AUTOMOBILE COMPETITION COMMITTEE
FOR THE UNITED STATES, FIA, INC.
330 Vanderbilt Motor Parkway
Hauppauge, L.I., N.Y. 11787
(516) 582-4040

FIA NO. 1669

GROUP 2

FEDERATION INTERNATIONALE DE L'AUTOMOBILE
FORM OF RECOGNITION

In accordance with Appendix "J" of the International Sporting Code

Cylinder Capacity 1999.2 cm^3 122 in3

Manufacturer Chevrolet Motor Div. GMC

Model Vega Cosworth Twin Cam 1HV77

Serial # Chassis 1HV77N4U 100001

Manufacturer Chevrolet

Serial # Engine _____

Manufacturer Chevrolet

Recognition valid from 1.7.75

List _____

The manufacturing of the model described in this recognition form was started on _____ and the minimum production of _____ identical cars, in accordance with the specifications of this form, was reached on _____

A 3/4 Front View Car *

The following amendments apply to the vehicle identified above:

Variants
on____19__ Rec #____ list_____
on____19__ Rec #____ list_____
on____19__ Rec #____ list_____

Normal Evolution of the Type
on____19__ Rec #_____ list _____
on____19__ Rec #_____ list _____
on____19__ Rec #_____ list _____

Stamp/Signature of
National Sporting Authority

Stamp/Signature
F.I.A.

MAKE Chevrolet-Vega Cosworth Twin Cam MODEL 1HV77 FIA REC # 1669

IMPORTANT - Underlined items must be filled in, in both metric and English values. See Conversion Table below. SEE PAGE 10 FOR EXPLANATION OF SYMBOLS.

CAPACITIES AND DIMENSIONS

* 1.	Wheelbase:	2463.8 mm	97.0	inches
* 2.	Front track:	1402.08 mm	55.2	inches (1)
* 3.	Rear track:	1374.14 mm	54.1	inches (1)
4.	Overall length of car	448.1 cm	176.4	inches
5.	Overall width of car (at widest point)	167 cm	65.72	inches
5a	Overall width of car (at vertical plane through front wheels)	166.8 cm	65.60	in
5b	Overall width of car (at vertical plane through rear wheels)	167 cm	65.72	in
6.	Overall height of car	127 cm	50.0	inches
* 7.	Capacity of fuel tank (reserve included)	60.56 Litres	16.0 Approx	U.S.Gals.

8. Seating capacity: Four (4)

* 9. Weight - Total weight of vehicle with normal equipment described on homologation sheet, all required lubricants and coolants and one spare wheel and tire, but without fuel or repair tools

937.96 kg 2066 lbs

(1) Specify ground clearance Front and Rear corresponding to Front and Rear track measurements shown above. Indicate by sketch below reference points on chassis or suspension where these dimensions are checked. These specifications are for the purpose of checking the track with specified wheel rim size with the suspension at reference setting. Differences in track resulting from use of different rim widths must be shown with suspension at reference setting. A sketch showing the rim widths superimposed is desirable.

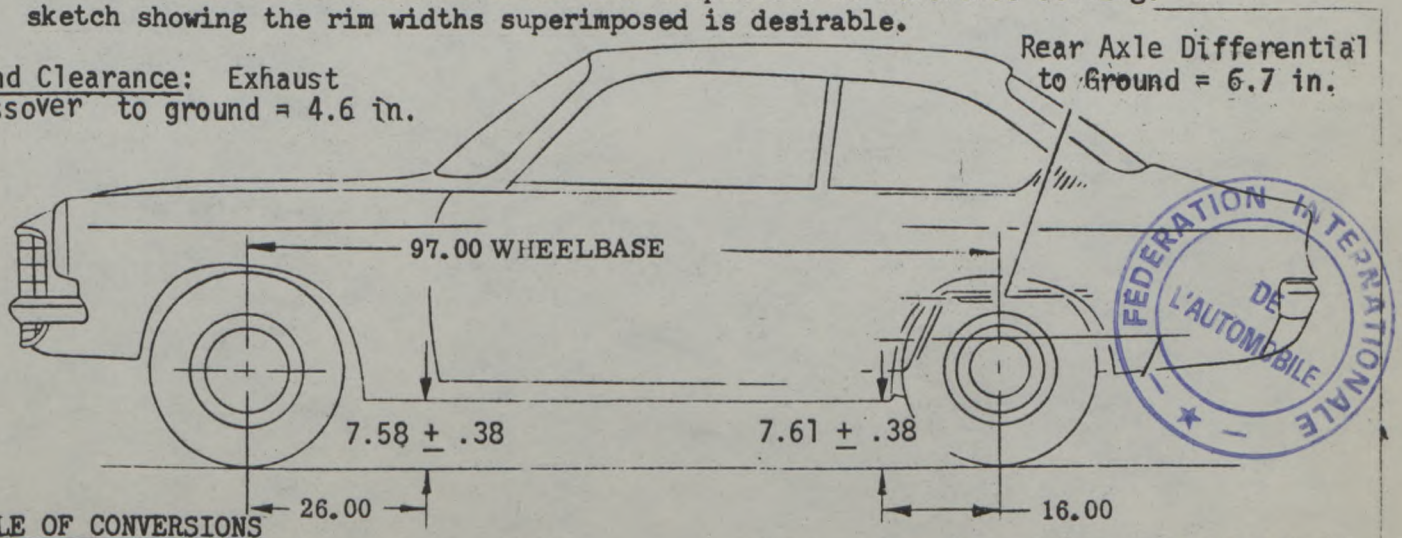


TABLE OF CONVERSIONS

1 inch	2.54 cm	1 pound	453.593 gr
1 foot	30.4794 cm	1 quart U.S.	0.9464 ltrs
1 square inch	6.452 cm^2	1 pint U.S.	0.473 ltrs
1 cubic inch	16.387 cm^3	1 gallon U.S.	3.785 ltrs

MAKE Chevrolet Vega Cosworth Twin Cam MODEL 1HV77 FIA REC # 1669

CHASSIS AND BODYWORK (Photos A, B and C)

* 20. Chassis/body construction: (separate) (unit construction)
* 21. Unit construction: material Steel
* 22. Separate construction: material of chassis
* 23. Material of body: Steel
* 24. Number of doors: Two (2) Material: Steel
* 25. Material of hood: Steel
* 26. Material of trunk lid: Steel
27. Material of rear window: Tempered Plate Glass
28. Material of windshield: Laminated Plate Glass
29. Material of front door windows: Tempered Plate Glass
30. Material of rear door windows: None
31. Windows, actuating system: Crank, Gear & Linkage
32. Material of rear quarter window: Tempered Plate Glass

ACCESSORIES AND UPHOLSTERY

38. Heating, interior: (yes) (no)
39. Air conditioning: (yes) (no)
40. Ventilation: (yes) (no)
(SP)41. Seats, front: Type of seat and upholstery Fabric & Vinyl
42. Seats, front: Weight (complete with supports and rails out of car) 16.35 kg 36.0 lbs
Check: Bench _____ Bucket X Console included _____
43. Seats, rear: Type of seat and upholstery
44. Bumper, front: Material: Aluminum Weight: 8.26 kg 18.2 lbs
45. Bumper, rear: Material: Aluminum Weight: 7.80 kg 17.2 lbs

WHEELS

50. Type: Cast Aluminum Alloy
51. Weight: (per wheel, without tire) 6.59 kg 14.50 lbs
52. Method of attachment: 4 Nuts - 4" Dia. Bolt Circle
53. Rim diameter: 330.2 mm 13.0 inches
54. Rim width: 152.4 mm 6.0 inches

STEERING

60. Type: Recirculating Ball Bearing Nut Gear
61. Servo-assistance: (yes) (no) Optional
62. Number of turns of steering wheel from lock to lock: 4.4
63. In case of servo-assistance: 2.82

MAKE Chevrolet Vega Cosworth Twin Cam MODEL 1HV77 FIA REC # 1669

SUSPENSION

* 70. Front suspension (Photo D) type: Independent-Upper & Lower Control Arms
* 71. Type of spring: Coil
(SP)72. Stabilizer (if fitted): Torsion Bar
73. Number of shock absorbers: One per wheel
74. Type: Tubular-direct acting

* 78. Rear suspension (Photo E) type: Solid Axle
* 79. Type of spring: Coil
(SP)80. Stabilizer (if fitted): Torsion Bar
81. Number of shock absorbers: One per wheel
82. Type: Tubular-Direct Acting

BRAKES (Photos F and G)

* 90. Method of operation: Hydraulic
(SP)91. Power assisted (if fitted,) type: None
92. Number of master cylinders: One (1) Tandem Split System

		Front		Rear	
93.	Number of cylinders per wheel:	One (1)		One (1)	
94.	Bore of wheel cylinder:	47.625 mm	1.875 in	19.05 mm	.75 in
(SP)	Drum Brakes:				
95.	Inside diameter:	____ mm	____ in	228.6 mm	9.0 in
96.	Length of brake linings:	____ mm	____ in	233.17 mm	9.18 in
97.	Width of brake linings:	____ mm	____ in	30.48 mm	1.20 in
98.	Number of shoes per brake:				2
99.	Total area per brake: Friction Material per Wheel	____ mm^2	____ in^2	145.8 mm^2	22.51 in^2
(SP)	Disc Brakes:				
100.	Outside diameter	250.95 mm	9.88 in	____ mm	____ in
101.	Thickness of disc:	12.7 mm	.50 in	____ mm	____ in
102.	Length of brake linings:	101.6 mm	4.00 in	____ mm	____ in
103.	Width of brake linings:	40.64 mm	1.60 in	____ mm	____ in
104.	Number of pads per brake:		2		
105.	Total area per brake: Friction Material per Wheel	72.0 mm^2	11.12 in^2	____ mm^2	____ in^2

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

MAKE Chevrolet Vega Cosworth Twin Cam MODEL 1HV77 FIA REC # 1669

ENGINE (Photos J and K)

* 130.	Cycle: Four Stroke Cycle				
* 131.	Number of cylinders: Four (4)				
* 132.	Cylinder arrangement: In-Line	Wankel: # of elements & basic dimensions-			
* 133.	Bore:	88.925	mm	3.501	inches
* 134.	Stroke:	80.264	mm	3.160	inches
* 135.	Capacity per cylinder:	499.803	cm^3	30.5	cu in
* 136.	Total cylinder capacity:	1993.973	cm^3	122	cu in

C.S.I. CORRECTION

* 137.	Material of cylinder block: Aluminum Alloy				
* 138.	Material of sleeves (if fitted): None				
* 139.	Cylinder head material: Aluminum Alloy			Number fitted:	One (1)
* 140.	Number of inlet ports: Four (4)				
* 141.	Number of exhaust ports: Four (4)				
(SP)142.	Compression ratio: 8.50:1 Nominal	6851			
(SP)143.	Volume of combustion chamber:	[illegible]	cm^3	[illegible]	cu in
(SP)144.	Piston, material: Forged Aluminum				
(SP)145.	Number of rings: Three (3)				

C.S.I. CORRECTION

(SP)146. Distance from gudgeon pin centre line to highest point of piston crown: 43.99 mm 1.732 inches

* 147.	Crankshaft: (cast) (forged)				
* 148.	Crankshaft, type: (integral) (sectioned)				
* 149.	Crankshaft, number of main bearings: Five (5)				
* 150.	Material of bearing cap: Cast Iron				
151.	System of lubrication: (dry sump) (oil in sump)				
152.	Lubricant capacity: 2.839 litres		pints	3.0	quarts U.S. + Filter
(SP)153.	Oil cooler: (yes) (no)				
* 154.	Method of engine cooling: Liquid-Radiator				
155.	Capacity of cooling system: 8.7 litres		pints	9.2	quarts U.S.
(SP)156.	Cooling fan (if fitted) diameter:	40.64	cm	16.0	inches
(SP)157.	Number of blades of cooling fan: Five (5)				

BEARINGS

* 158.	Crankshaft, main, type: Insert	Diameter:	58.445	mm	2.301	inches
* 159.	Connecting rod, big end, type: Insert	Diameter:	50.80	mm	2.000	inches

WEIGHTS

(SP)160.	Flywheel (clean):	7.48 kg	16.50 lbs
(SP)161.	Flywheel with clutch (all rotating parts):	15.35 kg	33.40 lbs
(SP)162.	Crankshaft:	19.30 kg	41.250 lbs
(SP)163.	Connecting Rod:	.568 kg	1.250 lbs
(SP)164.	Piston with rings and pin:	.572 kg	1.260 lbs

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

MAKE Chevrolet Vega Cosworth Twin Cam MODEL 1HV77 FIA REC # 1669

FOUR CYCLE ENGINES

* 170. Number of camshafts: Two (2)
* 171. Location of camshaft: In Overhead Cam Carrier
* 172. Type of camshaft drive: Cog Timing Belt
* 173. Type of valve operation: Direct from Camshaft

INLET (see Photo P) +

180. Material of inlet manifold: Aluminum Alloy
181. Overall diameter of valves: 35.763 mm 1.408 inches
(SP)182. Maximum valve lift: 8.687 mm .342 inches
183. Number of valve springs: Two (2)
184. Type of spring: Coil & Coil
* 185. Number of valves per cylinder: Two (2)
(SP)186. Tappet clearance for checking timing (cold) .330 mm .013 inches
(SP)187. Valves open at (with tolerance for tappet clearance indicated): 40° BTDC (Crk. Angle)
(SP)188. Valves close at(with tolerance for tappet clearance indicated): 244° ATDC (Crk. Angle)
(SP)189. Air filter: (wet) (dry) Cartridge type: (yes) (no)

EXHAUST (see Photo Q)

195. Material of exhaust manifold: Welded Steel Tubing
196. Overall diameter of valves: 30.607 mm 1.205 inches
(SP)197. Maximum valve lift: 8.661 mm .341 inches
198. Number of valve springs: Two (2)
199. Type of spring: Coil & Coil
* 200. Number of valves per cylinder: Two (2)
(SP)201. Tappet clearance for checking timing (cold) .355 mm .014 inches
(SP)202. Valves open at (with tolerance for tappet clearance indicated): 250° BTDC(Crk. Angle)
(SP)203. Valves close at(with tolerance for tappet clearance indicated): 30° ATDC (Crk. Angle)
(SP)204. Inside diameter of exhaust manifold outlet: 2.120 ± .012

CARBURETION (see Photo N)

210. Number of carburetors fitted: N.A.
(SP)211. Type:
(SP)212. Make:
(SP)213. Model:
214. Number of mixture passages per carburetor:
(SP)215. Flange hole diameter of exit port of carburetor: _____mm _____inches
(SP)216. Depending on type of carburetor, indicate: diameter at throat of venturi/s at the plane of maximum restriction. Dimension of mixture passage at the point of maximum restriction with the piston in its maximum open position (example SU type): _____mm _____inches

+ For additional information concerning two-stroke engines and supercharged engines, add supplementary page

MAKE Chevrolet Vega Cosworth Twin Cam MODEL 1HV77 FIA REC # 1669

INJECTION (if fitted)

220. Make of pump: Bendix Electronic
221. Number of plungers: None
(SP)222. Model or type of pump: Bendix
223. Total number of injectors: Four (4)
224. Location of injectors: Inlet Manifold
(SP)225. Minimum diameter of inlet pipe: 27.94 mm 1.10 inches

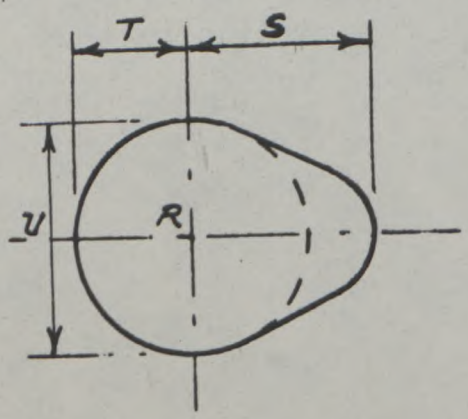
ENGINE ACCESSORIES

(SP)230. Fuel pump: mechanical and/or electrical
231. Number fitted: Two (2)
232. Type of ignition system: Battery, Coil & Distributor
233. Number of distributors: One (1)
234. Number of ignition coils: One (1)
235. Number of spark plugs per cylinder: One (1)
(SP)236. Generator type: (dynamo) (alternator) Number: One (1)
237. Method of drive: Belt
238. Voltage of generator: 12.0
239. Battery, number: One (1)
240. Location of battery: Engine Compartment
241. Voltage of battery: 12.0 volts

ENGINE & CAR PERFORMANCE (as declared by manufacturer in catalog)

(SP)250. Horsepower, maximum engine output: 110 at: 5600 rpm
(indicate SAE or DIN)
(SP)251. Maximum rpm: 7000
(SP) Output at that figure:
(SP)252. Maximum torque: 107 at: 4800 rpm
(SP)253. Maximum speed: N.A. km/hour N.A. miles/hour

255. CAM



(SP) Inlet cam

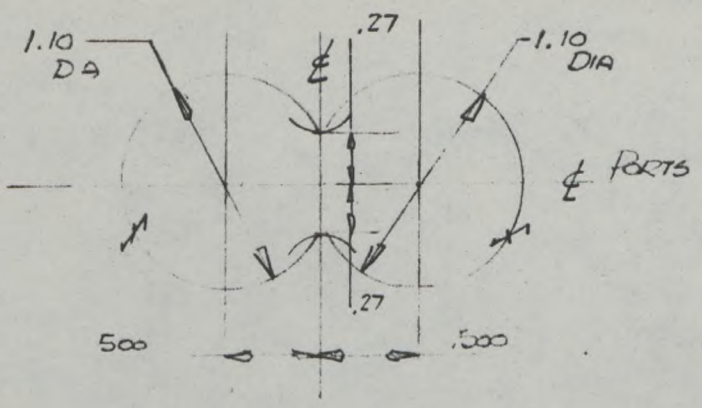
S =	21.971	mm	.865 inches
T =	12.954	mm	.510 inches
U =	25.908	mm	1.020 inches

(SP) Exhaust cam

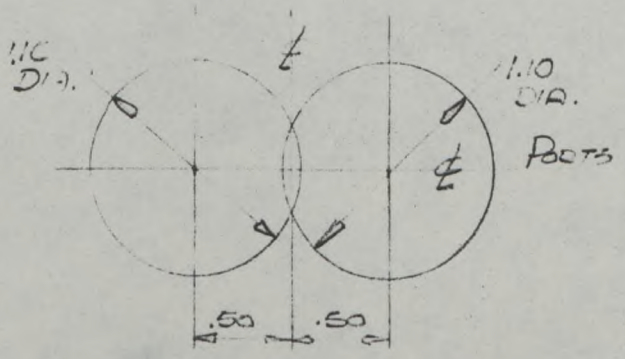
S =	21.971	mm	.865 inches
T =	12.954	mm	.510 inches
U =	25.908	mm	1.020 inches

MAKE Chevrolet Vega Cosworth Twin Cam MODEL 1HV77 FIA REC #

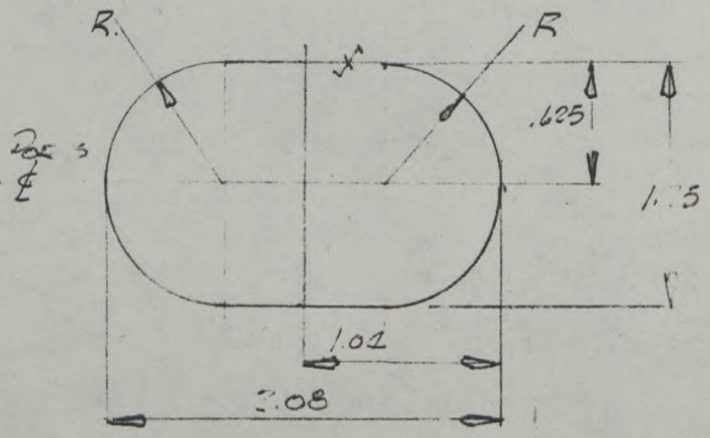
- Drawing inlet manifold ports, side of cylinder head. Indicate scale or dimensions and manufacturing tolerance.



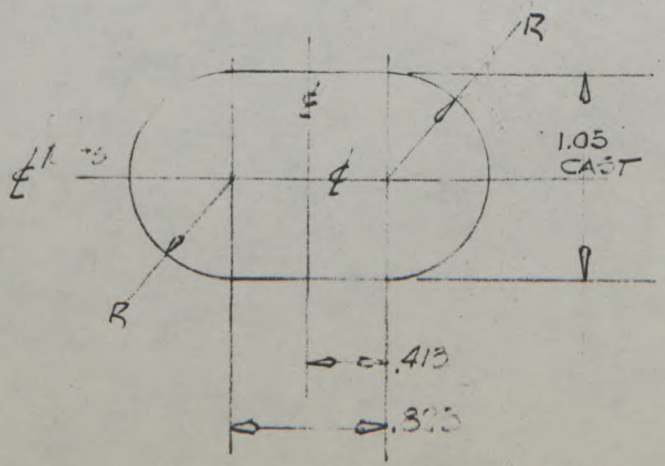
- Drawing of entrance to inlet port of cylinder head. Indicate scale or dimensions and manufacturing tolerance.



- Drawing exhaust manifold ports, side of cylinder head. Indicate scale or dimensions and manufacturing tolerance.



- Drawing of exit to exhaust port of cylinder head. Indicate scale or dimensions and manufacturing tolerance.



MAKE Chevrolet Vega Cosworth Twin Cam MODEL 1HV77 FIA REC # 1669

DRIVE TRAIN

Clutch

260. Type of clutch: Dry Disc-Diapragm 261. Number of plates: One (1)
262. Diameter of clutch plates: Spring 235.9 mm 9.28 inches
263. Inside diameter of lining: 155.448 mm 6.12 inches
Outside diameter of lining: 231.648 mm 9.12 inches
264. Method of operation: Cable and Lever

Gear Box (Photo H)

* 270. Manual type, make: Chevrolet Method of operation: Remote Lever & Rods
* 271. Number of gear box forward ratios: Four (4)
272. Synchronized forward ratios: Four (4)
273. Location of gear-shift: Floor
* 274. Automatic, make: Chevrolet Type: 3-Speed Torque Converter
* 275. Number of forward ratios: Three (3)
276. Location of gear-shift: Floor

277.	Manual Ratio	Manual No. Teeth	Automatic Ratio	Automatic No. Teeth	Alternative Manual/XXXXXXXXX Ratio	Alternative Manual/XXXXXXXXX No. Teeth	Ratio	No. Teeth
1	3.11:1	$\frac{29}{18} \times \frac{29}{15}$	2.52:1	*	3.41:1	$\frac{35}{26} \times \frac{38}{15}$		
2	2.20:1	$\frac{29}{18} \times \frac{26}{19}$	1.52:1	*	2.08:1	$\frac{35}{26} \times \frac{34}{2}$		
3	1.47:1	$\frac{29}{18} \times \frac{23}{21}$	1.00:1	Direct	1.397:1	$\frac{35}{26} \times \frac{27}{26}$		
4	1.00:1	Direct	---		1.00:1	Direct		
5			---		0.80:1	$\frac{35}{26} \times \frac{22}{37}$		
6			---		------			
Reverse	3.11:1		1.93:1		2.365:1	$\frac{35}{26} \times \frac{35}{19}$		

*Automatic Transmission ratios are resultant interaction of two (2) planetary gear sets sun gear = 34T, planet = 16T, ring gear + 66T.

278. Overdrive, type: N.A.
279. Forward gears on which overdrive can be selected:
280. Overdrive ratio:

FINAL DRIVE

* 290. Type of final drive: Salisbury Solid Axle
* 291. Type of differential: Hypoid Gear
* 292. Type of limited slip differential (if fitted): Cone Clutch-Friction Plates
293. Final drive ratio: 3.42:1 2.93:1
Number of teeth: 12/41 13/38

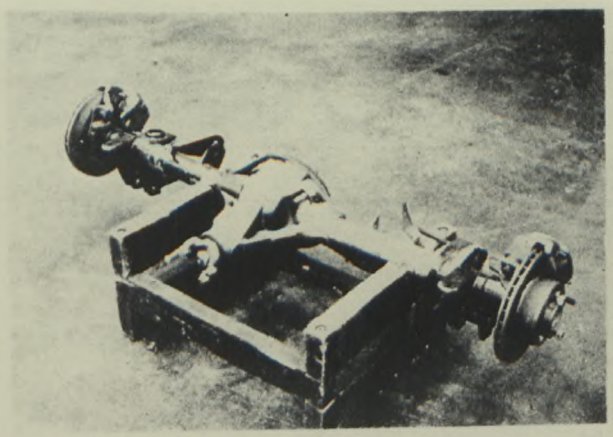
MAKE Chevrolet Vega Cosworth Twin Cam MODEL 1HV77 FIA REC. # 1669

IMPORTANT - For cars engaged in Group 2 (Special Touring) and Group 4 (Special Grand Touring) conformity with characteristics identified by symbol (SP) and entire page 8 IS NOT REQUIRED.

For cars engaged in Group 5 (Sport) only the characteristics identified by asterisks (*) need be verified.

EQUIPMENT AND ACCESSORIES available as options or production installed must indicate the part number of the option and the item number affected.

FÉDÉRATION INTERNATIONALE DE L'AUTOMOBILE



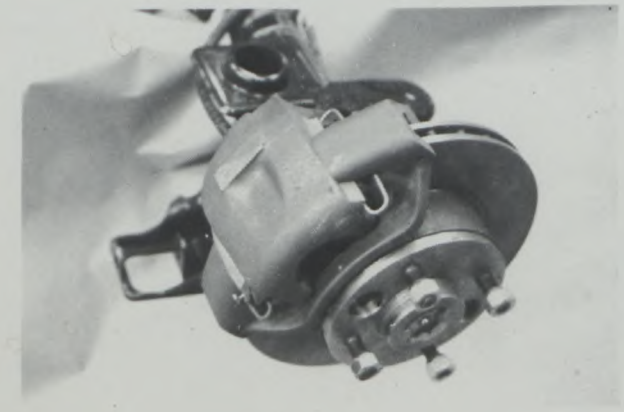
GROUP II USAGE ONLY

REAR AXLE ASSEMBLY
P.N. 0-352946

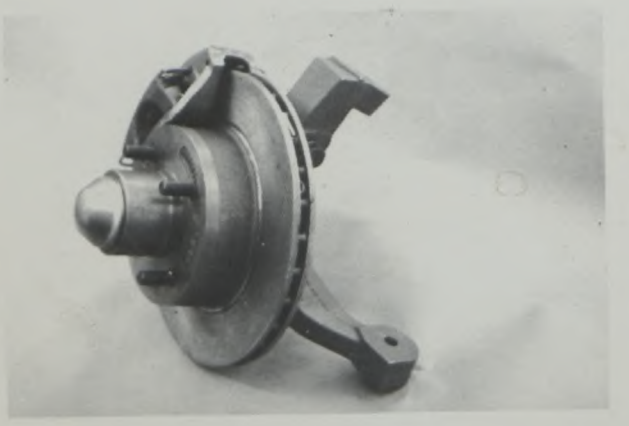
"valable en Groupe 2 uniquement"
"valid for Group 2 only"

MAKE Chevrolet Vega Cosworth Twin Cam MODEL 1HV77

FIA REC. #1669
Group II Usage Only



REAR AXLE DISC BRAKE ASSEMBLY
P.N. 0-352951 LH
0-352952 RH



STEERING KNUCKLE, HUB & BRAKE ASM.
P.N. 0-352933 LH
0-352934 RH

STEERING KNUCKLE ASSEMBLY
P.N. 0-375565 LH
0-375566 RH

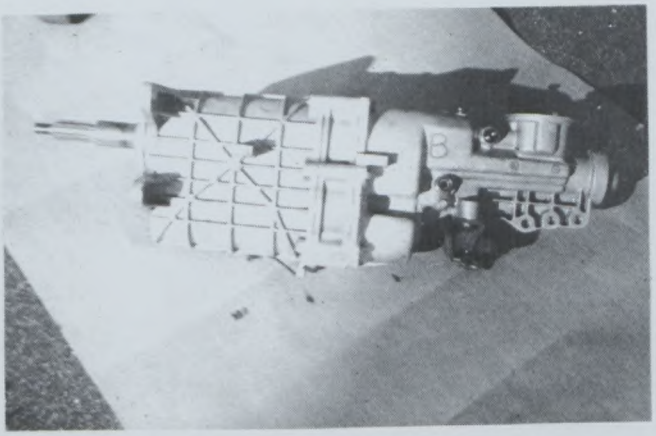
"valable en Groupe 2 uniquement"
"valid for Group 2 only"

FLYWHEEL ASSEMBLY
RPO L-88
P.N. 3991406

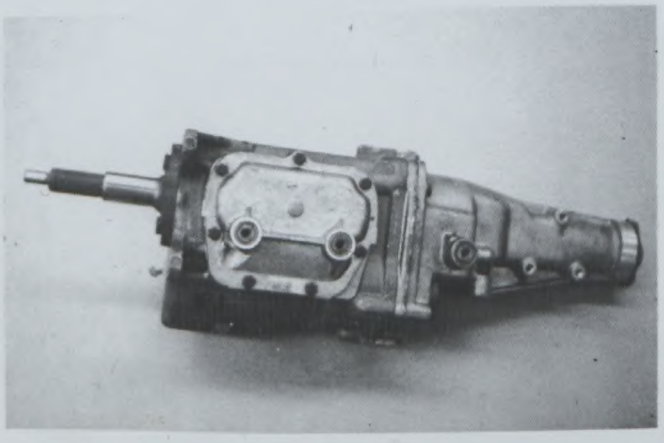
MAKE Chevrolet Vega Cosworth Twin Cam MODEL 1HV77

FIA REC. # 1669

Group II Usage Only

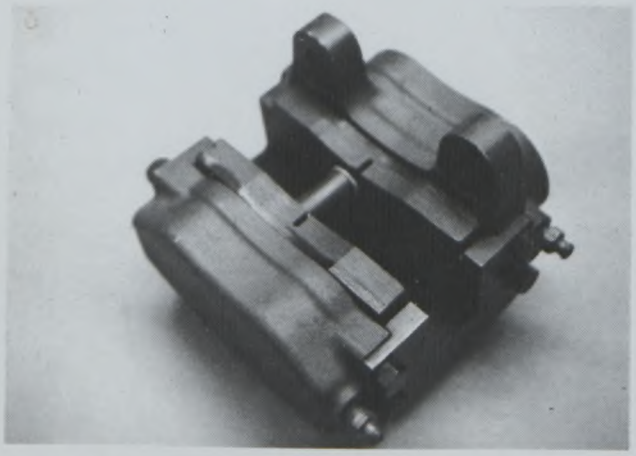


TRANSMISSION ASSEMBLY
PN 342451
W.G. 13-38-000-002



TRANSMISSION ASSEMBLY
RPO M-22
P.N. 6271517

FEDERATION INTERNATIONALE DE L'AUTOMOBILE



BRAKE CALIPER ASSEMBLY
CP 2271-48/49 FRONT
CP 2301 REAR

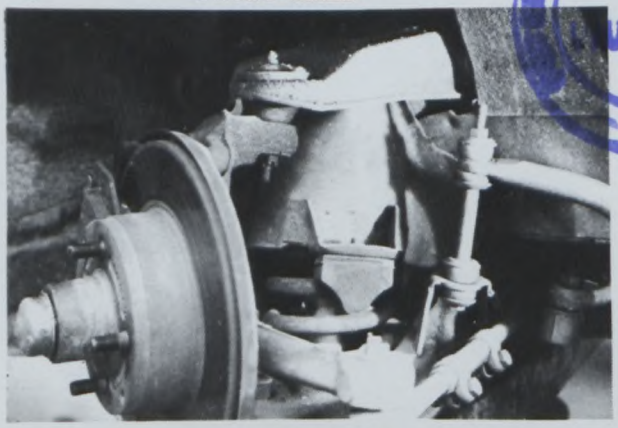
"valable en Groupe 2 uniquemen..."
"valid for Group 2 only"

MAKE Chevrolet Vega Cosworth Twin Cam MODEL 1HV77 FIA REC # 1669

B 3/4 REAR CAR *

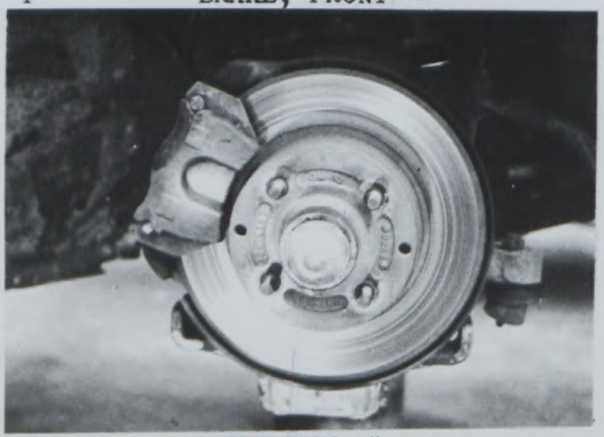
C INTERIOR CAR

D FRONT AXLE *

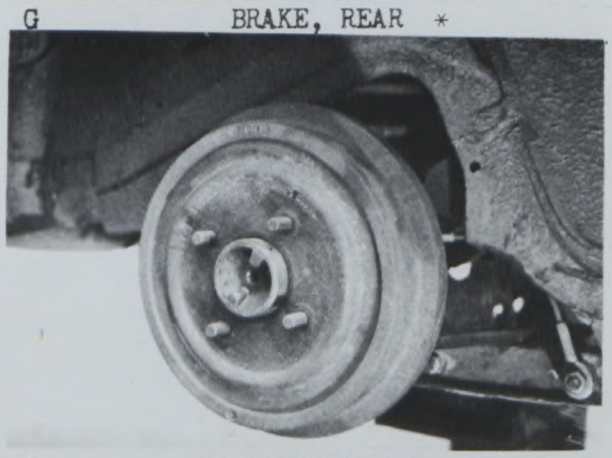


E REAR AXLE *

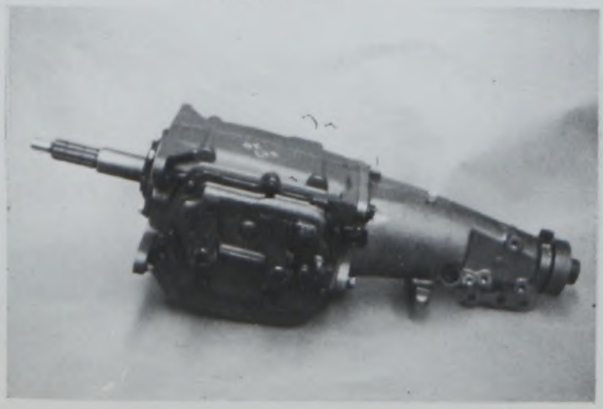
F BRAKE, FRONT *



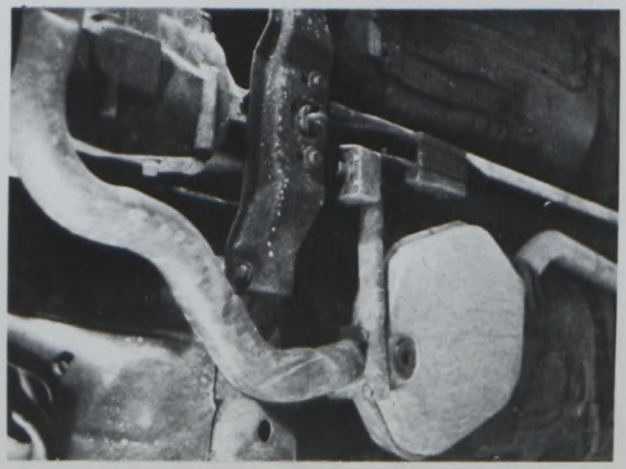
G BRAKE, REAR *



H GEAR BOX *

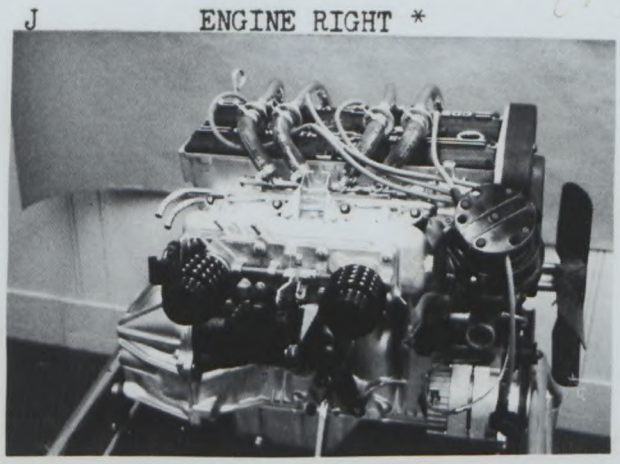


I EXHAUST SYSTEM

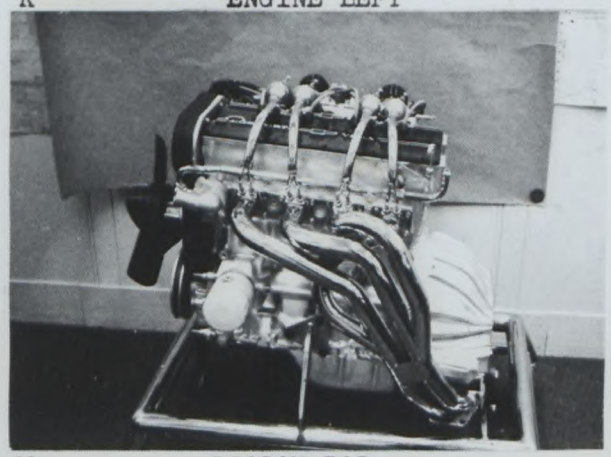


MAKE Chevrolet Vega Cosworth Twin Cam MODEL 1HV77 FIA REC # 1669

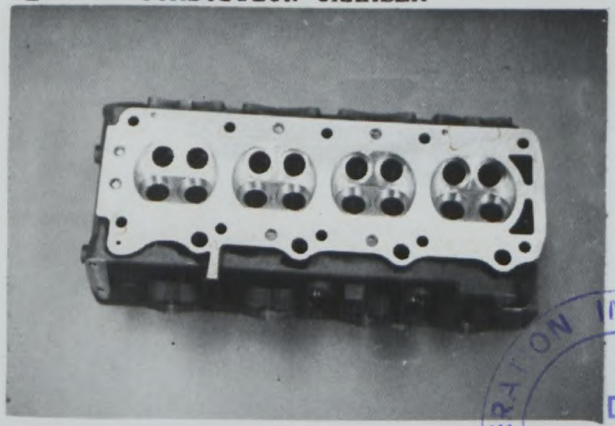
J ENGINE RIGHT *



K ENGINE LEFT *



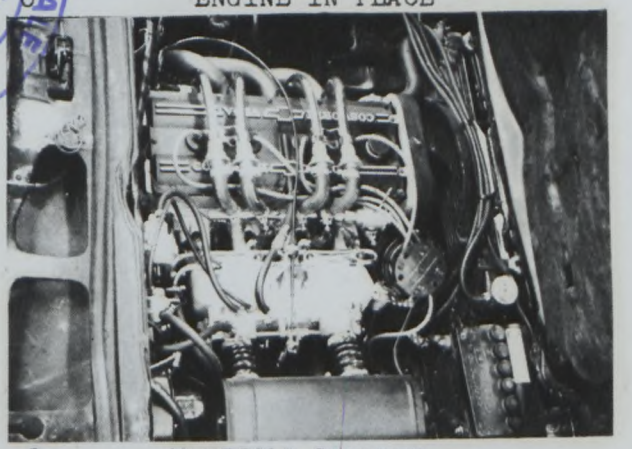
L COMBUSTION CHAMBER



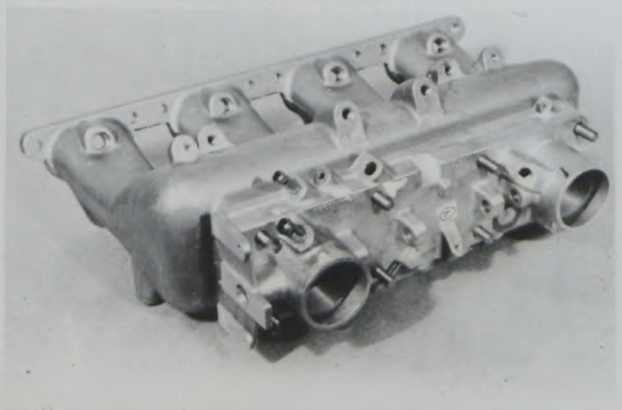
M PISTON TOP

N CARBURETOR

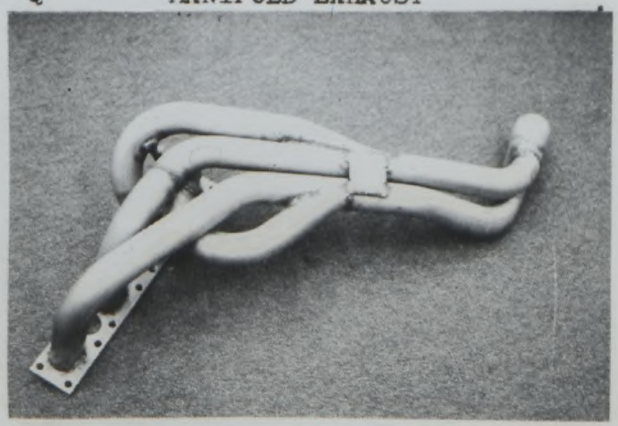
ENGINE IN PLACE *



P MANIFOLD INLET



Q MANIFOLD EXHAUST



FIA Homologation No. 1689

1/1V

Automobile Competition Comm.
For The U.S., FIA, INC.
1725 "K" St., N.W., Suite 302
WASHINGTON, D. C. 20006

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

DOCUMENT OF HOMOLOGATION EXTENSION
IN CONFORMITY WITH APPENDIX J OF THE INTERNATIONAL SPORTING CODE

Make Chevrolet

Model Vega Cosworth Twin Cam 1HV77

Chassis/Body 1HV77N4U

Serial numbers initiating the modifications described below:

Engine

Date of production of first vehicles incorporating modifications: Mar. 1975

Designation of vehicles incorporating modifications: Vega Cosworth 1HV77

This homologation extension is to be considered as a: VARIANT (Option) Variant

NORMAL EVOLUTION OF TYPE
(Replaces previous design)

This Homologation is valid from 1.8.1975

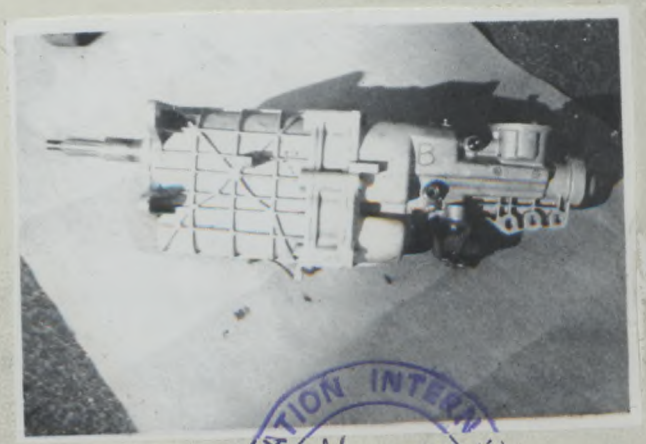
List

DESCRIPTION OF MODIFICATIONS:

GROUP 2 ONLY

Alternative 5 ratio Gear Box Part No. 342451 W.G. 13-38-000-002

Ratio	No. Teeth
1. 3.41:1	$\frac{35}{26} \times \frac{38}{15}$
2. 2.08:1	$\frac{35}{26} \times \frac{34}{22}$
3. 1.39:1	$\frac{35}{26} \times \frac{27}{26}$
4. 1.00:1	Direct
5. 0.80:1	$\frac{25}{26} \times \frac{22}{27}$
Rev. 3.36:1	$\frac{35}{26} \times \frac{35}{19}$



FÉDÉRATION INTERNATIONALE DE L'AUTOMOBILE

Signature & Stamp of the F.I.A.

Signature & Stamp of National Sporting Authority