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# INTRODUCTION

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#### PM -

# BODY CODE PLATE

## DESCRIPTION

The Body Code Plate is located in the engine compartment on the plenum behind the right side strut tower. 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 2**

#### DIGITS 1, 2, AND 3

Paint procedure

#### **DIGIT 4**

Open Space

#### DIGITS 5 THROUGH 7

Primary paint

(Refer to 23 - BODY/PAINT - SPECIFICATIONS) for Body Color Codes.

#### **DIGIT 8 AND 9**

**Open Space** 

#### **DIGITS 10 THROUGH 12**

Secondary Paint

#### DIGIT 13 AND 14

Open Space

#### **DIGITS 15 THROUGH 18**

Interior Trim Code

#### DIGIT 19

Open Space

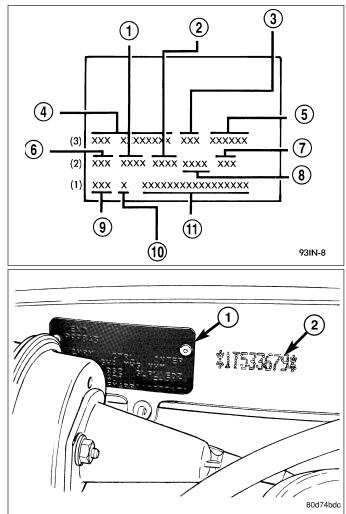
#### DIGITS 20, 21, AND 22

Engine Code

- EJD = 1.6L Four Cylinder 16 Valves SOHC Gasoline
- ECC = 2.0L Four Cylinder 16 Valves DOHC Gasoline
- EDJ = 2.2L Four Cylinder Turbo Diesel Engine
- EDZ = 2.4L Four Cylinder 16 Valves DOHC Gasoline
- EDV = 2.4L Four Cylinder 16 Valves DOHC H.O. Turbo Gasoline

#### DIGIT 23

Open Space



#### – INTRODUCTION 3

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

#### DIGITS 1, 2, AND 3

Transaxle Codes

- DGL = 41TE 4-Speed Electronic Automatic Transaxle
- DD5 = NV T350 5-Speed Manual Transaxle
- DDD = GETRAG 288 5-Speed Manual Transaxle

#### **DIGIT 4**

Open Space

#### **DIGIT 5**

Market Code

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

#### **DIGIT 6**

Open Space

#### **DIGITS 7 THROUGH 23**

Vehicle Identification Number

 (Refer to VEHICLE DATA/VEHICLE INFORMATION/VEHICLE IDENTIFICATION NUMBER - DESCRIPTION) 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 indicate (CTD)

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

PM -

# 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 8.9 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.

#### **Bolt Markings and Torques - Metric**

| Bolt Markings | 8.8 | /8.9     | 1           | 0.9      | 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 | Gra | ade 5       | Gra | ade 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. |     | •       |

|  | Mark  | Class   |             | Mark    | Class      |
|--|---|---|-------------|---------|------------|
| Hexagon<br>head bolt                               | 4<br>5<br>5<br>Bolt 6<br>head No. 7<br>8<br>9<br>10<br>11 | - 5T<br>- 6T<br>- 7T<br>- 8T<br>- 9T<br>- 10T | Stud bolt   | No mark | <b>4</b> T |
|  | No mark   | 4T  |             |         |            |
| Hexagon<br>flange bolt<br>w/washer<br>hexagon bolt | No mark   | 4T  |             | Grooved | бT         |
| Hexagon<br>head bolt                               | Two<br>protruding<br>lines                                | 51  |             |         |            |
| Hexagon<br>flange bolt<br>w/washer<br>hexagon bolt | Two<br>protruding<br>lines                                | бТ  | Welded bolt |         |            |
| Hexagon<br>head bolt                               | Three<br>protruding<br>lines                              | 71  |             |         | 4T         |
| Hexagon<br>head bolt                               | Four<br>protruding<br>lines                               | 87  |             |         |            |
|  |   |   |             |         | 95IN-      |

# **FASTENER USAGE**

### 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.

### THREADED HOLE REPAIR

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

# **INTERNATIONAL SYMBOLS**

## DESCRIPTION

|             | ₽<br>₽           | - <b>Ç</b><br>3      |                    | 5  | 6  |
|-------------|------------------|----------------------|--------------------|----|----|
| 7           | ₹<br>Ţ<br>₽<br>8 | 9                    | <b>\$</b> 5<br>10  | 11 | 12 |
| 13          | 14               | <b>اللہ پڑ</b><br>15 | <b>– – +</b><br>16 | 17 | 18 |
| ((!))<br>19 | ((P))<br>20      | 21                   | 22                 | 23 | 24 |

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

# **METRIC SYSTEM**

### DESCRIPTION

|  | ,   |  | ir   | n-Ibs  | to N•  | m  |   |   |  |  |  |  | N∙n  | n to   | in-lbs   |   |  |   |   |
|--|---|--|--|--|--|--|---|---|--|--|--|--|--|--|--|---|--|---|---|
| in- Ib   | N∙m   | in-lb  | N∙m  | in-lb  | N∙m  | in-lb  | N∙m   | in-lb   | N∙m  | N∙m  | in-lb  | N∙m  | in-lb  | N∙m  | in-lb  | N∙m   | in-lb  | N∙m   | in-lb   |
| 2<br>6<br>8<br>10<br>12<br>14  | .2260<br>.4519<br>.6779<br>.9039<br>1.1298<br>1.3558<br>1.5818<br>1.8077<br>2.0337  | 44<br>46<br>48<br>50<br>52<br>54<br>56<br>58   | 4.7453<br>4.9713<br>5.1972<br>5.4232<br>5.6492<br>5.8751<br>6.1011<br>6.3270<br>6.5530   | 82<br>84<br>86<br>88<br>90<br>92<br>94<br>96<br>98   | 9.2646<br>9.4906<br>9.7165<br>9.9425<br>10.1685<br>10.3944<br>10.6204<br>10.8464<br>11.0723  | 124<br>126<br>128<br>130<br>132<br>134<br>136<br>138   | 13.7839<br>14.0099<br>14.2359<br>14.4618<br>14.6878<br>14.9138<br>15.1397<br>15.3657<br>15.5917   | 164<br>166<br>168<br>170<br>172<br>174<br>176<br>178  | 18.3032<br>18.5292<br>18.7552<br>18.9811<br>19.2071<br>19.4331<br>19.6590<br>19.8850<br>20.1110  | .2<br>.4<br>.6<br>.8<br>1<br>1.2<br>1.4<br>1.6<br>1.8<br>2   | 1.7702<br>3.5404<br>5.3107<br>7.0809<br>8.8511<br>10.6213<br>12.3916<br>14.1618<br>15.9320<br>17.7022  | 4.2<br>4.4<br>4.6<br>4.8<br>5<br>5.2<br>5.4<br>5.6<br>5.8  | 37.1747<br>38.9449<br>40.7152<br>42.4854<br>44.2556<br>46.0258<br>47.7961<br>49.5663<br>51.3365<br>53.1067   | 8.2<br>8.4<br>8.6<br>8.8<br>9<br>9.2<br>9.4<br>9.6<br>9.8<br>10  | 74.3494<br>76.1197<br>77.8899<br>79.6601   | 12.4<br>12.6<br>12.8<br>13<br>13.2<br>13.4<br>13.6<br>13.8  | 107.9837<br>109.7539<br>111.5242<br>113.2944<br>115.0646<br>116.8348<br>118.6051<br>120.3753<br>122.1455<br>123.9157   | 16.4<br>16.6<br>16.8<br>17<br>17.2<br>17.4<br>17.6  | 145.158<br>146.928<br>148.698<br>150.469  |
| 20<br>22<br>24<br>26<br>28<br>30<br>32<br>34<br>36<br>38<br>40   | 2.2597<br>2.4856<br>2.7116<br>2.9376<br>3.1635<br>3.3895<br>3.6155<br>3.8414<br>4.0674<br>4.2934<br>4.5193  | 64<br>68<br>70<br>72<br>74<br>76<br>78   | 7.2309<br>7.4569<br>7.6828<br>7.9088<br>8.1348<br>8.3607<br>8.5867<br>8.8127   | 100<br>102<br>104<br>106<br>108<br>110<br>112<br>114<br>116<br>118<br>120  | 11.2983<br>11.5243<br>11.7502<br>11.9762<br>12.2022<br>12.4281<br>12.6541<br>12.8801<br>13.1060<br>13.3320<br>13.5580  | 142<br>144<br>146<br>148<br>150<br>152<br>154<br>156<br>158  | 15.8176<br>16.0436<br>16.2696<br>16.4955<br>16.7215<br>16.9475<br>17.1734<br>17.3994<br>17.6253<br>17.8513<br>18.0773   | 182<br>184<br>186<br>188<br>190<br>192<br>194<br>196<br>198   | 20.3369<br>20.5629<br>20.7889<br>21.0148<br>21.2408<br>21.4668<br>21.6927<br>21.9187<br>22.1447<br>22.3706<br>22.5966  | 2<br>2.2<br>2.4<br>2.6<br>2.8<br>3<br>3.2<br>3.4<br>3.6<br>3.8<br>4  | 17.7022<br>19.4725<br>21.2427<br>23.0129<br>24.7831<br>26.5534<br>28.3236<br>30.0938<br>31.8640<br>33.6342<br>35.4045  | 6<br>6.2<br>6.4<br>6.6<br>6.8<br>7<br>7.2<br>7.4<br>7.6<br>7.8<br>8  | 54.8770<br>56.6472<br>58.4174<br>60.1876   | 10.2<br>10.4<br>10.6<br>10.8<br>11<br>11.2<br>11.4<br>11.6<br>11.8   | 90.2815<br>92.0517<br>93.8219<br>95.5921<br>97.3624<br>99.1326<br>100.9028<br>102.6730<br>104.4433<br>106.2135   | 14.2<br>14.4<br>14.6<br>14.8<br>15<br>15.2<br>15.4<br>15.6<br>15.8  | 125.6860<br>127.4562<br>129.2264<br>130.9966<br>132.7669<br>134.5371<br>136.3073<br>138.0775<br>139.8478<br>141.6180   | 18.5<br>19<br>19.5<br>20<br>20.5<br>21<br>22<br>23<br>24  | 163.745<br>168.171<br>172.597<br>177.022<br>181.448<br>185.873<br>194.724<br>203.575<br>212.427<br>221.278  |
|  |   |  | ft-  | lbs  | to N∙m   | ו  |   |   |  |  |  |  | N  | l∙m  | to ft-lk   | os  |  |   |   |
| t-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-lb  | N∙m  | ft-lb  | N∙m   | ft-lb  | N∙m   | ft-lb   |
| 9<br>10<br>11<br>12<br>13<br>14<br>15<br>15<br>16<br>17<br>18<br>19  | 1.3558<br>2.7116<br>4.0675<br>5.4233<br>6.7791<br>8.1349<br>9.4907<br>10.8465<br>12.2024<br>13.5582<br>14.9140<br>16.2698<br>17.6256<br>18.9815<br>20.3373<br>21.6931<br>23.0489<br>24.4047<br>25.7605<br>27.1164 | 21<br>22<br>23<br>24<br>25<br>26<br>27<br>28<br>29<br>30<br>31<br>32<br>33<br>34<br>35<br>36<br>37<br>38<br>39<br>40                     | 28.4722<br>29.8280<br>31.1838<br>32.5396<br>33.8954<br>35.2513<br>36.6071<br>37.9629<br>39.3187<br>40.6745<br>42.0304<br>43.3862<br>44.7420<br>46.0978<br>47.4536<br>43.3862<br>44.7420<br>450.1653<br>51.5211<br>52.8769<br>54.2327 | 41<br>42<br>43<br>44<br>45<br>46<br>47<br>48<br>49<br>50<br>51<br>52<br>53<br>54<br>55<br>55<br>55<br>57<br>58<br>59<br>60                             | 55.5885<br>56.9444<br>58.3002<br>59.6550<br>61.0118<br>62.3676<br>63.7234<br>65.0793<br>66.4351<br>67.7909<br>69.1467<br>70.5025<br>71.8583<br>73.2142<br>74.5700<br>75.9258<br>77.2816<br>78.6374<br>79.9933<br>81.3491 |  | 82.7049<br>84.0607<br>85.4165<br>86.7723<br>88.1281<br>89.4840<br>90.8398<br>92.1956<br>93.5514<br>94.9073<br>96.2531<br>97.6189<br>98.9747<br>100.3316<br>101.6862<br>103.0422<br>104.3980<br>105.7538<br>107.1196<br>108.4654 | 83<br>84  | 109.8212<br>111.1770<br>112.5328<br>113.8888<br>115.2446<br>116.6004<br>119.3120<br>120.6678<br>123.0794<br>124.7352<br>126.0910<br>127.4468<br>128.8026<br>130.1586<br>131.5144<br>132.8702<br>134.2260<br>134.2260<br>134.2260 | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12<br>.13<br>14<br>15<br>16<br>17<br>18<br>19<br>20                             | .7376<br>1.4751<br>2.2127<br>2.9502<br>3.6878<br>4.4254<br>5.1629<br>5.9005<br>6.6381<br>7.3756<br>8.1132<br>8.8507<br>9.5883<br>10.3259<br>11.0634<br>11.8010<br>12.5386<br>13.2761<br>14.0137<br>14.7512       | 21<br>22<br>23<br>24<br>25<br>26<br>27<br>28<br>29<br>30<br>31<br>32<br>33<br>34<br>35<br>36<br>37<br>38<br>39<br>40                     | 15.9888<br>16.2264<br>16.9639<br>17.7015<br>18.4391<br>19.9142<br>20.6517<br>21.3893<br>22.1269<br>22.8644<br>23.6020<br>24.3395<br>25.0771<br>25.8147<br>26.5522<br>27.2898<br>28.7649<br>28.7649 | 41<br>42<br>43<br>44<br>45<br>46<br>47<br>48<br>49<br>50<br>51<br>52<br>53<br>54<br>55<br>55<br>55<br>55<br>56<br>57<br>58<br>59<br>60   | 30.2400<br>30.9776<br>31.7152<br>32.4527<br>33.1903<br>33.9279<br>34.6654<br>35.4030<br>36.1405<br>36.8781<br>37.6157<br>38.3532<br>39.0908<br>39.8284<br>40.5659<br>41.3035<br>42.0410<br>42.7786<br>43.5162  | 61<br>62<br>63<br>64<br>65<br>66<br>67<br>68<br>69<br>70<br>71<br>72<br>73<br>74<br>75<br>76<br>77<br>78<br>80                    | 44.9913<br>45.7289<br>46.4664<br>47.2040<br>47.9415<br>48.6791<br>49.4167<br>50.1542<br>50.8918<br>51.6293<br>52.3669<br>53.1045<br>53.8420<br>54.5720<br>55.3172<br>56.0547<br>56.7923<br>57.5298<br>58.2674<br>59.0050   | 81<br>82<br>83<br>84<br>85<br>86<br>87<br>88<br>89<br>90<br>91<br>92<br>93<br>94<br>95<br>94<br>95<br>96<br>97<br>98<br>99<br>100         | 59,742<br>60,480<br>61,217,<br>61,955<br>62,692<br>63,430<br>64,167<br>64,954<br>65,643<br>66,380<br>67,118<br>67,815<br>68,593<br>69,330<br>70,068<br>71,543<br>70,806<br>71,543<br>72,281<br>73,018<br>73,756 |
|  |   |  |  | in.  | to mm  |  |   |   |  |  |  |  |  | mm   | to in.   |   |  |   |   |
| n  | mm  | in.  | mm   | in.  | mm   | in.  | mm  | in.   | mm   | mm   | in.  | mm   | in.  | mm   | in.  | mm  | in.  | mm  | in.   |
| 01<br>02<br>03<br>04<br>05<br>06<br>07<br>08<br>09<br>10<br>11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>20 | .254<br>.508<br>.762<br>1.016<br>1.270<br>1.524<br>2.032<br>2.286<br>2.540<br>2.794<br>3.048<br>3.302<br>3.556<br>3.810<br>4.064<br>3.318<br>4.572<br>4.826<br>5.080  | .21<br>.22<br>.23<br>.24<br>.25<br>.26<br>.27<br>.28<br>.29<br>.30<br>.31<br>.32<br>.33<br>.34<br>.35<br>.36<br>.37<br>.38<br>.39<br>.40 | 5.334<br>5.588<br>5.842<br>6.096<br>6.350<br>6.604<br>6.858<br>7.112<br>7.366<br>7.620<br>7.874<br>8.128<br>8.636<br>8.890<br>9.144<br>9.398<br>9.652<br>9.906<br>10.160   | $\begin{array}{c} .41\\ .42\\ .43\\ .44\\ .45\\ .46\\ .47\\ .48\\ .49\\ .50\\ .51\\ .52\\ .53\\ .54\\ .55\\ .56\\ .57\\ .58\\ .59\\ .60\\ \end{array}$ | 10.414<br>10.682<br>11.176<br>11.430<br>11.681<br>11.938<br>12.192<br>12.446<br>12.700<br>12.954<br>13.208<br>13.405<br>13.970<br>14.224<br>14.478<br>14.732<br>14.986<br>15.240   | .61<br>.62<br>.63<br>.64<br>.65<br>.66<br>.67<br>.70<br>.71<br>.72<br>.73<br>.74<br>.75<br>.76<br>.77<br>.78<br>.79<br>.80 | $\begin{array}{c} 15,494\\ 15,748\\ 16,002\\ 16,256\\ 16,510\\ 16,764\\ 17,018\\ 17,272\\ 17,526\\ 17,780\\ 18,034\\ 18,542\\ 18,542\\ 18,542\\ 18,596\\ 19,050\\ 19,304\\ 19,558\\ 19,812\\ 20,066\\ 20,320\\ \end{array}$     | .81<br>.82<br>.83<br>.84<br>.85<br>.86<br>.87<br>.88<br>.87<br>.90<br>.91<br>.92<br>.93<br>.94<br>.95<br>.96<br>.97<br>.96<br>.97<br>.98<br>.99<br>1.00 | 20.574<br>20.828<br>21.082<br>21.336<br>21.590<br>21.844<br>22.098<br>22.352<br>22.606<br>23.114<br>23.368<br>23.827<br>23.876<br>24.130<br>24.384<br>24.638<br>24.892<br>25.146<br>25.146                                       | .01<br>.02<br>.03<br>.04<br>.05<br>.06<br>.07<br>.08<br>.09<br>.10<br>.11<br>.12<br>.13<br>.14<br>.15<br>.16<br>.17<br>.18<br>.19<br>.20 | .00039<br>.00079<br>.00118<br>.00157<br>.00236<br>.00276<br>.00315<br>.00354<br>.00394<br>.00394<br>.00472<br>.00551<br>.00551<br>.00551<br>.005591<br>.005591<br>.00569<br>.00669<br>.00709<br>.00748<br>.00787 | .21<br>.22<br>.23<br>.24<br>.25<br>.26<br>.27<br>.28<br>.29<br>.30<br>.31<br>.32<br>.33<br>.34<br>.35<br>.36<br>.37<br>.38<br>.39<br>.40 | .00827<br>.00866<br>.00906<br>.00945<br>.00984<br>.01023<br>.01023<br>.01102<br>.01181<br>.01220<br>.01280<br>.01280<br>.01378<br>.01378<br>.01477<br>.01496<br>.01535<br>.01575                   | .41<br>.42<br>.43<br>.45<br>.46<br>.47<br>.48<br>.50<br>.51<br>.52<br>.53<br>.54<br>.55<br>.56<br>.57<br>.58<br>.50<br>.50<br>.50<br>.50<br>.55<br>.50<br>.55<br>.50<br>.55<br>.50<br>.55<br>.50<br>.55<br>.50<br>.55<br>.50<br>.55<br>.50<br>.55<br>.50<br>.55<br>.55 | .01614<br>.01653<br>.01732<br>.01772<br>.01811<br>.01850<br>.01890<br>.01969<br>.02008<br>.02047<br>.02083<br>.02125<br>.02244<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02245<br>.02253<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02255<br>.02555<br>.02555<br>.02555<br>.02555<br>.025555<br>.025555555555 | .61<br>.62<br>.63<br>.64<br>.65<br>.66<br>.67<br>.68<br>.69<br>.70<br>.71<br>.72<br>.73<br>.74<br>.75<br>.76<br>.77<br>.78<br>.80 | .02402<br>.02441<br>.02480<br>.02520<br>.02559<br>.02559<br>.02638<br>.02677<br>.02775<br>.02755<br>.02795<br>.02795<br>.02795<br>.02795<br>.02795<br>.02874<br>.02795<br>.02874<br>.02913<br>.02953<br>.02953<br>.02992<br>.03032<br>.03071<br>.03110<br>.03150 | .81<br>.82<br>.83<br>.84<br>.85<br>.86<br>.87<br>.88<br>.87<br>.90<br>.91<br>.92<br>.93<br>.94<br>.95<br>.96<br>.97<br>.98<br>.99<br>1.00 | 03189<br>03228<br>03208<br>03346<br>03346<br>03346<br>03425<br>03455<br>03455<br>03455<br>03543<br>03583<br>03583<br>03583<br>03583<br>03583<br>03583<br>03583<br>03780<br>03740<br>03818<br>03858<br>03898     |
| _  |   |  |  |  |  |  |   |   |  |  |  |  |  |  |  |   |  |   |   |

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<br>0.11298 | = Newton Meters<br>(N⋅m)   | N⋅m      | x 8.851      | = in-lbs              |
| ft-lbs                | x<br>1.3558  | = Newton Meters<br>(N⋅m)   | N∙m      | x<br>0.7376  | = ft-lbs              |
| Inches Hg (60° F)     | x 3.377      | = Kilopascals (kPa)        | kPa      | x<br>0.2961  | = Inches Hg           |
| psi                   | x 6.895      | = Kilopascals (kPa)        | kPa      | x 0.145      | = psi                 |
| Inches                | x 25.4       | = Millimeters (mm)         | mm       | x<br>0.03937 | = Inches              |
| Feet                  | x<br>0.3048  | = Meters (M)               | Μ        | x 3.281      | = Feet                |
| Yards                 | x<br>0.9144  | = Meters                   | Μ        | x<br>1.0936  | = Yards               |
| mph                   | x<br>1.6093  | = Kilometers/Hr.<br>(Km/h) | Km/h     | x<br>0.6214  | = mph                 |
| Feet/Sec              | x<br>0.3048  | = Meters/Sec (M/S)         | M/S      | x 3.281      | = Feet/Sec            |
| mph                   | x<br>0.4470  | = Meters/Sec (M/S)         | M/S      | x 2.237      | = mph                 |
| Kilometers/Hr. (Km/h) | x<br>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.).

# **TORQUE REFERENCES**

### DESCRIPTION

|            |          |       |      |                |          | ed torque |                  |              |
|------------|----------|-------|------|----------------|----------|-----------|------------------|--------------|
| Class      | Diameter | Pitch |      | Hexagon head l |          | H         | lexagon flange l |              |
|            | mm       | mm    | N∙m  | kgf-cm         | ft-lbf   | N∙m       | kgf-cm           | ft-lbf       |
|            | 6        | 1     | 5    | 55             | 48 inlbf | 6         | 60               | 52 inlb      |
|            | 8        | 1.25  | 12.5 | 130            | 9        | 14        | 145              | 10           |
| 4T         | 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       | -         | —                | —            |
|            | 6        | 1     | 6.5  | 65             | 56 inIbf | 7.5       | 75               | 65 inlbl     |
|            | 8        | 1.25  | 15.5 | 160            | 12       | 17.5      | 175              | 13           |
| 5T         | 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      | _         |                  | —            |
|            | 6        | 1     | 8    | 80             | 69 inIbf | 9         | 90               | <br>78 inlbf |
|            | 8        | 1.25  | 19   | 195            | 14       | 21        | 210              | 15           |
| 6T         | 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      | _         | _                |              |
|            | 6        | 1     | 10.5 | 110            | 8        | 12        | 120              | 9            |
|            | 8        | 1.25  | 25   | 260            | 19       | 28        | 290              | 21           |
| <b>7</b> T | 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      |           |                  | —            |
|            | 8        | 1.25  | 29   | 300            | 22       | 33        | 330              | 24           |
| 8T         | 10       | 1.25  | 61   | 620            | 45       | 68        | 690              | 50           |
|            | 12       | 1.25  | 110  | 1,100          | 80       | 120       | 1,250            | 90           |
|            | 8        | 1.25  | 34   | 340            | 25       | 37        | 380              | 27           |
| 9T         | 10       | 1.25  | 70   | 710            | 51       | 78        | 790              | 57           |
|            | 12       | 1.25  | 125  | 1,300          | 94       | 140       | 1,450            | 105          |
|            | 8        | 1.25  | 38   | 390            | 28       | 42        | 430              | 31           |
| 10T        | 10       | 1.25  | 78   | 800            | 58       | 88        | 890              | 64           |
|            | 12       | 1.25  | 140  | 1,450          | 105      | 155       | 1,600            | 116          |
|            | 8        | 1.25  | 42   | 430            | 31       | 47        | 480              | 35           |
| 11T        | 10       | 1.25  | 87   | 890            | 64       | 97        | 990              | 72           |
|            | 12       | 1.25  | 155  | 1,600          | 116      | 175       | 1,800            | 130          |

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.

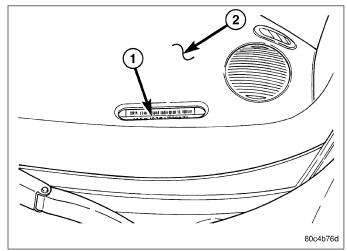
# **VEHICLE IDENTIFICATION NUMBER**

# **DESCRIPTION - VEHICLE IDENTIFICATION NUMBER**

The Vehicle Identification Number (VIN) is located on the upper left corner of the instrument panel, near the left A-Pillar. The VIN consists of 17 characters in a combination of letters and numbers that provide specific information about the vehicle. Refer to VIN Code Decoding 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.

#### VIN CODE DECODING



| POSITION | INTERPRETATION    | CODE = DESCRIPTION  |  |
|----------|-------------------|---|--|
| 1        | Country of Origin | 1 = Manufactured by DiamlerChrysler Corporation   |  |
| 2        | Make              | B = Dodge   |  |
| 3        | Vehicle Type      | 3 = Passenger Car   |  |
|          | Restraint System  | D = Restraint System With Out Air Bags Sales Code<br>(CGJ) (Mexico)   |  |
| 4        |                   | H = Restraint System Air Bags Front Next Generation<br>Multi Stage Sales Code ( CG1 ) With Side Air Bags Sales<br>Code ( CGS )    |  |
|          |                   | J = Restraint System Air Bags Front Next Generation<br>Multi Stage Sales Code ( CG1 ) Without Side Air Bags<br>Sales Code ( CGS ) |  |
| 5        | Vehicle Line      | B = Caliber (FWD) (LHD U.S., Canada, Mexico , BUX   |  |
|          |                   | E = Caliber (AWD) (LHD) U.S., Canada, Mexico  |  |
|          |                   | 3 = Caliber (FWD) (RHD) BUX   |  |
|          | Series            | 2 = L ( Low Line)   |  |
|          |                   | 4 = H ( High Line )   |  |
| 6        |                   | 6 = S (Sport)   |  |
|          |                   | 7 = X (Special)   |  |
|          |                   | C = 6 Speed Manual Heavy Duty, Sales Code (DEF)   |  |
|          |                   | C = 6 Speed Manual, Sales Code ( DEK )  |  |
|          |                   | G = Continuously Variable, Sales Code (DAV)   |  |
|          |                   | N = 5 Speed Manual, Sales Code ( DD7 )  |  |

# 12 INTRODUCTION —

| POSITION | INTERPRETATION | CODE = DESCRIPTION      |  |
|----------|----------------|-------------------------|--|
| 7        | Body Style     | 8 = PM 49 4dr Hatchback |  |

### VIN CODE DECODING

|              |                        | A = 2.0L I4 CYL 16V DOHC Diesel Sales Code ( ECD )            |  |
|--------------|------------------------|---|--|
|              |                        | B = 2.0L I4 CYL 16V DOHC Dual VVT Gasoline Sales<br>Code(ECN) |  |
| 8            | Engine                 | C = 1.8L I4 CYL 16V DOHC Dual VVT Gasoline Sales<br>Code(EBA) |  |
|              |                        | F = 2.4L I4 CYL 16V DOHC Turbo Gasoline Sales Code<br>(ED4)   |  |
|              |                        | K = 2.4L I4 CYL 16V Dual VVT Gasoline Sales Code<br>(ED3)     |  |
| 9            | Check Digit            | 0 Thru 9 or X.  |  |
| 10           | Model Year             | 7 = Model Year 2007   |  |
| 11           | Assembly Plant         | D = Belvedere Assembly  |  |
| 12 Though 17 | Vehicle Build Sequence | 6 digit number assigned by assembly plant.                    |  |

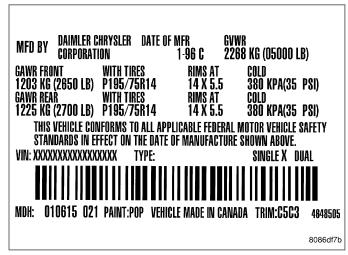
------ PM

# **VEHICLE CERTIFICATION LABEL**

# DESCRIPTION

A vehicle certification label is attached to the rear shutface 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.



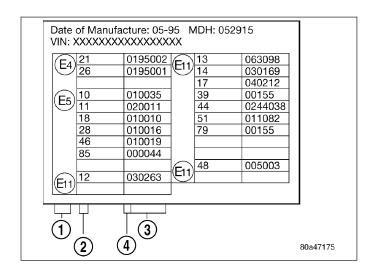
PM ·

# E-MARK LABEL

# DESCRIPTION

An E-mark Label is located on the rear shut face of the driver's door. The label contains the following information:

- Date of Manufacture
- Month-Day-Hour (MDH)
- Vehicle Identification Number (VIN)
- Country Codes
- Regulation Number
- Regulation Amendment Number
- Approval Number



# **VECI LABEL**

# DESCRIPTION

All models have a Vehicle Emission Control Information (VECI) Label. Chrysler permanently attaches the label in the engine compartment. 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.

# MANUFACTURER PLATE

### DESCRIPTION

The Manufacturer Plate is located in the engine compartment on the passenger side rear corner of the hood. The plate contains five lines of information:

- 1. Vehicle Identification Number (VIN)
- 2. Gross Vehicle Mass (GVM)
- 3. Gross Train Mass (GTM)
- 4. Gross Front Axle Rating (GFAR)
- 5. Gross Rear Axle Rating (GRAR)

DAIMLERCHRYSLER CORPORATION \*XXXXXXXXXXXXXXXX XXXX KG XXXX KG 1 XXXX KG 2 XXXX KG 80bf3788

# **LUBRICATION & MAINTENANCE**

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# INTERNATIONAL SYMBOLS

# DESCRIPTION

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

|           | ENGINE OIL                         |            | BRAKE FLUID                |  |
|-----------|------------------------------------|------------|----------------------------|--|
| JULY LUNA | AUTOMATIC<br>TRANSMISSION<br>FLUID | $\bigcirc$ | POWER<br>STEERING<br>FLUID |  |
|           | ENGINE<br>COOLANT                  |            | WINDSHIELD<br>WASHER FLUID |  |
| 8097ddbd  |                                    |            |                            |  |

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.

# 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.

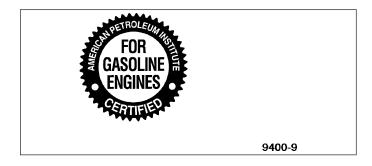
When service is required, DaimlerChrysler Corporation recommends that only Mopar® brand parts, lubricants and chemicals be used. Mopar® provides the best engineered products for servicing DaimlerChrysler Corporation vehicles.

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

- 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)

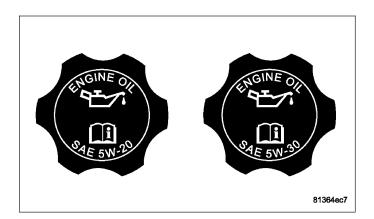
### API CERTIFICATION AND LICENSE SYMBOL

Use an engine oil that is API Certified and Licensed to display the certification mark. MOPAR<sup>®</sup> provides engine oils that meet or exceed, Material Standard MS-6395 requirement.



#### SAE VISCOSITY

SAE 5W-20 and SAE 5W-30 engine oils are recommended for all operating temperatures. These engine oils are designed to improve low temperature starting and vehicle fuel economy. Refer to the engine oil filler cap for the preferred engine oil viscosity grade for each vehicle. SAE viscosity grades are used to specify the correct viscosity oil for an engine. Use only Multi-Viscosity oils such as SAE 5W-20 or 5W-30. These are specified with a dual SAE viscosity grade which indicates the cold (5W) to hot (20, 30) temperature performance range of the oil.

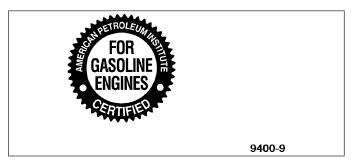


### ACEA CATEGORIES

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.

#### CONTAINER IDENTIFICATION

The Engine Oil Certification Mark was developed and trademarked by the API to refer customers to those engine oils preferred by the automobile manufacturers. This symbol means that the oil has been certified and licensed by the American Petroleum Institute (API). This certification mark will only be found on the front of the oil containers. Those oils that do not display the "Mark" on the front of the container should not be used.



DaimlerChrysler only recommends API Certified engine oils that meet the requirements of Material

Standard MS-6395. Use Mopar or an equivalent oil meeting the specification MS-6395.

#### SYNTHETIC ENGINE OILS

There are a number of engine oils being promoted as either synthetic or semi-synthetic. If you chose to use such a product, use **only** those oils that are certified by the American Petroleum Institute (API) to display the "Certification Mark" and show SAE viscosity grade recommended for each vehicle. Follow the service schedule that describes your driving type.

#### ENGINE OIL ADDITIVES/SUPPLEMENTS

The manufacturer **does not recommend** the addition of any engine oil additives/supplements to the specified engine oil. Engine oil additives/supplements should not be used to enhance engine oil performance. Engine oil additives/supplements should not be used to extend engine oil change intervals. No additive is known to be safe for engine durability and can degrade emission components. Additives can contain undesirable materials that harm the long term durability of engines and emission systems by:

- Increasing the level of Phosphorus and Sulfur in the engine oil. The API Certified Engine Oils control the Phosphorus and Sulfur contents of the oil to levels that reduce the contamination effect on the vehicles emission control system.
- Altering the viscosity characteristics of the engine oil so that it no longer meets the requirements of the specified viscosity grade.
- Creating potential for an undesirable additive compatibility interaction in the engine crankcase. The engine oils contain a performance additive system carefully developed to optimize the oils performance in the engine. The addition of supplements may cause the oil to thicken prematurely, cause excessive deposit build-up and potentially shorten engine life.

### **ENGINE 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 boiling 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 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