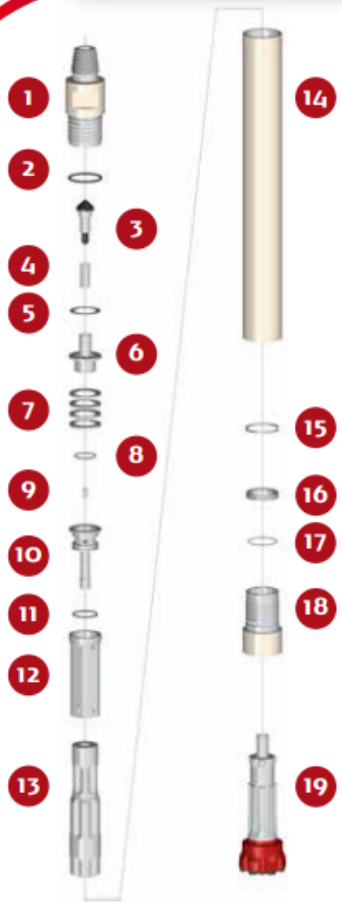
PUMA M5.2
DHD 350

HAMMER TYPE / S (Standard) CODE / 0006050-000007



SPARE PARTS

ITEM	DESCRIPTION	kg /	lb	CODE
1	Backhead 3 1/2" API Reg. Pin(1)	11.7	25.6	0101050-010000
2	Backhead O'Ring	0.0	0.0	C180010-002341
3	Check Valve Dart	0.4	0.9	0101050-030000
4	Spring	0.1	0.1	0101050-040000
5	Make Up Ring Shim(2)	0.1	0.1	0101050-180000
6	Air Distributor	1.2	2.6	0106050-050000
7	Compression Disk (Qty.4)	0.7	1.5	0106050-060000
8	Air Distributor O'Ring	0.0	0.0	C180010-002141
9	Choke(3)	0.0	0.0	0101050-070000
10	Air Guide	1.7	3.8	0106050-080001
11	Air Guide O'Ring	0.0	0.0	C180010-002231
12	Cylinder	2.7	6.0	0106050-100000
13	Piston DHD 350	14.2	31.2	0106050-120011
14	Wear Sleeve	24.4	53.7	0106050-110000
15	Piston Retainer Ring	0.2	0.4	0106050-140000
16	Bit Retainer DHD 350	0.3	0.7	0106050-150000
17	Bit Retainer O'Ring	0.0	0.0	C180010-002236
18	Chuck DHD 350	4.6	10.2	0106050-170001
19	Bit DHD 350	-	-	-

(1) Other thread types can be delivered at request.
(2) Not installed in new hammers.
(3) Different choke size are available.

GENERAL DESCRIPTION

NET WEIGHT		OUTSIDE DIAMETER		HAMMER LENGTH		HAMMER LENGTH WITH BIT			
						CLOSED BIT		EXTENDED BIT	
kg	lb	mm	in	mm	in	mm	in	mm	in
63	137	115	4.52	1093	43	1188	46.7	1225	48.2

AIR CONSUMPTION											
PRESSURE	psig	150	200	250	300	350	barg	10.3	13.8	17.2	20.7	24.1
VOLUME	SCFM	310	425	542	660	775	m³/min	8.8	12.0	15.4	18.7	22.0

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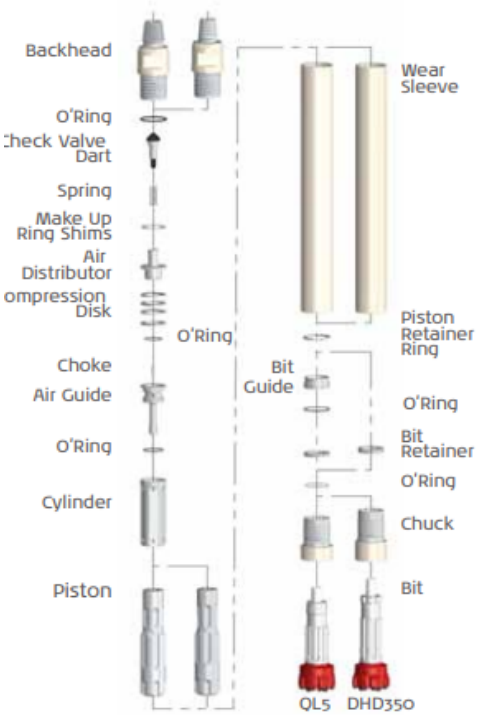
GHB GROUND ENGINEERING

PUMA M5.2 MAINTENANCE SHEET
QL5, DHD 350

EXPLODED VIEW



DISASSEMBLY

WARNING!
- Use hammer disassembly bench.
- Do not apply heat to any component
- Use wrenches in good condition
- Do not apply wrench over Inserts on bit body
- Apply clamps on recommended areas

DISASSEMBLY SEQUENCE

1 Disassemble the hammer on the bit side
2 Extract the chuck, Bit retainer, and Bit
3 Rotate and loosen the hammer at the Backhead side
4 Take out the backhead and remove its O'ring
5 Remove the check Valve, Spring, Air distributor and Disc springs
6 Remove the cylinder and air guid
7 Remove the piston.
8 Rotate the wear sleeve
9 Remove the stop ring

A Bit Side		B Back Head Side		C Clamp Location	
inch	mm	inch	mm	inch	mm
6.5	164	11.8	300	2.0 - 3.9	50-100

ASSEMBLY

Disc springs Position

WARNING!
1 All components must be in good conditions for use
2 Follow assembly sequence as per drawing
3 Lubricate each component, before installation
4 Secure spring discs position
5 Check gap between Wear Sleeve and Backhead ("S") If gap space "s" is less than 3.4 mm, use a make up ring shim
6 Apply recommended pretorque

T=Force x Arm

Distance "S"		PRE-TORQUE	
inch	mm	ft-lb$_f$	kg$_f$-m
0.14 - 0.18	3,5 - 4,5	2,850 - 3,150	395 - 437

LUBRICATION

OIL GRADE SELECTION (cSt)

Work Pressure (bars)	TEMPERATURE		ISO GRADE	
	Environment Air	Discharge Air	Dry Drilling	with water
6.9 - 10.3	-20°C to 30°C	< 100°C	50 to 100	100 to 150
	Over 30°C	< 100°C	100 to 150	150 to 220
10.3 - 24.1	-20°F to 30°C	> 100°C	150 to 220	220 to 320
	Over 30°C	> 100°C	220 to 320	320

OIL CONSUMPTION (gal/h)

Drilling	WORK PRESSURE (barg)				
	10.3	13.8	17.2	20.7	24.1
Dry	1.0	1.3	1.7	2.1	2.5
With Water	1.5	2.0	2.6	3.2	3.8

MAINTENANCE

STANDARD MAINTENANCE PROGRAM

OPERATION CONDITIONS	INSPECT EVERY:
- Stable, non abrasive ground - No water injection	200 (operating hours)
- Stable and abrasive ground - With or without water injection	100 (operating hours)
- Unstable and abrasive ground - With or without water injection	50 (operating hours)

COMPONENT INSPECTION AND REPAIR.

All components must be washed thoroughly with appropriate solvent, eliminating all accumulated dirt. Use sand paper to smooth steel surfaces and friction marks , leaving all contact, sliding and threaded surfaces in good smooth condition

DIMENSIONS LIMITS in (mm)

COMPONENT	DIMENSION		QL-5	DHD-350
1 Backhead	ø External	a	4.17" (106,00)	
2 Air Guide	ø Flute	b	1.160" (29,47)	
3 Cylinder	ø Internal	c	3.011" (76,47)	
	Shoulder width	c2	0.394" (10,00)	
4 Wear Sleeve	ø External	d	4.17" (106,00)	
	ø Rotate (*)	d	4.331" (110,00)	
	ø Internal	e	3.618" (91,90)	
5 Piston	ø Ext. body	f	3.606" (91,58)	
	ø Ext. tail	g	2.996" (76,1)	
	ø Int. body	h	1.539" (39,09)	1.406" (35,71)
	ø Int. tail	i	1.179" (29,95)	
6 Chuck	ø External	j	4.17" (106,00)	
	External Length	k	1.77"(45,00)	2.56" (65,00)
	Spline width	l	0.12" (3,00)	0.16" (4,00)
7 Bit Guide	ø Internal	m	3.024" (76,81)	----------

(*) This dimendion is the allowable lower limiting diameter in wich the wear sleeve can be reversed prolonging the operational life-time of the part

Check : 05/2018

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1 85