
Bearings	Release	Shrink fit		
		Single row ball		
	Pilot	None, prepacked		
		Bronze bushing		
Controls	Clutch fork	Drop forged steel, pivot mounted on ball		
	Pedal mounting	Pendant, from brace on dash		
	Lubrication	Crossover shaft		
Clutch housing material		Aluminum alloy		

4 & 5-SPEED TRANSMISSIONS

Transmission Type		L4-140 Cu.In.		V8-305 Cu.In.	
		4-Speed	5-Speed	4-Speed	
Case material		Cast iron			
Gear Shift	Type	Remote			
	Control	Lever			
	Location	Floor, mounted between seats			
Gears	Type	Helical			
	Material	Forged steel, hardened			
	Synchronization	All forward gears			
	Constant mesh gear	All forward gears			
	Sliding gears		Reverse		
	Ratios	First	3.11	3.40	2.85
		Second	2.20	2.08	2.02
		Third	1.47	1.39	1.35
		Fourth	1.00	1.00	1.00
Fifth		-	.80	-	
	Reverse	3.11	3.36	2.85	
Lubricant	Type	Meeting Military Specifications MIL-L-2105-B			
	Capacity (pts)	3			
Extension	Material	Aluminum			
	Oil Seal	Steel encased seal of spring loaded silicone			

TRANSMISSIONS

TURBO HYDRA-MATIC TRANSMISSION

Engine	Displacement (Cu.In.)	L4-140 Cu.In.	V8-305 Cu.In.	
General Data	Type	Automatic hydraulic torque converter with compound planetary gear system - three forward speeds and reverse.		
	Selector lever	Location	Floor tunnel (a)	
		Operation	Actuates controls by a hydraulic system from pressurized gear type pump	
		Quadrant pattern	P-R-N-D-L2-L1	
	Parking Lock	Type	Locking pawl	
		Operation	Applied by selector lever through manual linkage	
	Method of cooling	Air	Water	
	Flywheel assembly	Steel stamping with welded on ring gear		
Hydraulic System	Oil pressure pump	Supplies hydraulic pressure from an engine driven gear type pump		
	Type	Steel spool valve		
	Valves	Manual Pressure regulator	Establishes range at transmission operation	
		Shift (1-2)	Provides main line pressure	
		Shift (1-2)	Controls oil pressure for transmission shift from 1-2 or 2-1	
		Shift (2-3)	Controls oil pressure for transmission shift from 2-3 or 3-2	
	Modulator	Regulates line pressure with modulator oil pressure which varies with torque to transmission		
	Accumulator	Provides greater flexibility in attaining desired shift quality for various engine requirements		
	Pressure @ Idle (b)	Drive	55	55
		L2	80	80
L1		80	80	
Reverse		84	84	
Converter Assembly	Pump (Drive member)	Multivane type, sheet metal blade spot welded to steel pump housing that is an integral part of the converter housing		
	Turbine (Driven member)	Steel axial flow blades assembled between inner and outer steel shells		
	Stator assembly	Aluminum multivane type blades mounted on a one way (overrunning) roller clutch		
	Stall ratio	2.60	2.35	
	Stall speed (RPM)	2450		
	Diameter (nominal)	10.00	11.75	
Planetary Gear Set	Reaction carrier assembly	4 steel pinion gears		
	Output carrier assembly	4 steel pinion gears		
	Intermediate band	Circular steel with organic lining		
	Range	D (Drive)	2.52-1.52-1.00	2.74-1.57-1.00
		L2 (Low two)	2.52-1.52	2.74-1.57
		L1 (Low one)	2.52	2.74
R (Reverse)		1.94	2.07	
Servo Unit	Piston with release spring and inner cushion spring			
Case	Material	Aluminum		
	Type	Three, multiple disk		
Clutches	Material	Drive plates	Steel with bonded organic facings	
		Driven plates	Flat steel	
	Forward clutch	3 each drive & driven plates	4 each drive & driven plates	
	Direct clutch	2 each drive & driven plates	3 each drive & driven plates	
	Low & Reverse clutch	3 each drive & driven plates	4 each drive & driven plates	
	Release spring	Radial row steel coil		
Torque Multiplication	Drive (maximum)	6.55:1 to 1.00	6.44:1 to 1.00	
	Low 2	6.55:1 to 1.52	6.44:1 to 1.57	
	Low 1	6.55:1 to 2.52	6.44:1 to 2.74	
	Reverse	5.04:1 to 1.94	4.86:1 to 2.07	
Governor	Type	Cross-axis centrifugal		
	Operation	Regulates a pressure proportional to car speed which acts upon the (1-2) (2-3) shift and modulator valves		
Lubricant	Type	Dexron II		
	Capacity (pints)	Dry	20	
		Refill	8	7

(a) Floor mounted automatic mini-console available as an option, quadrant changes to P-R-N-3-2-1.

(b) Conditions: 600 RPM input