Flashing and Software Calibration Number (SCN)
Objectives

At the end of this presentation the participants will be able to:

- Explain when, why and how flashing is performed
- Explain when, why and how SCN coding is performed
Introduction

Flashing is a way to update control unit software

- Flashing is required
  - If DTB requires updating of software
  - Requested by TAC/EDAC
  - New ECU part number

SCN coding identifies control unit software and coding conforming to Vehicle

- SCN is required
  - After flashing fuel control unit (ME) or Electronic Transmission Controller (ETC)
  - After replacement of ME or ETC
  - Required by law, can be fined if not done
  - Vehicle may not function correctly if not performed
  - Prevents after-market performance enhancements
  - In future additional control modules will require SCN coding
Flashing

- Flashing is performed using SDS
  - Via CD in SDS
  - DAS (software updates)
  - Via on-line (near future)

- SDS downloads software into appropriate control unit

- Flashing is only to be performed when needed, otherwise issues may arise

Note: Keep battery charger connected to vehicle during flash, battery voltage critical to process, verify proper connection to X11/4
# SDflash Release CD

## STAR DIAGNOSIS NOTICE

The following tables show the flashware available on the SDflash Release CD:

<table>
<thead>
<tr>
<th></th>
<th>Model 211</th>
<th>Model 215</th>
<th>Model 220</th>
<th>Model 230 (except 230.476)</th>
<th>Model 230.476</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Gateway (CGW)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>System diagnosis (SD)</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Audio gateway (AGW)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOSE sound system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tele Aid</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Instrument Cluster (IC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Engine Control Module</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ME-SFI 2.6</td>
<td>X</td>
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<td></td>
<td></td>
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<tr>
<td>ME-SFI 2.7.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic transmission control module</td>
<td>Models equipped with automatic transmission 722.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic transmission 722.9</td>
<td>Flashware on this CD for this ECM has been superceded - Please use SDflash CD Release 0004483010 for this application</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:

The software included on this SDflash Release CD is provided to support spare part installation as well as any technical repairs outlined in existing/future DTH’s. There is no need to flash an ECM unless specifically instructed by and existing/future DTH, TAC/EDAC, or when prompted by the STAR Diagnosis System. The Automatic Transmission 722.9 flashware contained on this SDflash Release CD has been superceded; please use SDflash CD Release 0004483010 for this application.

Mercedes-Benz USA, LLC
Dealer Workshop Services

12/2003
Software Calibration Number

SCN

- As of 2003 emission regulations require SCN in all coded emission related control units

- SCN identifies control unit software and coding for a specific vehicle (similar to version coding)
  - Coding string adapts the control unit to the individual vehicle, incorporates vehicle equipment, safety information and emissions
  - Check digit also referred to as test digit checks VIN, SCN and code string

- Must get new SCN when replacing or flashing ME or new Transmission control units

- If improperly completed certain features of vehicle may become inoperative (Tip start, cruise control)
SCN Coding Process

- Receive SCN coding from Technicalinformation@mbusa.com via E-mail or SDS help desk

- Information needed
  - Your name
  - Your E-mail address
  - Dealer name and number
  - Part# for ME or Transmission control module
  - VIN
SCN Coding Process Continued

- Information returned via e-mail
  - SCN coding (example 1131531279-15-002)
  - Code string (example 08-7D-08-&D-AC-0E-EF-FB-12-47-2B-BF-99-52-14-2C)
    - Note: make sure to use code string as received including zeros
  - Test digit (example 1A-0C-9D-43)

- DAS in ME – Control Unit Adaptations / Version Coding / Coding / SCN Coding / Perform SCN Coding

Note: Process will change
<table>
<thead>
<tr>
<th>Control unit</th>
<th>Model/ major assembly</th>
<th>Programming</th>
<th>Coding</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Online</td>
<td>Offline DAS menu</td>
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<tr>
<td>AGW</td>
<td>Models 211, 220</td>
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<td>x</td>
</tr>
<tr>
<td>SDS</td>
<td>Model 230</td>
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<td>x</td>
</tr>
<tr>
<td>CGW Step 1</td>
<td>Models 211, 220</td>
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<td>x</td>
</tr>
<tr>
<td>CGW</td>
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<td>x</td>
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<tr>
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<tr>
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<td>x</td>
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<tr>
<td>ASSYST PLUS</td>
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<td>x</td>
</tr>
</tbody>
</table>
Bulletins

- S-B-07.61/38
- S-SI-07.08/001
- S-B-54.21/101
- S-B-07.61/27a
- P-B-54.21/74
Questions?