



Bulletin: Auxiliary Drive Retrofit

09/04/2015



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NOTICE:

The specifications, descriptions, information, and recommendations contained in this bulletin are believed to be accurate as of September 4, 2015.

Upfitter Management Vans reserves the right to modify or append this document without prior notification.

This bulletin is not intended as a work instruction, but as a guideline for upfitters to provide technical information necessary to retrofit or modify Mercedes-Benz Sprinters & Freightliner Sprinters (906).

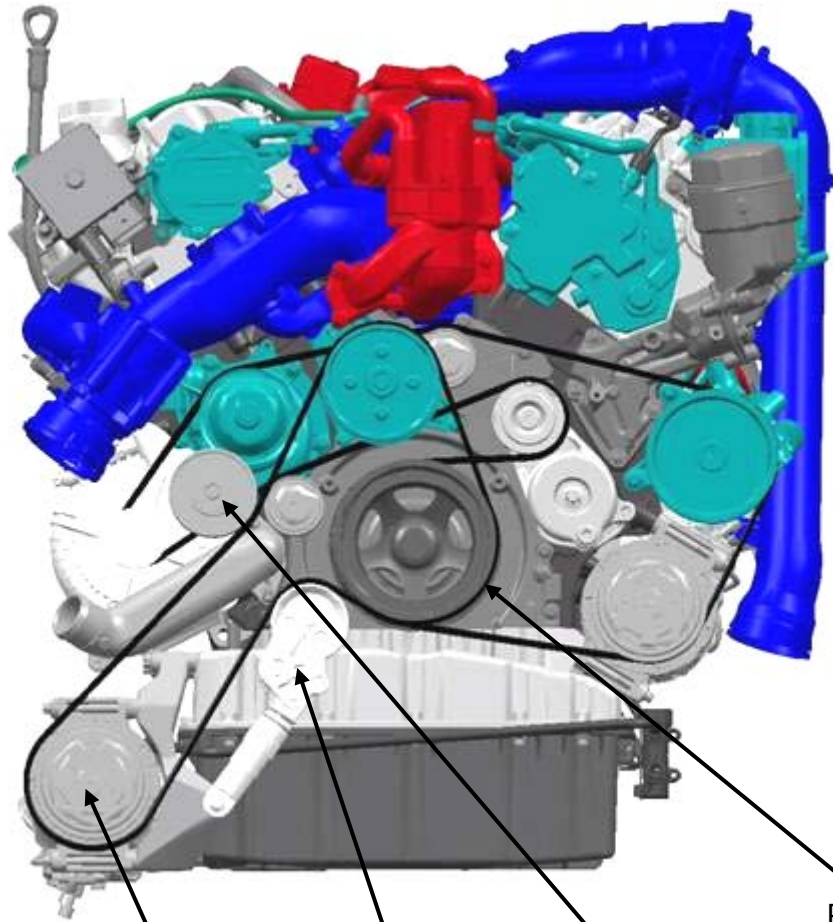
Prior to making any modification to or installing any equipment in or on a Mercedes-Benz Sprinter & Freightliner Sprinter, please consult with Upfitter Management Vans for additional and updated information, and read the Body & Equipment Guidelines for Sprinter Model Series 906.

Upfitter Management Vans Contacts:

For information or upfitter inquiries
please submit a request via our website:

www.upfitterportal.com

Auxiliary Drive Retrofit General (N63/ N62)



Compressor

Pulley with hydraulic
belt tensioner

Guide pulley

Fan belt pulley

Note:

This guideline is not intended as a complete work instruction but as an aid for body builders and upfitters, that need to retrofit the auxiliary drive (code N63 / N62).

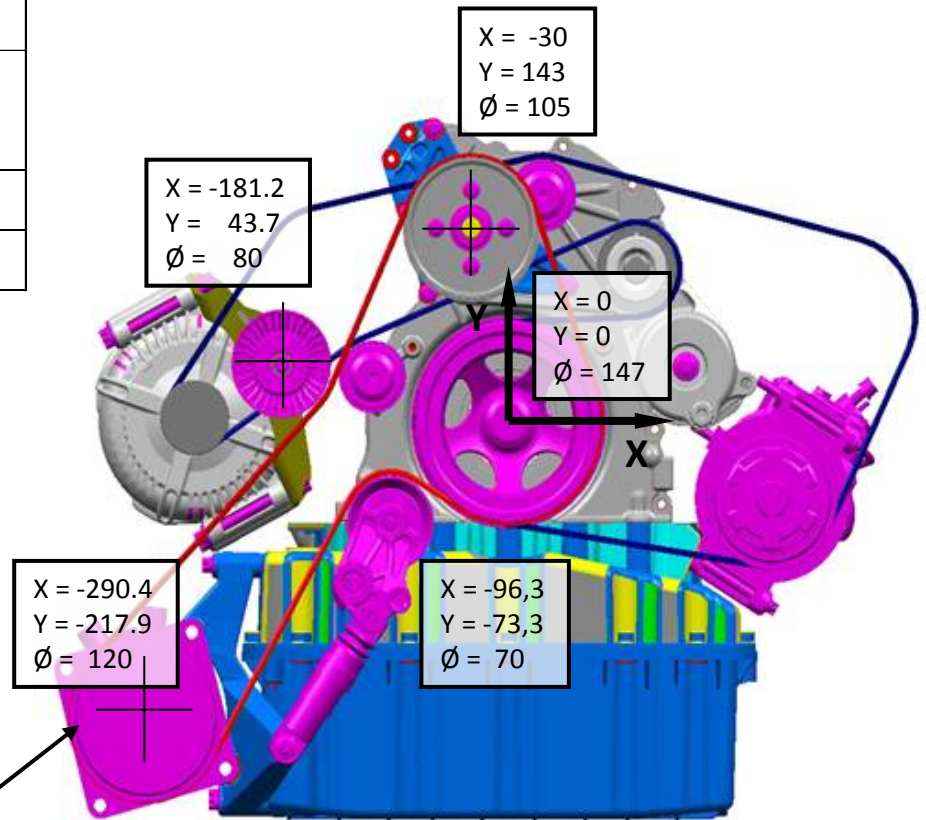
It contains part numbers, installation information and torque values for the Mercedes-Benz Sprinter & Freightliner Sprinters.

- On Sprinters with Diesel engines it is possible to attach an additional compressor or aux alternator on the right side of the engine next to the oil pan.
- An A/C compressor bracket can be retro fitted by replacing the existing casting.
- The compressor pulley and the cooling fan are connected with the crank shaft pulley via a serpentine belt.

Belt length layout: (Example is a 120mm diameter pulley)

Engine center	See picture
Pully diameter d(a)	120 mm (see picture)
serpentine belt 21.36 x 1411	width: 21.36 mm length: 1411 mm rib quantity: 6 PK material: EPDM
Compressor casting (part of CODE LBS)	MB part #.: A 642 234 04 39) fits refrigeration compressor
compressor weight:	Max 6,5 kg [14.33 lbs]
input compressor:	Max 8,0 kW

It is the Upfitters responsibility to choose the correct belt length and to ensure the correct belt layout and belt durability.



Example is a 120mm compressor pulley

Parts List

Qty	MB#	Description
1	A 906 501 20 82	hose, cooling fluid
1	A 000 993 08 02	stop spring (radiator)
1	A 906 501 33 82	hose, cooling fluid
1	A 642 203 05 40	bracket (to alternator)
1	N 910143 006001	screw MBN 10143-M6x16-8.8
1	A 642 200 11 70	belt tensioner
1	N 910143 008015	screw MBN 10143-M8x30-10.9
1	N 000912 008210	screw DIN 912-M8x65-10.9
1	A 001 993 46 96	main serpentine belt 21.36x2045
4	N 000000 003609	screw MBN 10143-M8x95-10.9
1	A 642 230 00 42	pulley, bracket
1	A 642 200 07 56	adapter cooling water intake

Depending on the application one of the following available attachment casting options must be ordered in addition:

For retrofitting CODE N63 refrigeration casting:

1	A 642 234 04 39	casting (refrigeration)
4	N 910143 008021	screw MBN 10143 M8x65 - 8.8

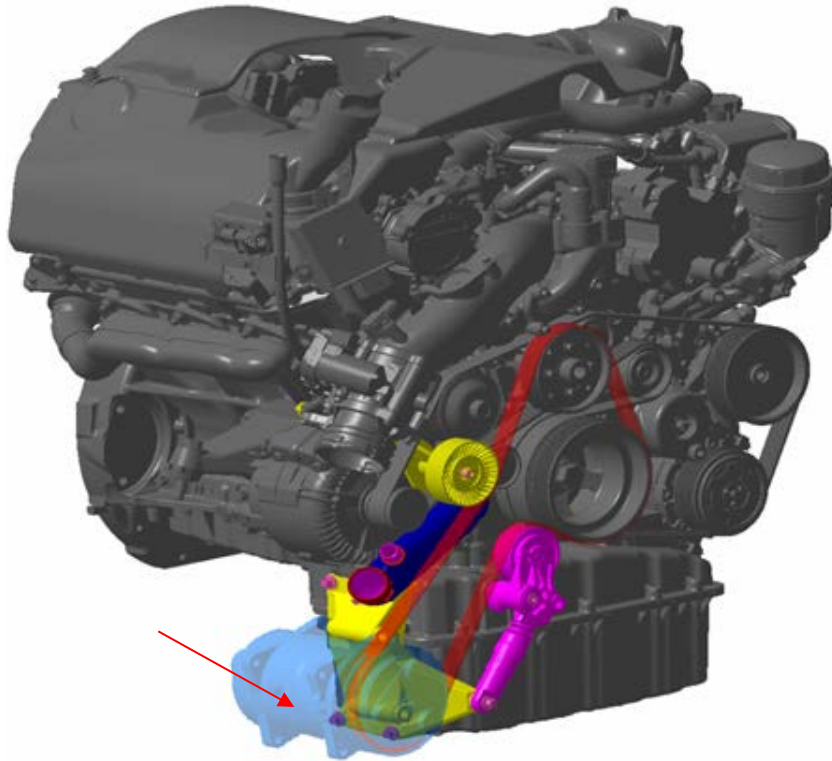
For retrofitting air-conditioning casting with compressor (Denso):

1	A 642 234 03 39	casting A/C (Denso)
4	N 910143 008021	screw MBN 10143 M8x65 - 8.8
1	A 001 230 71 11	compressor (Denso)
1	A 001 993 37 96	serpentine belt (21.36mm x 1411mm)
3	N 910143 008011	screw M8 x 90 - 8.8

For retrofitting CODE N62 alternator casting:

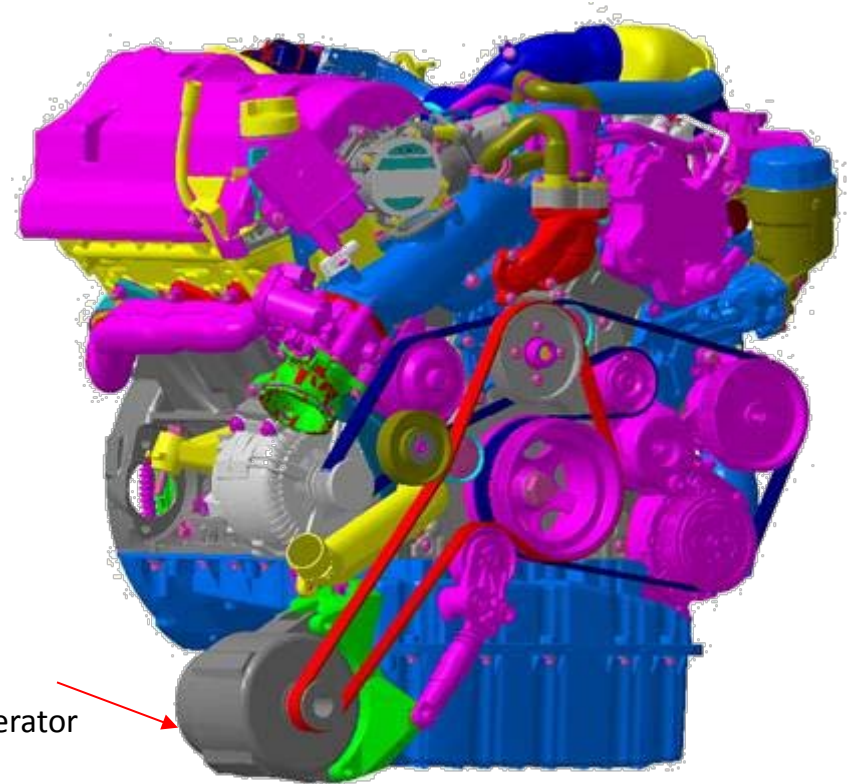
1	A 642 150 00 65	casting (alternator)
4	N 910143 008007	screw MBN 10143 M8x50 - 8.8

Aux Drive On Engine OM642



CODE N63

Alternator, A/C compressor or refrigeration compressor are customer supplied.



Aux generator

CODE N62

Overview

Available castings:

A/C casting DENSO (OEM spare part)
MB# A 642 234 03 39

Refrigeration casting SANDEN (included in CODE N63)
MB# A642 234 04 39

Aux alternator casting
(included in CODE N62)
MB# A 642 150 00 65

For A/C and refrigeration casting use screws:

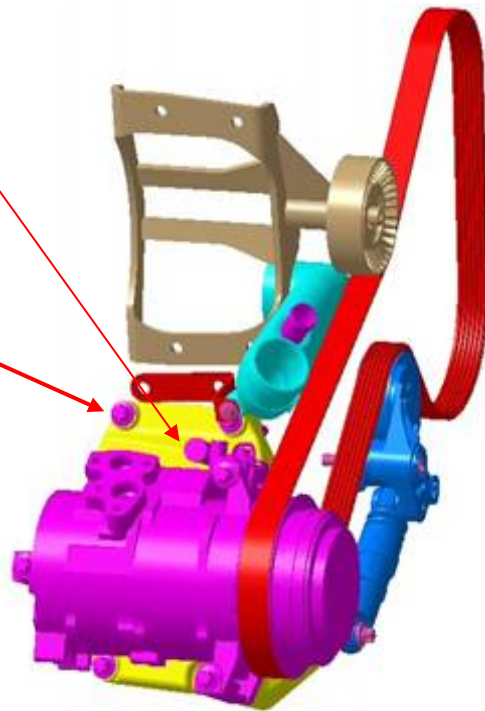
4x MB# N 910143 008021

Screw M8x65 - 8.8
20 Nm +/- 1,6 Nm
[14.75 lb-ft +/- 1.2lb-ft]

For generator casting use:

4x MB# N 910143 008007

Screw M8x50 - 8.8
20 Nm +/- 1,6 Nm
[14.75 lb-ft +/- 1.2lb-ft]

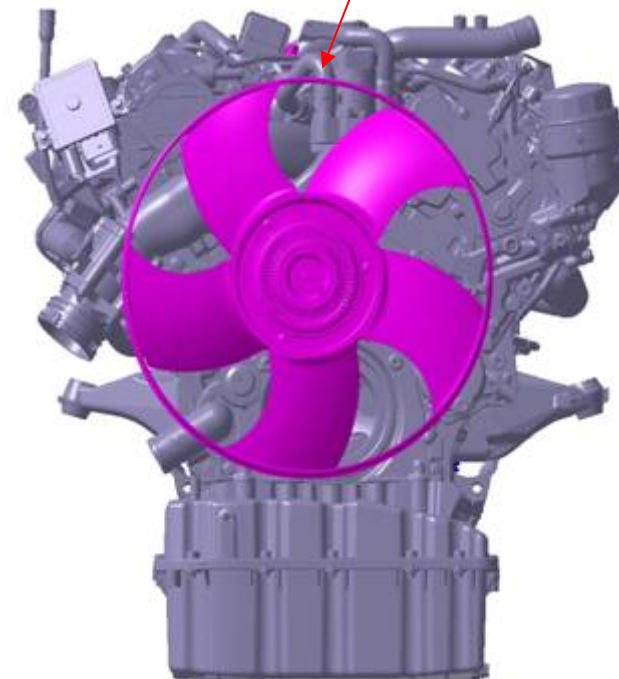


Remarks:

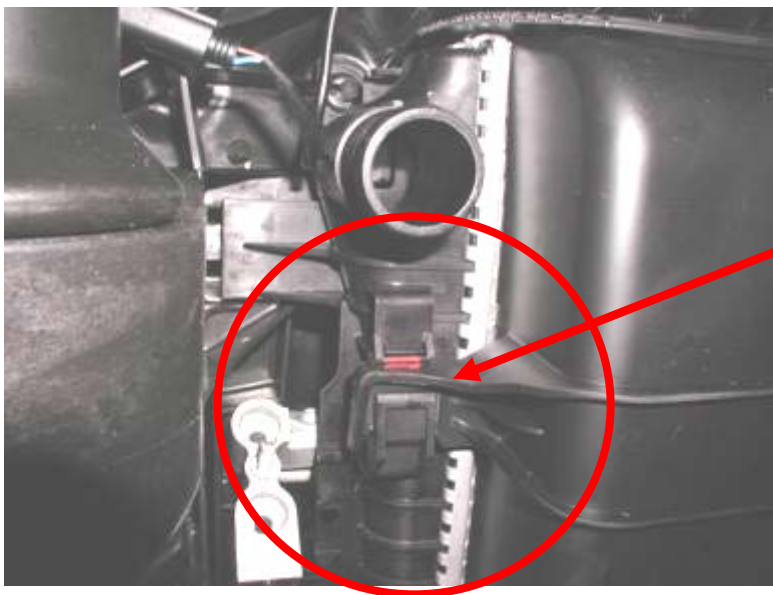
Using special tool (counter holder) 8930, remove radiator fan.
Always store the viscous fan clutch in the upright position. Do not place down flat.

MB# A 000 200 73 23

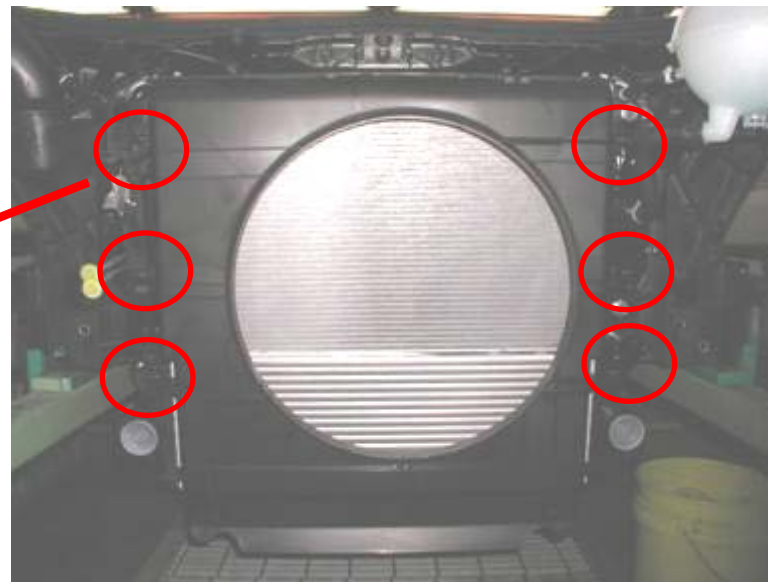
Cooling fan
22 Nm +/- 3 Nm
[16.25 lb-ft +/- 2.2lb-ft]



Fan Shroud



Top tab (rear view)



Cooling unit (rear view)

- To remove fan shroud MB# A9065050155, release lateral clips from the top 2 tabs very careful. The bottom 4 clips rest in a groove. Pull gently fan shroud upward.
- To reassemble ensure that all 6 tabs fit correctly.
- **Do not install shroud with broken or missing tabs.**



Pulley Bracket to Alternator Mounting

Remove:
Sprinter OEM alternator

4x MB# N 000000 003609

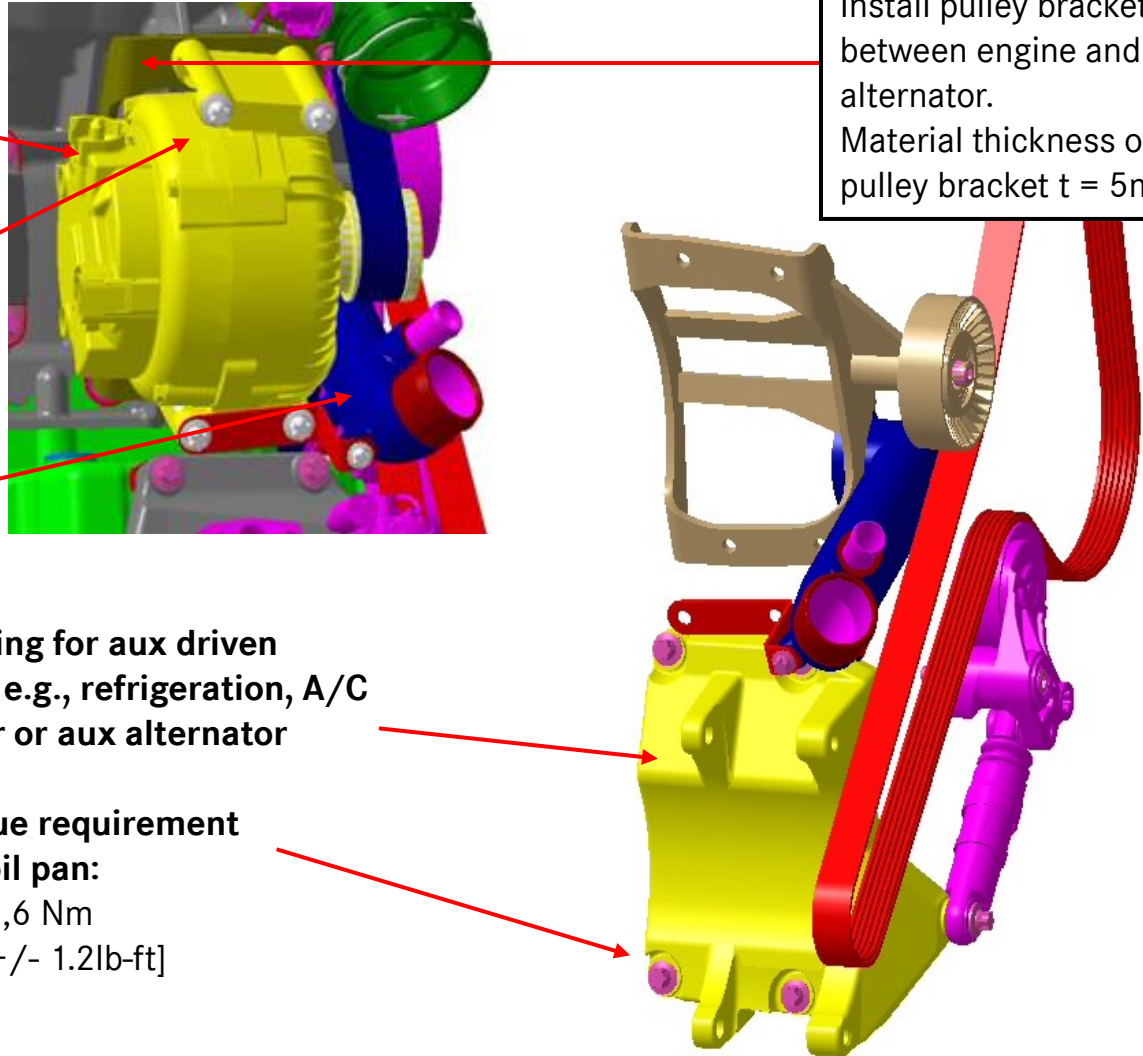
Screw: M8 X95 - 8.8
20 Nm +/- 1,6 Nm
[14.75 lb-ft +/- 1.2lb-ft]

Adapter coolant intake
MB# A 642 200 07 56

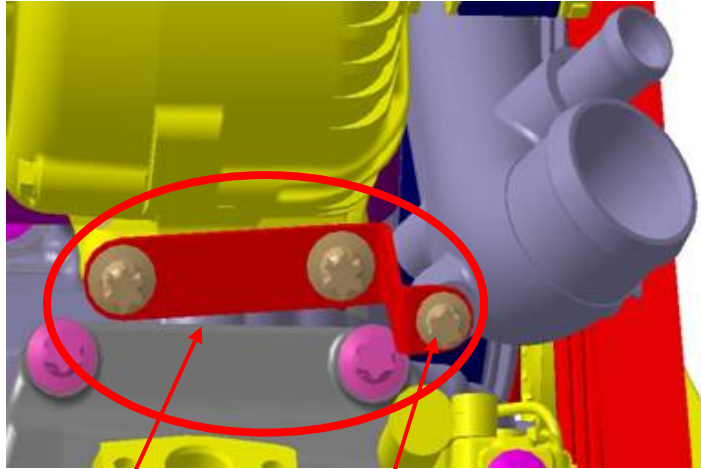
Mount casting for aux driven component e.g., refrigeration, A/C compressor or aux alternator

Screw torque requirement casting to oil pan:
20 Nm +/- 1,6 Nm
[14.75 lb-ft +/- 1.2lb-ft]

A 642 230 00 42
Install pulley bracket between engine and alternator.
Material thickness of pulley bracket t = 5mm



Bracket Alternator / Hydraulic Dampener

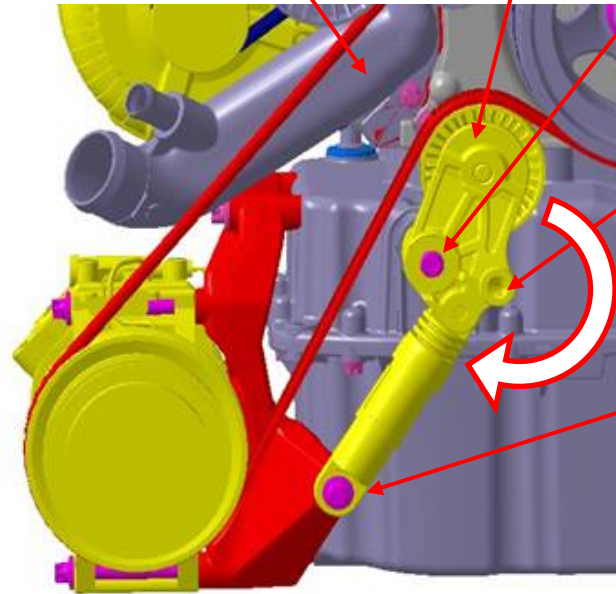


1x A 642 203 05 40
Bracket

1x N 910143 006001
Screw M 6X16 - 8.8
8,4 Nm +/- 0,65 Nm
[6.2 lb-ft +/- 0.5 lb-ft]

Adapter coolant intake
1x A 642 200 07 56
Reuse existing 2x screws

1x A 642 200 11 70
Belt tensioner



1x N 000912 008210
Screw M8x65 - 10.9
27,5 Nm +/- 2,2 Nm
[20.3 lb-ft +/- 1.6 lb-ft]

Use Torx head T55
to install
serpentine
belt (see arrow)

1x N 910143 008015
Screw M8 x30 - 10.9
29,5 Nm +/- 2,3 Nm
21.75 lb-ft +/- 1.7lb-ft]

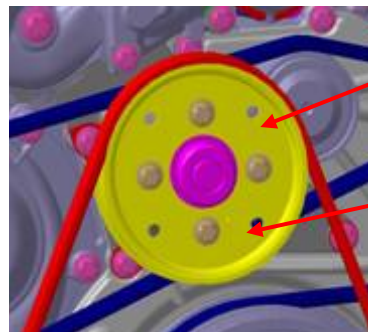
Serpentine Belt Routing

Factory supplied main serpentine belt
MB# A 642 997 02 92 (2035 mm)

Factory supplied serpentine belt, remove only when installing
 compressor/generator.

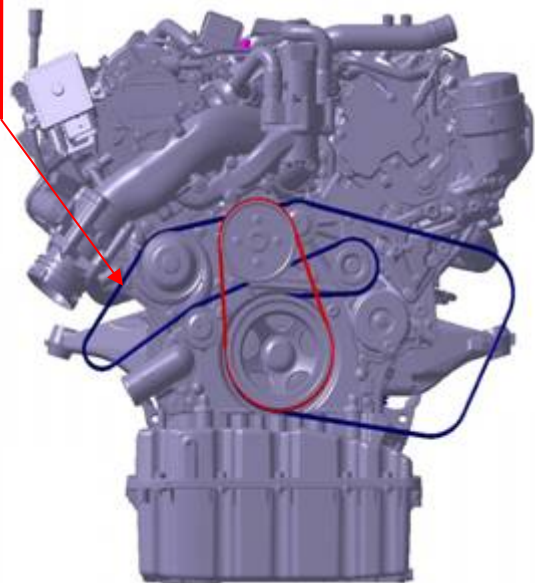
(crank pulley to fan)

MB# A 001 993 38 96 (21.36 x 691 mm)



Pulley

4x Screw M6x10 - 8.8
 10 Nm +/- 1 Nm
 [7.4 lb-ft +/- 0.7 lb-ft]



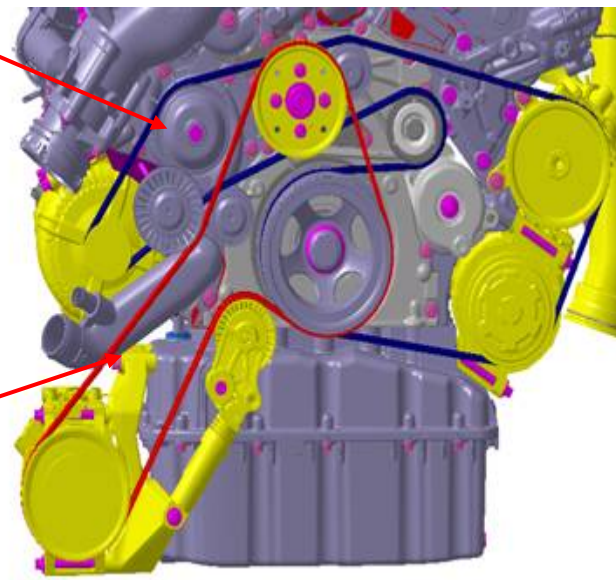
Factory original

Main serpentine belt **must be replaced** with
 longer belt **MB# A 001 993 46 96**
 (21.36mm x 2045 mm)

**Alternator, A/C compressor or
 refrigeration compressor are not
 included in the option code. Customer
 needs to procure the aforementioned
 components.**

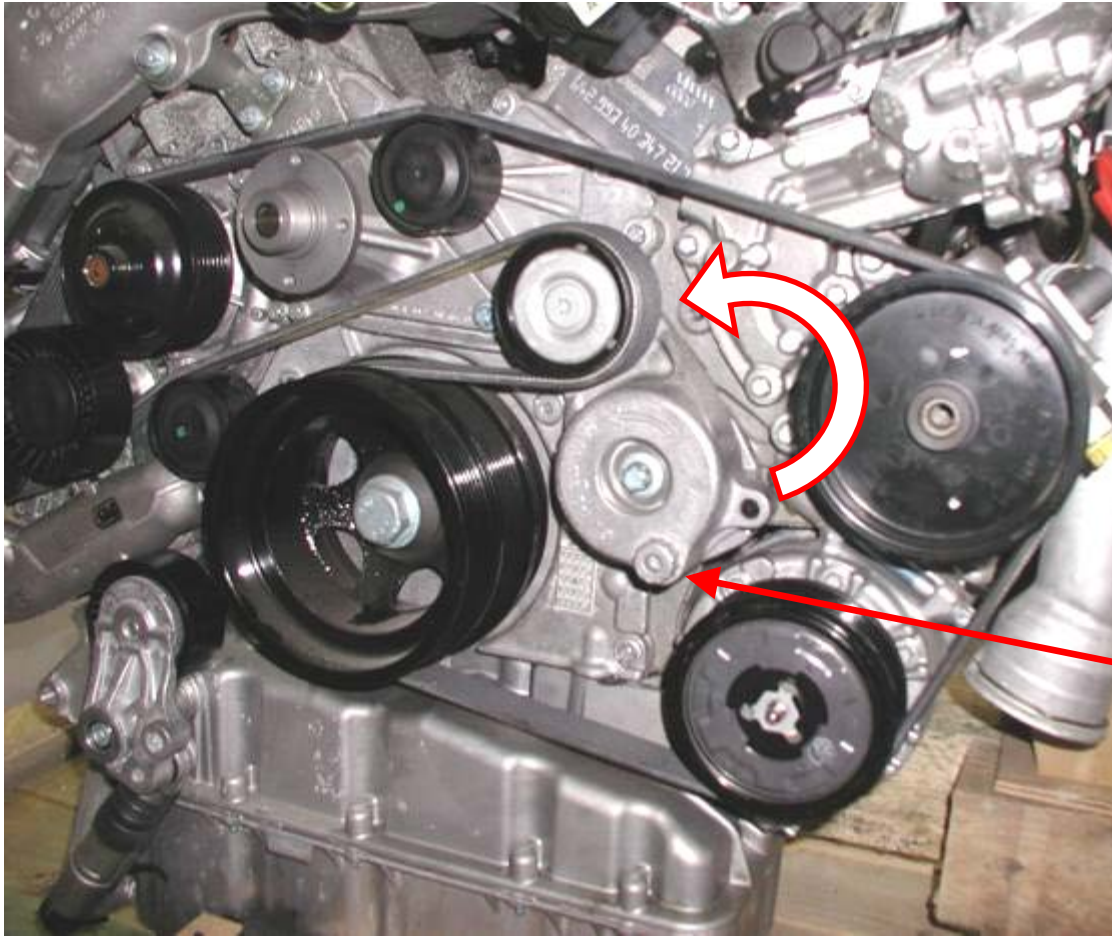
Available serpentine belt for option (N63)
MB# A 001 993 37 96 (21.36 x 1411 mm)

Available serpentine belt for option (N62)
MB# A 011 997 58 92 (21.36 x 1330 mm)



After conversion

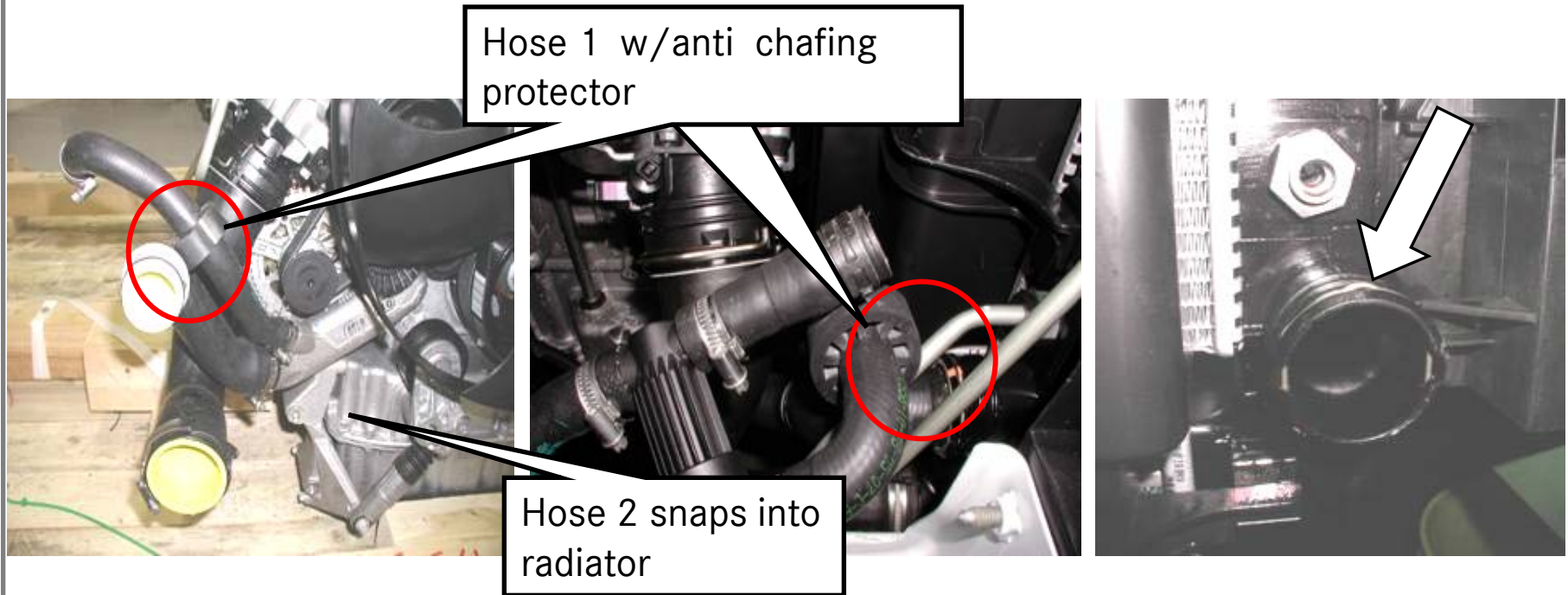
Main Serpentine Belt



- Front belt removed for visual purposes.
- Do not remove the small front belt if no aux generator or compressor is fitted. Belt is difficult to reinstall.

Belt tensioner:
Use 17mm 12 point socket or Torx equivalent to install serpentine belt 68012426AA.

Cooling Houses



- Install cooling hose 1 MB# A9065013382 pointing backwards and using 2 hose clamps and re - installing an anti chafing protector.
- Install hose 2 MB# A 906 501 20 82 pointing straight forward.

- Protector on hose 1 right must be installed over metal pipe to prevent chafing.
- Connect hose 2 directly to the radiator ensuring that the clip connector is engaged. Ensure that clip A 000 993 08 02 fits tightly and is secured. Ensure proper hose 2 seating.

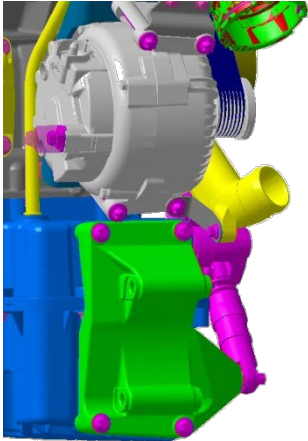
Install:

- Ensure that clip A 000 993 08 02 is securely engaged

Uninstall:

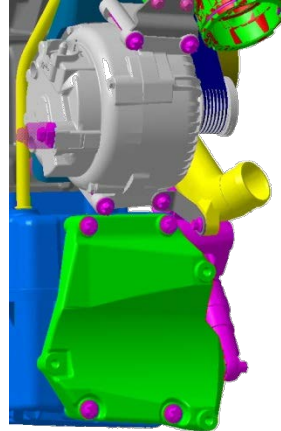
- Pull clip A 000 993 08 02 upwards to remove lower cooling hole

Retrofitting to A/C Casting



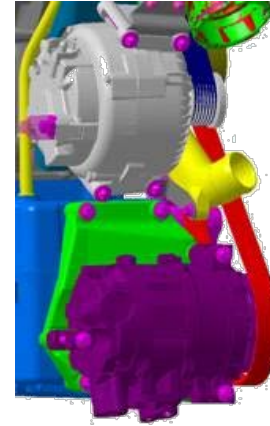
Refrigeration casting
CODE N63 (Sanden)
MB# A 642 234 04 39

Fits Sanden SD7H13 compressor
(aftermarket sales)



A/C (air conditioning) casting Denso
only available as OEM spare part
MB# A 642 234 03 39

Fits Denso A/C Compressor
MB# A 001 993 37 96

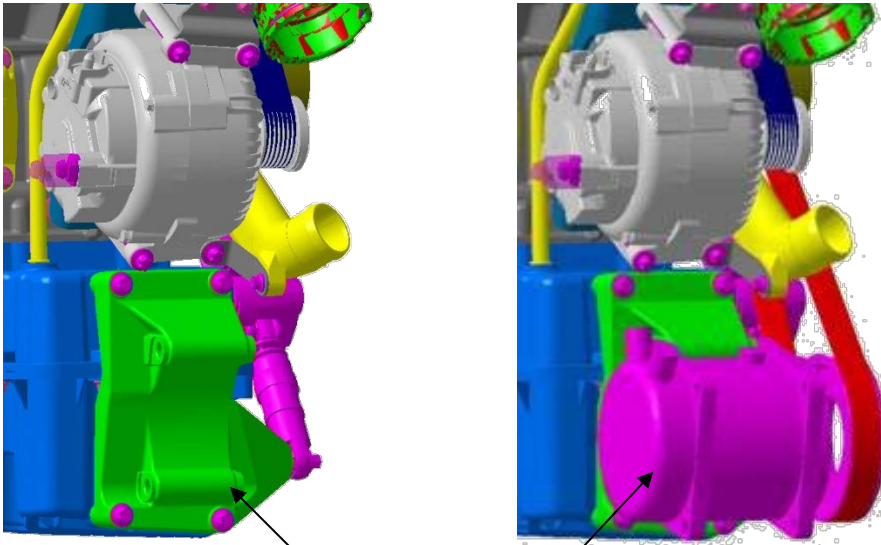


Note:
Option N63 includes a
refrigeration
compressor support casting.

For aux A/C compressor
applications a different support
casting is required. Replace
support casting with part number
A 642 234 03 39

Replace existing belt
MB# A 001 993 38 96
21.36x690mm
with a 6 ribbed serpentine belt
MB# A 001 993 37 96
21.36x1411mm

Sanden Compressor Layout Option N63



Replace existing MB# A 001 993 38 96
(21.36x690mm) with a 6 ribbed
serpentine belt,
MB# A 001 993 37 96 (21.36x1411mm)

Refrigeration Compressor
(Sanden SD 7H13 aftermarket sales)
and compressor casting