

Service Campaign Bulletin

FILE: SERVICE: GROUP 00 OF SERVICE INFORMATION BINDER
PARTS: GROUP I OF INFORMATION _ PARTS & ACCESSORIES BINDER

Campaign No. 2005070017, April 2006

Revision History

Revision	Date	Purpose
D	04/06/06	Update of model 163 in VIN list and warranty information; change of affected model years
C	04/05/06	Addition of new affected models—163, 208, 209, 215, 219, 220, and 463—and part number
B	02/08/06	Update of VIN list and change of regulator part number
A	08/29/05	Breakdown of parts information into primary and secondary parts; addition of estimated replacement rates
-	08/01/05	Initial issue

TO: ALL MERCEDES-BENZ CENTERS

SUBJECT: **MODELS 163/ 208/ 209/ 211/ 215/ 219/ 220/ 230/ 463**
MODEL YEARS 2001-2006
ENGINES 112 AND 113
INSPECT ALTERNATOR, REPLACE REGULATOR IF NECESSARY

This Service Campaign has been initiated because DCAG has determined that on the affected vehicles (see VIN range below) the alternator regulator may fail to prevent voltage values ranging beyond the specified tolerance limits. As a result, the battery may be insufficiently recharged and the convenience systems may be shut off due to a resulting under voltage condition. The voltage drop is accompanied by a corresponding message display at the instrument cluster. This campaign includes checking the alternator and replacing the regulator if necessary.

Please review the Effective Serial Number chart located below, and if necessary, repair the subject vehicles during the vehicle's next service.

Prior to performing this Service Campaign:

- Please check VMI to insure the vehicle is involved and to determine if the vehicle has been previously repaired.
- Please review the entire Service Campaign bulletin.

Approximately 279,948 vehicles are affected.

Order No. P-SC-2005070017

This bulletin has been created and maintained in accordance with MBUSA-SLP S423QH001, Document and Data Control, and MBUSA-SLP S424HH001, Control of Quality Records.

Effective Serial Number Range

Models	Chassis End Number	
	From	To
163.174	A318687	A440701
163.175	A318687	A569678
208.370	F192569	F201799
	T093068	T128471
208.374	F192579	F198331
	T093560	T120625
208.470	T093056	T144410
208.474	T093122	T129637
209.375	F000313	F151415
209.376	F019833	F151253
209.475	F111256	F151424
	T000115	T047048
209.476	T009165	T046986
211.065	A014562	A734487
	X097696	X116123
211.070	A042945	A773521
211.076	A136286	A773571
211.082	X108074	X178595
211.083	X108399	X178599
211.265	A307691	A732056
211.276	A715663	A772339
211.282	X108182	X178465
211.283	X108624	X178584
215.373	A019008	A031309
215.374	A030004	A046181
215.375	A019005	A046183
219.375	A000205	A010499
220.067	A374774	A458342
220.170	A227053	A459236
220.173	A227313	A301296
220.174	A306185	A459218
220.175	A227057	A459237
220.183	A310904	A459235
220.184	A308819	A459238
230.474	F009458	F098828
230.475	F001175	F098841
463.246	X134785	X147514
463.249	X126770	X159330
463.271	X146910	X159323

Note:

Every vehicle in the VIN range may not be included in the campaign. VMI must always be checked before performing campaigns to verify that the campaign is required on a specific vehicle. VMI **always** overrides the bulletin in reference to a specific vehicle's inclusion in a particular campaign. Please also note that Recall and Service Campaigns **do not expire** and may also be performed on a vehicle with a vehicle status indicator. Only procedures below are applicable to an individual VIN. Not all vehicles require all repair procedures.

A. INSPECT ALTERNATOR

Procedure

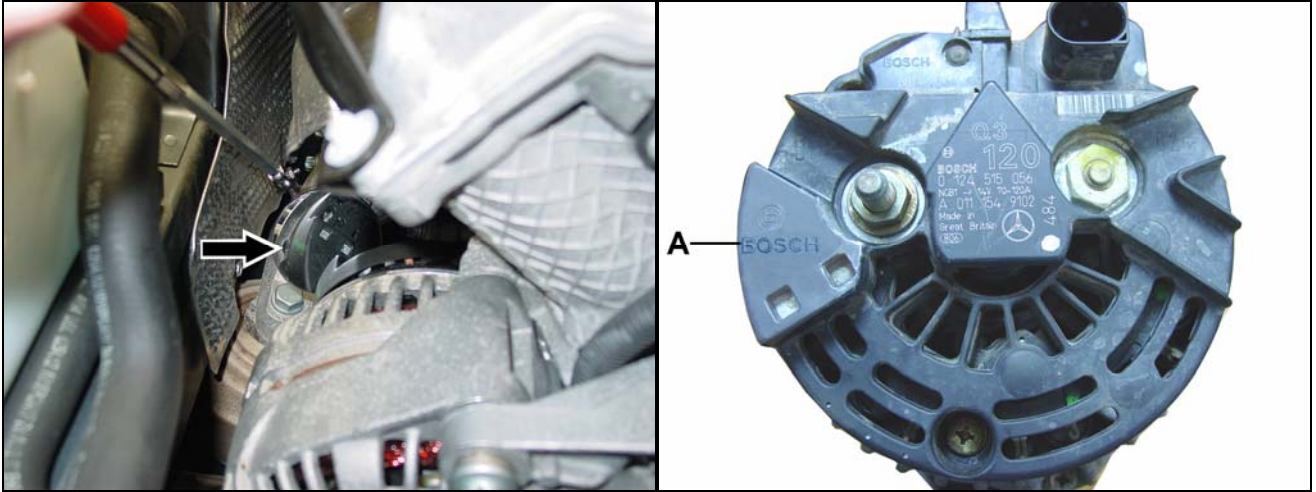


Figure 1

1. Vehicles with engine **112**: Check the manufacturer of the alternator using a mirror (arrow, Figure 1).
 - If the alternator is manufactured by **Valeo**:
This campaign is completed, no further action needs to be taken.
 - If the installed alternator is made by **Bosch (A)** replace regulator:
For models **211 4Matic/ 220**: Proceed to Subject **B**.
For model **211**: Proceed to Subject **C**.
2. Vehicles with engine **113**: Replace regulator:
 - For models **163/ 211 4Matic/ 215/ 220/ 463**: Proceed to Subject **B**.
 - For models **209/ 211/ 219/ 230**: Proceed to Subject **C**.

Note:

- **IT IS NOT NECESSARY TO CHECK THE MANUFACTURER OF THE ALTERNATOR ON VEHICLES EQUIPPED WITH ENGINE 113.**
- **ALL 113 ENGINES ARE EQUIPPED WITH BOSCH ALTERNATORS AND REQUIRE REGULATOR REPLACEMENT.**

B. REMOVE REGULATOR WITH ALTERNATOR IN ENGINE COMPARTMENT MODELS 163/ 211 4MATIC/ 215/ 220/ 463

Note:

- **Model 163:** Proceed to step 1.
 - **Model 463:** Proceed to step 2.
 - **Models 211 4Matic/ 215/ 220:** Proceed to step 3
1. **Model 163:** Remove alternator from vehicle (refer to WIS: AR15.40-P-5032GH) then proceed to Subject D, Replace Regulator.
 2. **Model 463:**
 - Disconnect battery ground cable from battery terminal.
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- Remove right air intake duct (arrow, Figure 2).
 - Remove front section of upper engine cover (A, Figure 2).
 - Remove engine fan refer to WIS: AR20.40-P-5660C.
 - Remove engine belt from alternator pulley (do not remove belt from vehicle) refer to WIS: AR13.22-P-1202B
- Note** (regarding above WIS instructions):
When removing engine belt from alternator pulley, do not remove fan shroud.
- Remove upper alternator mounting bolt (B, Figure 3).
 - Loosen lower alternator mounting bolt (A, Figure 3) from mounting bracket (arrow).

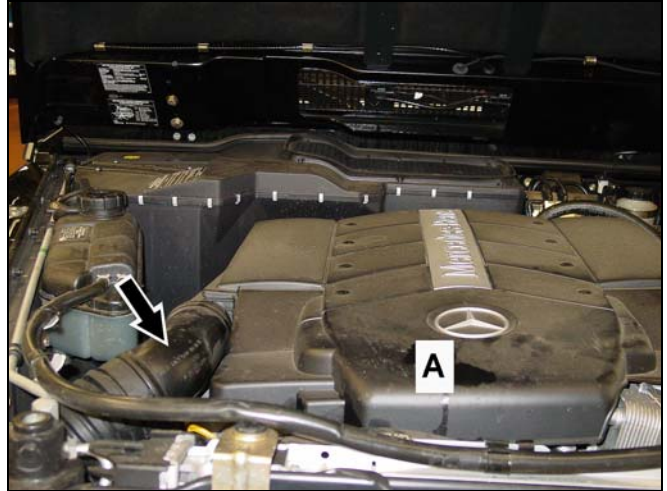


Figure 2

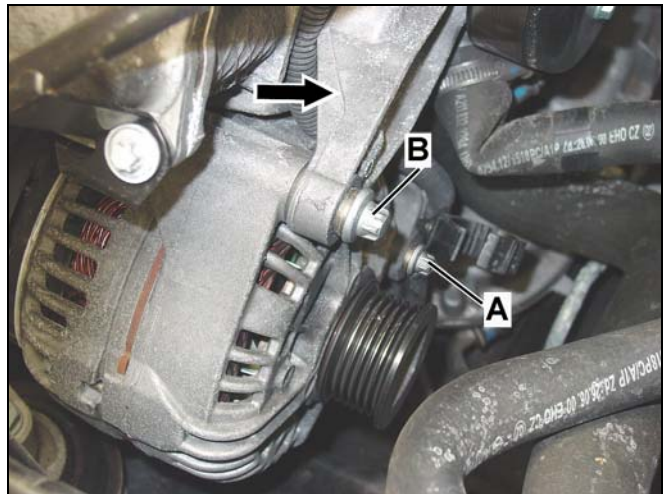


Figure 3

(Shown on model 211)

- Disconnect circuit 61 harness connector (arrow, Figure 4) from regulator.
- Remove circuit 30 terminal cover (A)

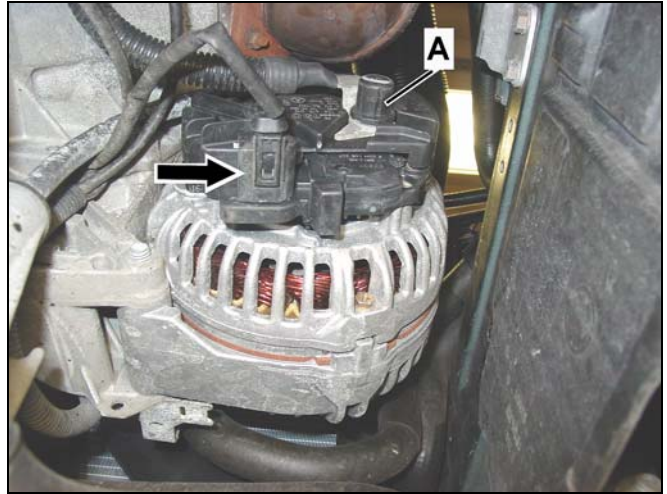


Figure 4 (shown on model 208)

- Remove nut (arrow, Figure 5) then remove circuit 30 harness connector (A) from terminal stud.
- Remove lower alternator bolt (A, Figure 3) from mounting bracket.
- Remove alternator (B, Figure 5) from mounting brackets.

Note:

Do not remove alternator (B) from engine compartment.

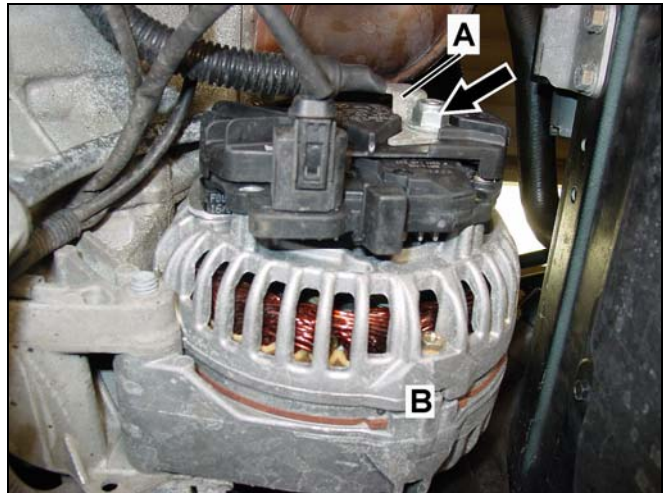


Figure 5 (shown on model 208)

- Position alternator (A, Figure 6) with regulator facing up and pulley facing down.
Regulator will be replaced with alternator in engine compartment (proceed to Subject D).

Note:

Replacement of engine belt is not included in this campaign.

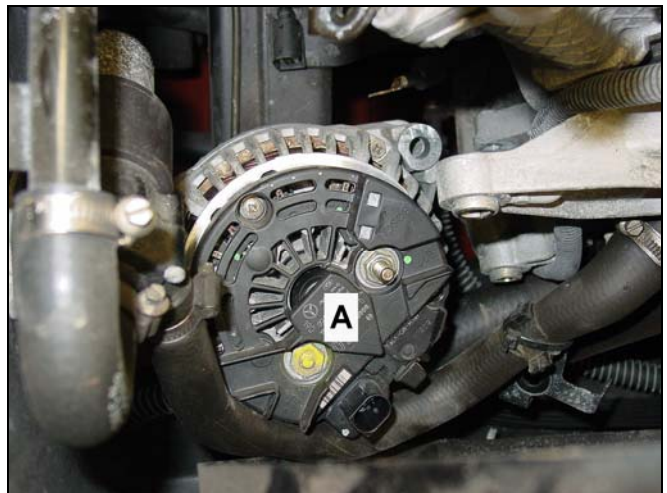


Figure 6

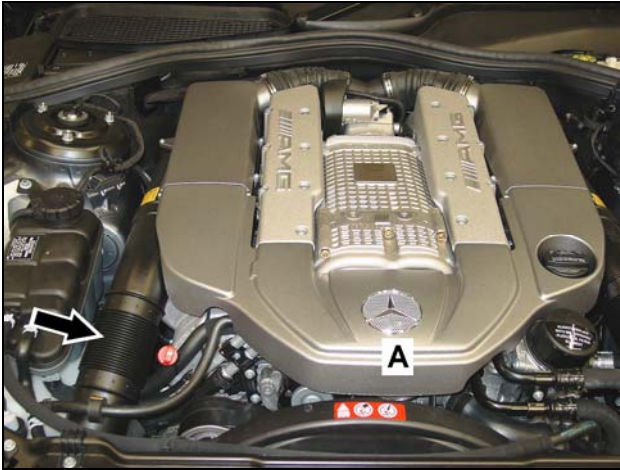


Figure 7 (Shown on model S55 AMG)

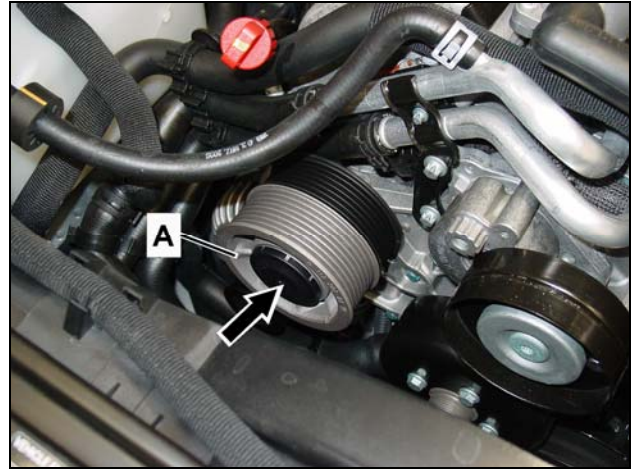


Figure 8 (Shown on model S55 AMG)

3. **Models 211 4Matic/ 215/ 220:**

- Disconnect battery ground cable from battery terminal.
- Remove right air intake duct (arrow, Figure 7).
- Remove front section of upper engine cover (A, Figure 7).
- **Models 215/ 220 AMG only:**
 - ◆ Remove supercharger belt from vehicle refer to WIS: AR13.21-P-1202RVK.
 - ◆ Remove cap (arrow, Figure 8) on idler pulley (A).
 - ◆ Remove idler pulley bolt (arrow, Figure 9) and idler pulley (A).

Installation Note:

When reinstalling, torque bolt (A) to 68 Nm.

- Remove engine belt from alternator pulley (do not remove belt from vehicle) refer to WIS: Group 13.22
- **Model 211 4Matic only:** Unclip heater hose (A, Figure 10) from mounting clip (arrow).

Note:

Replacement of engine belt and/or supercharger belt are **not** included in this campaign.

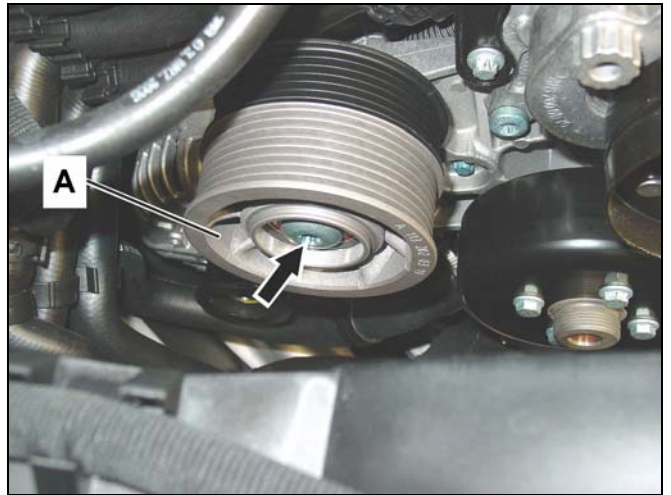


Figure 9

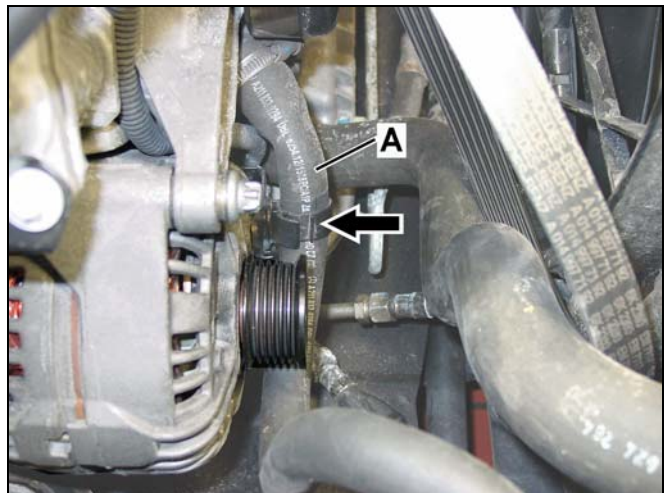


Figure 10

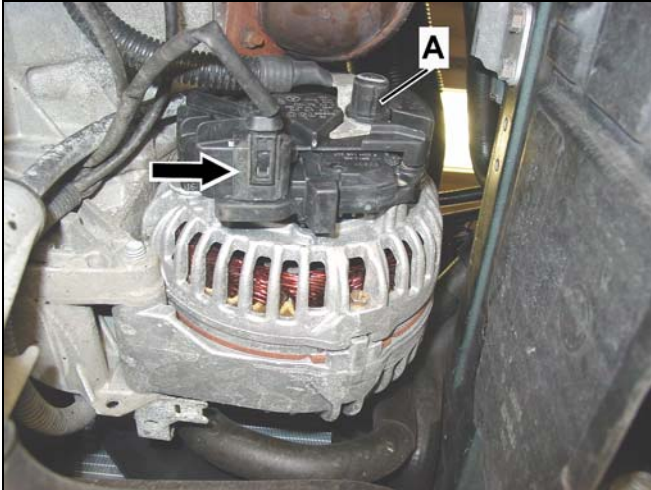


Figure 11

(shown on model 208)

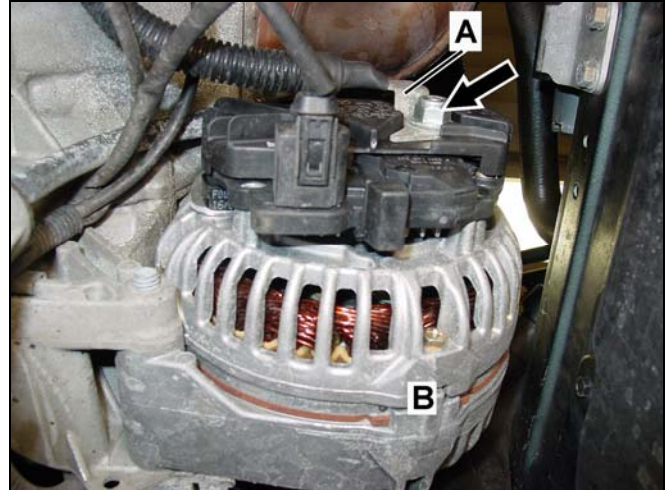


Figure 12

(shown on model 208)

- Disconnect circuit 61 harness connector (arrow, Figure 11) from regulator.
- Raise vehicle on vehicle lift then remove lower (center) engine cover.
- Remove circuit 30 terminal cover (A, Figure 12).
- Remove nut (arrow, Figure 12) then remove circuit 30 harness connector (A) from terminal stud on alternator (B).

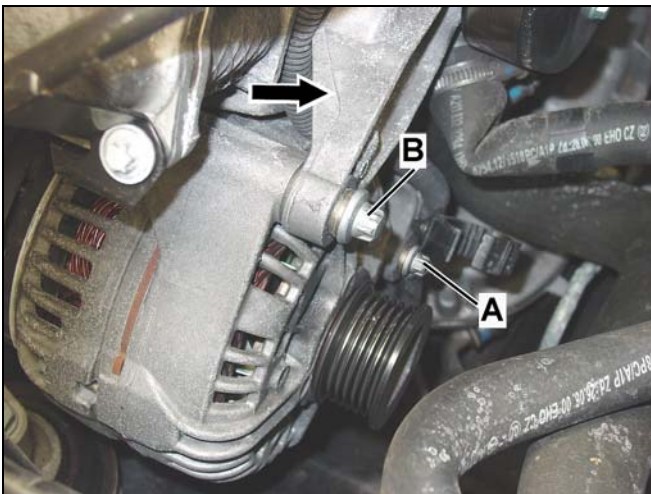


Figure 13

(Shown on model 211)

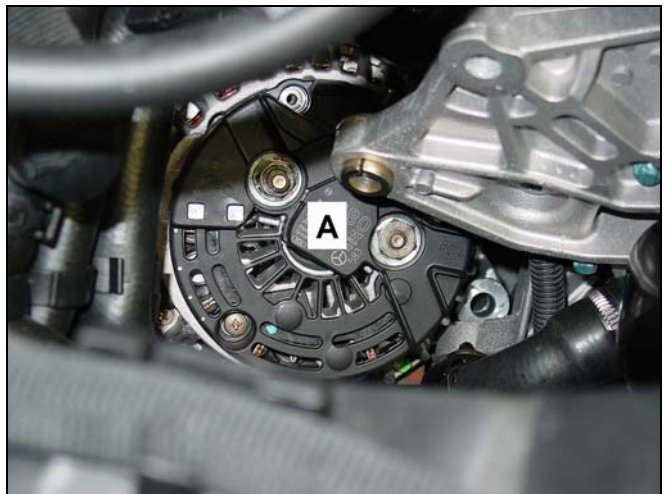


Figure 14

(Shown on model S55 AMG)

- Loosen upper alternator mounting bolt (B, Figure 13).
- Remove lower alternator mounting bolt (A), then remove upper alternator mounting bolt (B).
- Remove alternator from mounting brackets.

Note:

Do not remove alternator from engine compartment.

- Position alternator (A, Figure 14) with regulator facing up and pulley facing down. **REGULATOR WILL BE REPLACED WITH ALTERNATOR IN ENGINE COMPARTMENT** (proceed to Subject D).

**C. REMOVE REGULATOR WITH ALTERNATOR BOLTED TO ENGINE
MODELS 208/ 209/ 211/ 219/ 230**

Note:

Subject C does not apply to 4Matic models.

1. Disconnect battery ground cable from battery terminal.
2. Raise vehicle.
3. Remove lower engine cover:
 - **Models 211/ 219/ 230:** Remove lower middle engine cover.
 - **Models 208/ 209:** Remove (single) lower engine cover.
4. Disconnect circuit 61 connector (arrow, Figure 15) from regulator.
5. Remove circuit 30 cover (A, Figure 15) from terminal.
6. Remove nut (arrow, Figure 16) then remove circuit 30 harness connector (A) from terminal stud on alternator (B).
7. Replace regulator with alternator bolted to engine (proceed to Subject D).

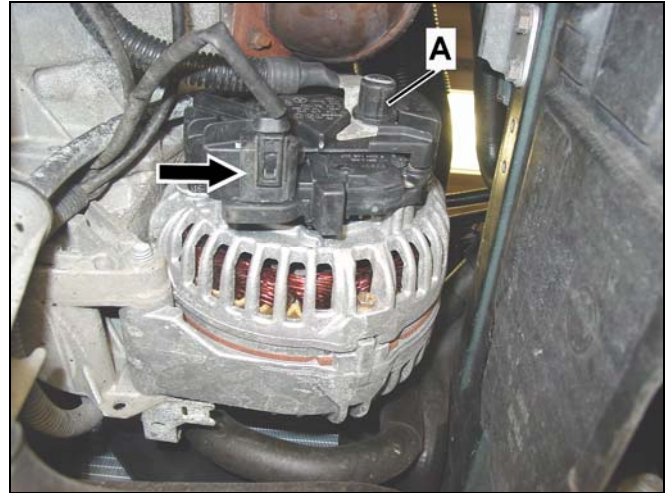


Figure 15

(shown on model 208)

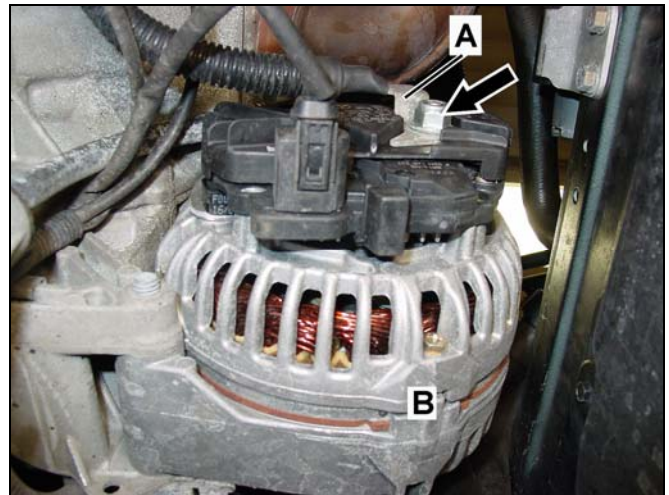


Figure 16

D. REPLACE REGULATOR

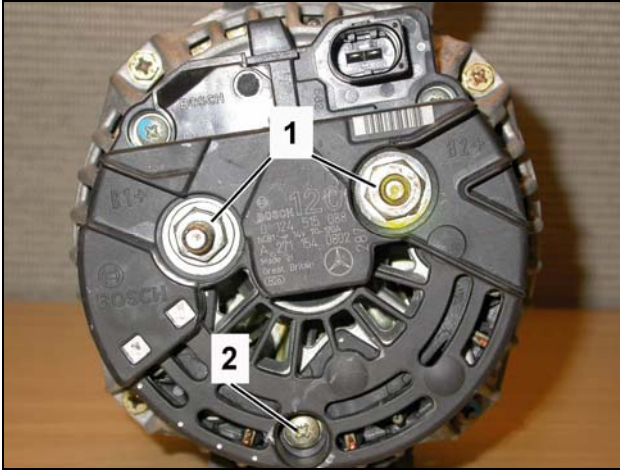


Figure 17

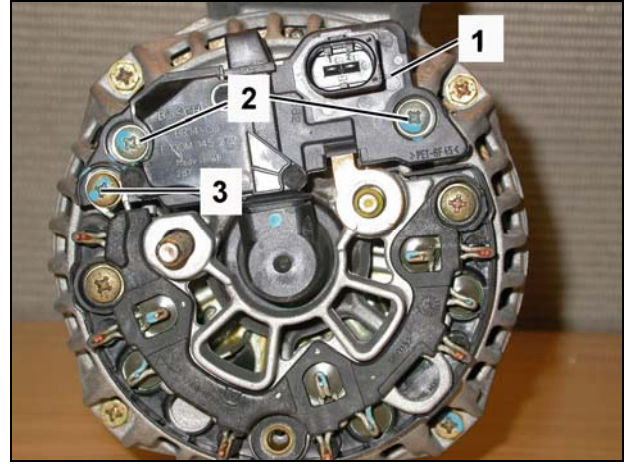


Figure 18

1. Remove the two nuts (1, Figure 17) from studs and one Philips head screw (2); remove the plastic cover from the rear of the generator.

Note:

Observe which nut is removed from either stud.

2. Remove three Philips head screws (2, 3, Figure 18); remove regulator (1) from the generator.
3. Install new regulator (1) with **original** Philips head screws and torque screws to:
 - (2) = 2.0-2.4 Nm
 - (3) = 1.0-1.4 Nm

Note:

Ensure the carbon brushes (arrows, Figure 19) are not damaged during the installation procedure.

4. Install the plastic cover on the back of the generator and torque the Philips head screw (2, Figure 17) to: 2.2 - 2.6 Nm and the two nuts (1) as follows:
 - On long stud: 29.0 - 32.0 Nm
 - On short stud: 11.0 - 13.0 Nm
5. Reinstall the alternator in reverse order
6. Reinstall components in reverse order.



Figure 19

7. Reconnect battery cable to negative battery terminal, reinitialize vehicle systems (e.g., steering angle sensor, power windows etc.); refer to WIS: AR00.19-P-0200P
8. Connect SDS and erase any faults that may have been stored.

Primary Parts Information

Qty.	Part Name	Part Number	Estimated Replacement Rate
1	Regulator (Models 208/ 211/ 215/ 219/ 220/ 230/ 463)	A 003 154 51 06	Engine 113: 100% Engine 112: See note below
	Regulator (Models 163/ 209)	A 003 154 52 06	

Note: 100% replacement rate on vehicles with 112 Engines only applies to those equipped with Bosch Alternators. Vehicles with 112 Engines equipped with Valero alternator do not require replacement as part of the campaign.

NOTE:

THE FOLLOWING SECONDARY PART(S) IS/ARE NOT TO BE ORDERED IN EQUAL QUANTITIES AS THE PRIMARY PART(S). THEREFORE DO NOT PACKAGE OR KIT CAMPAIGN PARTS TOGETHER SINCE NOT ALL VEHICLES WILL REQUIRE THESE PARTS.

Secondary Parts Information

Qty.	Part Name	Part Number	Estimated Replacement Rate
As Required (Maximum of 3)	Screw (regulator to alternator)	A 001 990 61 21	25%

Note:

- Please be aware that only the part number(s) referenced in the Campaign Bulletin is/are approved for use to repair the vehicle. Repairs performed using any other part(s) will not have been performed in accordance with the campaign. Accordingly, warranty claims submitted with reference to an improper part number(s) will be denied.
- The following allowable labor operation should be used when submitting a warranty claim for this repair:

Warranty Information**Repair 1 (Engine 112- Check Alternator Only)****Operation:** Voltage Regulator- Alternator M112, Check (02-4827)

Damage Code	Operation Number	Labor Time (hrs.)	Model Indicator(s)
54 930 01 8	02-4827	0.1 hrs.	J2, T1, T4, U1, U4

Repair 2 (Engine 112- Check Alternator and Replace Regulator)**Operation:** Voltage Regulator- Alternator M112, Check (02-4827)

Voltage Regulator- Alternator (DAS Connected), Replace (02-4828)

Diagnosis Assistance System (DAS), Connect & Disconnect (02-4762)

Damage Code	Operation Number	Labor Time (hrs.)	Model Indicator(s)
54 930 01 7	02-4827	0.1 hrs.	J2, T1, T4, U1, U4
	02-4828	0.6 hrs.	T1, T4, U1, U4
	02-4828	0.7 hrs.	J2
	02-4762	0.2 hrs.	J2, T1, T4, U1, U4

Repair 3 (Engine 113- Replace Regulator Only)**Operation:** Voltage Regulator- Alternator (DAS Connected), Replace (02-4828)

Diagnosis Assistance System (DAS), Connect & Disconnect (02-4762)

Damage Code	Operation Number	Labor Time (hrs.)	Model Indicator(s)
54 930 01 7	02-4828	0.6 hrs.	L1, L2, L3, T2, T3, T5, U3, U5, Y1
	02-4828	0.7 hrs.	M1, M2, M5, N1, R1, R2, S2, S3, S5, S6
	02-4828	0.8 hrs.	K3, K4, M6, M7, M9, N3, N5
	02-4828	1.1 hrs.	H2, H4, H5, H6
	02-4762	0.2 hrs.	H2, H4, H5, H6, K3, K4, L1, L2, L3, M1, M2, M5, M6, M7, M9, N1, N3, N5, R1, R2, S2, S3, S5, S6, T2, T3, T5, U3, U5, Y1