

**Technical Service Bulletin Number**

TSB101096

**Technical Service Bulletin****Subject**

New Aftertreatment Diesel Particulate Filter Part Numbers for ISX CM871 and ISX CM871 Export Engines

**Warranty Statement**

The information in this document has no effect on present warranty coverage or repair practices, nor does it authorize TRP or Campaign actions.

**Contents**

The purpose of this document is to announce new aftertreatment diesel particulate filter (DPF) part numbers for the following engines that use a DPF:

- ISX CM871 engines built between 1 September 2006 and 31 December 2009
- ISX CM871 Export engines built between 1 December 2009 to present.

The new DPF part numbers supersede the previous DPF part numbers for both production and service. See Tables 1A and 1B.

| Table 1A: Aftertreatment Diesel Particulate Filter (DPF) Part Number Supersession |                                |                      |                                                |
|-----------------------------------------------------------------------------------|--------------------------------|----------------------|------------------------------------------------|
| ISX CM871                                                                         |                                |                      |                                                |
| Old DPF Part Numbers (Phase 1)                                                    | Old DPF Part Numbers (Phase 2) | New DPF Part Numbers | Description                                    |
| 4969702                                                                           | 5283669                        | 5297522              | Insulated diesel particulate filter assembly   |
| 4969701                                                                           | 5283778                        | 5297990              | Uninsulated diesel particulate filter assembly |

|         |         |         |                                                      |
|---------|---------|---------|------------------------------------------------------|
| 4969703 | 5283799 | 5297989 | Volvo™ Spacesaver diesel particulate filter assembly |
|---------|---------|---------|------------------------------------------------------|

| Table 1B: Aftertreatment Diesel Particulate Filter (DPF) Part Number Supersession |                               |                     |                                              |
|-----------------------------------------------------------------------------------|-------------------------------|---------------------|----------------------------------------------|
| ISX CM871 Export                                                                  |                               |                     |                                              |
| Old DPF Part Number (Phase 1)                                                     | Old DPF Part Number (Phase 2) | New DPF Part Number | Description                                  |
| 4969702                                                                           | 5283669                       | 5297522             | Insulated diesel particulate filter assembly |

The new DPFs contain a revised substrate material that may **not** be backward compatible with the engine's current electronic control module (ECM) calibration and Control Parts List (CPL).

A new ECM calibration for the correct CPL may be required to be installed in the engine ECM when installing a DPF with a new part number.

Also, if a DPF with an old part number is installed on a vehicle after a DPF with a new part number has previously been installed, the old ECM calibration for the correct CPL **must** be installed in the engine ECM.

The following methods are used to make sure the correct process is followed:

- A sticker is placed on the new DPF that references the need for a possible ECM calibration change.
- A sticker is placed on the exterior of the new DPF packaging that references the need for a possible ECM calibration change.
- A one page document referencing this Technical Service Bulletin (TSB) is placed in the packaging of all new DPFs.

**NOTE: A change in CPL and therefore ECM base code will require a fleet count.**

**NOTE: Failure to install the ECM calibration for the correct CPL and DPF part number will cause damage to the DPF and will be considered an improper repair.**

**NOTE: To verify compatibility; any time a new, cleaned, or reconditioned DPF is installed on a vehicle, the ECM calibration installed in the engine ECM (as viewed through INSITE™ electronic service tool), as well as the CPL, must be cross referenced with the DPF part number being installed.**



Mismatching a DPF, CPL, and ECM calibration will result in inconsistent and improper regeneration characteristics and could cause damage to the DPF.

Reference the following tables for more information:

Table 2: ISX CM871 DPF Part Number and ECM Calibration Requirement Reference

- CPL 1437, 2732, 3745, and 3748 (385 to 450 HP)
- CPL 1434, 2733, 3746, and 3749 (455 to 500 HP)

Table 3: ISX CM871 ECM Calibration Cross Reference

- CPL 1437, 2732, 3745, and 3748 (385 to 450 HP)
- CPL 1434, 2733, 3746, and 3749 (455 to 500 HP)

Table 4: ISX CM871 DPF Part Number and ECM Calibration Requirement Reference

- CPL 0927, 2734, 2919, 3320, 3747, 3750, 3751, and 3752 (525 to 600 HP)

Table 5: ISX CM871 ECM Calibration Cross Reference

- CPL 0927, 2734, 2919, 3320, 3747, 3750, 3751, and 3752 (525 to 600 HP)

Table 6: ISX CM871 Export DPF Part Number and ECM Calibration Requirement Reference

- CPL 2733, 3458, 3459, 3774, 3775, and 3776 (400 to 600 HP)

Table 7: ISX CM871 Export ECM Calibration Cross Reference

- CPL 2733, 3458, 3459, 3774, 3775, and 3776 (400 to 600 HP)

| Table 2: ISX CM871 DPF Part Number and ECM Calibration Requirement<br>CPL 1437, 2732, 3745, and 3748 (385 to 450 HP)<br>CPL 1434, 2733, 3746, and 3749 (455 to 500 HP) |                      |                                                      |                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------------------------------------|--------------------------|
| Old DPF Part Numbers                                                                                                                                                   | New DPF Part Numbers | Description                                          | ECM Calibration Required |
| 4969702                                                                                                                                                                | 5297522              | Insulated diesel particulate filter assembly         | Yes <sup>1</sup>         |
| 4969701                                                                                                                                                                | 5297990              | Uninsulated diesel particulate filter assembly       | Yes <sup>1</sup>         |
| 4969703                                                                                                                                                                | 5297989              | Volvo™ Spacesaver diesel particulate filter assembly | Yes <sup>1</sup>         |
| 4969702                                                                                                                                                                | 5283669              | Insulated diesel particulate filter assembly         | Yes <sup>1</sup>         |
| 4969701                                                                                                                                                                | 5283778              | Uninsulated diesel particulate filter assembly       | Yes <sup>1</sup>         |
| 4969703                                                                                                                                                                | 5283799              | Volvo™ Spacesaver diesel particulate filter assembly | Yes <sup>1</sup>         |
| 5283669                                                                                                                                                                | 5297522              | Insulated diesel particulate filter assembly         | No <sup>2</sup>          |
| 5283778                                                                                                                                                                | 5297990              | Uninsulated diesel particulate filter assembly       | No <sup>2</sup>          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |         |                                                      |                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------------------------------------|-----------------|
| 5283799                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 5297989 | Volvo™ Spacesaver diesel particulate filter assembly | No <sup>2</sup> |
| <sup>1</sup> Install the correct ECM calibration for CPL 3745, 3746, 3748, or 3749 when a new DPF part number is installed, or verify the correct ECM calibration is installed for the corresponding DPF part number and CPL. See Table 3.<br><sup>2</sup> Verify the correct ECM calibration for CPL 3745, 3746, 3748, or 3749 is already installed, or verify the correct ECM calibration is installed for the corresponding DPF part number and CPL. See Table 3. |         |                                                      |                 |

**Table 3: ISX CM871 ECM Calibration Cross Reference**

CPL 1437, 2732, 3745, and 3748 (385 to 450 HP)

CPL 1434, 2733, 3746, and 3749 (455 to 500 HP)

| Old Engine CPL | ECM Calibration to be Used with DPF Part Number 4969701, 4969702, or 4969703 (See Table 2) | ECM Calibration to be Used with DPF Part Number 5283669, 5283778, 5283799, 5297522, 5297989, or 5297990 (See Table 2) | New Engine CPL |
|----------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|----------------|
| 1434           | AV10002                                                                                    | AV10191                                                                                                               | 3746           |
| 1434           | AV10003                                                                                    | AV10192                                                                                                               | 3746           |
| 1434           | AV10004                                                                                    | AV10193                                                                                                               | 3746           |
| 1434           | AV10005                                                                                    | AV10194                                                                                                               | 3746           |
| 1434           | AV10006                                                                                    | AV10195                                                                                                               | 3746           |
| 1434           | AV10008                                                                                    | AV10196                                                                                                               | 3746           |
| 1434           | AV10009                                                                                    | AV10197                                                                                                               | 3746           |
| 1434           | AV10010                                                                                    | AV10198                                                                                                               | 3746           |
| 1434           | AV10011                                                                                    | AV10199                                                                                                               | 3746           |
| 1434           | AV10012                                                                                    | AV10200                                                                                                               | 3746           |
| 1434           | AV10014                                                                                    | AV10201                                                                                                               | 3746           |
| 1437           | AV10020                                                                                    | AV10202                                                                                                               | 3745           |
| 1437           | AV10021                                                                                    | AV10203                                                                                                               | 3745           |
| 1437           | AV10022                                                                                    | AV10204                                                                                                               | 3745           |
| 1437           | AV10023                                                                                    | AV10205                                                                                                               | 3745           |
| 1437           | AV10024                                                                                    | AV10206                                                                                                               | 3745           |
| 1437           | AV10025                                                                                    | AV10207                                                                                                               | 3745           |
| 1437           | AV10027                                                                                    | AV10208                                                                                                               | 3745           |
| 1437           | AV10029                                                                                    | AV10209                                                                                                               | 3745           |
| 1437           | AV10030                                                                                    | AV10210                                                                                                               | 3745           |
| 1437           | AV10032                                                                                    | AV10211                                                                                                               | 3745           |
| 1437           | AV10034                                                                                    | AV10212                                                                                                               | 3745           |

| 1437 | AV10034 | AV10212 | 3745 |
|------|---------|---------|------|
| 1437 | AV10036 | AV10213 | 3745 |
| 2732 | AV10055 | AV10214 | 3748 |
| 2732 | AV10056 | AV10215 | 3748 |
| 2732 | AV10057 | AV10216 | 3748 |
| 2732 | AV10058 | AV10217 | 3748 |
| 2732 | AV10059 | AV10218 | 3748 |
| 2732 | AV10060 | AV10219 | 3748 |
| 2732 | AV10061 | AV10220 | 3748 |
| 2732 | AV10062 | AV10221 | 3748 |
| 2732 | AV10063 | AV10222 | 3748 |
| 2732 | AV10064 | AV10223 | 3748 |
| 2732 | AV10065 | AV10224 | 3748 |
| 2732 | AV10066 | AV10225 | 3748 |
| 2732 | AV10067 | AV10226 | 3748 |
| 2732 | AV10068 | AV10227 | 3748 |
| 2732 | AV10069 | AV10228 | 3748 |
| 2732 | AV10070 | AV10229 | 3748 |
| 2732 | AV10071 | AV10230 | 3748 |
| 2732 | AV10137 | AV10231 | 3748 |
| 2732 | AV10138 | AV10232 | 3748 |
| 2732 | AV10149 | AV10233 | 3748 |
| 2732 | AV10181 | AV10234 | 3748 |
| 2732 | AV10182 | AV10235 | 3748 |
| 2732 | AV10183 | AV10236 | 3748 |
| 2732 | AV10311 | AV10312 | 3748 |
| 2732 | AV10313 | AV10314 | 3748 |
| 2732 | AV10315 | AV10317 | 3748 |
| 2732 | AV10316 | AV10318 | 3748 |
| 2733 | AV10044 | AV10237 | 3749 |
| 2733 | AV10045 | AV10238 | 3749 |
| 2733 | AV10046 | AV10239 | 3749 |
| 2733 | AV10047 | AV10240 | 3749 |
| 2733 | AV10048 | AV10241 | 3749 |
| 2733 | AV10049 | AV10242 | 3749 |

|      |         |         |      |
|------|---------|---------|------|
| 2733 | AV10049 | AV10291 | 3749 |
| 2733 | AV10050 | AV10242 | 3749 |
| 2733 | AV10051 | AV10243 | 3749 |
| 2733 | AV10052 | AV10244 | 3749 |
| 2733 | AV10053 | AV10245 | 3749 |
| 2733 | AV10054 | AV10246 | 3749 |
| 2733 | AV10139 | AV10247 | 3749 |
| 2733 | AV10165 | AV10248 | 3749 |
| 2733 | AV10166 | AV10249 | 3749 |
| 2733 | AV10167 | AV10250 | 3749 |
| 2733 | AV10168 | AV10251 | 3749 |
| 2733 | AV10169 | AV10252 | 3749 |
| 2733 | AV10170 | AV10253 | 3749 |
| 2733 | AV10171 | AV10254 | 3749 |
| 2733 | AV10172 | AV10255 | 3749 |
| 2733 | AV10173 | AV10256 | 3749 |
| 2733 | AV10174 | AV10257 | 3749 |
| 2733 | AV10175 | AV10258 | 3749 |
| 2733 | AV10176 | AV10259 | 3749 |
| 2733 | AV10177 | AV10260 | 3749 |
| 2733 | AV10178 | AV10261 | 3749 |
| 2733 | AV10179 | AV10262 | 3749 |
| 2733 | AV10180 | AV10263 | 3749 |
| 2733 | AV10307 | AV10309 | 3749 |
| 2733 | AV10308 | AV10310 | 3749 |

**Table 4: ISX CM871 DPF Part Number and ECM Calibration Requirement Reference**  
CPL 0927, 2734, 2919, 3320, 3747, 3750, 3751, and 3752 (525 to 600 HP)

| Old DPF Part Number | New DPF Part Number | Description                                          | ECM Calibration Required |
|---------------------|---------------------|------------------------------------------------------|--------------------------|
| 4969702             | 5283669             | Insulated diesel particulate filter assembly         | Yes <sup>1</sup>         |
| 4969701             | 5283778             | Uninsulated diesel particulate filter assembly       | Yes <sup>1</sup>         |
| 4969703             | 5283799             | Volvo™ Spacesaver diesel particulate filter assembly | Yes <sup>1</sup>         |

|                     |         |                                                      |                  |
|---------------------|---------|------------------------------------------------------|------------------|
| 4969702,<br>5283669 | 5297522 | Insulated diesel particulate filter assembly         | Yes <sup>2</sup> |
| 4969701,<br>5283778 | 5297990 | Uninsulated diesel particulate filter assembly       | Yes <sup>2</sup> |
| 4969703,<br>5283779 | 5297989 | Volvo™ Spacesaver diesel particulate filter assembly | Yes <sup>2</sup> |

<sup>1</sup>Verify the correct ECM calibration for CPL 3747, 3750, 3751, or 3752 is already installed, or verify the correct ECM calibration is installed for the corresponding DPF part number and CPL. See Table 5.

<sup>2</sup>Verify the correct ECM calibration and minimum revision level for CPL 3747, 3750, 3751, or 3752 is already installed, or verify the correct ECM calibration is installed for the corresponding DPF part number and CPL. See Table 5.

**Table 5: ISX CM871 ECM Calibration Cross Reference**

**CPL 0927, 2734, 2919, 3320, 3747, 3750, 3751, and 3752 (525 to 600 HP)**

| Old Engine CPL | ECM Calibration to be Used with DPF Part Number 4969701, 4969702, or 4969703 (See Table 4) | ECM Calibration to be Used with DPF Part Number 5283669, 5283778, 5283799, 5297522, 5297989, or 5297990 (See Table 4) | Minimum Calibration Revision Level Required for Use with DPF Part Number 5297522, 5297989, or 5297990 | New Engine CPL |
|----------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------|
| 0927           | AV10007                                                                                    | AV10185                                                                                                               | 07                                                                                                    | 3747           |
| 0927           | AV10015                                                                                    | AV10186                                                                                                               | 06                                                                                                    | 3747           |
| 0927           | AV10016                                                                                    | AV10187                                                                                                               | 06                                                                                                    | 3747           |
| 0927           | AV10017                                                                                    | AV10188                                                                                                               | 06                                                                                                    | 3747           |
| 0927           | AV10018                                                                                    | AV10189                                                                                                               | 06                                                                                                    | 3747           |
| 0927           | AV10019                                                                                    | AV10190                                                                                                               | 06                                                                                                    | 3747           |
| 2734           | AV10037                                                                                    | AV10264                                                                                                               | 06                                                                                                    | 3750           |
| 2734           | AV10038                                                                                    | AV10265                                                                                                               | 06                                                                                                    | 3750           |
| 2734           | AV10039                                                                                    | AV10266                                                                                                               | 06                                                                                                    | 3750           |
| 2734           | AV10040                                                                                    | AV10267                                                                                                               | 06                                                                                                    | 3750           |
| 2734           | AV10041                                                                                    | AV10268                                                                                                               | 06                                                                                                    | 3750           |
| 2734           | AV10042                                                                                    | AV10269                                                                                                               | 06                                                                                                    | 3750           |
| 2734           | AV10043                                                                                    | AV10270                                                                                                               | 06                                                                                                    | 3750           |
| 2919           | AV10098                                                                                    | AV10271                                                                                                               | 06                                                                                                    | 3751           |
| 2919           | AV10099                                                                                    | AV10272                                                                                                               | 06                                                                                                    | 3751           |
| 2919           | AV10101                                                                                    | AV10273                                                                                                               | 06                                                                                                    | 3751           |
| 2919           | AV10102                                                                                    | AV10274                                                                                                               | 06                                                                                                    | 3751           |
| 2919           | AV10103                                                                                    | AV10275                                                                                                               | 06                                                                                                    | 3751           |

|      |         |         |    |      |
|------|---------|---------|----|------|
| 2919 | AV10103 | AV10273 | 06 | 3751 |
| 2919 | AV10104 | AV10276 | 06 | 3751 |
| 2919 | AV10105 | AV10277 | 06 | 3751 |
| 2919 | AV10106 | AV10278 | 06 | 3751 |
| 2919 | AV10116 | AV10279 | 06 | 3751 |
| 2919 | AV10134 | AV10280 | 06 | 3751 |
| 2919 | AV10140 | AV10281 | 06 | 3751 |
| 2919 | AV10150 | AV10282 | 06 | 3751 |
| 3320 | AV10141 | AV10283 | 06 | 3752 |
| 3320 | AV10142 | AV10284 | 06 | 3752 |
| 3320 | AV10143 | AV10285 | 06 | 3752 |
| 3320 | AV10144 | AV10286 | 06 | 3752 |
| 3320 | AV10145 | AV10287 | 06 | 3752 |
| 3320 | AV10146 | AV10288 | 06 | 3752 |
| 3320 | AV10147 | AV10289 | 06 | 3752 |
| 3320 | AV10148 | AV10290 | 06 | 3752 |

**Table 6: ISX CM871 DPF Part Number and ECM Calibration Cross Reference**  
CPL 2733, 3458, 3459, 3774, 3775, and 3776 (400 to 600 HP)

| Old Engine Part Number | New DPF Part Number | Description                                  | ECM Calibration Required |
|------------------------|---------------------|----------------------------------------------|--------------------------|
| 4969702                | 5283669             | Insulated diesel particulate filter assembly | Yes <sup>1</sup>         |
| 4969702, 5283669       | 5297522             | Insulated diesel particulate filter assembly | Yes <sup>2</sup>         |

<sup>1</sup>Verify the correct ECM calibration for CPL 3774, 3775, or 3762 is already installed, or verify the correct ECM calibration is installed for the corresponding DPF part number and CPL. See Table 7.

<sup>2</sup>Verify the correct ECM calibration and minimum revision level for CPL 3774, 3775, or 3762 is already installed, or verify the correct ECM calibration is installed for the corresponding DPF part number and CPL. See Table 7.

**Table 7: ISX CM871 Export ECM Calibration Cross Reference**  
CPL 2733, 3458, 3459, 3774, 3775, and 3776 (400 to 600 HP)

| Old Engine CPL | ECM Calibration to be Used with DPF Part Number 4969702 (See Table 6) | ECM Calibration to be Used with DPF Part Number 5283669 or 5297522 (See Table 6) | Minimum Calibration Revision Level Required for Use with DPF Part Number 5297522 | New Engine CPL |
|----------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------|
| 2733           | AV10184                                                               | AV10206                                                                          | 05                                                                               | 3776           |

|      |         |         |    |      |
|------|---------|---------|----|------|
| 2733 | AV10184 | AV10300 | 05 | 3770 |
| 3458 | AV10151 | AV10292 | 05 | 3774 |
| 3458 | AV10152 | AV10293 | 05 | 3774 |
| 3458 | AV10153 | AV10294 | 05 | 3774 |
| 3458 | AV10154 | AV10295 | 05 | 3774 |
| 3458 | AV10155 | AV10296 | 05 | 3774 |
| 3458 | AV10156 | AV10297 | 05 | 3774 |
| 3458 | AV10157 | AV10298 | 05 | 3774 |
| 3458 | AV10158 | AV10299 | 05 | 3774 |
| 3459 | AV10159 | AV10300 | 05 | 3775 |
| 3459 | AV10160 | AV10301 | 05 | 3775 |
| 3459 | AV10161 | AV10302 | 05 | 3775 |
| 3459 | AV10162 | AV10303 | 05 | 3775 |
| 3459 | AV10163 | AV10304 | 05 | 3775 |
| 3459 | AV10164 | AV10305 | 05 | 3775 |

## Document History

| Date       | Details                                   |
|------------|-------------------------------------------|
| 2010-11-18 | Module Created                            |
| 2011-2-7   | Original draft was only a place holder.   |
| 2011-9-29  | Corrected table so it displays correctly. |
| 2012-1-31  |                                           |
| 2014-11-11 | Added note about fleet count requirement  |

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