Servicing

MERCEDES-BENZ - C-CLASS
MERCEDES-BENZ - E-CLASS
MERCEDES-BENZ - V-CLASS
MERCEDES-BENZ - VIANO
MERCEDES-BENZ - VITO Bus
MERCEDES-BENZ - VITO / MIXTO Box
MERCEDES-BENZ - SPRINTER 2 - 3 - 4 - 5t

Replacing

BOSCH	F00M991125
BOSCH	F00M991190
BOSCH	F00M991303
CARGO	232624
CARGO	332302
INA (LUK-AS)	535005010
MERCEDES-BENZ	6111550315
MERCEDES-BENZ	6111550515
MERCEDES-BENZ	6111550715
VALEO	2549800

81113527 Free Wheel Pulley

TEST REPORT – including;

Visibility Page 2

High Speed Test Page 3

Salt Spray test Page 4

BEFORE TEST	TEST RESULT	
		Shaft does not show fretting marks. Ordinary marks on shaft were noticed. No progressive wear pattern was found on Parts.
		Contact marks found on pulley cam profile shows perfect alignment between bearing and pulley cam profile.
		No deformation detected.
		No deformation or excessive wear detected.
		No deterioration of grease was found.

Result	Remarks
All approved	After test the pulley worked perfectly

TEST REPORT

1) Test Purpose

To verify the service life of overrunning alternator pulley at high temperature and high speed conditions

2) Test Conditions

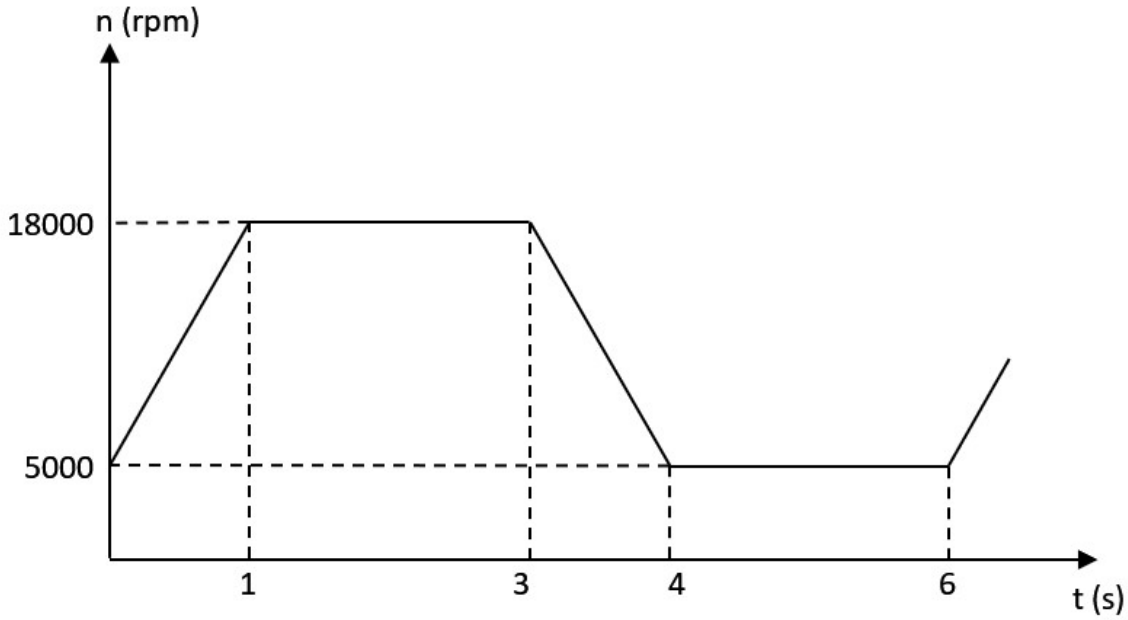
High Temperature and High Speed Durability Test

- RPM:
  1ST Phase: the driving device drives the pulley work at the speed of 5000 rpm. Test duration: 50h.
  2nd Phase: the driving device drives the pulley work at the speed of 18000 rpm. Test duration: 1050h.
- Load:
  Current of alternator is 80% of rated current.
  Belt tension: 900N/side. After the first phase, the belt tension should be higher than 600N/side.
- Ambient Temperature: 100℃
- Test Duration: 1050h
  Note: During the test, carbon brushes are allowed to be replaced every 330 hours and the bearings are replaced every 700 hours.

High Temperature Variable Speed Endurance Test

- Temperature: 100℃
- Load:
  Current of alternator is 80% of rated current.
  Belt tension:900N/side. After the first phase, the belt tension should be higher than 600N/side.
- Revs Range: 5000-18000rpm
- Cycle Time of 6s(1+2+1+2)
- Test Time: 160 000 cycles (267h)

3) Conclusion
Qualification factors: tested pulley could run freely without slipping, stuck or mechanical noise.



TEST REPORT

Salt Spray Test

1) Test Purpose

To verify the corrosion resistance of OAD pulley in Salt Spray chamber

2) Test Conditions

- Ambient Temperature:35℃ ± 2K
- NaCl Contnent:5% ± 0.5
- PH: 6.5~7.2
- Spray Pressure: 0.1MPa ± 0.02
- Saltwater Content (80cm²): 1.5ml/h±0.5

Record Time	Rotate Speed	Voltage	Current	Test Temperature	Continuous Work Time	Note
2016.12.21 10:00	6000	13.5	29.90	35	Begin	
2016.12.22 10:00	6000	13.6	29.90	35	24H	
2016.12.23 10:00	6000	13.7	29.90	35	48H	
2016.12.24 10:00	6000	13.7	29.90	35	72H	
2016.12.25 10:00	6000	13.7	29.90	35	96H	
2016.12.25 14:00	FINISHED					

3) Test Cycle

The alternator is carried out in the ON/OFF cycle mode

ON

- Rpm: 6000r/min
- Output: 1/3 of the Minimum Current under the condition of 4000RPM (+25°C) or specified by testing equipment.
- Test Time: 60 min
- Salt spray works constantly.

OFF

- Electric Polarization: No
- Salt spray stops.
- Test Time: 15 min

Cycle Time of 75 min (60+15)
Test Time: 77 cycles (96h)

4) Conclusion

After 96 hours dynamic salt spray test, the OAD pulley has no damage to its parts and the fasteners are not loose. The output performance of the alternator meets the requirements of the design. No rust and deformation detected. No deterioration of grease was found. The pulley still perform well.
This test is qualified.