1

# INTRODUCTION

### CONTENTS

pag	ge page
BODY CODE PLATE LOCATION AND DECODING INFORMATION INTERNATIONAL SYMBOLS METRIC SYSTEM METRIC THREAD AND GRADE IDENTIFICATION	TORQUE REFERENCES42VEHICLE FAMILY IDENTIFICATION15VEHICLE IDENTIFICATION NUMBER15VEHICLE SAFETY CERTIFICATION LABEL34

### VEHICLE FAMILY IDENTIFICATION

Throughout this service manual references are made to Vehicle Family, Body Codes. The letters AS is a body code that is assigned to a individual vehicle family. Digit boxes 16 and 17 on the Body Code Plate indicate the Vehicle family.

#### VEHICLE IDENTIFICATION NUMBER

The Vehicle Identification Number (VIN) is located on the upper left corner of the instrument panel, near the left windshield pillar. The VIN consists of 17 characters in a combination of letters and numbers that provide specific information about the vehicle (Fig. 1). Refer to VIN Code Breakdown Chart.

To protect the consumer from theft and possible fraud the manufacturer is required to include a Check Digit at the ninth position of the Vehicle Identification Number. The check digit is used by the manufacturer and government agencies to verify the authenticity of the vehicle and official documentation. The formula to use the check digit is not released to the general public.

	VL	HICLE IDENTIFICATI	ON NOMBER BREAKDO	
POSITION	INTERPRETATION	CODE OPTIONS		
1	Country of Origin	1 = United States	2 = Canada	3 = Mexico
2	Make	B = Dodge	C = Chrysler	P = Plymouth
3	Type of Vehicle	4 = Multipurpose Passenger	Vehicle	
4	Gross Vehicle	D 🛥 0-1360 kg [1-3000 lbs.	]	
	Weight	E = 1361-1814 kg (3001-4	000 lbs.)	
		F = 1815-2267 kg (4001-5	000 lbs.)	
		G = 2268-2721 kg (5001-6	000 lbs.)	
		H = 2722-3175 kg (6001-7-	000 [bs.]	
		J = 3176-3628 kg (7001-8	000 [bs.]	
		K = 3629-4082 kg (8001-9	000 lbs.)	
		E = 4083-4535 kg (9001-1-	0000 lbs.)	
		M = 4536 6350 kg (10001-	14000 lbs.)	
		W = Busses/Incomplete Vehic	des with Hydroulic Brokes	
5	Lìne	H = 4x2 - Dodge/Caravan 5	SE, Caravan LE	
		H = 4x2 Plymouth/Voyage	r SE, Voyager LE	
		H = 4x2 - Chrysler/Town &	Country	
		K = 4x4 - Dodge/Caravan S	SE, Corovan IE	
		K = 4x4 - Plymouth/Voyage	r SE, Voyager LE	
		K = 4x4 - Chrysler/Jown &	Country	
6	Series	1 = Economy Line	2 = Low Line	3 = Medium Line
		4 = High Line	5 = Premium Line	6 = Sport
		7 = Special	8 = Miscellaneous	
7	Body Style	1 = Van	4 = Extended Wogon/Var	١
		5 = Wogon		
8	Engine	3 = 3.0L MPI	K = 2.5LTBI	<u> </u>
	Check Digit		· · · · · · · · · · · · · · · · · · ·	
10	Model Year	P = 1993		
11	Assy. Plant	R = Windsor	X = St. Louis II	
12 through 17	= Vehicle Model Sequ	ience		

# VELUCIE IDENTIFICATION AUMOED DECARDOWN



### Fig. 1 Vehicle Identification Number (VIN Plate)

# BODY CODE PLATE LOCATION AND DECODING INFORMATION

The Body Code Plate is attached to the top of the radiator closure panel in the engine compartment. There are seven lines of information on the body code plate. Lines 4, 5, 6, and 7 are not used to define service information. Information reads from left to right, starting with line 3 in the center of the plate to line 1 at the bottom of the plate.

### **BODY CODE PLATE LINE 3**

DIGIT BOXES 1 THROUGH 12—Vehicle Order Number

DIGIT BOXES 13, 14, AND 15-Vinyl Roof Code

DIGIT BOXES 16, 17, 18, AND 19—Vehicle Shell Car Line

- ASYP = 2x4-Chrysler Town & Country
- ASCP = 4x4-Chrysler Town & Country
- ASKE = 2x4-Dodge Caravan C/V
- ASKH = 2x4-Dodge Caravan SE, Grand Caravan SE
- ASKL = 2x4-Dodge Caravan
- ASDE = 4x4-Dodge Caravan CV
- ASDH = 4x4-Dodge Caravan SE, Grand Caravan SE
- ASDP = 4x4-Dodge Caravan LE

• ASHH = 2x4-Plymouth, Voyager SE, Grand Voyager SE

• ASHL = 2x4-Plymouth, Voyager

• ASHP = 2x4-Plymouth, Voyager LE, Grand Voyager LE

• ASPH = 4x4-Plymouth Voyager SE, Grand Voyager SE

• ASPP = 4x4-Plymouth , Voyager LE, Grand Voyager LE

### DIGIT BOX 19—Price Class

- E = Economy
- H = High Line

- L = Low Line
- M = Maximum
- P = Premium

### DIGIT BOXES 20 AND 21-Body Type

- 12 = Van/Short Wheel Base
- 13 = Van/Long Wheel Base
- 52 = Wagon/Short Wheel Base
- 53 = Wagon/Long Wheel Base

### **BODY CODE PLATE LINE 2**

DIGIT BOXES 22,23, AND 24—Paint Procedure

DIGIT BOXES 25 THROUGH 28—Primary Paint See Group 23, Body for color codes

DIGIT BOXES 29 THROUGH 32—Secondary Paint

DIGIT BOXES 33 THROUGH 36—Interior Trim Code

DIGIT BOXES 37, 38, AND 39—Engine Code

• EDM = 2.5 L, 4 cylinder EFI Gas—Automatic or Manual Transaxle

• EFA = 3.0 L, V6 Gas (EFI)—Automatic or Manual Transaxle

• EGA = 3.3 L, V6 Gas (EFI)—Automatic Transaxle

### **BODY CODE PLATE LINE 1**

#### DIGIT BOXES 40, 41, AND 42—Transaxle Codes

- DDM = 5-speed Manual Transaxle
- DGM = 3-speed Automatic Transaxle
- DGC = 3-speed Automatic Transaxle
- DGL = 4-speed Electronic Automatic Transaxle

### DIGIT BOX 43—Market Code

- U = United States
- C = Canada
- B = International
- M = Mexico

# DIGIT BOXES 44 THROUGH 60—Vehicle Identification Number (VIN)

Refer to Vehicle Identification Number (VIN) paragraph for proper breakdown of VIN code.

### IF TWO BODY CODE PLATES ARE REQUIRED

The last code shown on either plate will be followed by END. When two plates are required, the last code space on the first plate will show CTD (for continued).

When a second plate is required, the first four spaces of each line will not be used due to overlap of the plates.

\*

- INTRODUCTION

3



### VEHICLE SAFETY CERTIFICATION LABEL

A vehicle safety certification label (Fig. 2) is attached to the rear facing of the driver's door. This label indicates date of manufacture (month and year), Gross Vehicle Weight Rating (GVWR), Gross Axle Weight Rating (GAWR) front, Gross Axle Weight Rating (GAWR) rear and the Vehicle Identification Number (VIN). The Month, Day and Hour of manufacture is also included.

All communications or inquiries regarding the vehicle should include the Month-Day-Hour and Vehicle Identification Number.



Fig. 2 Vehicle Safety Certification Label

EXTERIOR	EXTERIOR DIMENSIONS												
		WHEELBAS	ie i	TRAC	ĸ		OV	OVERALL					
VEHICLE FAMILY	BODY STYLE	mm/in.	Fi	RONT m/in.	REAR mm/in.	LENGTH mm/in.	r	WIDTH nm/in.	HEIGHT mm/in.				
AS AS AS AS	K-12 K-13 HK-52 HK-53	2846/112.0 3024/119.1 2846/112.0 3025/119.1	0 152 1 152 0 152 1 152	22/59.9 23/60.0 22/59.9 21/59.9	1578/62.1 1578/62.1 1578/62.1 1578/62.1	4468/175. 4838/190. 4516/177.8 4888/192.	9 17 5 17 3 17 4 17	764/69.4 764/69.4 764/69.4 764/69.4	.4 1698/66.9 .4 1714/67.5 .4 1672/65.8 .4 1676/66.0				
INTERIOR	DIMENSIONS	5	•	•		•	•						
VEHICLE FAMILY	BODY STYLE	HEAD R	OOM REAR	LEG FRONT	ROOM REAR	SHOULDEF FRONT	ROOM REAR	HIP RC FRONT	DOM REAR				
AS	K-12/13	990 mm 39.0 in.		970 mm 38.2 in.		1484 mm 58.4 in.		1344 mm 52.9 in.					
AS	HK-52/53	990 mm 39.0 in.	970 mm 38.2 in.	970 mm 38.2 in.	959 mm 37.8 in.	1484 mm 58.4 in.	1557 mm 61.3 in.	1344 mm 51.9 in.	1620 mm 63.8 in.				

### STANDARD BODY DIMENSIONS

≣D	Ð	-ÇÇ-	$\langle \dot{\nabla} \dot{\nabla} \rangle$		
HIGH BEAM	FOG LIGHTS	PARKING LIGHTS, PANEL LIGHTS	TURN SIGNAL	HAZARD WARNING	WINDSHIELD WASHER
WINDSHIELD WIPER	WINDSHIELD WIPER AND WASHER	WINDSCREEN DEMISTING AND DEFROSTING	VENTILATING FAN	REAR WINDOW DEFOGGER	REAR WINDOW WIPER
REAR WINDOW WASHER	FUEL	ENGINE COOLANT TEMPERATURE	BATTERY CHARGING CONDITION		SEAT BELT
			REAR HOOD		

Fig. 7 International Symbols

### TORQUE REFERENCES

Individual Torque Charts appear at the end of many Groups. Refer to the Standard Torque Specifications and Bolt Identification Chart in this Group for torques not listed in the individual torque charts (Fig. 3).

Torque specifications on the Bolt Torque chart are based on the use of clean and dry threads. Reduce the torque by 10% when the threads are lubricated with engine oil and by 20% if new plated bolts are used.

Various sizes of Torx head fasteners are used to secure numerous components to assemblies. Due to ever changing usage of fasteners, Torx head fasteners may not be identified in art or text.

### METRIC THREAD AND GRADE IDENTIFICATION

Metric and SAE thread notations differ slightly. The difference is illustrated in Figure 4.

Common metric fastener strength classes are 9.8 and 12.9 with the class identification embossed on the head of each bolt (Fig. 5). Some metric nuts will be marked with a single digit strength number on the nut face.

SAE strength classes range from grade 2 to 8 with line identification embossed on each bolt head. Markings corresponding to two lines less than the actual

BOIT	GR	ADE 5	GR	ADE 8								
SIZE	N∙m	ft-lbs (in-lbs)	N•m	ft-lbs (in-lbs)								
1/4-20	11	(95)	14	(125)								
1/4-28	11	(95)	17	(150)								
5/16-18	23	(200)	31	(270)								
5/16-24	27	20	34	25								
3/8-16	41	30	54	40								
3/8-24	48	35	61	45								
7/16-14	68	50	88	65								
7/1 <b>6-20</b>	75	55	95	70								
1/2-13	102	75	136	100								
1/2-20	115	85	149	110								
9/16-12	142	105	183	135								
9/16-18	156	115	203	150								
5/8-11	203	150	264	195								
5/8-18	217	160	285	210								
3/4-16	237	175	305	225								

POIT TOPOLIE

J89IN-9

### Fig. 3 Grade 5 and 8 Standard Torque Specifications

grade (Fig. 6). For Example: Grade 7 bolt will have 5 embossed lines on the bolt head.

\*

INC	CH	METRIC						
5/16	5-18	M8 X	1.25					
THREAD MAJOR DIAMETER IN INCHES	NUMBER OF THREADS PER INCH	THREAD MAJOR DIAMETER IN MILLIMETERS	DISTANCE BETWEEN THREADS IN MILLIMETERS					

PR606B

Fig. 4 Thread Notation (Metric and SAE)



METRIC BOLTS—IDENTIFICATION CLASS NUMBERS CORRESPOND TO BOLT STRENGTH— INCREASING NUMBERS REPRESENT INCREASING STRENGTH. J89IN-10

Fig. 5 Metric Bolt Identification



Fig. 6 SAE Bolt Identification

### INTERNATIONAL SYMBOLS

Some International Symbols are used to identify controls and displays in this vehicle. These symbols are applicable to those controls which are displayed on the instrument panel or in the immediate vicinity of the driver (Fig. 7).

### METRIC SYSTEM

Figure art, specifications, and tightening references in this Service Manual are identified in the metric system and in the SAE system.

During any maintenance or repair procedures, it is important to salvage metric fasteners (nuts, bolts, etc.) for reassembly. If the fastener is not salvageable, a fastener of equivalent specification should be used.

### WARNING: USE OF AN INCORRECT FASTENER MAY RESULT IN COMPONENT DAMAGE OR PER-SONAL INJURY.

The metric system is based on quantities of one, ten, one hundred, one thousand, and one million (Fig. 8).

The following Tables will assist you in conversion procedures.

Mega	-	(M) Million	Deci -	(D) Tenth
Kilo	-	(K) Thousand	Centi -	(C) Hundreth
		Milli -	(m) Thousandth	

J901N-2

Fig. 8 Metric Prefixes

★

INTRODUCTION —

6

# **CONVERSION TABLES**

in-lbs to N•m

ft-lbs to N•m

N•m to ft-lbs

N•m to in-lbs

ft-lb	N•m	ft-lb	N∙m	ft-lb	N∙m	ft-lb	N•m	ft-lb	N∙m	N∙m	ft-lb	N∙m	ft-Ib	N∙m	ft-Ib	N∙m	ft-Ib	N∙m	ft-lb
1	1.3558	21	28,4722	41	55,5885	61	82,7049	81	109.8212	1	.7376	21	15.9888	41	30.2400	61	44.9913	81	59.7425
2	2.7116	22	29.8280	42	56,9444	62	84.0607	82	111.1770	2	1.4751	22	16.2264	42	30.9776	62	45.7289	82	60.4801
3	4.0675	23	31.1838	43	58.3002	63	85,4165	83	112.5328	3	2.2127	23	16.9639	43	31.7152	63	46.4664	83	61.2177
4	5.4233	24	32.5396	44	59.6560	64	86.7723	84	113.8888	4	2.9502	24	17.7015	44	32.4527	64	47.2040	84	61.9552
5	6.7791	25	33.8954	45	61.0118	65	88.1281	85	115.2446	5	3.6878	25	18.4391	45	33.1903	65	47.9415	85	62.6928
6	8.1349	26	35.2513	46	62.3676	66	89.4840	86	116.6004	6	4.4254	26	19.1766	46	33.9279	66	48.6791	86	63.4303
7	9.4907	27	36.6071	47	63.7234	67	90.8398	87	117.9562	7	5.1629	27	19.9142	47	34.6654	67	49.4167	87	64.1679
8	10.8465	28	37.9629	48	65.0793	68	92.1956	88	119.3120	8	5.9005	28	20.6517	48	35.4030	68	50.1542	88	64.9545
9	12.2024	29	39.3187	49	66.4351	69	93.5514	89	120.6678	9	6.6381	29	21.3893	49	36.1405	69	50.8918	89	65.6430
10	13.5582	30	40.6745	50	67.7909	70	94.9073	90	122.0236	10	7.3756	30	22.1269	50	36.8781	70	51.6293	90	66.3806
11	14.9140	31	42.0304	51	69.1467	71	96.2631	91	123.3794	11	8.1132	31	22.8644	51	37.6157	71	52.3669	91	67.1181
12	16.2698	32	43.3862	52	70.5025	72	97.6189	92	124.7352	12	8.8507	32	23.6020	52	38.3532	72	53.1045	92	67.8557
13	17.6256	33	44.7420	53	71.8583	73	98.9747	93	126.0910	.13	9.5883	33	24.3395	53	39.0908	73	53.8420	93	68.5933
14	18.9815	34	46.0978	54	73.2142	74	100.3316	94	127.4468	14	10.3259	34	25.0771	54	39.8284	74	54.5720	94	69.3308
15	20.3373	35	47.4536	55	74.5700	75	101.6862	95	128.8026	15	11.0634	35	25.8147	55	40.5659	75	55.3172	95	70.0684
16	21.6931	36	48.8094	56	75.9258	76	103.0422	96	130.1586	16	11.8010	36	26.5522	56	41.3035	76	56.0547	96	70.8060
17	23.0489	37	50.1653	57	77.2816	77	104.3980	97	131.5144	17	12.5386	37	27.2898	57	42.0410	77	56.7923	97	71.5435
18	24.4047	38	51.5211	58	78.6374	78	105.7538	98	132.8702	18	13.2761	38	28.0274	58	42.7786	78	57.5298	98	72.2811
19	25.7605	39	52.8769	59	79.9933	79	107.1196	99	134.2260	19	14.0137	39	28.7649	59	43.5162	/9	58.2674	99	73.0187
20	27.1164	40	54.2327	60	81.3491	80	108.4654	100	135.5820	20	14.7512	40	29.5025	60	44.2537	80	59.0050	100	73.7562

in. to mm

mm to in.

in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
in. .01 .02 .03 .04 .05 .06 .07 .08 .09 .10 .11 .12 .13 .14 .15	mm .254 .508 1.016 1.270 1.524 1.778 2.032 2.286 2.540 2.540 2.540 2.540 3.048 3.302 3.556 3.810	in. .21 .22 .23 .24 .25 .26 .27 .28 .29 .30 .31 .32 .33 .34 .35	mm 5.334 5.588 5.842 6.096 6.350 6.604 6.858 7.112 7.366 7.620 7.874 8.128 8.382 8.382 8.636	in. .41 .42 .43 .44 .45 .46 .47 .48 .47 .48 .49 .50 .51 .52 .53 .54 .55	mm 10.414 10.668 10.922 11.176 11.430 11.684 12.192 12.446 12.700 12.954 13.208 13.462 13.716 13.971	in. .61 .62 .63 .64 .65 .66 .67 .68 .69 .70 .71 .72 .73 .74 .75	mm 15. 494 15. 748 16. 002 16. 256 16. 510 16. 764 17. 018 17. 272 17. 526 17. 780 18. 034 18. 028 18. 542 18. 542 18. 796 19. 057	in. .81 .82 .83 .84 .85 .86 .87 .88 .87 .88 .89 .90 .91 .92 .93 .94	mm 20.574 20.828 21.082 21.336 21.590 21.844 22.098 22.352 22.606 22.860 23.114 23.368 23.368 23.876 24.130	mm .01 .02 .03 .04 .05 .06 .07 .08 .09 .10 .11 .12 .13 .14 .15	in. .00039 .00079 .00118 .00157 .00197 .00236 .00276 .00315 .00354 .00394 .00433 .00472 .00512 .00551	mm .21 .22 .23 .24 .25 .26 .27 .28 .29 .30 .31 .32 .33 .34 .35	in. .00827 .00866 .00906 .00945 .00984 .01024 .01023 .01102 .01142 .01181 .01220 .01260 .01299 .01339 .01378	mm .41 .42 .43 .44 .45 .46 .47 .48 .47 .48 .49 .50 .51 .52 .53 .54 .55	in. .01614 .01654 .01693 .01732 .01772 .01810 .01850 .01850 .01929 .01969 .02047 .02087 .02087 .02126 .02126	mm .61 .62 .63 .64 .65 .66 .67 .68 .69 .70 .71 .72 .73 .74 .75	in. .02402 .02441 .02480 .02520 .02559 .02559 .02638 .02677 .02717 .02716 .02755 .02874 .02874 .02953 .02874	mm .81 .82 .83 .84 .85 .86 .87 .88 .87 .88 .89 .90 .91 .92 .93 .94 .95	in. .03189 .03228 .03307 .03346 .03405 .03405 .03405 .03504 .03583 .03583 .03583 .03622 .03661 .03701 .03701
.16 .17 .18 .19 .20	4.064 3.318 4.572 4.826 5.080	.36 .37 .38 .39 .40	9.144 9.398 9.652 9.906 10.160	.56 .57 .58 .59 .60	14.224 14.478 14.732 14.986 15.240	.76 .77 .78 .79 .80	19.304 19.558 19.812 20.066 20.320	.96 .97 .98 .99 1.00	24.384 24.638 24.892 25.146 25.400	.16 .17 .18 .19 .20	.00630 .00669 .00709 .00748 .00787	.36 .37 .38 .39 .40	.01417 .01457 .01496 .01535 .01575	.56 .57 .58 .59 .60	.02205 .02244 .02283 .02323 .02362	.76 .77 .78 .79 .80	.02992 .03032 .03071 .03110 .03150	.96 .97 .98 .99 1.00	.03780 .03819 .03858 .03898 .03937

J901N-10

 $\star$ 

Multiply	By	To Get	Multiply	By	To Get	
inlbs.	x 0.11298	= Newton-Metres (N•m)	(N•m)	x 8.851	= inlbs.	
ftIbs.	x 1.3558	= Newton-Metres (N•m)	(N•m)	x 0.7376	= ftIbs.	
Inches Hg. (60°F)	x 3.377	= Kilopascals (kPa)	(kPa)	x 0.2961	= Inches Hg.	
Pounds/Sq. In.	x 6.895	<ul> <li>Kilopascals (kPa)</li> </ul>	(kPa)	x 0.145	= Pounds/Sq. In.	
Inches	× 25.4	= Millimetres (mm)	(mm)	x 0.03937	= Inches	
Feet	x 0.3048	= Metres (M)	(M)	x 3.281	= Feet	
Yards	x 0.9144	= Metres (M)	(M)	x 1.0936	= Yards	
Miles	x 1.6093	= Kilometres (Km)	(Km)	x 0.6214	= Miles	
Miles/Hr.	x 1.6093	= Kilometres/Hr. (Km/h)	(Km/h)	x 0.6214	= Miles/Hr.	
Feet/Sec.	x 0.3048	= Metres/Sec. (M/S)	(M/S)	x 3.281	= Feet/Sec.	
Kilometres/Hr.	× 0.27778	= Metres/Sec. (M/S)	(M/S)	x 3.600	= Kilometres/Hr.	
Miles/Hr.	× 0.4470	= Metres/Sec. (M/S)	(M/S)	x 2.237	= Miles/Hr.	
		COMMON METRI	EQUIVALENTS			
1 Inch = 25 Millim	eters		1 Cubic Inch	= 16 Cub	ic Centimeters	
1 Foot = 0.3 Meter 1 Yard = 0.9 Meter	r r		Cubic Foot = 0.03 Cubic Meter			
1 Mile = 1.6 Kilome	ters					

# **CONVERSION TABLES**

★

J901N-11