

FAILURE ANALYSIS REPORT



CUSTOMER NAME	PT. PUTRA PERKASA ABADI	PHONE NO. / HP		
KOTA / BRANCH	SITE AMI, CENTRAL BORNEO		DATE	20-Nov-25
UNIT TYPE	COMP MODEL	BRAND	INSTALL DATE	PROBLEM DATE
AXOR HDT	AXOR 2528 CH Euro 4	MERCEDES-BENZ	29-Jul-23	20-Nov-25
UNIT CODE	MACHINE LOCATION	LIFETIME	HM / KM	
DA25136	PPA-AMI		8060h/96663km	

DETAIL PROBLEM

Ketika melakukan service ditemukan gram upnormal pada plug engine

PHOTO



DATA UNIT



HISTORICAL

Penggantian Oli Over dari HM

Diagnosis Assistance System Copyright 2019 Mercedes-Benz AG

VIN	MEC2437BAPP131804	Model series/model designation	HDT
Order number		License plate	

Stored fault codes	ENGINE OVERSPEED
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Control unit: MRSKR

Code	Text	Status
00530	Engine overspeed	11.75 h STORED

Name	Current values (first/last)	Unit
Status of fault code	Fault not current	
Priority	Unknown status	
Operating hours counter	11.75	h

Filename: C:\TesterUpdate\Data\mnt\active\LAS\bin\..trees\lbaratbenz\m\m\m\hdt2\sgscreen\GFMRHDT_2.s
Cell co-ordinate: 5, 5

Customer Name	PT. PUTRA PERKASA ABADI	Unit Number	DA25136	Viscosity@100/80C					
Address	TJHLIP	Component	ENGINE	Viscosity@40/80C					
Unit Model	AXOR 2528CHX4MTEuro4	Component Matrix	L10020N085AUREN	T B N					
Serial Number	MEC2437BAPP131804	Oil Matrix	GEN D50-5W-40						
Test Detail					Overall Analysis Result				
Lab. Number	B25104023	B25115008	B25135346	B25167425	B25213504				
Sampling Date	2025-05-12	2025-06-04	2025-06-28	2025-08-02	2025-09-27				
Received Date	2025-05-20	2025-06-11	2025-07-02	2025-08-07	2025-09-30				
Hours on Oil	1000	250	500	250	500				
Hours on Unit	6309	6356	6694	7080	7614				
Lube Oil Name	MEETRAK SX 15W40 PPA	MEETRAK SX 15W40 PPA	MEETRAK SX 15W40 PPA	MEETRAK SX 15W40 PPA	MEETRAK SX 15W40 PPA				
Oil Change	Yes	Yes	Yes	Yes	Yes				
Status	NORMAL	NORMAL	NORMAL	NORMAL	SEVERE				
									
					SEVERE				
Physical Test	Unit	Method							
Visc@40C	cSt	ASTM D7279-20							
Visc@100C	cSt	ASTM D7279-20	13.92	13.82	13.7	13.59	14.06		
T A N	mg KOH/g	ASTM D978-22							
T B N	mg KOH/g	ASTM D4739-23	10.56	10.85	10.38	10.42	7.41		
Metal Additive									
Magnesium (Mg)	ppm	ASTM D5185-18	92	16	14	21	77		
Calcium (Ca)	ppm	ASTM D5185-18	3446	3382	3895	3951	3826		
Zinc (Zn)	ppm	ASTM D5185-18	1116	1068	1130	1198	1243		
Molybdenum (Mo)	ppm	ASTM D5185-18							
Boron (B)	ppm	ASTM D5185-18							
Phosphorus (P)	ppm	ASTM D5185-18							
Contaminant									
Sulfur (S)	ppm	ASTM D5185-18	1	0	0	0	1	35	50
Silicon (Si)	ppm	ASTM D5185-18	8	4	5	5	5	30	45
Fuel Dilution	%v	ASTM E2412-23	0	0	0	0	0	2	3
Fume Dilution	%v	ASTM E2412-23	0	0	0	0	0	4	5
Water Content	%v	ASTM E2412-23	0	0	0	0	0	0.1	0.15
Glycol	%v	ASTM E2412-23	0	0	0	0	0	2	3
Wear Metal									
Iron (Fe)	ppm	ASTM D5185-18	17	11	10	16	11	50	100
Copper (Cu)	ppm	ASTM D5185-18	1	1	1	2	1	20	30
Aluminum (Al)	ppm	ASTM D5185-18	4	3	2	4	3	18	30
Chromium (Cr)	ppm	ASTM D5185-18	2	1	1	0	2	10	15
Nickel (Ni)	ppm	ASTM D5185-18	0	0	0	0	1	5	10
Tin (Sn)	ppm	ASTM D5185-18	0	1	0	0	4	10	15
Lead (Pb)	ppm	ASTM D5185-18	2						
Pb 75th Percentile									
PQ Index	-	D8184-18	8						
Color	ASTM Color	ASTM D1500-12							

Kandungan cooper dan iron tinggi

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ANALYSIS
Dari data yang dikumpulkan setelah melakukan pelepasan pada drain plug ketika service ditemukan gram upnormal pada plug, kemudian mekanik check historical pernah melakukan penggantian PLD no 4, lalu diliat dari hasil PAP terdapat temuan kandungan iron dan cooper yang tinggi, selesai melakukan pengecekan hasil PAP kemudian mekanik melakukan check di PLD no 4 ditemukan bending dan Camshaft Damage, setelah itu mekanik melakukan check by xentry terdapat data bahwa ada temuan engine overspeed
STATUS WARRANTY
Dari hasil investigasi dimana unit pernah mengalami overspeed karena kesalahan operator bukan dari kesalahan product atau principle Mercedes Benz, maka status warranty REJECTED

STATUS ORDER SPAREPARTS
☐ WARRANTY ☒ NON WARRANTY

RECOMMENDED SPAREPARTS

DATA SPAREPARTS RECOMMENDED						
No	Part Number	Description				Qty
	Terlampir					

Created by

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