Sterling Bullet Workshop Manual 2009

Full download: http://manualplace.com/download/sterling-bullet-workshop-manual-2009/



2009 BULLET WORKSHOP MANUAL

Models: CONV45

CONV55

STI-488-09 (11/08P)

Published by Daimler Trucks North America LLC 4747 N. Channel Ave. Portland, OR 97217 Printed in U.S.A.

Foreword

The purpose of this manual is to assist the service technician when the vehicle is serviced. Major drivetrain component service information is not included in this manual, but is located in each manufacturer's service manual.

Instructions and procedures are those recommended by Sterling Trucks or the component manufacturer.

Maintenance schedules and additional service information are included in the *Bullet*[®] *Driver's* and *Maintenance Manual*.

IMPORTANT: Descriptions and specifications in this manual were in effect at the time of printing. Sterling Trucks reserves the right to discontinue models, and to change specifications or design at any time without notice and without incurring obligation. Descriptions and specifications contained in this publication provide no warranty, expressed or implied, and are subject to revision and editions without notice.

Refer to http://www.SterlingTrucks.com for more information, or contact Daimler Trucks North America LLC at the address below.

Environmental Concerns and Recommendations

Whenever you see instructions in this manual to discard materials, you should attempt to reclaim and recycle them. To preserve our environment, follow appropriate environmental rules and regulations when disposing of materials.

NOTICE: Parts Replacement Considerations

Do not replace suspension, axle, or steering parts (such as springs, wheels, hubs, and steering gears) with used parts. Used parts may have been subjected to collisions or improper use and have undetected structural damage.

© 2007–2008 Daimler Trucks North America LLC

All rights reserved. No part of this publication, in whole or in part, may be translated, reproduced, stored in a retrieval system, or transmitted in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Daimler Trucks North America LLC. Daimler Trucks North America LLC is a Daimler company.

Daimler Trucks North America LLC
Service Systems and Documentation (POC-SSD)
P.O. Box 3849
Portland, OR 97208-3849

Workshop Manual Contents

| Group No. | Group Title |
|-----------|--|
| 00 | Introduction Vehicle Data |
| 02 | Front Suspension |
| | Differential and Driveline Vehicle Quick Reference |
| | Venicle Quick Reference |
| | Clutch |
| 07 | Cooling |
| 08A | Audio |
| 08B | Chime/Buzzer |
| 08E | Electronic Control Modules |
| 08F | Battery System |
| | Heated/Cooled Systems |
| 08H | Horn |
| | Ignition Control |
| 08J | Instrument Cluster Lamps and Lighting |
| UOL | Message Systems |
| | Power Systems |
| | Speed Control |
| 08Q | Vehicle Theft Security |
| 08R | Wiper/Washers |
| 08T | . Navigation/Telecommunication |
| 08W | Wiring |
| 09 | Engine |
| 10 | Restraints Exhaust System |
| 13 | Frame and Bumpers |
| | Fuel System |
| | Rear Suspension |
| 19 | Steering |
| 21 T | Fransmission and Transfer Case |
| 22 | Tires/Wheels |
| 23 | Body |
| 24 | Heating and Air Conditioning |
| | Emissions Control DTC-Based Diagnostics |
| | · · |
| 29 | Non-DTC Diagnostics |

VEHICLE DATA

TABLE OF CONTENTS

| | | | | | | | pa | ag | е |
|---------------------|--|--|--|--|--|--|----|----|---|
| VEHICLE DATA | | | | | | | | | |
| VEHICLE INFORMATION | | | | | | | | | 3 |

00 - 2 Vehicle Data — BULLET

VEHICLE INFORMATION

TABLE OF CONTENTS

| page | page |
|---------------------------------------|-------------------------------|
| VEHICLE INFORMATION | PLATE, BODY CODE |
| FASTENER IDENTIFICATION | DESCRIPTION |
| DESCRIPTION | THREADED HOLE REPAIR |
| FASTENER USAGE | DESCRIPTION |
| DESCRIPTION7 | TORQUE REFERENCES |
| INTERNATIONAL VEHICLE CONTROL AND | DESCRIPTION |
| DISPLAY SYMBOLS | VEHICLE CERTIFICATION LABEL |
| DESCRIPTION7 | DESCRIPTION |
| LABEL, VEHICLE EMISSION CERTIFICATION | VEHICLE IDENTIFICATION NUMBER |
| INFORMATION (VECI) | DESCRIPTION |
| DESCRIPTION | |
| METRIC SYSTEM | |
| DESCRIPTION 0 | |

00 - 4 Vehicle Data — BULLET

Vehicle Information

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.

Bolt Markings and Torques - Metric

| Bolt Markings | 8.8 | 3/8.9 | 10 | 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 | 54 40 | | 45 | 74 | 55 | | | | | |
| 12 | 95 | 70 | 108 | 80 | 135 | 100 | | | | | |
| 14 | 155 | 115 | 175 | 130 | 216 | 160 | | | | | |
| 16 | 243 180 | | 324 | 324 210 | | 240 | | | | | |
| | * Inch Lbs. | | | | | | | | | | |

Bolt Markings and Torques - U. S. Customary

| Bolt Markings | Gra | de 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 | | | |

Bolt Markings and Torques - U. S. Customary, continued

| Bolt Markings | Gra | de 5 | Grade 8 | | | | | | |
|----------------------|-----|---------|---------|---------|--|--|--|--|--|
| Bolt Dia. | N∙m | Ft. Lbs | N⋅m | Ft. Lbs | | | | | |
| 7/8 - 14 | 405 | 300 | 540 | 400 | | | | | |
| * Inch Lbs. | | | | | | | | | |

| HOW TO DETERMINE BOLT STRENGTH | | | | | | | | | | | | |
|--|------------------------|---|-------------|---------|------------|--|--|--|--|--|--|--|
| | Mark | Mark Class Mark | | | | | | | | | | |
| Hexagon head bolt | 8 - 9 - 10 - 11 - | 4T 5T 6T 7T 8T 9T 10T | Stud bolt | No mark | 4 T | | | | | | | |
| | No mark | 4 T | | | | | | | | | | |
| Hexagon flange bolt w/washer hexagon bolt | No mark | 4 T | | Grooved | 6 T | | | | | | | |
| Hexagon head bolt | Two protruding lines | <i>5</i> T | | | | | | | | | | |
| Hexagon flange bolt w/washer hexagon bolt | Two protruding lines | 6T | Welded bolt | | | | | | | | | |
| Hexagon head bolt | Three protruding lines | 71 | | | 4 T | | | | | | | |
| Hexagon head bolt | Four protruding lines | 8Т | | | | | | | | | | |
| | | | | | 95IN-4 | | | | | | | |

Fastener Usage

Description

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.

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

International Vehicle Control and Display Symbols

Description

Sterling Trucks uses international symbols to identify various systems on the vehicle.

| ≣ ○ | #0 | - \(\) - | ♦ | 5 | 6 |
|------------|-----------|-----------------|----------------------|----|----------------|
| 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | - + 16 | 17 | 18 |
| 19 | (P) 20 | 21 | 22 | 23 | 24 80be4788 |

The graphic symbols illustrated are used to identify various instrument controls. The symbols correspond to the controls and displays that are located on the instrument panel.

INTERNATIONAL SYMBOL MATRIX

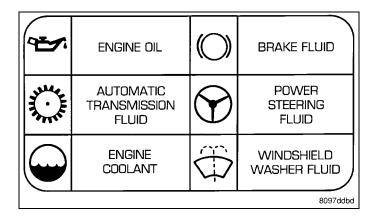
| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION | | | |
|--------|---|--------|-------------------------------|--|--|--|
| 1 | High Beam | 13 | Rear Window Washer | | | |
| 2 | Fog Lamps | 14 | Fuel | | | |
| 3 | Headlamp, Parking Lamps, Panel Lamps | 15 | Engine Coolant Temperature | | | |
| 4 | Turn 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 | | | |

INTERNATIONAL SYMBOL MATRIX, continued

| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION |
|--------|--------------------------------------|--------|---------------------|
| 9 | Wind screen 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 |

ENGINE COMPARTMENT

The graphic symbols illustrated are used to identify engine compartment lubricant and fluid inspection and fill locations. The symbols correspond to the caps located within the engine compartment.



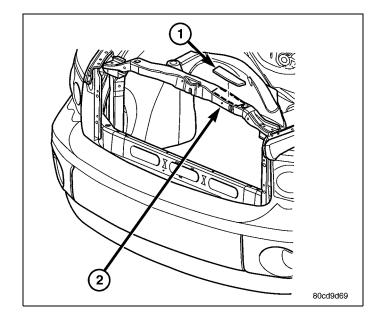
LABEL, Vehicle Emission Certification Information (VECI)

Description

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

The VECI label contains the following:

- · Engine family and displacement
- Evaporative family
- Certification application
- Engine timing specifications (if adjustable)
- Idle speeds (if adjustable)
- Spark plug and gap



Metric System

Description

| | | | ir | n-lbs | to N• | m | | | | | | | N∙n | n to | in-Ibs | | | | |
|--|--|--|--|---|--|--|--|---|---|--|---|--|---|--|---|--|---|--|--|
| 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 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 | .2260 .4519 .6779 .9039 1.1298 1.3558 1.5818 1.8077 2.0337 2.2597 2.4856 2.7116 2.9376 3.1635 3.1635 3.3895 3.6155 3.8414 4.0674 4.2934 4.5193 | 44 46 48 50 52 54 56 62 64 66 68 70 72 74 76 78 | 4.7453 4.9713 5.1972 5.4232 5.6492 5.6491 6.1011 6.3270 6.5530 6.7790 7.2309 7.4569 7.6828 8.1348 8.3607 8.5867 8.8127 9.0386 | 82 84 86 88 90 92 94 96 98 100 102 104 106 108 110 112 114 116 118 120 | 9.2646 9.4906 9.7165 9.9425 10.1685 10.3944 10.6204 11.0723 11.2983 11.5243 11.7502 12.2022 12.4281 12.6541 12.6541 13.1060 13.3320 13.5580 | 124 126 128 130 132 134 136 138 140 142 144 146 148 150 152 154 156 158 | 13.7839 14.0099 14.2359 14.4618 14.9138 15.1397 15.3657 15.5917 16.0436 16.2696 16.4955 16.7215 16.9475 17.1734 17.3994 17.6253 17.8513 18.0773 | 164 166 168 170 172 174 176 178 180 182 184 186 188 190 192 194 196 | 18.3032 18.5292 18.7552 18.9811 19.2071 19.4331 19.6590 19.8850 20.1110 20.3369 20.5629 20.7889 21.0148 21.2408 21.4668 21.4668 21.6927 21.9187 22.1447 22.3706 22.5966 | .2 .4 .6 .8 1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 | 1.7702 3.5404 5.3107 7.0809 7.0809 10.6213 12.3916 14.1618 15.9320 17.7022 19.4725 21.2427 23.0129 24.7831 26.5534 28.3236 30.0938 31.8640 33.6342 35.4045 | 4.2 4.4 4.6 4.8 5.2 5.4 5.6 6.6 6.8 7.7.4 7.8 8 | 37.1747 38.9449 40.7152 42.4854 44.0258 47.7961 49.5663 51.3365 53.31657 54.8770 56.6472 58.4174 60.19579 63.7281 65.4983 67.2685 69,0388 70.8090 | 10.4 10.6 10.8 11 11.2 11.4 11.6 11.8 | 72.5792 74.3494 76.1197 77.8899 79.6601 81.4303 83.2006 84.9708 86.7410 90.2815 92.0517 93.8219 95.5921 97.3624 99.1326 100.9028 102.6730 104.4433 106.2135 | 12.4 12.6 12.8 13 13.2 13.4 13.6 13.8 14 14.2 14.4 14.6 14.8 15 15.2 15.4 15.6 15.8 | 107.9837 109.7539 111.5242 113.2944 115.0646 116.8348 118.6051 120.3753 122.1455 123.9157 125.6860 127.4562 129.2264 130.30775 136.3073 138.0775 139.8478 141.6180 | 16.4 16.6 16.8 17 17.2 17.4 17.6 17.8 18 18.5 19 19.5 20 20.5 21 22 23 24 | 143.3882 145.1584 146.9287 148.6989 150.4691 152.2393 154.0096 155.7798 157.5500 159.3202 163.7458 168.1714 172.5970 177.0225 181.4480 185.8736 194.7247 203.5759 212.4270 221.2781 |
| | | | ft- | lbs | to N•m | 1 | | | | | | | ٨ | l•m | to ft-lk | os | | | |
| 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-lb | N∙m | ft-lb | N∙m | ft-lb | N∙m | ft-lb |
| 9 10 11 12 13 14 15 16 17 18 19 | 1,3558 2,7116 4,0675 5,4233 6,7791 8,1349 9,4907 10,8465 12,2024 13,5582 14,025 16,2698 17,6256 18,9815 20,3373 21,6931 23,0489 24,4047 25,7605 27,1164 | 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 | 28.4722 29.8280 31.1838 32.5396 33.8954 35.2513 36.6071 37.9629 39.3187 40.6745 42.0304 43.3862 44.7420 46.0978 47.4536 48.8094 50.1653 51.5211 52.8769 54.2327 | 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 55 56 57 58 | 55.5885 56.9444 58.3002 59.6560 61.0118 62.3676 63.7234 65.0793 66.4351 67.7909 69.1467 70.5025 71.8583 73.2142 74.5700 75.9258 77.2816 78.6374 79.9933 81.3491 | 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 | 82.7049 84.0607 85.4165 86.7723 88.1281 89.4840 90.8398 92.1956 93.5514 94.9073 96.2631 107.6189 98.9747 100.3316 101.6862 103.0422 104.3980 105.7538 107.1196 108.4654 | 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 | 109.8212 111.1770 112.5328 113.8888 115.2446 116.6004 117.9562 120.6678 122.0236 123.3794 124.7352 126.0910 127.4468 128.8026 130.1586 131.5144 132.8702 134.2260 135.5820 | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 | .7376 1.4751 2.2127 2.9502 3.6878 4.4254 5.1629 5.9005 6.6381 7.3756 8.1132 8.8507 9.5883 10.3259 11.0634 11.8010 12.5386 13.2761 14.0137 14.7512 | 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 | 15.9888 16.2264 16.9639 17.7015 18.4391 19.1766 19.9112 20.6517 21.3893 22.1269 22.86420 23.6020 24.3395 25.0771 25.8147 26.5522 27.2898 28.0274 28.7649 29.5025 | 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 55 56 57 58 59 60 | 30.2400 30.9776 31.7152 32.4527 33.1903 33.9279 34.6654 35.4030 36.1405 36.8781 37.6157 38.3532 39.9284 40.5659 41.3035 42.0410 42.7786 43.5162 44.2537 | 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 80 | 44.9913 45.7289 46.4664 47.2040 47.9415 48.6791 49.4167 50.1542 50.8918 51.6293 53.1049 53.1049 53.1049 55.3172 55.3172 56.7923 57.5298 58.2674 59.0050 | 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 | 59.7425 60.4801 61.2177 61.9552 62.6928 63.4303 64.1679 64.9545 65.6430 66.3806 67.1181 67.8557 68.5933 69.3308 70.0684 70.8060 71.5435 72.2811 73.0187 73.7562 |
| | | Ι. | | , | to mm | . | | | | | | | | | to in. | | in | | |
| in01 .02 .03 .04 .05 .06 .07 .08 .09 .10 .11 .12 .13 .14 .15 .16 .17 .18 .19 .20 | .254 .508 .762 1.016 1.270 1.524 1.778 2.032 2.286 2.540 2.794 3.302 3.556 3.810 4.064 3.318 4.572 4.826 5.080 | in. 21 .22 .23 .24 .25 .26 .27 .28 .29 .30 .31 .32 .33 .34 .35 .36 .37 .38 .39 .40 | 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 8.636 8.890 9.144 9.398 9.652 9.906 10.160 | in41 .42 .43 .44 .45 .46 .47 .49 .50 .51 .52 .53 .54 .55 .56 .57 .58 | mm 10.414 10.668 10.922 11.176 11.430 11.684 11.938 12.192 12.446 12.700 12.954 13.208 13.462 13.716 13.970 14.224 14.478 14.732 14.986 15.240 | in61 .62 .63 .64 .65 .66 .67 .68 .69 .71 .72 .73 .74 .75 .76 .77 .78 .80 | 15.494 15.748 16.002 16.256 16.510 16.764 17.018 17.272 17.526 17.780 18.034 18.288 18.542 18.796 19.050 19.304 19.558 19.812 20.066 20.320 | in. .81 .82 .83 .84 .85 .86 .87 .89 .90 .91 .92 .93 .94 .95 .96 .97 .98 .99 1.00 | 20.574 20.828 21.082 21.336 21.590 21.844 22.098 22.352 22.606 22.860 23.114 23.368 23.622 23.876 24.130 24.384 24.638 24.638 24.892 25.146 | .01 .02 .03 .04 .05 .06 .07 .08 .09 .10 .11 .12 .13 .14 .15 .16 .17 .18 .19 .20 | in00039 .00079 .00118 .00157 .00197 .00236 .00276 .00354 .00354 .00394 .00433 .00472 .00512 .00551 .00591 .00669 .00709 .00748 .00787 | .21 .22 .23 .24 .25 .26 .27 .28 .29 .30 .31 .32 .33 .34 .35 .36 .37 .38 .39 .40 | .00827 .00866 .00906 .00945 .00945 .01024 .01023 .01102 .01142 .01181 .01220 .01299 .01339 .01339 .01457 .01457 .01457 .01457 | .41 .42 .43 .44 .45 .46 .47 .48 .49 .50 .51 .52 .53 .54 .55 .56 .57 .58 | in01614 .01654 .01693 .01732 .01870 .01811 .01850 .01890 .01999 .02008 .02047 .02087 .02126 .02126 .02125 .02244 .02283 .02362 | .61 .62 .63 .64 .65 .66 .67 .68 .69 .71 .72 .73 .74 .75 .76 .77 .78 | | .81 .82 .83 .84 .85 .86 .87 .88 .89 .90 .91 .92 .93 .94 .95 .96 .97 .98 | in. 03189 03228 03268 03307 03346 03386 03425 03465 03504 03543 03583 03622 03661 03701 03740 03780 03819 03858 03898 |
| | | | | | | | | | | | | | | | | | | J9(| 01N-10 |

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

00 - 10 Vehicle Data — BULLET

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 | | = in-lbs |
| ft-lbs | x 1.3558 | = Newton Meters (N·m) | eters $N \cdot m$ $x = \text{ft-lbs}$ 0.7376 | | = ft-lbs |
| Inches Hg (60° F) | x 3.377 | = Kilopascals (kPa) | (kPa) kPa x = Inches 0.2961 | | = Inches Hg |
| psi | x 6.895 | = Kilopascals (kPa) | kPa x 0.145 = psi | | = psi |
| Inches | x 25.4 | = Millimeters (mm) | mm | x 0.03937 | = Inches |
| Feet | x 0.3048 | = Meters (M) | M x 3.281 = Feet | | = Feet |
| Yards | x 0.9144 | = Meters | M x = Yard | | = 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 | | = Feet/Sec |
| mph | x 0.4470 | = Meters/Sec (M/S) | M/S x 2.237 = mph | | = mph |
| Kilometers/Hr. (Km/h) | x 0.27778 | = Meters/Sec (M/S) | M/S x 3.600 Kilometers/Hr. (K | | Kilometers/Hr. (Km/h) |

COMMON METRIC EQUIVALENTS

| Inch to Millimeters | Cubic Inch to Cubic Centimeters | |
|-------------------------|-------------------------------------|--|
| 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 $(N \cdot m)$. Also, use the chart to convert between millimeters (mm) and inches (in.).

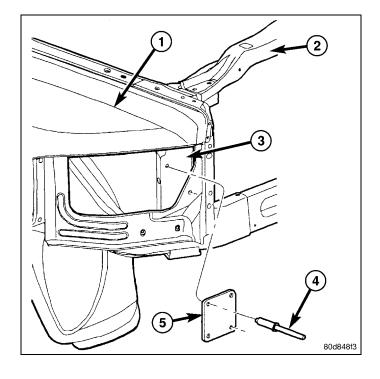
PLATE, Body Code

Description

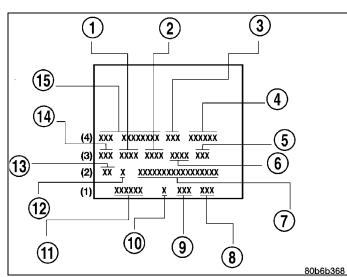
The Body Code Plate is located on the right front hydroform fender rail just behind the headlight assembly. There are seven lines of information on the body code plate. Lines 5, 6, and 7 are not used to define service information. Information reads from left to right, starting with line 4 in the center of the plate to line 1 at the bottom of the plate.

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 4



DIGITS 1 THROUGH 12

Vehicle Order Number (15)

DIGITS 13, 14, AND 15

Transmission Codes (3)

- DEG = 6-speed Manual (G56)
- DG3 = 6-speed Automatic (AS68RC)

DIGITS 16 and 17

Family (4)

• DA = Sterling Bullet

DIGIT 18

Vehicle Line (4)

DIGIT 19

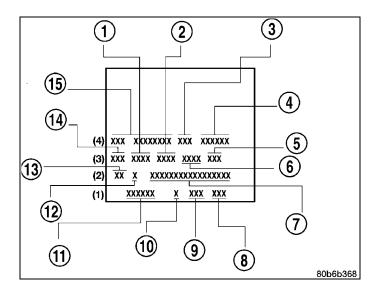
Price Class (4)

- L = Low
- H = Highline
- P = Premium

DIGITS 20 AND 21

Body Type (4)

BODY CODE PLATE - LINE 3



DIGITS 1,2, AND 3

Paint Procedure (14)

- APA = Monotone
- AP9 = Special
- APD = Two-tone (Lower break)

DIGIT 4

Open Space

DIGITS 5 THROUGH 8

Primary Paint (1)

(Refer to 23 - Body/Paint - Specifications) for color codes.

DIGIT 9

Open Space

DIGITS 10 THROUGH 13

Secondary Paint (2)

DIGIT 14

Open Space

DIGITS 15 THROUGH 18

Interior Trim Code (6)

DIGIT 19

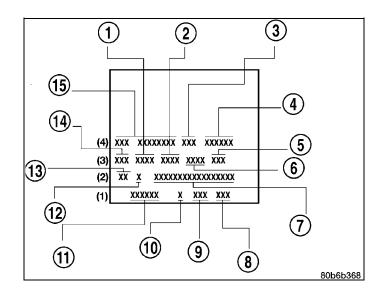
Open Space

DIGITS 20, 21, AND 22

Engine Code (5)

• ETJ = 6.7L I6 CYL Cummins Turbo Diesel

BODY CODE PLATE - LINE 2



DIGIT 1

Open Space

DIGITS 2 AND 3

Species Code. (Used for Manufacturing) (13)

DIGIT 4

Open Space

DIGIT 5

Market Code (12)

- C = Canada
- U = United States

DIGIT 6

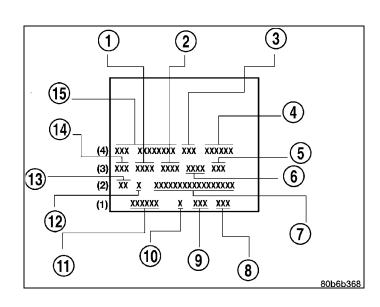
Open Space

DIGITS 7 THROUGH 23

Vehicle Identification Number (VIN) (7)

(Refer to 00 - Vehicle Data/Vehicle Information/Vehicle Identification Number - Description) for proper breakdown of VIN code.

BODY CODE PLATE - LINE 1



DIGITS 1 THROUGH 6

Body-in-white assembly sequence (11)

DIGIT 7

Open Space

DIGIT 8

Tailgate trim code (10)

DIGIT 9

Open Space

DIGITS 10 THROUGH 12

Cargo box code (9)

DIGIT 13

Open Space

DIGITS 14 THROUGH 16

Tailgate code (8)

Threaded Hole Repair

Description

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

Torque References

Description

| Specified torque | | | | | | | | |
|------------------|----------|-------|-------------------|-------------|---------------------|------|--------------|----------------|
| Class | Diameter | Pitch | Hexagon head bolt | | Hexagon flange bolt | | | |
| | mm | mm | N∙m | kgf-cm | ft-lbf | N•m | kgf-cm | ft-lbf |
| | 6 | 1 | 5 | 55 | 48 inlbf | 6 | 60 | 52 inlbf |
| | 8 | 1.25 | 12.5 | 130 | 9 | 14 | 145 | 10 |
| 4 T | 10 | 1.25 | 26 | 260 | 19 | 29 | 290 | 21 |
| | 12 | 1.25 | 47 | 480 | 35 | 53 | 540 | 39 |
| | 14 | 1.5 | 74 | <i>7</i> 60 | 55 | 84 | 850 | 61 |
| | 16 | 1.5 | 115 | 1,150 | 83 | | _ | _ |
| | 6 | 1 | 6.5 | 65 | 56 inlbf | 7.5 | 75 | 65 inlbl |
| | 8 | 1.25 | 15.5 | 160 | 12 | 17.5 | 1 <i>7</i> 5 | 13 |
| 5 T | 10 | 1.25 | 32 | 330 | 24 | 36 | 360 | 26 |
| | 12 | 1.25 | 59 | 600 | 43 | 65 | <i>67</i> 0 | 48 |
| | 14 | 1.5 | 91 | 930 | 67 | 100 | 1,050 | 76 |
| | 16 | 1.5 | 140 | 1,400 | 101 | _ | | |
| | 6 | 1 | 8 | 80 | 69 inlbf | 9 | 90 | —— 78 inIbl |
| | 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 |
| 7T | 10 | 1.25 | 52 | 530 | 38 | 58 | 590 | 43 |
| | 12 | 1.25 | 95 | 970 | <i>7</i> 0 | 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 |
| 8 T | 10 | 1.25 | 61 | 620 | 45 | 68 | 690 | 50 |
| 0, | 12 | 1.25 | 110 | 1,100 | 80 | 120 | 1,250 | 90 |
| | 8 | 1.25 | 34 | 340 | 25 | 37 | 380 | 27 |
| 9T | 10 | 1.25 | <i>7</i> 0 | 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 |
| 10Т | 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 |
| 117 | 10 | 1.25 | 87 | 890 | 64 | 97 | 990 | 72 |
| | 12 | 1.25 | 1 <i>5</i> 5 | 1,600 | 116 | 175 | 1,800 | 130 |

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

Vehicle Certification Label

Description

A vehicle certification label is attached to every Sterling Trucks 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.

The label is located on the driver-side door shut-face.

DAIMLER CHRYSLER DATE OF MFR MFD BY 2268 KG (05000 LB) CORPORATION 1-96 C **GAWR FRONT** WITH TIRES 1203 KG (2650 LB) P195/75R14 14 X 5.5 380 KPA(35 PSI) GAWR REAR WITH TIRES RIMS AT COLD 1225 KG (2700 LB) P195/75R14 380 KPA(35 PSI) THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE. VIN: XXXXXXXXXXXXXXXXXX TYPE: SINGLE X DUAL MDH: 010615 021 PAINT:POP VEHICLE MADE IN CANADA TRIM:C5C3 8086df7b

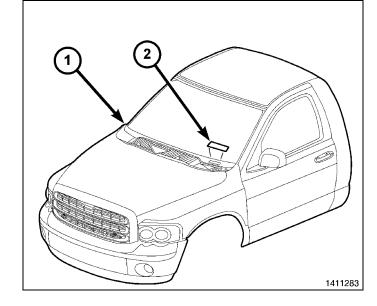
Vehicle Identification Number

Description

The Vehicle Identification Number (VIN) plate (2) 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 VIN is also imprinted on the:

- Body Code Plate.
- Equipment Identification Plate.
- 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 VIN. 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.

| POSITION | INTERPRETATION | CODE = DESCRIPTION | | |
|----------|-----------------------------|---|--|--|
| 1 | Country of Origin | 3 = Manufactured By Chrysler De Mexico | | |
| 2 | Make | F = Sterling | | |
| 3 | Vehicle Type | 6 = Incomplete Less Side Airbag | | |
| 4 | Gross Vehicle Weight Rating | W = Incomplete Vehicles With Hydraulic Brakes | | |