

<u>Failure Mode.</u>

Report received. Leaking from front of Drifter. 3233Hrs

On disassembly found the front percussion seals distorted and worn which would have been the reason for removal.

The Drifter is in good condition for the hours completed however a number of wear parts require replacement.

HOUSING LIFE EXPECTANCY

Percussion Housing - No work required this service.

Gear Box Housing - No work required this service.

Spacer Assembly - No work required this service.

Flushing Housing - No work required this service.

Complete HL 1560 Rebuild Kit items include

All Seals, O-rings

Hydraulic Fitting Kits, Fasteners Kits, Bearing Kits, Diaphragms, Valves and Rubber Caps.

All Machining required highlighted in GREEN

All Parts for recommended replacement highlighted in RED

All Parts highlighted in Blue Not with Machine NWM



HL1560 Rock Drill Failure Analysis Report

Job No - Q16465

Serial No - BO 45 104

Requires Machining

Recommended Replacement

Hours Achieved - 3233

INSPECTION AREA		COMMENTS		
Flushing Housing	(303 730 88)	Serviceable Reuse		
Front Cover Assembly	(154 035 58)	Swapped from BO45031		
Bushing	(550 063 74)	Swapped from BO45031 (new on that rebuild)		
Seal Housing	(550 063 73)	Machining Required (Repair Oring seat Ph. 2)		
Connection Flange	(154 148 78)	Serviceable Reuse		
Shank Bushing	(550 358 24)	Machining Required (Skim Ph. 3)		
Coupling Piece	(550 347 96)	Replace (Ph. 4)		
Rotation Bushing	(550 350 50)	Replace (Ph. 5)		
Rotation Bushing Assembly	(550 348 41)	Serviceable Reuse		
Drill Sleeve	(550 352 26)	Machining Required (Skim Ph. 6)		
Tie Rod (4)	(550 379 11)	Serviceable Reuse		
Nut (8)	(151 679 38)	Serviceable Reuse		
Pin	(154 020 08)	Machining Required (Polish)		
Idler Wheel Assembly	(150 620 38)	Serviceable Reuse.		
Slide Ring (2)	(150 609 68)	Serviceable Reuse		
Distributor	(153 603 28)	Replace (Ph. 7)		
Rear Cylinder	(550 373 97)	Machining Required (Polishing Ph. 8)		
Hydraulic Motor OMT 500	(154 044 38)	Serviceable Reuse, some wear evident (Ph. 9)		
Housing	(303 737 78)	Machining Required (Skim Ph. 10)		
Lock Nut	(514 015 60)	Serviceable Reuse		
Lock Washer	(514 411 60)	Replace, Standard Servicing (included in Rebuild Kit)		
Circlip	(800 957 69)	Serviceable Reuse		
Cover	(154 023 98)	Serviceable Reuse		
Rotation Shaft	(302 827 88)	Machining Required (Polishing)		
Thrust	(150 613 08)	Serviceable Reuse		
Impact Piston	(302 947 28)	Machining Required (Polish, skim 11, 12)		
Body Cylinder	(550 365 35)	Serviceable Reuse		
Spacer Assy	(550 358 96)	Serviceable Reuse		
Ring	(550 351 52)	Machining Required (Polishing)		
Spring Pin	(801 849 99)	Serviceable Reuse		
Bushing	(550 350 52)	Replace (Ph. 13)		
Bushing	(550 350 51)	Replace (Ph. 14)		
Low Pressure Accumulator Assy (2)	(154 046 98)	Serviceable Reuse		
High Pressure Accumulator Assy (2)	(154 045 68)	Serviceable Reuse		
Stabiliser Piston	(550 354 19)	Machining Required (Polish)		
Bushing	(550 350 49)	Replace (Ph. 15)		
Stabiliser Piston	(550 348 12)	Machining Required (Polish)		

MANGELSDORF ENGINEERING PTY LTD "When Quality Counts..." 47 Oroya Street, Boulder WA 6432 ROCKDRILL DIVISION

HL1560 Rock Drill Failure Analysis Report

Job No - Q16465

Serial No - BO 45 104

Requires Machining Recommended Replacement

Hours Achieved - 3233

INSPECTION AREA		COMMENTS				
Ring	(550 358 97)	Serviceable Reuse.				
Bushing	(550 350 48)	Replace (Ph. 16)				
Front Cylinder	(550 352 19)	Serviceable Reuse				
Bushing	(150 116 58)	Replace (Ph. 17)				
Bushing	(152 672 58)	Serviceable Reuse				
Cover	(152 414 08)	Serviceable Reuse				
Rear Bushing	(151 655 08)	Serviceable Reuse				
Seal Housing	(151 668 08)	Serviceable Reuse				
Rear Cover	(302 825 28)	Machining Required (Skim)				
Accumulator Assembly	(153 875 08)	Serviceable Reuse				
Spring Pin	(803 881 29)	Serviceable Reuse				
Gear Housing	(550 358 60)	Serviceable Reuse				
Bushing	(550 521 81)	Serviceable Reuse				
Bearing Bush	(853 231 59)	Serviceable Reuse				
Bushing	(550 521 62)	Replace (Ph. 18)				
Bushing	(152 362 68)	Serviceable Reuse				
Gland	(152 372 78)	Serviceable Reuse				
Circlip	(422 285 80)	Serviceable Reuse				
Diaphragm (4)	(152 357 98)	Replace, Standard Servicing (included in Rebuild Kit)				
Diaphragm (1)	(152 055 58)	Replace, Standard Servicing (included in Rebuild Kit)				
Valve (5)	(807 590 69)	Replace, Standard Servicing (included in Rebuild Kit)				
Cap (5)	(085 370 18)	Replace, Standard Servicing (included in Rebuild Kit)				
Lock screw	(550 126 00)	Serviceable Reuse				



Ph. 1 - Front percussion seals - Cause of failure out.



Ph. 2 - Seal Housing - Weld and rebore Oring seat.



Ph. 3 - Shank Bushing - Skim.



Ph. 4 - Coupling - Worn to replacement.



Ph. 5 - Rotation Bushing - Replace.



Ph. 6 - Drill sleeve - Skim.



Ph. 7 - Distributor - Replace, deep cavitation.



Ph. 8 - Rear Cylinder - Polish, light cavitation.



Ph. 9 - Rotation Motor - Wear evident, acceptable for re-use.



Ph. 10 - Housing - Skim



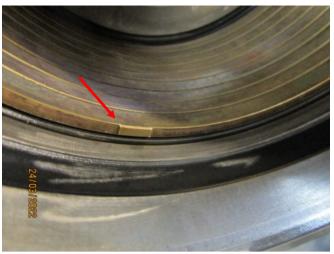
Ph. 11 - Impact Piston - Polish.



Ph. 12 - Impact Piston - Skim.



Ph. 13 - Bushing - Replace.



Ph. 14 - Bushing - Replace.



Ph. 15 - Bushing - Replace.



Ph. 16 - Bushing - Replace.



Ph. 17 - Bushing - Replace.



Ph. 18 - Bushing - Replace.

Mangelsdorf Engineering PL

47 Oroya Street Boulder Western Australia Australia 6432 **Tel** 08 9093 2972 **Fax** 08 9093 2981

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 Date
 25/03/2022
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lten	n Our Ref	CPN/Description	Drawing No.	Issue	Quantity	Unit Price
1	HL 1560 REBUILD KIT	HL 1560 Complete Reb	ouild Kit		1	2714.00
2	SAND BLAST	Sand Blasting			1	130.00
3	SUNDRY	OIL/ENVIROMENT	SUNDRY		1	182.00
4	LABOUR	LABOUR DRIFTER REE	LABOUR BUILD		1	2500.00
5	MACHINING	MACHINING MACHINING DRIFTER I	PARTS		1	2031.00
6	550 350 50	Bearing Bushing			1	422.00
7	153 603 28	HL 1010/1500 Distribut	or		1	3325.00
8	550 350 52	Bush	55035052		1	511.00
9	550 350 51	Bushing	55035051		1	491.00
10	550 350 49	Bearing Bush	55035049		1	363.00

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ltem	Our Ref	CPN/Description	Drawing No.	Issue	Quantity	Unit Price
11	550 350 48	Bearing Bush	55035048		1	412.00
12	150 116 58	HL 1500/1560 Front Cyli	nder Bush		1	512.30
13	550 521 62	Bearing			1	661.20
14	550 190 07	Flushing Head seal kit D	55019007 065		1	306.20
				т	otal	14560.70

THE ABOVE COSTINGS REMAIN EFFECTIVE FOR THIRTY DAYS FROM THE DATE OF QUOTATION.QUOTE IS EXCLUSIVE OF GST. IF YOU HAVE ANY QUERIES, PLEASE DO NOT HESITATE TO CONTACT THE UNDERSINED.

Yours sincerely,