GROUP TAB LOCATOR

INTRODUCTION

TABLE OF CONTENTS

VEHICLE IDENTIFICATION NUMBER

DESCRIPTION

The Vehicle Identification Number (VIN) plate is located on the lower windshield fence near the left A-pillar. The VIN contains 17 characters that provide data concerning the vehicle. Refer to the VIN decoding chart to determine the identification of a vehicle.

The Vehicle Identification Number is also imprinted on the:

- Vehicle Safety Certification Label.
- Frame rail.

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.

VEHICLE IDENTIFICATION NUMBER DECODING CHART

POSITION	INTERPRETATION	CODE = DESCRIPTION
1	Country of Origin	1 = Manufactured By DaimlerChrysler Corporation
2	Make	J = Jeep
3	Vehicle Type	4 = MPV
4	Gross Vehicle Weight Rating	E = 3001-4000 lbs. F = 4001-5000 lbs.
5	Vehicle Line	A = Wrangler 4X4 (LHD) 4 = Wrangler 4X4 (RHD)
6	Series	3 = X 4 = Sport/Unlimited 5 = Sahara 6 = Rubicon
7	Body Style	4 = Extended Open Body 9 = Open Body
8	Engine	1 = 2.4L 4 cyl DOHC Gasoline S = 4.0L 6 cyl Gasoline

VEHICLE IDENTIFICATION NUMBER (Continued)

POSITION	INTERPRETATION	CODE = DESCRIPTION
9	Check Digit	0 through 9 or X
10	Model Year	5=2005
11	Assembly Plant	P = Toledo #2
12 thru 17	Vehicle Build Sequence	

VEHICLE EMISSION CONTROL INFORMATION (VECI) LABEL

DESCRIPTION

All models have a Vehicle Emission Control Information (VECI) Label. DaimlerChrysler permanently attaches the label in the engine compartment (Fig. 1). It cannot be removed without defacing information and destroying the label.

The label contains the vehicle's emission specifications and vacuum hose routings. All hoses must be connected and routed according to the label.

The VECI label contains the following:

- Engine family and displacement
- Evaporative family
- Emission control system schematic
- Certification application
- Engine timing specifications (if adjustable)
- Idle speeds (if adjustable)
- Spark plug and gap

The label also contains an engine vacuum schematic. These labels are permanently attached and cannot be removed without defacing information and destroying label.

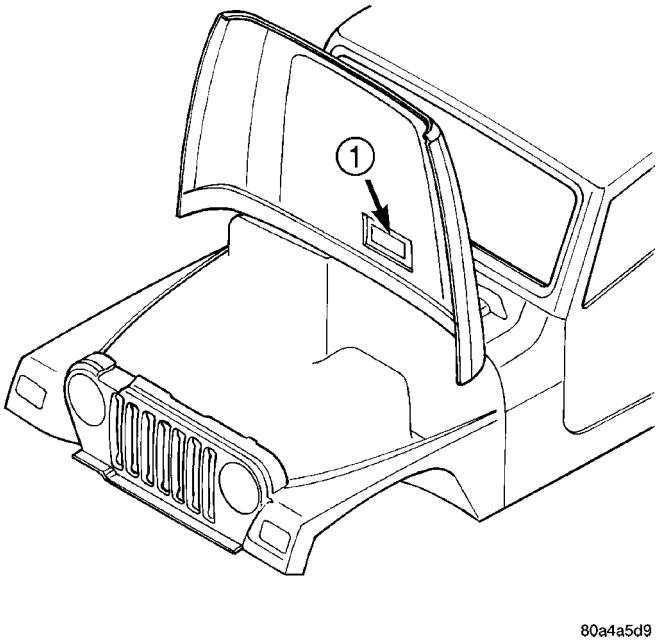


Fig. 1 VECI Label Location

1 - VECI LABEL

The label is located on the driver-side door shutface.

VEHICLE CERTIFICATION LABEL

DESCRIPTION

A vehicle certification label (Fig. 2) is attached to every DaimlerChrysler Corporation vehicle. The label certifies that the vehicle conforms to all applicable Federal Motor Vehicle Standards. The label also lists:

- Month and year of vehicle manufacture.
- Gross Vehicle Weight Rating (GVWR). The gross front and rear axle weight ratings (GAWR's) are based on a minimum rim size and maximum cold tire inflation pressure.
- Vehicle Identification Number (VIN).
- Type of vehicle.
- Type of rear wheels.
- Bar code.
- Month, Day and Hour (MDH) of final assembly.
- Paint and Trim codes.
- Country of origin.

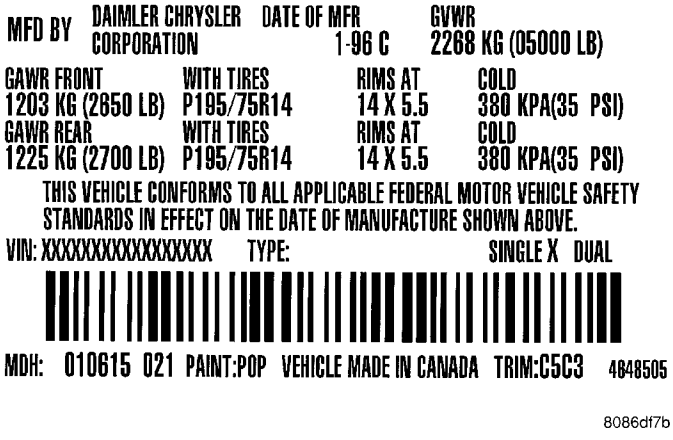


Fig. 2 VEHICLE CERTIFICATION LABEL - TYPICAL

BODY CODE PLATE

DESCRIPTION

BODY CODE PLATE

A metal body code plate is attached to the floor pan under the drivers seat (Fig. 3). Disengage the snaps attaching the carpet to the floor pan to read the information. 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 (Fig. 4).

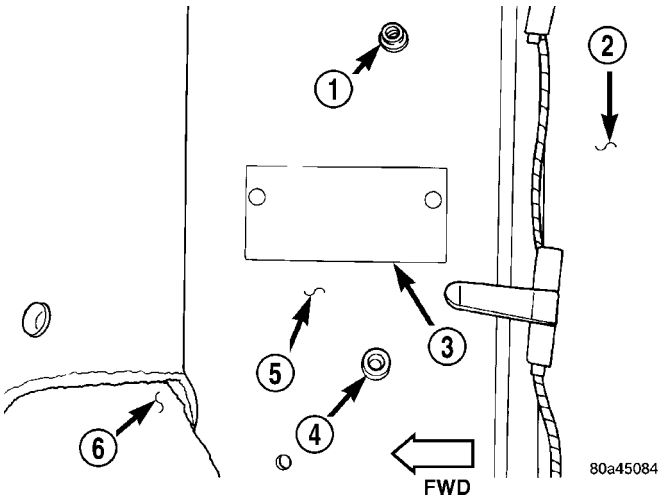


Fig. 3 Body Code Plate Location

1 - SNAP
2 - REAR CARPET
3 - BODY CODE PLATE
4 - SNAP
5 - FLOOR PAN
6 - FRONT CARPET

The last code imprinted on a vehicle code plate will be followed by the imprinted word END. When two vehicle code plates are required, the last available spaces on the first plate will be imprinted with the letters CTD (for continued).

When a second vehicle code plate is necessary, the first four spaces on each row will not be used because of the plate overlap.

BODY CODE PLATE—LINE 3

DIGITS 1 THROUGH 12

Vehicle Order Number

DIGITS 13, 14, AND 15

Roof

- VJB = Soft Top Medium Gray
- VJC = Soft Top Medium Khaki
- VJG = Soft Top Dark Green
- VJK = Soft Top Dark Khaki

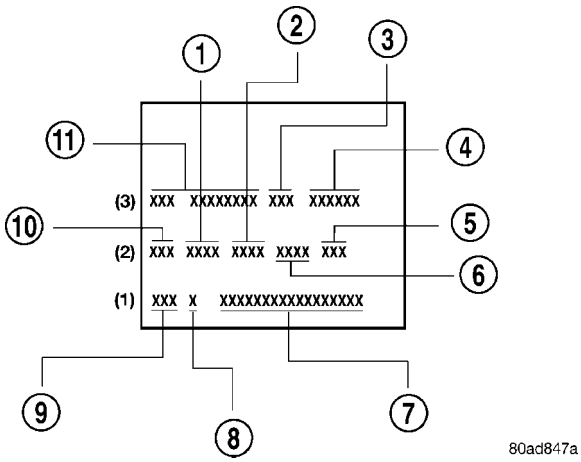


Fig. 4 Body Code Plate Decoding

1 - PRIMARY PAINT
2 - SECONDARY PAINT
3 - ROOF
4 - CAR LINE SHELL
5 - ENGINE
6 - TRIM
7 - VIN
8 - MARKET
9 - TRANSMISSION
10 - PAINT PROCEDURE
11 - VEHICLE ORDER NUMBER

- VKB = Hard Top Medium Gray
- VKC = Hard Top Medium Khaki
- VKK = Hard Top Dark Khaki

DIGITS 16, 17, AND 18

Car Line Shell

- TJJ = Wrangler (LHD)
- TJU = Wrangler (RHD)

DIGIT 19

Price Class

- L = Wrangler (All)

DIGITS 20 AND 21

Body Type

- 77 = Wheel Base (93.4 in.)
- 78 = Wheel Base (103.4 in.)

BODY CODE PLATE—LINE 2

DIGITS 1,2, AND 3

Paint Procedure

DIGIT 4

Open Space

DIGITS 5 THROUGH 8

Primary Paint

(Refer to 23 - BODY/PAINT - SPECIFICATIONS) for color codes.

DIGIT 9

Open Space

BODY CODE PLATE (Continued)

DIGITS 10 THROUGH 13

Secondary Paint

DIGIT 14

Open Space

DIGITS 15 THROUGH 18

Interior Trim Code

DIGIT 19

Open Space

DIGITS 20, 21, AND 22

Engine Code

- ED1 = 2.4L 4 cyl. MPI Gasoline
- ERH = 4.0L 6 cyl. MPI Gasoline

BODY CODE PLATE—LINE 1

DIGITS 1, 2, AND 3

Transmission Codes

- DEH = NSG370 6 - speed Manual
- DG6 = 42RLE 4 - speed Automatic

DIGIT 4

Open Space

DIGIT 5

Market Code

- B = International

DIGIT 6

Open Space

DIGITS 7 THROUGH 23

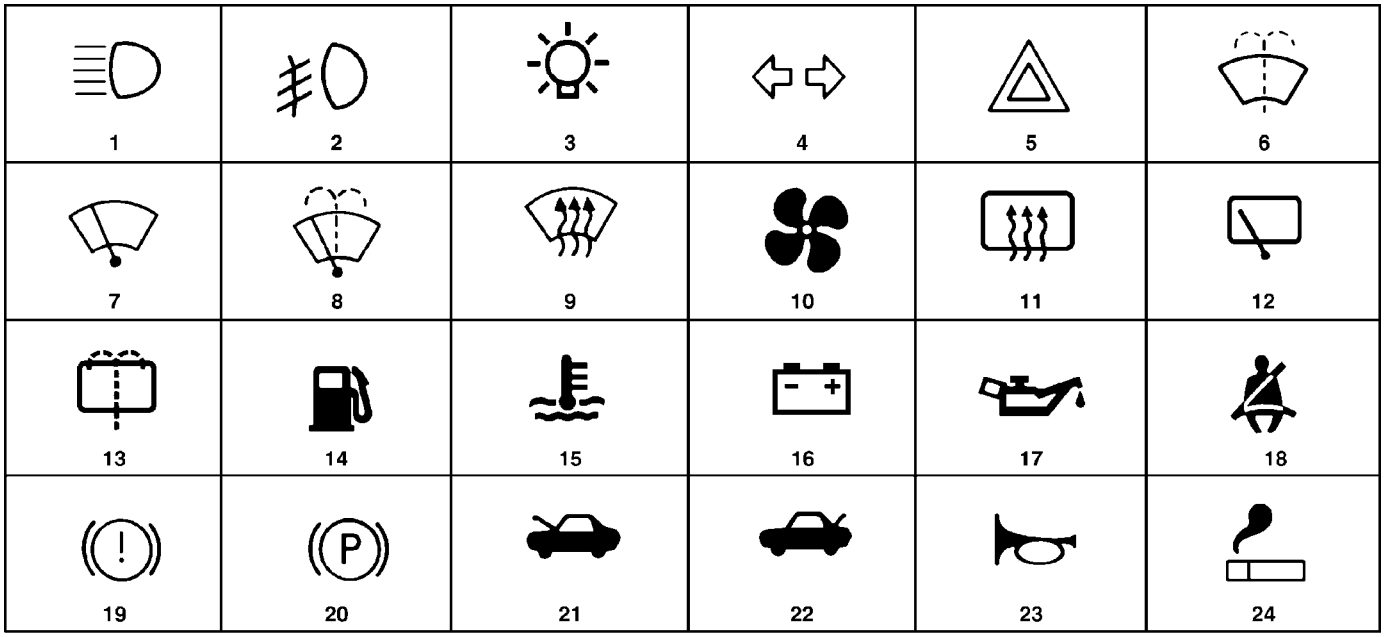
Vehicle Identification Number (VIN)

(Refer to VEHICLE DATA/VEHICLE INFORMATION/VEHICLE IDENTIFICATION NUMBER - DESCRIPTION) for breakdown of VIN code.

INTERNATIONAL SYMBOLS

DESCRIPTION

The graphic symbols illustrated in the following International Control and Display Symbols Chart (Fig. 5) are used to identify various instrument controls. The symbols correspond to the controls and displays that are located on the instrument panel.



80be4788

Fig. 5 INTERNATIONAL CONTROL AND DISPLAY SYMBOLS

1	High Beam	13	Rear Window Washer
2	Fog Lamps	14	Fuel
3	Headlamp, Parking Lamps, Panel Lamps	15	Engine Coolant Temperature
4	Turn Warning	16	Battery Charging Condition
5	Hazard Warning	17	Engine Oil
6	Windshield Washer	18	Seat Belt
7	Windshield Wiper	19	Brake Failure
8	Windshield Wiper and Washer	20	Parking Brake
9	Windscreen Demisting and Defrosting	21	Front Hood
10	Ventilating Fan	22	Rear hood (Decklid)
11	Rear Window Defogger	23	Horn
12	Rear Window Wiper	24	Lighter

FASTENER IDENTIFICATION

DESCRIPTION

The SAE bolt strength grades range from grade 2 to grade 8. The higher the grade number, the greater the bolt strength. Identification is determined by the line marks on the top of each bolt head. The actual bolt strength grade corresponds to the number of line marks plus 2. The most commonly used metric bolt strength classes are 9.8 and 10.9. The metric strength class identification number is imprinted on the head of the bolt. The higher the class number, the greater the bolt strength. Some metric nuts are imprinted with a single-digit strength class on the nut face. Refer to the Fastener Identification and Fastener Strength Charts (Fig. 6).

BOLT MARKINGS AND TORQUES - METRIC

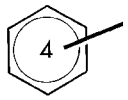
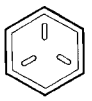
Bolt Markings	8.8/8.9		10.9		12.9	
Bolt Dia.	N·m	Ft. Lbs.	N·m	Ft. Lbs.	N·m	Ft. Lbs.
6	12	105*	14	120*	16	12
8	25	250*	32	23	38	28
10	54	40	60	45	74	55
12	95	70	108	80	135	100
14	155	115	175	130	216	160
16	243	180	324	210	324	240
* Inch Lbs.						

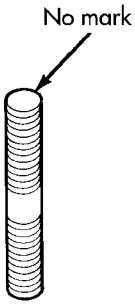
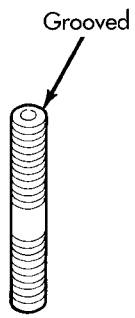
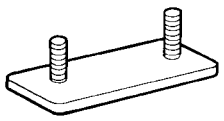
BOLT MARKINGS AND TORQUES - U. S. CUSTOMARY

Bolt Markings	Grade 5		Grade 8	
Bolt Dia.	N·m	Ft. Lbs	N·m	Ft. Lbs
1/4 - 20	10	95*	14	125*
1/4 - 28	10	95*	17	150*
5/16 - 18	22	200*	30	270*
5/16 - 24	26	240*	33	300*
3/8 - 16	40	30	55	40
3/8 - 24	47	35	60	45
7/16 - 14	68	50	88	65
7/16 - 20	74	55	95	70
1/2 - 13	101	75	135	100
1/2 -20	115	85	150	110
9/16 - 12	135	105	182	135
9/16 - 18	155	115	202	150
5/8 - 11	202	150	263	195
5/8 - 18	215	160	284	210
3/4 - 10	230	170	297	220
3/4 - 16	236	175	304	225
7/8 - 14	405	300	540	400
* Inch Lbs.				

FASTENER IDENTIFICATION (Continued)

HOW TO DETERMINE BOLT STRENGTH

	Mark	Class
Hexagon head bolt	 Bolt head No. 4 — 4T; 5 — 5T; 6 — 6T; 7 — 7T; 8 — 8T; 9 — 9T; 10 — 10T; 11 — 11T	
	 No mark	4T
Hexagon flange bolt w/washer hexagon bolt	 No mark	4T
Hexagon head bolt	 Two protruding lines	5T
Hexagon flange bolt w/washer hexagon bolt	 Two protruding lines	6T
Hexagon head bolt	 Three protruding lines	7T
Hexagon head bolt	 Four protruding lines	8T

	Mark	Class
Stud bolt		4T
		6T
Welded bolt		4T

95IN-4

Fig. 6 FASTENER STRENGTH

FASTENER USAGE

DESCRIPTION

DESCRIPTION - FASTENER USAGE

WARNING: USE OF AN INCORRECT FASTENER MAY RESULT IN COMPONENT DAMAGE OR PERSONAL INJURY.

Fasteners and torque specifications references in this Service Manual are identified in metric and SAE format.

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

DESCRIPTION - THREADED HOLE REPAIR

Most stripped threaded holes can be repaired using a Helicoil®. Follow the vehicle or Helicoil® recommendations for application and repair procedures.

METRIC SYSTEM

DESCRIPTION

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

The following chart will assist in converting metric units to equivalent English and SAE units, or vise versa.

CONVERSION FORMULAS AND EQUIVALENT VALUES

MULTIPLY	BY	TO GET	MULTIPLY	BY	TO GET
in-lbs	x 0.11298	= Newton Meters (N·m)	N·m	x 8.851	= in-lbs
ft-lbs	x 1.3558	= Newton Meters (N·m)	N·m	x 0.7376	= ft-lbs
Inches Hg (60° F)	x 3.377	= Kilopascals (kPa)	kPa	x 0.2961	= Inches Hg
psi	x 6.895	= Kilopascals (kPa)	kPa	x 0.145	= psi
Inches	x 25.4	= Millimeters (mm)	mm	x 0.03937	= Inches
Feet	x 0.3048	= Meters (M)	M	x 3.281	= Feet
Yards	x 0.9144	= Meters	M	x 1.0936	= Yards
mph	x 1.6093	= Kilometers/Hr. (Km/h)	Km/h	x 0.6214	= mph
Feet/Sec	x 0.3048	= Meters/Sec (M/S)	M/S	x 3.281	= Feet/Sec
mph	x 0.4470	= Meters/Sec (M/S)	M/S	x 2.237	= mph
Kilometers/Hr. (Km/h)	x 0.27778	= Meters/Sec (M/S)	M/S	x 3.600	Kilometers/Hr. (Km/h)

COMMON METRIC EQUIVALENTS

1 inch = 25 Millimeters	1 Cubic Inch = 16 Cubic Centimeters
1 Foot = 0.3 Meter	1 Cubic Foot = 0.03 Cubic Meter
1 Yard = 0.9 Meter	1 Cubic Yard = 0.8 Cubic Meter
1 Mile = 1.6 Kilometers	

Refer to the Metric Conversion Chart to convert torque values listed in metric Newton- meters (N·m). Also, use the chart to convert between millimeters (mm) and inches (in.) (Fig. 7).

METRIC SYSTEM (Continued)

in-lbs to N•m

in- lb	N•m	in-lb	N•m	in-lb	N•m	in-lb	N•m	in-lb	N•m
2	.2260	42	4.7453	82	9.2646	122	13.7839	162	18.3032
4	.4519	44	4.9713	84	9.4906	124	14.0099	164	18.5292
6	.6779	46	5.1972	86	9.7165	126	14.2359	166	18.7552
8	.9039	48	5.4232	88	9.9425	128	14.4618	168	18.9811
10	1.1298	50	5.6492	90	10.1685	130	14.6878	170	19.2071
12	1.3558	52	5.8751	92	10.3944	132	14.9138	172	19.4331
14	1.5818	54	6.1011	94	10.6204	134	15.1397	174	19.6590
16	1.8077	56	6.3270	96	10.8464	136	15.3657	176	19.8850
18	2.0337	58	6.5530	98	11.0723	138	15.5917	178	20.1110
20	2.2597	60	6.7790	100	11.2983	140	15.8176	180	20.3369
22	2.4856	62	7.0049	102	11.5243	142	16.0436	182	20.5629
24	2.7116	64	7.2309	104	11.7502	144	16.2696	184	20.7889
26	2.9376	66	7.4569	106	11.9762	146	16.4955	186	21.0148
28	3.1635	68	7.6828	108	12.2022	148	16.7215	188	21.2408
30	3.3895	70	7.9088	110	12.4281	150	16.9475	190	21.4668
32	3.6155	72	8.1348	112	12.6541	152	17.1734	192	21.6927
34	3.8414	74	8.3607	114	12.8801	154	17.3994	194	21.9187
36	4.0674	76	8.5867	116	13.1060	156	17.6253	196	22.1447
38	4.2934	78	8.8127	118	13.3320	158	17.8513	198	22.3706
40	4.5193	80	9.0386	120	13.5580	160	18.0773	200	22.5966

N•m to in-lbs

N•m	in-lb	N•m	in-lb	N•m	in-lb	N•m	in-lb	N•m	in-lb
.2	1.7702	4.2	37.1747	8.2	72.5792	12.2	107.9837	16.2	143.3882
.4	3.5404	4.4	38.9449	8.4	74.3494	12.4	109.7539	16.4	145.1584
.6	5.3107	4.6	40.7152	8.6	76.1197	12.6	111.5242	16.6	146.9287
.8	7.0809	4.8	42.4854	8.8	77.8899	12.8	113.2944	16.8	148.6989
1	8.8511	5	44.2556	9	79.6601	13	115.0646	17	150.4691
1.2	10.6213	5.2	46.0258	9.2	81.4303	13.2	116.8348	17.2	152.2393
1.4	12.3916	5.4	47.7961	9.4	83.2006	13.4	118.6051	17.4	154.0096
1.6	14.1618	5.6	49.5663	9.6	84.9708	13.6	120.3753	17.6	155.7798
1.8	15.9320	5.8	51.3365	9.8	86.7410	13.8	122.1455	17.8	157.5500
2	17.7022	6	53.1067	10	88.5112	14	123.9157	18	159.3202
2.2	19.4725	6.2	54.8770	10.2	90.2815	14.2	125.6860	18.5	163.7458
2.4	21.2427	6.4	56.6472	10.4	92.0517	14.4	127.4562	19	168.1714
2.6	23.0129	6.6	58.4174	10.6	93.8219	14.6	129.2264	19.5	172.5970
2.8	24.7831	6.8	60.1876	10.8	95.5921	14.8	130.9966	20	177.0225
3	26.5534	7	61.9579	11	97.3624	15	132.7669	20.5	181.4480
3.2	28.3236	7.2	63.7281	11.2	99.1326	15.2	134.5371	21	185.8736
3.4	30.0938	7.4	65.4983	11.4	100.9028	15.4	136.3073	22	194.7247
3.6	31.8640	7.6	67.2685	11.6	102.6730	15.6	138.0775	23	203.5759
3.8	33.6342	7.8	69.0388	11.8	104.4433	15.8	139.8478	24	212.4270
4	35.4045	8	70.8090	12	106.2135	16	141.6180	25	221.2781

ft-lbs to N•m

ft-lb	N•m	ft-lb	N•m	ft-lb	N•m	ft-lb	N•m	ft-lb	N•m
1	1.3558	21	28.4722	41	55.5885	61	82.7049	81	109.8212
2	2.7116	22	29.8280	42	56.9444	62	84.0607	82	111.1770
3	4.0675	23	31.1838	43	58.3002	63	85.4165	83	112.5328
4	5.4233	24	32.5396	44	59.6560	64	86.7723	84	113.8888
5	6.7791	25	33.8954	45	61.0118	65	88.1281	85	115.2446
6	8.1349	26	35.2513	46	62.3676	66	89.4840	86	116.6004
7	9.4907	27	36.6071	47	63.7234	67	90.8398	87	117.9562
8	10.8465	28	37.9629	48	65.0793	68	92.1956	88	119.3120
9	12.2024	29	39.3187	49	66.4351	69	93.5514	89	120.6678
10	13.5582	30	40.6745	50	67.7909	70	94.9073	90	122.0236
11	14.9140	31	42.0304	51	69.1467	71	96.2631	91	123.3794
12	16.2698	32	43.3862	52	70.5025	72	97.6189	92	124.7352
13	17.6256	33	44.7420	53	71.8583	73	98.9747	93	126.0910
14	18.9815	34	46.0978	54	73.2142	74	100.3316	94	127.4468
15	20.3373	35	47.4536	55	74.5700	75	101.6862	95	128.8026
16	21.6931	36	48.8094	56	75.9258	76	103.0422	96	130.1586
17	23.0489	37	50.1653	57	77.2816	77	104.3980	97	131.5144
18	24.4047	38	51.5211	58	78.6374	78	105.7538	98	132.8702
19	25.7605	39	52.8769	59	79.9933	79	107.1196	99	134.2260
20	27.1164	40	54.2327	60	81.3491	80	108.4654	100	135.5820

N•m to ft-lbs

N•m	ft-lb	N•m	ft-lb	N•m	ft-lb	N•m	ft-lb	N•m	ft-lb
1	.7376	21	15.9888	41	30.2400	61	44.9913	81	59.7425
2	1.4751	22	16.2264	42	30.9776	62	45.7289	82	60.4801
3	2.2127	23	16.9639	43	31.7152	63	46.4664	83	61.2177
4	2.9502	24	17.7015	44	32.4527	64	47.2040	84	61.9552
5	3.6878	25	18.4391	45	33.1903	65	47.9415	85	62.6928
6	4.4254	26	19.1766	46	33.9279	66	48.6791	86	63.4303
7	5.1629	27	19.9142	47	34.6654	67	49.4167	87	64.1679
8	5.9005	28	20.6517	48	35.4030	68	50.1542	88	64.9545
9	6.6381	29	21.3893	49	36.1405	69	50.8918	89	65.6430
10	7.3756	30	22.1269	50	36.8781	70	51.6293	90	66.3806
11	8.1132	31	22.8644	51	37.6157	71	52.3669	91	67.1181
12	8.8507	32	23.6020	52	38.3532	72	53.1045	92	67.8557
13	9.5883	33	24.3395	53	39.0908	73	53.8420	93	68.5933
14	10.3259	34	25.0771	54	39.8284	74	54.5720	94	69.3308
15	11.0634	35	25.8147	55	40.5659	75	55.3172	95	70.0684
16	11.8010	36	26.5522	56	41.3035	76	56.0547	96	70.8060
17	12.5386	37	27.2898	57	42.0410	77	56.7923	97	71.5435
18	13.2761	38	28.0274	58	42.7786	78	57.5298	98	72.2811
19	14.0137	39	28.7649	59	43.5162	79	58.2674	99	73.0187
20	14.7512	40	29.5025	60	44.2537	80	59.0050	100	73.7562

in. to mm

in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
.01	.254	.21	5.334	.41	10.414	.61	15.494	.81	20.574
.02	.508	.22	5.588	.42	10.668	.62	15.748	.82	20.828
.03	.762	.23	5.842	.43	10.922	.63	16.002	.83	21.082
.04	1.016	.24	6.096	.44	11.176	.64	16.256	.84	21.336
.05	1.270	.25	6.350	.45	11.430	.65	16.510	.85	21.590
.06	1.524	.26	6.604	.46	11.684	.66	16.764	.86	21.844
.07	1.778	.27	6.858	.47	11.938	.67	17.018	.87	22.098
.08	2.032	.28	7.112	.48	12.192	.68	17.272	.88	22.352
.09	2.286	.29	7.366	.49	12.446	.69	17.526	.89	22.606
.10	2.540	.30	7.620	.50	12.700	.70	17.780	.90	22.860
.11	2.794	.31	7.874	.51	12.954	.71	18.034	.91	23.114
.12	3.048	.32	8.128	.52	13.208	.72	18.288	.92	23.368
.13	3.302	.33	8.382	.53	13.462	.73	18.542	.93	23.622
.14	3.556	.34	8.636	.54	13.716	.74	18.796	.94	23.876
.15	3.810	.35	8.890	.55	13.970	.75	19.050	.95	24.130
.16	4.064	.36	9.144	.56	14.224	.76	19.304	.96	24.384
.17	3.318	.37	9.398	.57	14.478	.77	19.558	.97	24.638
.18	4.572	.38	9.652	.58	14.732	.78	19.812	.98	24.892
.19	4.826	.39	9.906	.59	14.986	.79	20.066	.99	25.146
.20	5.080	.40	10.160	.60	15.240	.80	20.320	1.00	25.400

mm to in.

mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
.01	.00039	.21	.00827	.41	.01614	.61	.02402	.81	.03189
.02	.00079	.22	.00866	.42	.01654	.62	.02441	.82	.03228
.03	.00118	.23	.00906	.43	.01693	.63	.02480	.83	.03268
.04	.00157	.24	.00945	.44	.01732	.64	.02520	.84	.03307
.05	.00197	.25	.00984	.45	.01772	.65	.02559	.85	.03346
.06	.00236	.26	.01024	.46	.01811	.66	.02598	.86	.03386
.07	.00276	.27	.01063	.47	.01850	.67	.02638	.87	.03425
.08	.00315	.28	.01102	.48	.01890	.68	.02677	.88	.03465
.09	.00354	.29	.01142	.49	.01929	.69	.02717	.89	.03504
.10	.00394	.30	.01181	.50	.01969	.70	.02756	.90	.03543
.11	.00433	.31	.01220	.51	.02008	.71	.02795	.91	.03583
.12	.00472	.32	.01260	.52	.02047	.72	.02835	.92	.03622
.13	.00512	.33	.01299	.53	.02087	.73	.02874	.93	.03661
.14	.00551	.34	.01339	.54	.02126	.74	.02913	.94	.03701
.15	.00591	.35	.01378	.55	.02165	.75	.02953	.95	.03740
.16	.00630	.36	.01417	.56	.02205	.76	.02992	.96	.03780
.17	.00669	.37	.01457	.57	.02244	.77	.03032	.97	.03819
.18	.00709	.38	.01496	.58	.02283	.78	.03071	.98	.03858
.19	.00748	.39	.01535	.59	.02323	.79	.03110	.99	.03898
.20	.00787	.40	.01575	.60	.02362	.80	.03150	1.00	.03937

J901N-10

Fig. 7 METRIC CONVERSION CHART

TORQUE REFERENCES

DESCRIPTION

Individual Torque Charts appear within many or the Groups. Refer to the Standard Torque Specifications Chart for torque references not listed in the individual torque charts (Fig. 8).

SPECIFIED TORQUE FOR STANDARD BOLTS

Class	Diameter mm	Pitch mm	Specified torque					
			Hexagon head bolt			Hexagon flange bolt		
			N•m	kgf-cm	ft-lbf	N•m	kgf-cm	ft-lbf
4T	6	1	5	55	48 in.-lbf	6	60	52 in.-lbf
	8	1.25	12.5	130	9	14	145	10
	10	1.25	26	260	19	29	290	21
	12	1.25	47	480	35	53	540	39
	14	1.5	74	760	55	84	850	61
	16	1.5	115	1,150	83	—	—	—
5T	6	1	6.5	65	56 in.-lbf	7.5	75	65 in.-lbf
	8	1.25	15.5	160	12	17.5	175	13
	10	1.25	32	330	24	36	360	26
	12	1.25	59	600	43	65	670	48
	14	1.5	91	930	67	100	1,050	76
	16	1.5	140	1,400	101	—	—	—
6T	6	1	8	80	69 in.-lbf	9	90	78 in.-lbf
	8	1.25	19	195	14	21	210	15
	10	1.25	39	400	29	44	440	32
	12	1.25	71	730	53	80	810	59
	14	1.5	110	1,100	80	125	1,250	90
	16	1.5	170	1,750	127	—	—	—
7T	6	1	10.5	110	8	12	120	9
	8	1.25	25	260	19	28	290	21
	10	1.25	52	530	38	58	590	43
	12	1.25	95	970	70	105	1,050	76
	14	1.5	145	1,500	108	165	1,700	123
	16	1.5	230	2,300	166	—	—	—
8T	8	1.25	29	300	22	33	330	24
	10	1.25	61	620	45	68	690	50
	12	1.25	110	1,100	80	120	1,250	90
9T	8	1.25	34	340	25	37	380	27
	10	1.25	70	710	51	78	790	57
	12	1.25	125	1,300	94	140	1,450	105
10T	8	1.25	38	390	28	42	430	31
	10	1.25	78	800	58	88	890	64
	12	1.25	140	1,450	105	155	1,600	116
11T	8	1.25	42	430	31	47	480	35
	10	1.25	87	890	64	97	990	72
	12	1.25	155	1,600	116	175	1,800	130

Fig. 8 TORQUE SPECIFICATIONS

LUBRICATION & MAINTENANCE

TABLE OF CONTENTS

INTERNATIONAL SYMBOLS

DESCRIPTION

DaimlerChrysler Corporation uses international symbols to identify engine compartment lubricant and fluid inspection and fill locations (Fig. 1).

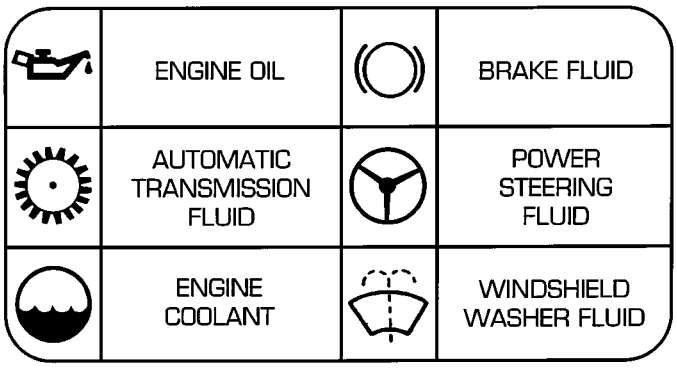


Fig. 1 INTERNATIONAL SYMBOLS

PARTS & LUBRICANT RECOMMENDATION

DESCRIPTION

LUBRICANT RECOMMENDATIONS

Chassis

Component	Fluid, Lubricant, or Genuine Part
Steering Gear & Linkage, Ball Joints, Prop Shafts & Yokes, Wheel Bearings	Mopar® Multi-Purpose Grease NLGI Grade 2 EP, GC-LB

PARTS & LUBRICANT RECOMMENDATION (Continued)

Body

Component	Fluid, Lubricant, or Genuine Part
Hinges:	
Door And Hood	Mopar® Engine Oil
Liftgate	Mopar® Multi-Purpose Grease NLGI Grade 2 EP, GC-LB
Latches:	
Door, Hood/Safety Catch, Liftgate	Mopar® Multi-Purpose Grease NLGI Grade 2 EP, GC-LB
Seat Regulator & Track	Mopar® Multi-Purpose Grease NLGI Grade 2 EP, GC-LB
Window System Components	Mopar® Spray White Lubricant
Lock Cylinders	Mopar® Lock Cylinder Lubricant
Parking Brake Mechanism	Mopar® Wheel Bearing Grease NLGI Grade 1, GC-LBB
Soft Top	Mopar® Soft Top Zipper Cleaner & Lubricant

FLUID TYPES

When service is required, DaimlerChrysler Corporation recommends that only Mopar® brand parts, lubricants and chemicals be used. Mopar® provides the best engineered products for servicing DaimlerChrysler Corporation vehicles.

Only lubricants bearing designations defined by the following organization should be used to service a Chrysler Corporation vehicle.

- Society of Automotive Engineers (SAE)
- American Petroleum Institute (API) (Fig. 2)
- National Lubricating Grease Institute (NLGI)

API QUALITY CLASSIFICATION

This symbol on the front of an oil container means that the oil has been certified by the American Petroleum Institute (API) to meet all the lubrication requirements specified by DaimlerChrysler Corporation.

9400-9

Fig. 2 API Symbol

GEAR LUBRICANTS

SAE ratings also apply to multigrade gear lubricants. In addition, API classification defines the lubricants usage. Such as API GL-5 and SAE 75W-90.

FLUID TYPES

DESCRIPTION

ENGINE OIL

WARNING: NEW OR USED ENGINE OIL CAN BE IRRITATING TO THE SKIN. AVOID PROLONGED OR REPEATED SKIN CONTACT WITH ENGINE OIL. CONTAMINANTS IN USED ENGINE OIL, CAUSED BY INTERNAL COMBUSTION, CAN BE HAZARDOUS TO YOUR HEALTH. THOROUGHLY WASH EXPOSED SKIN WITH SOAP AND WATER. DO NOT WASH SKIN WITH GASOLINE, DIESEL FUEL, THINNER, OR SOLVENTS, HEALTH PROBLEMS CAN RESULT. DO NOT POLLUTE, DISPOSE OF USED ENGINE OIL PROPERLY. CONTACT YOUR DEALER OR GOVERNMENT AGENCY FOR LOCATION OF COLLECTION CENTER IN YOUR AREA.

Only lubricants bearing designations defined by the following organization should be used.

- Society of Automotive Engineers (SAE)
- American Petroleum Institute (API)
- National Lubricating Grease Institute (NLGI)
- Association des Constructeurs Européens d' Automobiles (European Automobile Manufacturers Association) (ACEA)

API SERVICE GRADE CERTIFIED

Use an engine oil that is API Certified. MOPAR® provides engine oils, that meet or exceed this requirement.

FLUID TYPES (Continued)

SAE VISCOSITY

An SAE viscosity grade is used to specify the viscosity of engine oil. Use only engine oils with multiple viscosities such as 5W-30 or 10W-30. These are specified with a dual SAE viscosity grade which indicates the cold-to-hot temperature viscosity range. Select an engine oil that is best suited to your particular temperature range and variation (Fig. 3).

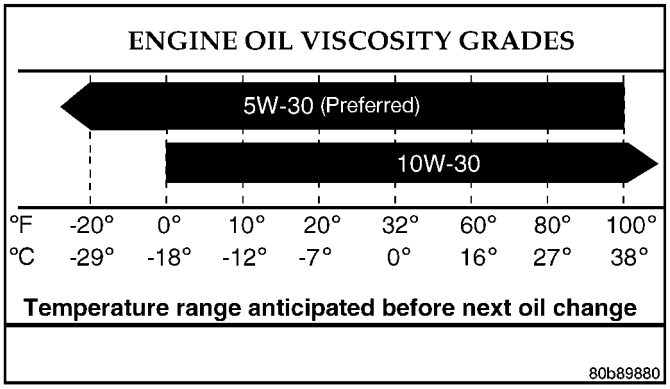


Fig. 3 Temperature/Engine Oil Viscosity

ACEA Categories

For countries that use the ACEA European Oil Categories for Service Fill Oils, use engine oils that meet the requirements of ACEA A1/B1, A2/B2, or A3/B3.

ENERGY CONSERVING OIL

An Energy Conserving type oil is recommended for gasoline engines. The designation of ENERGY CONSERVING is located on the label of an engine oil container.

CONTAINER IDENTIFICATION

Standard engine oil identification notations have been adopted to aid in the proper selection of engine oil. The identifying notations are located on the front label of engine oil plastic bottles and the top of engine oil cans (Fig. 4).

This symbol means that the oil has been certified by the American Petroleum Institute (API). DaimlerChrysler only recommend API Certified engine oils. Use Mopar® engine oil or equivalent.

9400-9

Fig. 4 API Certification Mark

FUEL REQUIREMENTS

Your engine is designed to meet all emissions regulations and provide excellent fuel economy and performance when using high quality unleaded “regular” gasoline having an octane rating of 87. The routine use of premium gasoline is not recommended. Under normal conditions the use of premium fuel will not provide a benefit over high quality regular gasolines and in some circumstances may result in poorer performance.

Light spark knock at low engine speeds is not harmful to your engine. However, continued heavy spark knock at high speeds can cause damage and immediate service is required. Engine damage resulting from operation with a heavy spark knock may not be covered by the new vehicle warranty.

Poor quality gasoline can cause problems such as hard starting, stalling and hesitations. If you experience these symptoms, try another brand of gasoline before considering service for the vehicle.

Over 40 auto manufacturers world-wide have issued and endorsed consistent gasoline specifications (the Worldwide Fuel Charter, WWFC) to define fuel properties necessary to deliver enhanced emissions, performance and durability for your vehicle. We recommend the use of gasolines that meet the WWFC specifications if they are available.

REFORMULATED GASOLINE

Many areas of the country require the use of cleaner burning gasoline referred to as “reformulated” gasoline. Reformulated gasoline contain oxygenates, and are specifically blended to reduce vehicle emissions and improve air quality.

We strongly support the use of reformulated gasoline. Properly blended reformulated gasoline will provide excellent performance and durability for the engine and fuel system components.

GASOLINE/OXYGENATE BLENDS

Some fuel suppliers blend unleaded gasoline with oxygenates such as 10% ethanol, MTBE, and ETBE. Oxygenates are required in some areas of the country during the winter months to reduce carbon monoxide emissions. Fuels blended with these oxygenates may be used in your vehicle.

CAUTION: DO NOT use gasoline containing METHANOL. Gasoline containing methanol may damage critical fuel system components.

MMT IN GASOLINE

MMT is a manganese-containing metallic additive that is blended into some gasoline to increase octane. Gasoline blended with MMT provide no performance

FLUID TYPES (Continued)

advantage beyond gasoline of the same octane number without MMT. Gasoline blended with MMT reduce spark plug life and reduce emission system performance in some vehicles. We recommend that gasolines free of MMT be used in your vehicle. The MMT content of gasoline may not be indicated on the gasoline pump; therefore, you should ask your gasoline retailer whether or not his/her gasoline contains MMT.

It is even more important to look for gasoline without MMT in Canada because MMT can be used at levels higher than allowed in the United States. MMT is prohibited in Federal and California reformulated gasoline.

SULFUR IN GASOLINE

If you live in the northeast United States, your vehicle may have been designed to meet California low emission standards with Cleaner-Burning California reformulated gasoline with low sulfur. If such fuels are not available in states adopting California emission standards, your vehicles will operate satisfactorily on fuels meeting federal specifications, but emission control system performance may be adversely affected. Gasoline sold outside of California is permitted to have higher sulfur levels which may affect the performance of the vehicle's catalytic converter. This may cause the Malfunction Indicator Lamp (MIL), Check Engine or Service Engine Soon light to illuminate. We recommend that you try a different brand of unleaded gasoline having lower sulfur to determine if the problem is fuel related prior to returning your vehicle to an authorized dealer for service.

CAUTION: If the Malfunction Indicator Lamp (MIL), Check Engine or Service Engine Soon light is flashing, immediate service is required; see on-board diagnostics system section.

MATERIALS ADDED TO FUEL

All gasoline sold in the United States and Canada are required to contain effective detergent additives. Use of additional detergents or other additives is not needed under normal conditions.

FUEL SYSTEM CAUTIONS

CAUTION: Follow these guidelines to maintain your vehicle's performance:

- The use of leaded gas is prohibited by Federal law. Using leaded gasoline can impair engine performance, damage the emission control system, and could result in loss of warranty coverage.
- An out-of-tune engine, or certain fuel or ignition malfunctions, can cause the catalytic converter to overheat. If you notice a pungent burning odor or some light smoke, your engine may be out of tune or malfunctioning and may require immediate service. Contact your dealer for service assistance.
- When pulling a heavy load or driving a fully loaded vehicle when the humidity is low and the temperature is high, use a premium unleaded fuel to help prevent spark knock. If spark knock persists, lighten the load, or engine piston damage may result.
- The use of fuel additives which are now being sold as octane enhancers is not recommended. Most of these products contain high concentrations of methanol. Fuel system damage or vehicle performance problems resulting from the use of such fuels or additives is not the responsibility of DaimlerChrysler Corporation and may not be covered under the new vehicle warranty.

NOTE: Intentional tampering with emissions control systems can result in civil penalties being assessed against you.

HOAT COOLANT

WARNING: ANTIFREEZE IS AN ETHYLENE-GLYCOL BASE COOLANT AND IS HARMFUL IF SWALLOWED OR INHALED. IF SWALLOWED, DRINK TWO GLASSES OF WATER AND INDUCE VOMITING. IF INHALED, MOVE TO FRESH AIR AREA. SEEK MEDICAL ATTENTION IMMEDIATELY. DO NOT STORE IN OPEN OR UNMARKED CONTAINERS. WASH SKIN AND CLOTHING THOROUGHLY AFTER COMING IN CONTACT WITH ETHYLENE-GLYCOL. KEEP OUT OF REACH OF CHILDREN. DISPOSE OF GLYCOL BASE COOLANT PROPERLY, CONTACT YOUR DEALER OR GOVERNMENT AGENCY FOR LOCATION OF COLLECTION CENTER IN YOUR AREA. DO NOT OPEN A COOLING SYSTEM WHEN THE ENGINE IS AT OPERATING TEMPERATURE OR HOT UNDER PRESSURE, PERSONAL INJURY CAN RESULT. AVOID RADIATOR COOLING FAN WHEN ENGINE COMPARTMENT RELATED SERVICE IS PERFORMED, PERSONAL INJURY CAN RESULT.

CAUTION: Use of Propylene-Glycol based coolants is not recommended, as they provide less freeze protection and less corrosion protection.

The cooling system is designed around the coolant. The coolant must accept heat from engine metal, in the cylinder head area near the exhaust valves and engine block. Then coolant carries the heat to the

FLUID TYPES (Continued)

radiator where the tube/fin radiator can transfer the heat to the air.

The use of aluminum cylinder blocks, cylinder heads, and water pumps requires special corrosion protection. Mopar® Antifreeze/Coolant, 5 Year/100,000 Mile Formula (MS-9769), or the equivalent ethylene-glycol base coolant with organic corrosion inhibitors (called HOAT, for Hybrid Organic Additive Technology) is recommended. This coolant offers the best engine cooling without corrosion when mixed with 50% ethylene-glycol and 50% distilled water to obtain a freeze point of -37°C (-35°F). If it loses color or becomes contaminated, drain, flush, and replace with fresh properly mixed coolant solution.

CAUTION: Mopar® Antifreeze/Coolant, 5 Year/100,000 Mile Formula (MS-9769) may not be mixed with any other type of antifreeze. Mixing of coolants other than specified (non-HOAT or other HOAT), may result in engine damage that may not be covered under the new vehicle warranty, and decreased corrosion protection.

COOLANT PERFORMANCE

The required ethylene-glycol (antifreeze) and water mixture depends upon climate and vehicle operating conditions. The coolant performance of various mixtures follows:

Pure Water- Water can absorb more heat than a mixture of water and ethylene-glycol. This is for purpose of heat transfer only. Water also freezes at a higher temperature and allows corrosion.

100 percent Ethylene-Glycol - The corrosion inhibiting additives in ethylene-glycol need the presence of water to dissolve. Without water, additives form deposits in system. These act as insulation causing temperature to rise to as high as 149°C (300°F). This temperature is hot enough to melt plastic and soften solder. The increased temperature can result in engine detonation. In addition, 100 percent ethylene-glycol freezes at -22°C (-8°F).

50/50 Ethylene-Glycol and Water - Is the recommended mixture, it provides protection against freezing to -37°C (-34°F). The antifreeze concentration **must always** be a minimum of 44 percent, year-round in all climates. If percentage is lower, engine parts may be eroded by cavitation. Maximum protection against freezing is provided with a 68 percent antifreeze concentration, which prevents freezing down to -67.7°C (-90°F). A higher percentage will freeze at a warmer temperature. Also, a higher percentage of antifreeze can cause the engine to overheat because specific heat of antifreeze is lower than that of water.

CAUTION: Richer antifreeze mixtures cannot be measured with normal field equipment and can cause problems associated with 100 percent ethylene-glycol.

COOLANT SELECTION AND ADDITIVES

The use of aluminum cylinder blocks, cylinder heads and water pumps requires special corrosion protection. Only Mopar® Antifreeze/Coolant, 5 Year/100,000 Mile Formula (glycol base coolant with corrosion inhibitors called HOAT, for Hybrid Organic Additive Technology) is recommended. This coolant offers the best engine cooling without corrosion when mixed with 50% distilled water to obtain to obtain a freeze point of -37°C (-35°F). If it loses color or becomes contaminated, drain, flush, and replace with fresh properly mixed coolant solution.

CAUTION: Do not use coolant additives that are claimed to improve engine cooling.

TRANSFER CASE - NV231

Recommended lubricant for the NV231 transfer case is Mopar® ATF +4, Automatic Transmission Fluid.

TRANSFER CASE - NV241

Recommended lubricant for the NV241 transfer case is Mopar® ATF +4, Automatic Transmission Fluid.

AXLE LUBRICATION

NOTE: DiamlerChrysler recommends using Mopar® lubricants or lubricants of equal quality.

FRONT AXLE

- 181 FBI (Model 30) - Mopar® Gear Lubricant 80W-90 (Trailer Towing Mopar® Synthetic Gear Lubricant 75W-140)
- RUBICON 216 FBI (Model 44) - Mopar® Gear Lubricant 80W-90 (Trailer Towing Mopar® Synthetic Gear Lubricant 75W-140)

REAR AXLE

- 194 RBI (Model 35) - Mopar® Gear Lubricant 80W-90 (Trailer Towing Mopar® Synthetic Gear Lubricant 75W-140)
- 194 RBI (Model 35) 4.56 Ratio - 2.4 L Enigne and 42 RLE Automatic Transmission - Mopar® Synthetic Gear Lubricant 75W-140
- 226 RBI (Model 44) - Mopar® Gear Lubricant 80W-90 (Trailer Towing Mopar® Synthetic Gear Lubricant 75W-140)

FLUID TYPES (Continued)

- RUBICON 226 RBI (Model 44) - Mopar® Synthetic Gear Lubricant 75W-140

NOTE: Trac-lok® equipped axles require 118 ml (4 ounces) of Limited Slip Additive in the lubricant.

MANUAL TRANSMISSION

NOTE: DaimlerChrysler recommends using Mopar® lubricants or lubricants of equal quality.

- NSG370 - Mopar® Manual Transmission Lubricant MS-9224

AUTOMATIC TRANSMISSION FLUID

NOTE: Refer to Service Procedures in this group for fluid level checking procedures.

Mopar® ATF +4, Automatic Transmission Fluid is the recommended fluid for DaimlerChrysler automatic transmissions.

Dexron II fluid IS NOT recommended. Clutch chatter can result from the use of improper fluid.

Mopar® ATF +4, Automatic Transmission Fluid when new is red in color. The ATF is dyed red so it can be identified from other fluids used in the vehicle such as engine oil or antifreeze. The red color is not permanent and is not an indicator of fluid condition. As the vehicle is driven, the ATF will begin to look darker in color and may eventually become brown. **This is normal.** ATF+4 also has a unique odor that may change with age. Consequently, odor and color cannot be used to indicate the fluid condition or the need for a fluid change.

FLUID ADDITIVES

DaimlerChrysler strongly recommends against the addition of any fluids to the transmission, other than those automatic transmission fluids listed above. Exceptions to this policy are the use of special dyes to aid in detecting fluid leaks.

Various “special” additives and supplements exist that claim to improve shift feel and/or quality. These additives and others also claim to improve converter clutch operation and inhibit overheating, oxidation, varnish, and sludge. These claims have not been supported to the satisfaction of DaimlerChrysler and these additives **must not be used.** The use of transmission “sealers” should also be avoided, since they may adversely affect the integrity of transmission seals.

POWER STEERING FLUID

The recommended fluid for the power steering system is Mopar® ATF +4.

Mopar® ATF+4, when new is red in color. The ATF+4 is dyed red so it can be identified from other fluids used in the vehicle such as engine oil or antifreeze. The red color is not permanent and is not an indicator of fluid condition, As the vehicle is driven, the ATF+4 will begin to look darker in color and may eventually become brown. **THIS IS NORMAL.** ATF+4 also has a unique odor that may change with age. Consequently, odor and color cannot be used to indicate the fluid condition or the need for a fluid change.

OPERATION - AUTOMATIC TRANSMISSION FLUID

The automatic transmission fluid is selected based upon several qualities. The fluid must provide a high level of protection for the internal components by providing a lubricating film between adjacent metal components. The fluid must also be thermally stable so that it can maintain a consistent viscosity through a large temperature range. If the viscosity stays constant through the temperature range of operation, transmission operation and shift feel will remain consistent. Transmission fluid must also be a good conductor of heat. The fluid must absorb heat from the internal transmission components and transfer that heat to the transmission case.

FLUID CAPACITIES

SPECIFICATIONS - FLUID CAPACITIES

DESCRIPTION	SPECIFICATION
FUEL TANK	19 U.S. Gallons (71.9 Liters)****
ENGINE OIL	
Engine Oil - with Filter - 2.4L	3.8 L (4.0 qts.)
Engine Oil - with Filter - 4.0L	5.7 L (6.0 qts.)
ENGINE COOLANT	
Cooling System - 2.4 L	8.5 L (9.0 qts.)
Cooling System - 4.0 L	9.9 L (10.5 qts.)
POWER STEERING SYSTEM	
Power steering fluid capacities are dependent on engine/chassis options as well as steering gear/cooler options. Depending on type and size of internal cooler, length and inside diameter of cooler lines, or use of an auxiliary cooler, these capacities may vary. Refer to 19, Steering for proper fill and bleed procedures.	
AUTOMATIC TRANSMISSION	
Service Fill - 42RLE	3.8 L (8.0 pts)
O-haul Fill - 42RLE	8.3 L (17.6 pts.)
Dry fill capacity Depending on type and size of internal cooler, length and inside diameter of cooler lines, or use of an auxiliary cooler, these figures may vary. (Refer to 21 - TRANSMISSION/AUTOMATIC - 42RLE/FLUID - STANDARD PROCEDURE)	
TRANSFER CASE	
NV231	1.0 L (2.2 pts.)
NV241	2.0 L (4.2 pts.)
MANUAL TRANSMISSION	
NSG 370 Approximate dry fill or fill to bottom edge of the fill plug hole.	1.5 L (3.17 pts.)
FRONT AXLE ± .03 L (1 oz.)	
181 FBI (Model 30)	1.2 L (2.5 pts.)
216 RBI (Model 44)	1.89 L (4.0 pts.)
REAR AXLE ± .03 L (1 oz.)	
194 RBI (Model 35)	1.66 L (3.5 pts.)*
216 RBI (Model 44)	1.89 L (4.0 pts.)*
* With Trac-lok add 118 ml (4.0 oz.) of Limited Slip Additive.	
****Nominal refill capacities are shown. A variation may be observed from vehicle to vehicle due to manufacturing tolerance and refill procedure.	

MAINTENANCE SCHEDULES

DESCRIPTION

MAINTENANCE SCHEDULES

There are two maintenance schedules that show the **required** service for your vehicle.

First is Schedule **"B"**. It is for vehicles that are operated under the conditions that are listed below and at the beginning of the schedule.

- Day or night temperatures are below 32°F (0°C)
- Stop and go driving
- Excessive engine idling
- Driving in dusty conditions
- Short trips of less than 10 miles (16.2 km)
- More than 50% of your driving is at sustained high speeds during hot weather, above 90°F (32°C)
- Trailer towing
- Taxi, police, or delivery service (commercial service)
- Off-road or desert driving
- **If equipped for and operated with E-85 (ethanol) fuel.**

NOTE: If ANY of these apply to you then change your engine oil every 3,000 miles (5 000 km) or 3 months, whichever comes first and follow "Schedule B" of the "Maintenance Schedules" section of this manual.

NOTE: If ANY of these apply to you then flush and replace your engine coolant/anti-freeze every 102,000 miles (163 000 km) or 60 months, whichever comes first, and follow "Schedule B" of the "Maintenance Schedules" section of this manual.

NOTE: Most vehicles are operated under the conditions listed for Schedule "B."

Second is Schedule **"A"**. It is for vehicles that are not operated under any of the conditions listed under Schedule "B."

Use the schedule that best describes your driving conditions. Where time and mileage are listed, follow the interval that occurs first.

CAUTION: Failure to perform the required maintenance items may result in damage to the vehicle.

MAINTENANCE SCHEDULES (Continued)

At Each Stop for Fuel

- Check the engine oil level about 5 minutes after a fully warmed engine is shut off. Checking the oil level while the vehicle is on level ground will improve the accuracy of the oil level reading. Add oil only when the level is at or below the ADD or MIN mark.
- Check the windshield washer solvent, add as required.

Once a Month

- Check the tire pressure and look for unusual wear or damage.
- Inspect the battery and clean and tighten the terminals as required.
- Check the fluid levels of the coolant reservoir, brake master cylinder, power steering, and transmission, and add as needed.
- Check all lights and all other electrical items for correct operation.

At Each Oil Change

- Change the engine oil filter.
- Inspect the exhaust system.
- Inspect brake hoses.
- Check the coolant level, hoses, and clamps.
- Rotate the tires.
- Inspect manual transmission fluid level - if equipped.
- After completion of off-road operation, the underside of the vehicle should be thoroughly inspected. Examine threaded fasteners for looseness.

Schedule "B"

Follow this schedule if you usually operate your vehicle under one or more of the following conditions.

- Day or night temperatures are below 0°C (32°F)
- Stop and go driving
- Excessive engine idling
- Driving in dusty conditions
- Short trips of less than 16.2 km (10 miles)
- More than 50% of your driving is at sustained high speeds during hot weather, above 32°C (90°F)
- Trailer towing
- Taxi, police, or delivery service (commercial service)
- Off-road or desert driving
- **If equipped for and operated with E-85 (ethanol) fuel.**

NOTE: If ANY of these apply to you then change your engine oil every 3,000 miles (5 000 km) or 3 months, whichever comes first and follow "Schedule B" of the "Maintenance Schedules" section of this manual.

NOTE: If ANY of these apply to you then flush and replace your engine coolant/anti-freeze every 102,000 miles (163 000 km) or 60 months, whichever comes first, and follow "Schedule B" of the "Maintenance Schedules" section of this manual.

Miles (Kilometers)	**3,000 (5 000)**	**6,000 (10 000)**	**9,000 (14 000)**	**12,000 (19 000)**	**15,000 (24 000)**
Change the engine oil and engine oil filter, if not replaced at 3 months.	X	X	X	X	X
Rotate the tires.		X		X	
Inspect the engine air filter element, replace if necessary.					X
Lubricate the steering linkage tie rod ends.	X	X	X	X	X
Lubricate the steering and suspension ball joints.		X		X	
Inspect the brake linings.				X	
Drain and refill the front and rear axle fluid‡				X	

Thank you very much for your reading.

Please click here and go back to the website.

Then, you can download the complete manual instantly.

No waiting.

MAINTENANCE SCHEDULES (Continued)

Miles	**18,000**	**21,000**	**24,000**	**27,000**	**30,000**
(Kilometers)	**(29 000)**	**(34 000)**	**(38 000)**	**(43 000)**	**(48 000)**
Change the engine oil and engine oil filter, if not replaced at 3 months.	X	X	X	X	X
Rotate the tires.	X		X		X
Inspect the engine air filter element, replace if necessary.					X
Inspect the PCV Valve, and replace if necessary. ◇					X
Replace the spark plugs.					X
Lubricate the steering linkage tie rod ends.	X	X	X	X	X
Lubricate the steering and suspension ball joints.	X		X		X
Inspect the brake linings.			X		
Drain and refill the front and rear axle fluid‡			X		
Inspect the transfer case fluid, add if necessary.					X

Miles	**33,000**	**36,000**	**39,000**	**42,000**	**45,000**
(Kilometers)	**(53 000)**	**(58 000)**	**(62 000)**	**(67 000)**	**(72 000)**
Change the engine oil and engine oil filter, if not replaced at 3 months.	X	X	X	X	X
Rotate the tires.		X		X	
Inspect the engine air filter element, replace if necessary.					X
Lubricate the steering linkage tie rod ends.	X	X	X	X	X
Lubricate the steering and suspension ball joints.		X		X	
Inspect the brake linings.		X			
Drain and refill the front and rear axle fluid‡		X			
Inspect the drive belt and replace as needed.					X

MAINTENANCE SCHEDULES (Continued)

Miles	**48,000**	**51,000**	**54,000**	**57,000**	**60,000**
(Kilometers)	**(77 000)**	**(82 000)**	**(86 000)**	**(91 000)**	**(96 000)**
Change the engine oil and engine oil filter, if not replaced at 3 months.	X	X	X	X	X
Rotate the tires.	X		X		X
Inspect the engine air filter element, replace if necessary.					X
Inspect the PCV Valve, and replace if necessary. ◇					X
Inspect the ignition cables, and replace if necessary (2.4L Only).					X
Replace the spark plugs.					X
Lubricate the steering linkage tie rod ends.	X	X	X	X	X
Lubricate the steering and suspension ball joints.	X		X		X
Inspect the brake linings.	X				X
Drain and refill the front and rear axle fluid‡	X				X
Drain and refill the automatic transmission fluid, and change filter.					X
Inspect the drive belt and replace as needed. Not required if belt was previously.					X
Drain and refill the transfer case fluid.					X
Flush and replace the engine coolant/anti-freeze at 60 months, if not done at 102,000 miles (163 000 km).					X

Miles	**63,000**	**66,000**	**69,000**	**72,000**	**75,000**
(Kilometers)	**(101 000)**	**(106 000)**	**(110 000)**	**(115 000)**	**(120 000)**
Change the engine oil and engine oil filter, if not replaced at 3 months.	X	X	X	X	X
Rotate the tires.		X		X	
Inspect the engine air filter element, replace if necessary.					X
Lubricate the steering linkage tie rod ends.	X	X	X	X	X
Lubricate the steering and suspension ball joints.		X		X	
Inspect the brake linings.				X	
Drain and refill the front and rear axle fluid‡				X	
Inspect the drive belt and replace as needed. Not required if belt was previously replaced.					X