

FAILURE ANALYSIS REPORT



CUSTOMER NAME	PUTRA PERKASA ABADI	PHONE NO. / HP		
KOTA / BRANCH	PT. ADARO MINERAL INDONESIA - central Borneo		DATE	24-May-24

 UNIT TYPE
 COMP MODEL
 BRAND
 INSTALL DATE
 PROBLEM DATE

 AROCS
 4042 K
 Mercedes Benz
 19-Apr-23
 21-May-24

 UNIT CODE
 MACHINE LOCATION
 LIFETIME
 HM / KM

 PPA DA42002
 PPA - AMI
 398 days
 3985 / 36181

DETAIL PROBLEM

We receive information from mechanic there are material after drain oil differential front

РНОТО











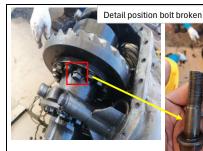




First finding mechanic do service

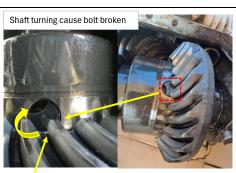
	Trouble Date	Unit Code	Hours Mela	Description Problem	Action Do	en .	Object Down Mescription C	etc.	MTC Descripti	Start Down	Finish Dow	Total Breakd	low Si	latus H	MRFU	Vak Drá	Report By		UNITED SERVICE					OIL	ANALYSIS RE	PORT	
1	FF6-204	DARRE	766	THE POSS BLEAK		Щ	TIFE	1		,		1			7	366	MILYD AGUS ARI		Customer Name Address	: TUHUP	PERKASA ABADI	Unit Numbe Component		: DA42002 : FRONT DIFFERENTIAL	Viscosky@10080C Viscosky@4080C	-	
H	856204	DARRE	361	TIRE POSTILEAK			TIFE	0	Tyre	0950	1015				ISHAU		FATALODI		Unit Medel Serial Number	W1796421	QK 6H8 120645988	Component Oil Matrix	Matrix	GEF30 SPRIAX SZARSWIJ40, PPA	TAN		
H	8Feb.204	DARRE	382	ABBLE LOW	POS 3,4, RETORQUE NUT POS 3,4, ADJUST PRESSURE Z		ENGINE	0		1944	0245				ISHAU	362	AGLS ADV										
H	22Feb304	DARRE	3234	TIRE POSSLEAK	ADD ADBLES D 1 T REPLACE TIME POLS 2	95	TIFE	2	Opportunity	0630	0640				ISHAU		AS FATAH ARI HINCOH		Test Detail							Overall Ass	nalysis Re
-	2760334 35563334	DARRE	234	SERVICE 250				2	Tyre Schedule	06.40	1930				ISBAU ISBAU	321	T. FESTIO, FRIMI, AVSAR		Lab. Number Sampling Date			823157868 2023-09-01	823209799 2023-11-08				
H	35Fe333	DARRE		DEPAKING CHARACTERISTIC CHARGE	EASING, PS 250 HOURS, MAINTENANCE AC, FILL AGE 2		BRAKE SISTEM	2		14:00						374	TEEO TEEO		Received Date Report Date			2023-09-09 2023-09-12	2023-11-22 2023-11-23			<i> </i>	
H	27Feb304	DARRE	320	TIRE POSILEAX			TIFE	3	Unschedule Ture	21:00	2130				ISHAU	320	HANGAH FATAH		Hours on Oil			1000	2000			_	
٠	214e333	DARRE	382	HOSE AGBLIE BOCCR	ETIRE POS BADJUST TIRE POS B, RETORQUE TIRE P	1	DIGIE	2		25:10	0000				ISHAU	382	DT NGHT SHFT		Hours on Unit Lube Oil Name			1037 SPRAX SZREWINGO PPA	2059 SPRAK SZAROWSKO PPA				
٠	386/304	DARNE	199	SLACK ADJUSTER THEROKEN	ACK ADJUSTER, SET NOT ACTIVE SENSOR SLACK ADJUL	-	BRAKE SISTEM		Unorhedule Unorhedule	1830	1930				ISBAU ISBAU	381	AGUS		Oil Change			Yes	Yes			NOR	RMAL
н	416/334	DARNE			REPLACE SLACK ADJUSTER POS 7.8 S BIVENAMBAL HOSE CODURNT TOP UP CODURNT 19.79	2	DIGITE	-		70.00	1230	-			2.777		BIA.NLEOHN. RESTO. PRIMA		Physical Test	Unit	Method	CHITICAL	NORMAL				
Н	7 Me 203	DARRE	339	TIPE POSILEAK		95	TIFE	2	Unachedule Turk	1830	1855				ISHAU	336	FATAH UNTANG		Visco 4X	CSE	ASTH 07279-20					Caution	CHI
Н	1He 204	DARRE	304	WORLANDOFF			STARTING & CHARGE	2		09:36		-			ISHAU	304	MBM MBM		Visci@100C TAN	CSt mg KDHig	ASTM 07279-20 ASTM 0974-22	17.15	23.76			22.5 27.57	20.05
Н	114x 304	DARRE	36	TIREPOSILEAK	REPLACE H7	2 2	THE	3	Unschedule Turk	1346	1958				ISHAU		NTAIG FATAH RISKY		Metal Additive	and arrange	ASIM 0974-22	1.02	0.0			Warning	
H		DAKNE			REPLACE TIME POS 3 Z HECK ERROR, RESET ERROR BY XENTRY ADD ADBLIE 4		BRAKE SISTEM	9			13:30	-			ISHAU		NURCHM	Λ.	Magnesium (Mg)	ppm	ASTM 05185-18		1				
H	11 Mar 2024 12 Mar 2024	DAKNE	343	SCHOOL EREASING			LERCATONS/ST		Unochedule Obnortunity	1950	2045	0.5		-	ISHAU	348	MRAIRASI TRLO	- 1	Calcium (Ca) Zinc (Zn)	ppm	ASTM 05185-18 ASTM 05185-18		26				
H	2768-204 3768-204	DAGEZ			GREISING ALL PIN Z LEWORY INDIA CAM. REST BROOK ARE BY CENTRY GR. 2		STARTING & CHARG	-	-997	08:30	0635			-	ISHAU	30	RON.ADY		Molybdenum (Mo) Baron (R)	ppm	ASTM 05185-18						
H	5Nar204	DAGEZ	36	SO/EDUE GREASING				3	Opportunity	22:39	22:48	1.5 098			ISHAU	36	RESTO, AYBAR	\	Boron (8) Phosphor (P)	ppm ppm	ASTM 05185-18 ASTM 05185-18						
H	ENtr204	DAKSEZ	30	SERVICE SIL	CLATOR VALVE, INSTALL PART BACKLOG RUBBER BUS 2		TUBRICATIONSYST	4	Schedule Schedule	22:11	23:10			50 V	ISHAU		M AGUSA ANDRAN ESI DON	١ ١	Contaminant								
H		DAGEZ	20	TYPE POSTBLEAK		0 11	TIFE	4	Screaue	0730	1230	_		55 1	SHAU	31	DOLHANZH	/	Natrium (Na) Silicon (Sil)	ppm	ASTR 05185-18 ASTR 05185-18	132	20			30	5
H	23 Mar 2024 24 Mar 2024	DAGEZ	300	ABILE LOV	TYRE POS 10, ADJUST THRE POS 10, RETORQUE THRE Z	4	ENGINE	6	Desertania	1900	1930				ISHAU	30	RSAD, DEDY		Fuel Dilution Fame Dilution	No.	ASTM E2412-23 ASTM E2412-23						
H	24 Mer 2024	DARRE	363	SPEASING	ACC ACBLIESOL 1	10 80	LUBRICATION SYST	2		1930	1935	0.25			ISHAU	30	TEDD AGUS A	_ /	Water Content	Six	ASTM E2412-23	0	0			0.1	0
H	25 Mer 2024	DARRE	363	EROR AES	EASING, CHECK ERCHARDS, RESET ERCHIBAGE BY HEIRT Z		STARTING & CHARGI	4	Schedule Unschedule	2500	2315				ISHAU ISHAU		BUSA NUROHM TECO	/	Oycul Wear Metal	No	ASTM E2412-23					2	
H	27 Mer 2024	DARRE	330	TYPE POS 4LDW PRESSURE	LEFT REAR, MELDING FLTER AIR DRIESI, REMOVE AN 2		TIFE	3	Ture		2943				UMRZI		DEL RISK, HANCAH	- 1	iron (Fe)	gem	ASTR 05185-18	322	147			300	50
H	23 Mer 2024	DARRE	389	TIRE POSILEAK	PROFIT CONTRACTOR OF THE PROFIT OF THE PROFI	95	TIFE	0	Tyre	0655					TSOUTH		FATALLINTAIG	- 1	Copper (Cu) Alumanium (Al)	ppm ppm	ASTM 05185-18 ASTM 05185-18		1			30	3
H	29 Me 2024	DARRE	389	FILTER AR DRYER BOCCH	REPLACE TIRE POSIÇAETORQUE NUT TIRE POSIÇ Z	1	ARSYSTEM	2	Unschedule	22:27	0000				SBALL	355	RIGIL FON		Chromium (DS	ppm	ASTM 05185-18	4	2	T		6	11
ŀ	4 kg 303	DARRE	.63	SPRING POSTPATAH	JER AR DRES, INSTALLAND GROUND TEST, REPLICE 4	•	SUSPENSION		Linechedule		1400						GAzori dreid prime adv		Nickel (Ni) Tin (Se)	ppm ppm	ASTM 05185-18 ASTM 05185-18		0				
ŀ	5 Apr 2034	DARRE	3733	SOMBLE GREASING			DUBRICATION S1ST		Obsertanty	1810	1818				UMRZI		BUSHA HANDONO		Lead (Pb) Pb 75th Percentile	ppm	ASTM 05185-18	2	1			20	40
ŀ	7 Apr. 203	DARRE	3744	SERVICE IN			DE MANTENACE S		Stetue	1830	2000				UARZI	34	RFQ MQD/O		PQ Index Color		D8184-18 ASTM 01500-12	271	104			300	40
ŀ	3 der 2024	DARRE			ATE POS 10. RETORQUE NUT POS 5.6 & 9.10. CHECK & 2	20	TIFE	-	Unorhedule	0720	0750	100			ISBAU	30	00/AW0		Cata		A01M 01500-12						
H	8 (pr.20)	DARRE			ATOP LIPADBLE 35 LITER CLEAN CAMERA MUNDUR 2	2 0	STARTING & CHARGE		Unchedule	0829	0835						AJAT ANGSAKUSINA										
H	8 (pr.20)	DARRE	22	SPRING FRONT BROKEN			SUSPENSION		Unchedule	22:30	06:00				ISHAU	7.7	Pari / Tabani and M										
H	8 dgr 2024	DARRE	388	SPRING FRONT BROKEN	If clans spring Rolling tire pos 1 & 2 Retard when \$		SUSPENSION		Linechedule	0600	08:00				ISHAU ISHAU	1010	KW Draid, Anggagrayoga Pakda Fa										
H	21 Apr 2024	DARRE	385	WORLANDOFF	PLACE LAWP H7 SETTING MONITOR REVERSE CAMES 2		STARTING & CHARGE		Lincohedule	19:17	19:25	100			ISHAU	325	ANERSKI										
H	214pr3034	DARRE	307	COOLWITERELLOV	TOP UP ADDRUCE SOL. 3	2 2	BADIATER		Obortunity	12:35					ISHAU	307	AIBAR PRINA			_ I H	listorv	break	nwot	and result	PAP		
H	21 Apr 2024	DAKNE	367	TYPE POSS SOE WALL CUT	REPLACE & ADJUST PRESSURE THE POS 9 2	95	TIFE	0	Tue	1030	11:00			-			DO.MUYO.R91			1	,						







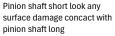














ANALYSIS

After inspection the data, we found pinion shaft jammed with gear kit. in this case jammed cause lack lubricant, and when the gearkit have a load over spinning lubricant can't lubricate maximal the gear kit and make jammed. Indicated over spinning can be see at shaft pinion gear kit and hole gearkit any surface damage, this damage is a characteristic of over spinning. The other answer questions why is the bolt of crown wheel to differential housing broken and why is only one side pinion jammed ? There is no difference if bolt is broken and only one side pinion jamed. The damage is the same. The one side pinion is the weaker part and may fail earlier. and we looks the lubrication used oil not recommendation for principle.

STATUS

STATUS ORDER SPAREPARTS □ WARRANTY □ NON WARRANTY

RECOMMENDED SPAREPARTS

DATA SPAREPARTS RECOMMENDED No Part Number Description Qty

Created	Egi sugiana
Date	24-May-24
Tertanda	Egi sugiana