



Surface

Quick Description

Surface Wireline Head Assemblies

Surface DiscovOre

This new generation, spring-latch head assembly targets safety-minded companies who are willing to invest in a premium product with new technology in order to improve performance. It focuses on safety without compromising speed and simplicity.

- Quick conversion to underground applications
- Outstanding durability
- No jamming of inner tube
- Patented



Surface Excore

For performance-driven companies, this piston latch head assembly features a strong mechanical latch lock with durable, long lasting latches.

- Converts easily to underground applications
- Easy repair
- Improved durability
- Patented



Surface OWL L-Latch

This link latch head assembly is a good choice for companies looking to balance cost and performance. It features an improved latch system.

- Well-known by drillers
- Less wear and maintenance



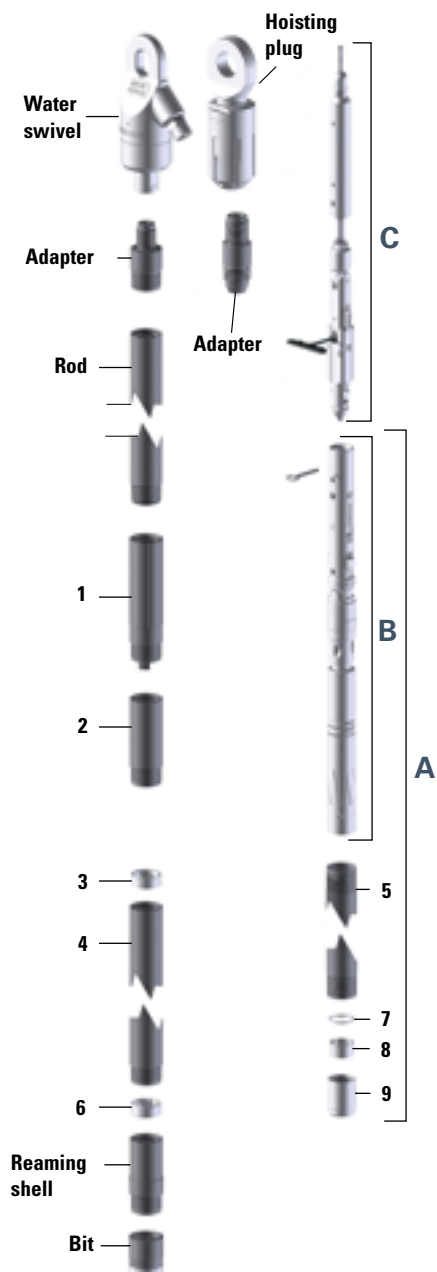
Surface OWL Standard

This is a spring-latch head assembly that is ideal for companies who need a high-quality product at minimal cost.

- Reliable industry standard
- Well-known option
- Good choice for conservative drillers



Surface DiscovOre Core Barrel Assembly



Item	Description		Part number
	Drill string component	Remarks	B core barrel
Water Swivel and Adaptors*			
	SHALLOW Water Swivel, AW rod box	DEEP Water Swivel as option	3760003627
	Drill rod adapter AW rod pin to B0 pin	Select one to match rod type	3760006008
	Drill rod adapter AW rod pin to BT pin		3760006009
	Drill rod adapter AW rod pin to BMO pin		3760015743
	Drill rod adapter AW rod pin to BR pin		3760014209
Hoisting Plug and Adaptors*			
	BNHP (30k Lbs) Hoisting Plug, NW rod box	55k (Lbs) HP as option	3760006010
	Drill rod adapter NW rod pin to B0 rod pin	Select one to match rod type.	3760015808
	Drill rod adapter NW rod pin to BT rod pin		3760015804
	Drill rod adapter NW rod pin to BMO rod pin	See options on page 62-63	3760015251
	Drill rod adapter NW rod pin to BR rod pin		3760014211
	Wireline Drill Rod		
Locking Coupling			
1	Locking coupling Full Hole - B0 rod box	Select one to match drill rod thread type.	3760006012
	Locking coupling Full Hole - BT rod box		3760006013
	Locking coupling Full Hole - BMO rod box	See options on page 54	3760015646
	Locking coupling Full Hole - BR rod box		3760014035
B,2-14	1.5 m / 5 ft Core barrel assy	w/o Locking Coupling (order separately)	3760017407
	3.0 m / 10 ft Core barrel assy		3760017406
A	1.5 m / 5 ft inner tube assy complete		3760017403
	3.0 m / 10 ft inner tube assy complete		3760017402
B	Head assembly complete		3760017400
C	Overshot assembly complete		3760017450
2	Adapter coupling		3760006014
3	Landing ring		3760006228
4	1.5 m / 5 ft outer tube		3760004831
	3.0 m / 10 ft outer tube		3760004832
5	1.5 m / 5 m inner tube		3760004830
	3.0 m / 10 ft inner tube		3760004829
6	Inner tube stabilizer		3760006229
7	Stop ring		3760006225
8	Core lifter		3760006226
9	Core lifter case		3760006227
Rshell	Reaming Shell RS++ - STD	Other types available	3760955420
Bit	Coring bit	Different options	See diamond tools catalogue

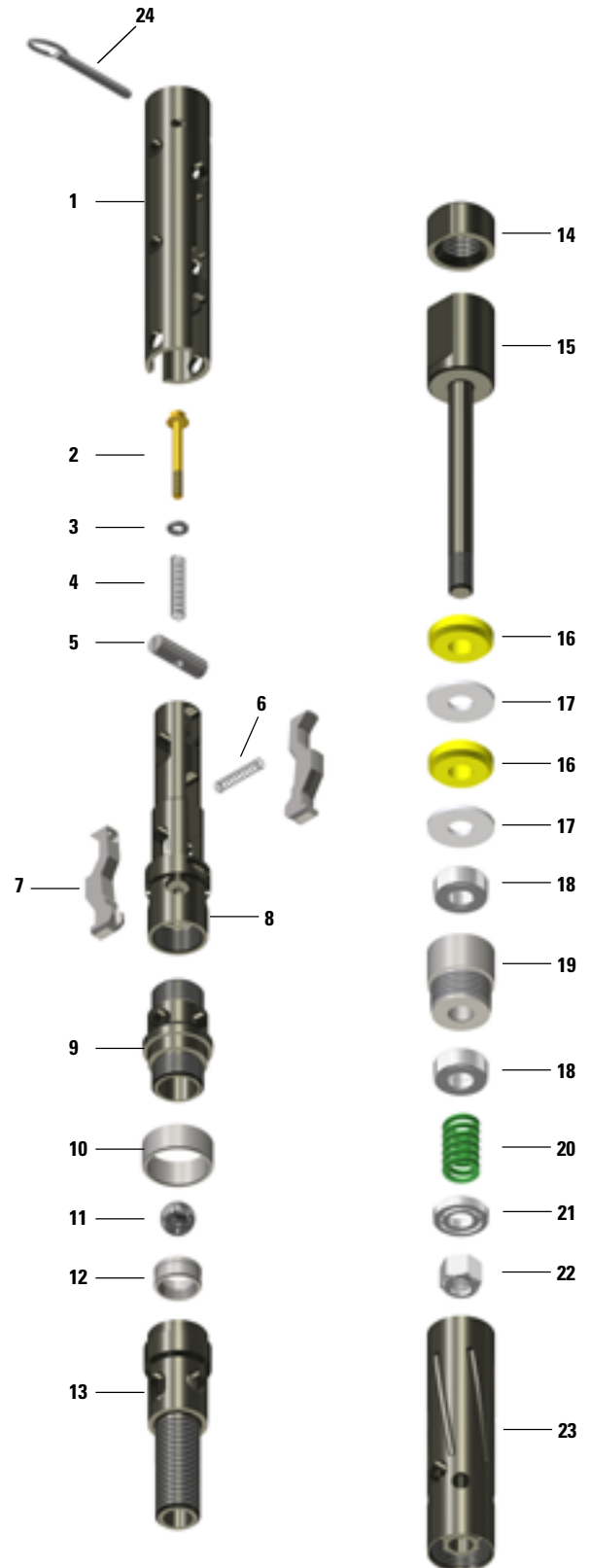
Note: Core barrel assemblies does not include locking coupling which needs to be ordered separately.

*Other configurations are available for these items. Please contact your sales representative.

Surface DiscovOre Head Assembly

B

Item	Description	Part Number	Qty
–	B-D Head Assembly – Surface	3760017400	1
1	Retracting case	3760017418	1
2	Assembly bolt	3760017439	1
3	Wedge lock washer	3760017235	1
4	Spring – Retracting case	3760017462	1
5	Assembly rod	3760017424	1
6	Spring – Latch	3760017237	1
7	Latch	3760017417	2
8	Latch body	3760017433	1
9	Mid body – Surface	3760017425	1
10	Landing shoulder	3760005796	1
11	22 mm ball	3760012099	1
12	Landing indicator bushing 600psi	3760012100	1
12	Landing indicator bushing high pressure 800psi (optional)	3760015391	1
13	Lower body	3760017411	1
14	Locknut – Spindle	3760017410	1
15	Spindle	3760017422	1
16	Shut off valve	3760008340	2
17	Valve adjusting washer	3760006222	2
18	Thrust bearing	3760006470	2
19	Spindle bearing housing	3760017423	1
20	Compression spring	3760006475	1
21	Ball bearing	3760017434	1
22	Nyloc nut	3760017431	1
23	Inner tube cap assembly	3760017415	1
24	Safety pin	3760017291	1



B Core barrel spare part kits (2000 m / 6600 ft)

Description	Part Number
B Core barrel spare part kits (2000m/6600ft drilling)	
Spare parts kit head assembly	3760017447
Spare parts kit overshot	3760017465
Consumables kit core barrel. Universal components common for most DCDMA core barrels	3760017449

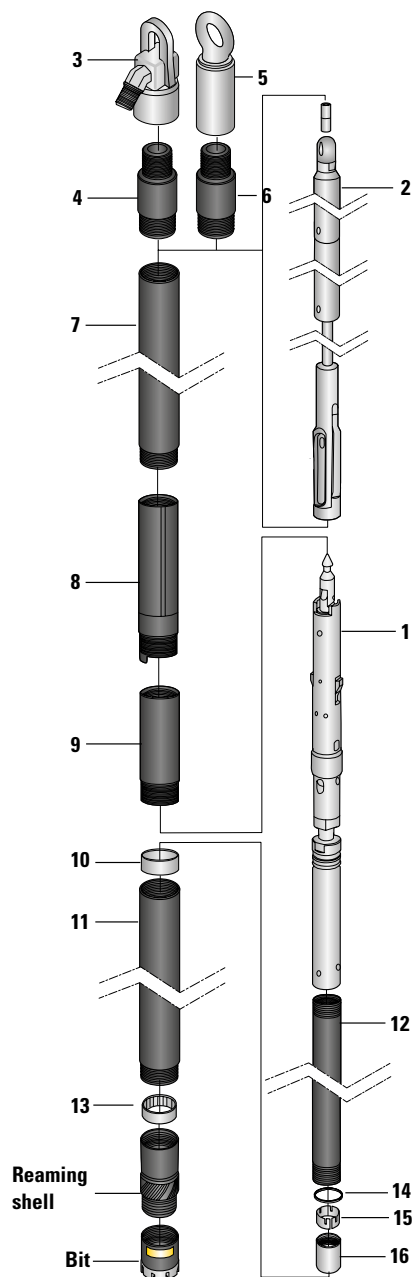
B Core barrel consumables kit (2000 m / 6600 ft)

Description	Part Number	Qty
B Core barrel consumables kit (2000 m / 6600 ft)	3760017449	1
Core lifter	3760006226	40
Core lifter case	3760006227	8
Landing ring	3760006228	4
Inner tube stabilizer	3760006229	4
Stop ring	3760006225	8

B Head assy spare parts kits (2000 m / 6600 ft)

Description	Part Number	Qty
B Head assy spare parts kit (2000 m / 6600 ft)	3760017447	1
B-D Latch	3760017417	2
B-D Assembly pin	3760017424	1
Assembly bolt	3760017439	2
Wedge lock washer	3760017235	2
Retracting case spring	3760017462	2
B Landing shoulder	3760005796	1
B Hard shut off valve – Yellow	3760008340	2
22 mm stainless steel ball	3760012099	1
Landing indicator bushing 600psi	3760012100	6
Latch spring	3760017237	2
Thrust bearing	3760006470	2
Ball bearing	3760017434	1

Surface Excore Core Barrel Assembly



Item	Description	Part number
Core barrel options		B core barrel
	1,5 m / 5 ft core barrel assembly complete	3760014430
	3,0 m / 10 ft core barrel assembly complete	3760014432
	1,5 m / 5 ft inner tube assembly complete	3760015575
	3,0 m / 10 ft inner tube assembly complete	3760015578
1	Head assembly complete	3760013450
Overshot		
2	Overshot assembly complete	3760016276
Water swivel*		
3	SHALLOW water swivel, AW rod box	3760003627
4	Drill rod adapter AW rod pin - BO rod pin	3760006008
4	Drill rod adapter AW rod pin - BT rod pin	3760006009
4	Drill rod adapter AW rod pin - BR rod pin	3760014209
Hoisting plug*		
5	BNHP hoisting plug assembly, NW box thread	3760006010
6	BO hoisting plug adapter NW pin	3760015808
6	BT hoisting plug adapter NW pin	3760015804
6	BR hoisting plug adapter NW pin	3760014211
Drill rods		
7	Drill rods	See options on page 62-63
Consumables/accessories		
8	Locking coupling	See options on page 54
9	Adapter coupling	3760006014
10	Landing ring	3760006228
11	1,5 m / 5 ft outer tube	3760004831
11	3,0 m / 10 ft outer tube	3760004832
12	1,5 m / 5 m inner tube	3760004830
12	3,0 m / 10 ft inner tube	3760004829
13	Inner tube stabilizer	3760006229
14	Stop ring	3760006225
15	Core lifter slotted	3760006226
16	Core lifter case	3760006227
Full grip wrenches		
Inner tube wrenches		3760006017
Outer tube wrenches		3760006018

* Other configurations are available. Please contact your representative.

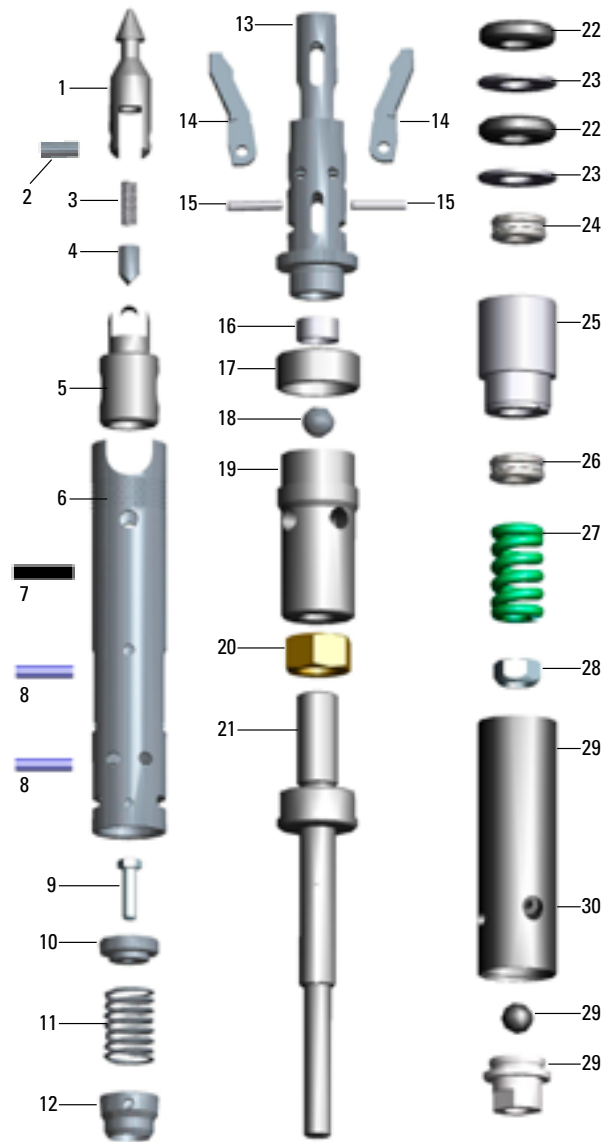
Note: Core barrel assemblies does not include locking coupling which needs to be ordered separately.

Description	Part Number	Qty
B core barrel consumables kit (2000 m / 6600 ft)	3760017449	1
Core lifter	3760006226	40
Core lifter case	3760006227	8
Landing ring	3760006228	4
Inner tube stabilizer	3760006229	4
Stop ring	3760006225	8

Surface Excore Head Assembly

B

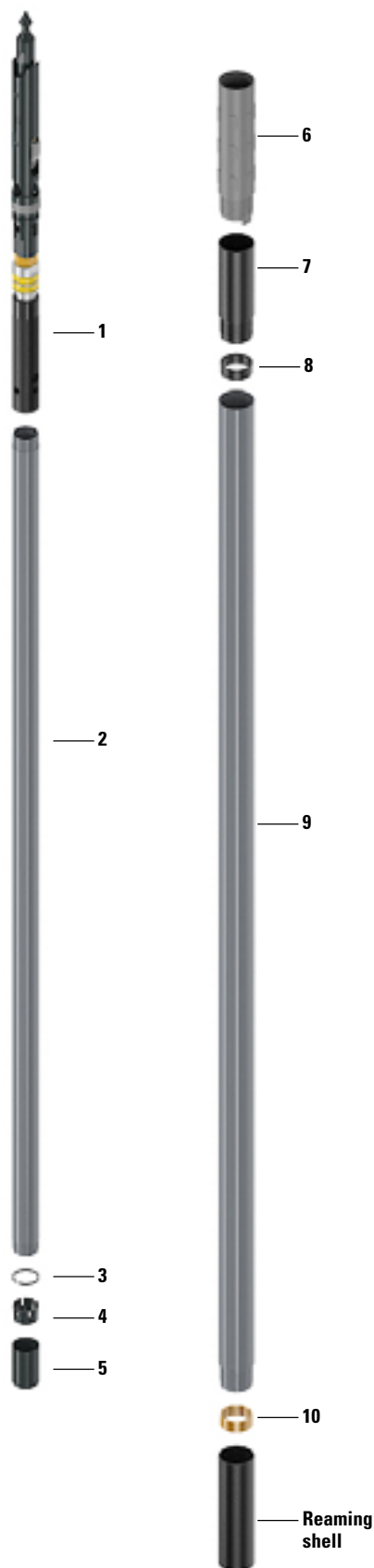
Item	Description	Part Number	Qty
–	B Head Assembly – Surface	3760013450	1
1	Spearhead	3760015393	1
2	Spiral pin 7/16 x 1	3760004348	1
3	Compression spring	3760015394	1
4	Detent plunger	3760015395	1
5	Spearhead base	3760013879	1
6	Latch retracting case	3760013456	1
7	Spring pin 3/8 x 1 5/8	0108169190	1
8	Spring pin 1/4 x 1 5/8	3760015119	2
9	HHCS 3/8 - 16 UNC x 1 1/4	3760013477	1
10	Guide spring	3760013462	1
11	Compression spring	3760013460	1
12	Latch piston	3760013461	1
13	Upper latch body	3760013458	1
14	Latch	3760013457	2
15	Spring pin 1/4 x 3/4	3108169186	2
16	Landing indicator bushing 600psi	3760012100	1
16	Landing indicator bushing high pressure 800psi (optional)	3760015391	1
17	Landing shoulder	3760005796	1
18	SS Ball 22 mm	3760012099	1
19	Lower latch body	3760013459	1
20	Lock nut 7/8 - 9 UNC	3268311200	1
21	Spindle	3760006220	1
22	Shut-off valve - Black	3760006221	2
23	Valve adjusting washer	3760006222	2
24	Thrust bearing	3760006470	1
25	Spindle bearing housing	3760006223	1
26	Thrust bearing	3760006470	1
27	Compression spring	3760006475	1
28	Lock nut 5/8 - 11 UNC stover	3760017431	1
29	Inner tube cap assembly (includes grease fitting)	3760006224	1
30	Grease fitting	9469705073	1



B Core barrel spare part kits (1000 m / 3300 ft)

Description	Part Number	Qty
Spare parts kit head assembly	3760015607	1
B landing ring	3760006228	2
B core lifter case	3760006227	4
B inner tube stabilizer	3760006229	2
B core lifter - slotted	3760006226	20
B stop ring	3760006225	4
B/N/H Excore spearhead	3760015393	1
Spiral pin 7/16 x 1	3760004348	2
Excore Detent compression spring	3760015394	1
B/N/H Excore detent plunger	3760015395	2
BU Excore compression spring	3760013460	2
B/BU Excore latch piston	3760013461	1
B/BU Excore latch	3760013457	2
Spring pin 1/4 x 1 5/8	3760015119	2
Landing indicator bushing 600psi	3760012100	2
B landing shoulder 3 PLB	3760005796	1
22 mm stainless steel ball	3760012099	1
Hex nut 7/8 9 UNC	3268311200	1
B shut off valve	3760006221	4
Thrust bearing	3760006470	2
B spindle bearing	3760006223	1
B compression spring	3760006475	1
Lock nut 5/8 11 UNC stover	3760017431	1
Spring pin 3/8 x 1 5/8	0108169190	2
B/N/H Excore bolt hexagon 3/8 - 16	3760013477	1
Spring pin - 1/4 x 3/4 LG	3108169186	4
Grease fitting	9469705073	1

Surface OWL L-Latch Core Barrel Assembly



Item	Description	Part number
Core barrel options		B core barrel
	1,5m/5ft core barrel assembly w/o locking coupling	9469711740
	3,0m/10ft core barrel assembly w/o locking coupling	9469711742
	1,5 m / 5 ft inner tube assembly complete	9469705083
	3,0 m / 10 ft inner tube assembly complete	9469705087
1	Head assembly complete	9469705090
Consumables/accessories		
6	Locking coupling	See options on page 54
7	Adapter coupling	9469705129
8	Landing ring	3760006228
9	1,5 m / 5 ft outer tube**	3760004831
9	3,0 m / 10 ft outer tube**	3760004832
2	1,5 m / 5 m inner tube	3760004830
2	3,0 m / 10 ft inner tube	3760004829
10	Inner tube stabilizer	3760006229
3	Stop ring	9469705125
4	Core lifter	9469705157
5	Core lifter case	9469705126
Full grip wrenches		
Inner tube wrenches		3760006017
Outer tube wrenches		3760006018

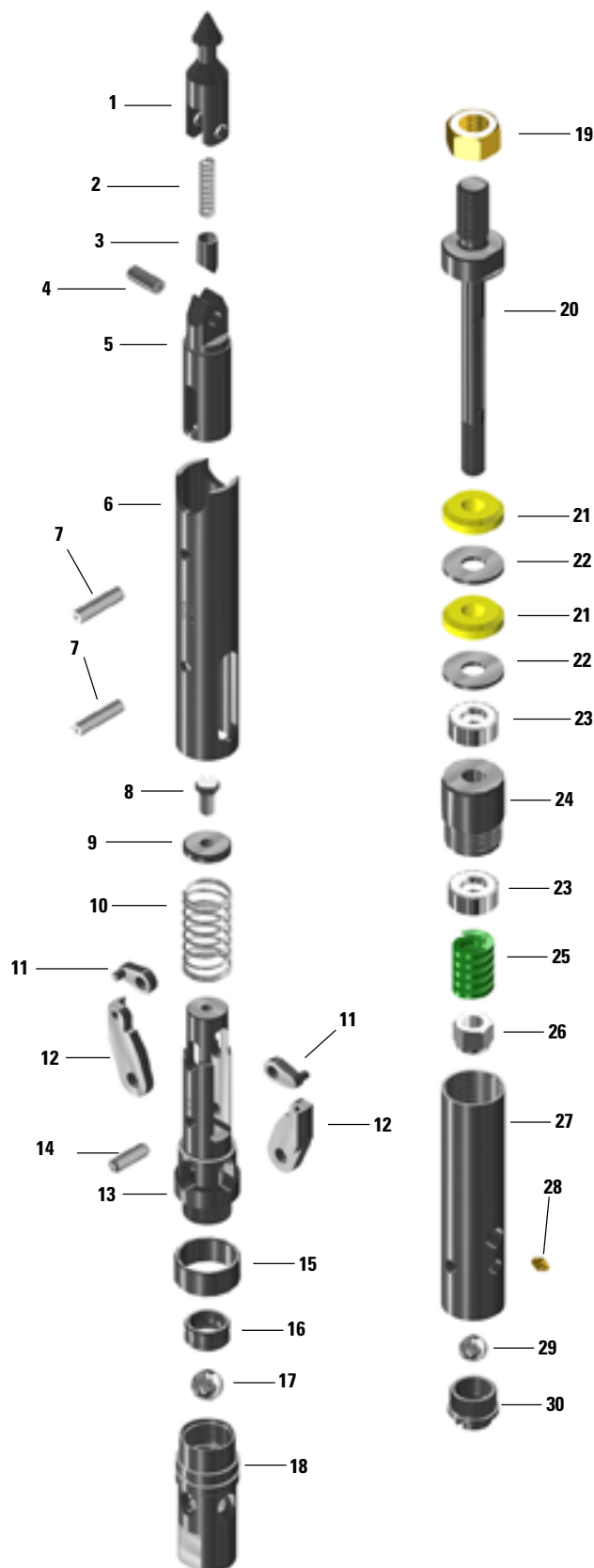
** Also available in full hole. Please contact your Fordia Powered by Epiroc's representative for more information.

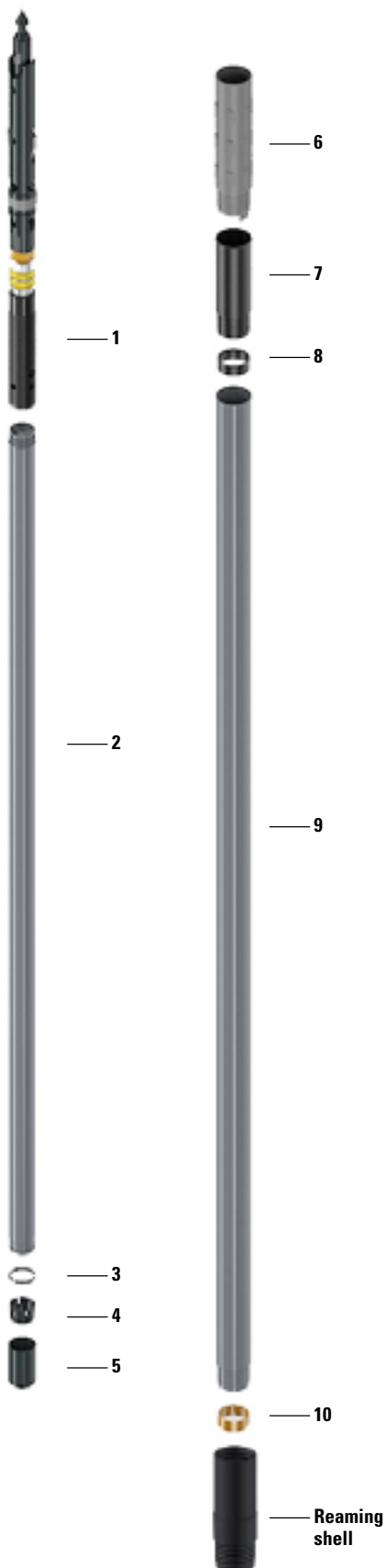
Description	Part Number	Qty
B core barrel consumables kit (2000 m / 6600 ft)	3760017449	1
Core lifter	3760006226	40
Core lifter case	3760006227	8
Landing ring	3760006228	4
Inner tube stabilizer	3760006229	4
Stop ring	3760006225	8

Surface OWL L-Latch Head Assembly

B

Item	Description	Part Number	Qty
		B Size	
–	B Head Assembly - Surface	9469705090	1
1	Spearhead point	9469705061	1
2	Compression spring	9469705063	1
3	Detent plunger	9469705064	1
4	Coiled spring pin 7/16" x 1"	9469705062	1
5	Spearhead base L-Latch	9469705100	1
6	Latch retracting case L-Latch	9469705104	1
7	Coiled spring pin BO 3/8"x1-5/8"	9469705102	2
8	Hex bolt 3/8-16 X 3/4	9469705138	1
9	Latch spring washer	9469705139	1
10	Latch compression spring	9469705098	1
11	Link for L-Latch	9469705140	2
12	Latch for L-Latch	9469705109	2
13	Upper latch body L-Latch	9469705150	1
14	Spring pin 3/8"x1-1/4"	9469705112	1
15	Landing shoulder	3760005796	1
16	Landing indicator bushing 600psi	3760012100	1
16	Landing indicator bushing high pressure 800psi (optional)	3760015391	1
17	Stainless steel ball 22mm	3760012099	1
18	Lower latch body	9469705147	1
19	Hex nut	9469705113	1
20	Spindle shaft	9469705114	1
21	Shut-off valve hard	9469705152	2
Option	Shut-off valve soft	9469706466	2
22	Valve adjusting washer	9469705115	2
23	Thrust bearing	9469705116	1
24	Spindle bearing	9469705117	1
25	Compression spring	3760006475	1
26	Stover lock nut	9469705119	1
–	Inner Tube Cap Assembly	9469705120	1
27	Inner tube cap	9469705153	1
28	Grease fitting 1/4" - 28 straight	9469705073	1
29	Stainless steel ball 22 mm	9469705155	1
30	Check valve body	9469705154	1





Item	Description	Part number
Core barrel options		B core barrel
	1,5 m / 5 ft core barrel assembly complete	9469711739
	3,0 m / 10 ft core barrel assembly complete	9469711741
	1,5 m / 5 ft inner tube assembly complete	9469705082
	3,0 m / 10 ft inner tube assembly complete	9469705086
1	Head assembly complete	9469705089
Consumables/accessories		
6	Locking coupling	See options on page 54
7	Adapter coupling	9469705129
8	Landing ring	3760006228
9	1,5 m / 5 ft outer tube**	3760004831
9	3,0 m / 10 ft outer tube**	3760004832
2	1,5 m / 5 m inner tube	3760004830
2	3,0 m / 10 ft inner tube	3760004829
10	Inner tube stabilizer	3760006229
3	Stop ring	9469705125
4	Core lifter	9469705157
5	Core lifter case	9469705126
Full grip wrenches		
Inner tube wrenches		3760006017
Outer tube wrenches		3760006018

** Also available in full hole. Please contact your Fordia Powered by Epiroc's representative for more information.

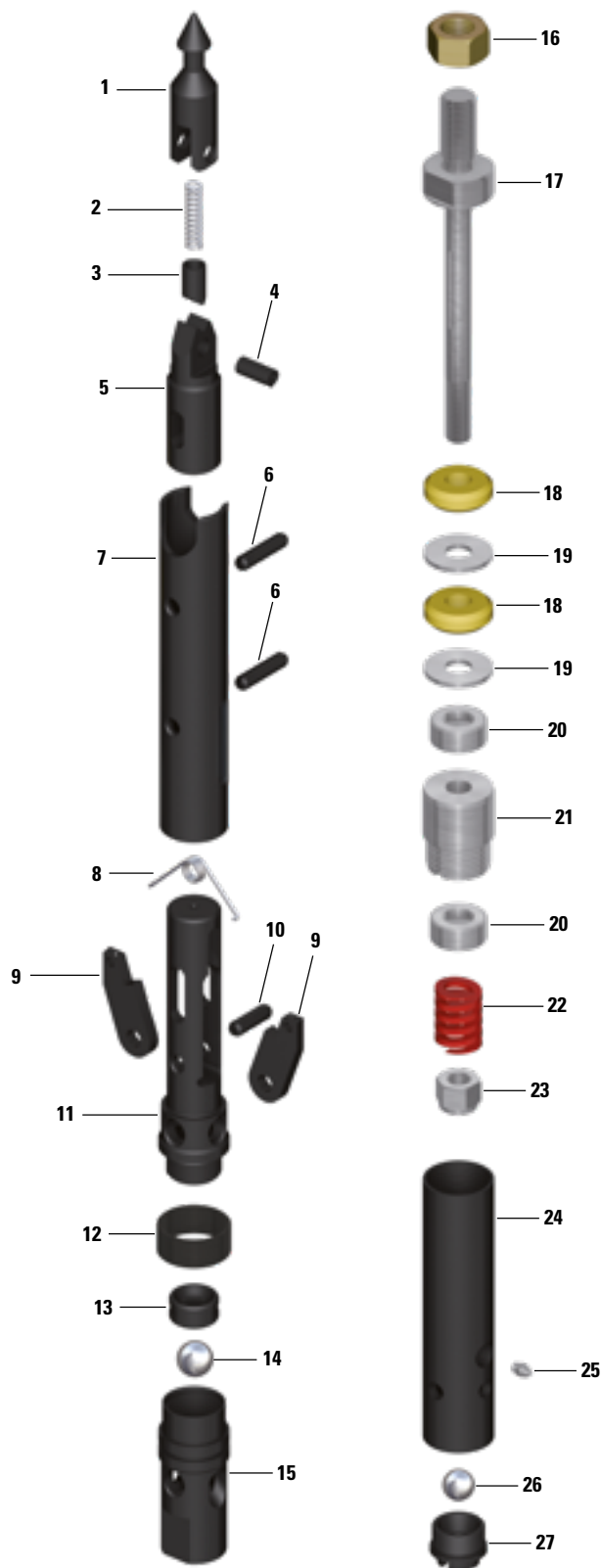
Description	Part Number	Qty
B core barrel consumables kit (2000 m / 6600 ft)	3760017449	1
Core lifter	3760006226	40
Core lifter case	3760006227	8
Landing ring	3760006228	4
Inner tube stabilizer	3760006229	4
Stop ring	3760006225	8

Surface

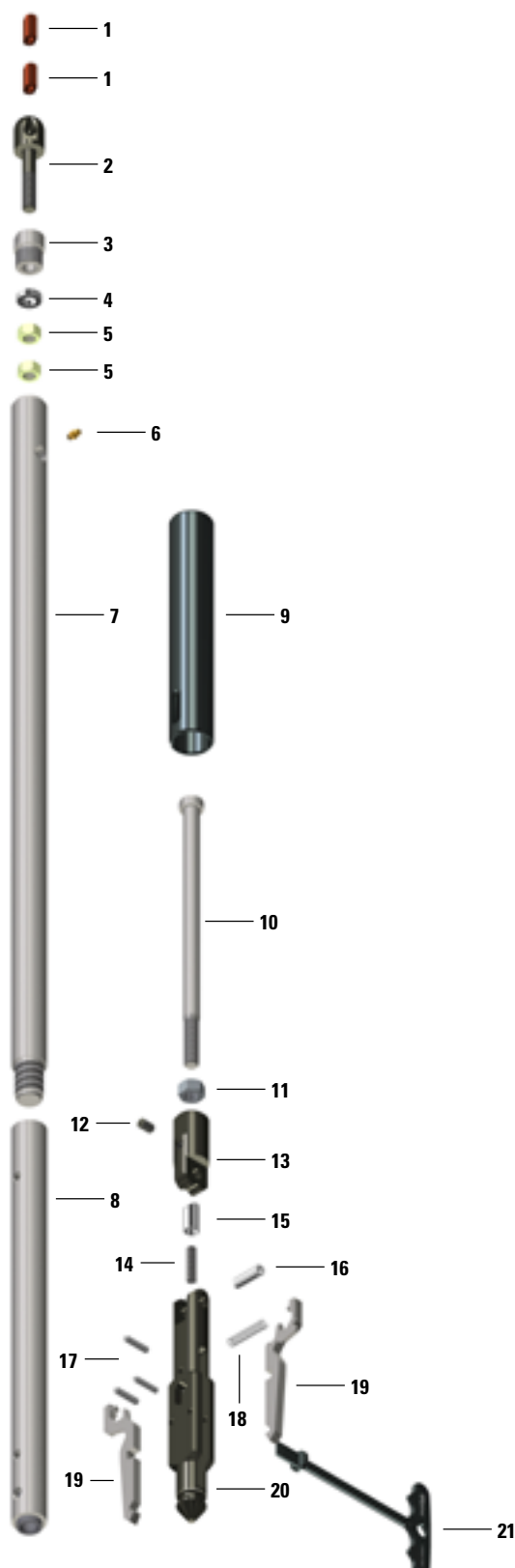
OWL Standard Head Assembly

B

Item	Description	Part Number	Qty
		B Size	
–	B Head Assembly - Surface	9469705089	1
1	Spearhead point	9469705061	1
2	Compression spring	9469705063	1
3	Detent plunger	9469705064	1
4	Coiled spring pin 7/16" X 1"	9469705062	1
5	Spearhead base	9469705099	1
6	Slotted spring pin 3/8" X1-5/8"	9469705101	2
7	Latch retracting case	9469705103	1
8	Latch spring	9469705106	1
9	Latch	9469705108	2
10	Slotted spring pin 3/8" X 1-1/4"	9469705112	1
11	Upper latch body	9469705149	1
12	Landing shoulder	9469705148	1
13	Landing indicator bushing 600psi	3760012100	1
13	Landing indicator bushing high pressure 800psi (optional)	3760015391	1
14	Stainless steel ball 22mm	3760012099	1
15	Lower latch body	9469705147	1
16	Hex nut	9469705113	1
17	Spindle shaft	9469705114	1
18	Shut-off valve hard	9469705152	2
18	Shut-off valve soft (optional)	9469706466	2
19	Valve adjusting washer	9469705115	2
20	Ball thrust bearing	9469705116	2
21	Spindle bearing	9469705117	1
22	Compression spring	9469705118	1
23	Lock nut	9469705119	1
–	Inner Tube Cap Assembly	9469705120	1
24	Inner tube cap	9469705153	1
25	Grease fitting 1/4" - 28 straight	9469705073	1
26	Stainless steel ball 22mm	9469705155	1
27	Check valve body	9469705154	1



Surface Arrow 3S Overshot



B Arrow 3S overshot assembly
(for DiscovOre surface head assemblies in B and BTW size)

Item	Description	Part Number	Qty
–	B-Arrow 3S Overshot – Surface	3760017450	1
1–5	Cable swivel assembly	3760016262	1
12–21	Arrow 3S Overshot head assembly	3760017452	1
1	Nicopress sleeve	3760008244	2
2	Eye bolt	3760016265	1
3	Cable swivel collar	3760007216	1
4	Bearing	3760006467	1
5	Nut	3760012331	2
6	Grease fitting	9469705073	1
7	Sinking bar body	3760006376	1
8	JarTube/Sinking Bar Adapter	3760015559	1
9	Release sleeve	3760006372	1
10	Jar staff	3760015556	1
11	Jam nut	0268413826	1
12	Set screw	3760007085	1
13	Pivot body	3760017458	1
14	Spring – Detent	3760017279	1
15	Detent	3760017280	1
16	Spring pin	3760017460	1
17	Coiled pin	3760017459	3
18	Lifting dog Spring	3760006373	1
19	Lifting dog – Surface	3760017454	2
20	Overshot body – Surface	3760017455	1
21	Release tool	3760017262	1

B Arrow 3S spare parts kits (2000 m / 6600 ft)

Description	Part Number	Qty
B-A3S spare parts kit (2000 m / 6600 ft)	3760017465	1
B-A3S Lifting dog	3760017454	2
B N H Lifting dog spring	3760006373	2
Coiled pin	3760017459	3
Spring pin	3760017460	1
Round detent plunger	3760017280	1
B-A3S Detent spring	3760017279	1
Nicopress sleeve oval	3760008244	2

B Overshot Roller-type Conversion Kit

Description	Part Number	Qty
Roller overshot conversion kit complete	3760015971	1

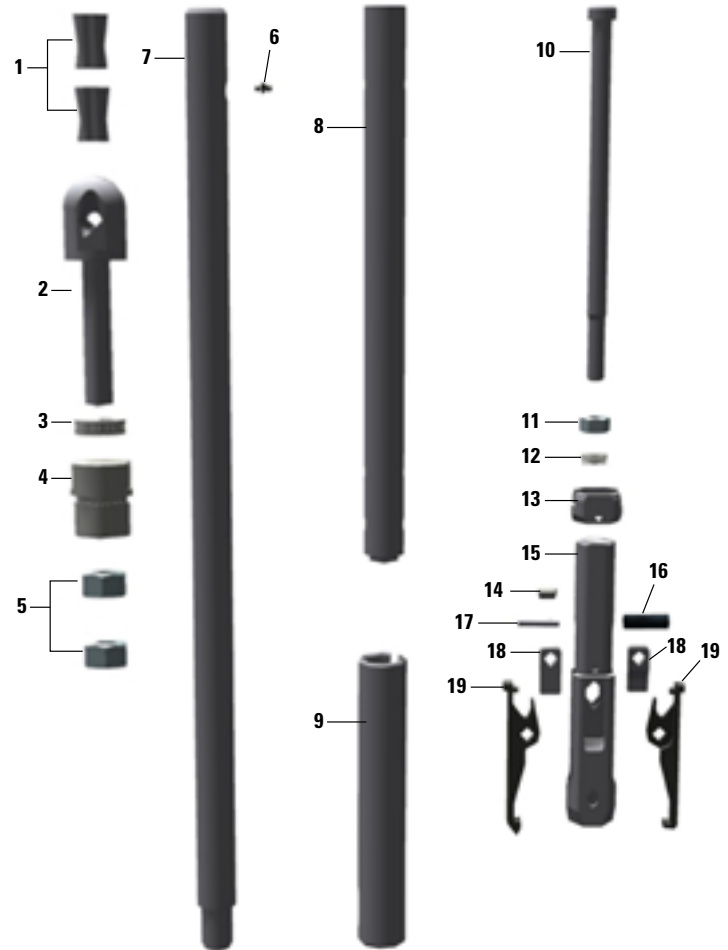
This kit can convert both Arrow 3S and Excore II overshots.

Surface Excure Overshot

B

Auto-lock overshoot for all B & BTW surface spearhead type head assemblies

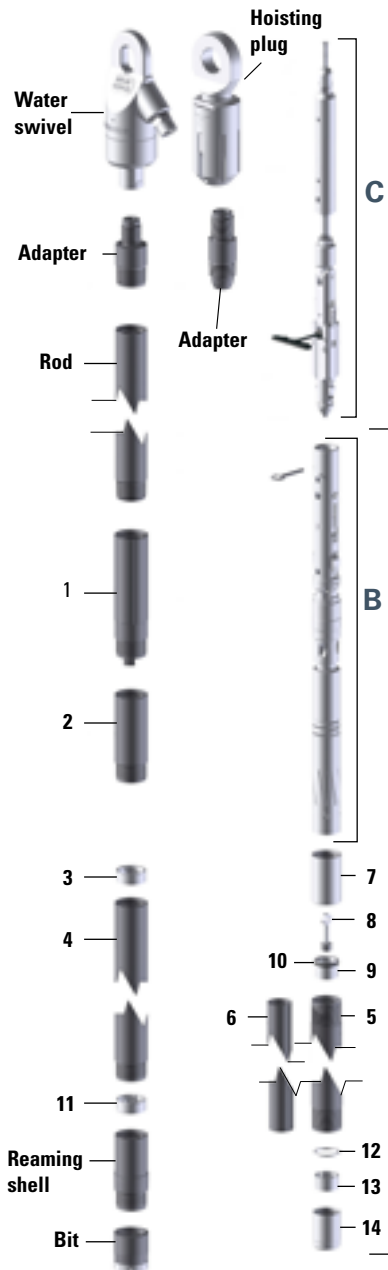
Item	Description	Part Number	Qty
–	Excure B-EX overshoot assembly	3760016276	1
1-5	EX cable swivel assembly	3760016262	1
15-19	EX overshoot head assembly	3760016124	1
1	3/16 nicopress sleeve oval	3760008244	2
2	EX eye bolt	3760016265	1
3	Bearing	3760006467	1
4	EX cable swivel collar	3760007216	1
5	Nut 1/2 20 UNF GR8	3760012331	2
6	Grease fitting	9469705073	1
7	EX Sinking bar body	3760006376	1
8	EX Jar tube	3760015559	1
9	Release sleeve	3760006372	1
10	B EX Jar staff	3760015556	1
11	Nut 9/16 - 12 UNC	0268413826	1
12	BU / NU EX II dog spring	3760006417	1
13	Protection sleeve	3760016128	1
14	Self locking set screw 3/8 - 16 x 5/8 LG	3760015495	1
15	B EX safety overshoot head	3760016126	1
16	Pivot pin 1/2 x 1 1/2	3760006380	1
17	Spring pin 1/4 x 1 3/8	3760016130	1
18	B-EX release bar	3760016129	2
19	B-EX lifting dog	3760016127	2



EX safety overshoot spare parts kit (1000 m / 3300 ft)

Description	Part Number	Qty
EX safety overshoot spare parts kit (1000 m/3300 ft)	3760016270	1
B N H lifting dog spring	3760006373	4
B pivot pin 1/2 x 1 1/2	3760006380	2
3/16 nicopress sleeve oval	3760008244	2
B EX safety overshoot protection sleeve	3760016128	1
Nut Hex 1/2 – 20	3760012331	2
1/4 grease fitting	9469705073	2
B EX safety overshoot lifting dogs	3760016127	2
B EX safety overshoot release bars	3760016129	2
Bearing	3760006467	1
Spring pin 1/4 x 1.375	3760016130	1





Item	Description		Part number		
	Drill string component	Remarks	N3 core barrel	N core barrel	N2 core barrel
Water Swivel and Adaptors*					
	SHALLOW Water Swivel, AW rod box	DEEP Water Swive as option	3760003627		
	Drill rod adapter AW rod pin to NO pin	Select one to match rod type	3760008108		
	Drill rod adapter AW rod pin to NT pin		3760008105		
	Drill rod adapter AW rod pin to NMO pin		3760015311		
	Drill rod adapter AW rod pin to NR pin		3760014042		
Hoisting Plug and Adaptors*					
	BNHP (30k Lbs) Hoisting Plug, NW rod box	55k (Lbs) HP as option	3760006010		
	Drill rod adapter NW rod pin to NO pin	Select one to match rod type.	3760015809		
	Drill rod adapter NW rod pin to NT pin		3760015805		
	Drill rod adapter NW rod pin to NMO pin	See options on page 62-63	3760015501		
	Drill rod adapter NW rod pin to NR pin		3760014256		
Wireline Drill Rod					
Locking Coupling					
1	Locking coupling Full Hole - NO rod box	Select one to match drill rod thread type.	3760006026		
	Locking coupling Full Hole - NT rod box		3760006027		
	Locking coupling Full Hole - NMO rod box	See options on page 54	Contact your sales representative		
	Locking coupling Full Hole - NR rod box		3760014037		
B,2-14	1.5 m / 5 ft Core barrel assy	w/o Locking Coupling (order separately)	3760017484	3760017480	3760017482
	3.0 m / 10 ft Core barrel assy		3760017485	3760017481	3760017483
A	1.5 m / 5 ft inner tube assy compl.		3760017297	3760017203	3760017353
	3.0 m / 10 ft inner tube assy compl.		3760017296	3760017202	3760017352
B	Head assembly complete		3760017200	3760017200	3760017221
C	Overshot assembly complete		3760017250		
2	Adapter coupling		3760006028		
3	Landing ring		3760006243	3760006243	3760006329
4	1.5 m / 5 ft outer tube		3760004837		
	3.0 m / 10 ft outer tube		3760004839		
5	1.5 m / 5 m inner tube		3760004835	3760004835	3760006136
	3.0 m / 10 ft inner tube		3760004836	3760004836	3760006137
6	1.5 m / 5 m Split inner tube	Triple tube components	3760006076	N/A	N/A
	3.0 m / 10 ft Split inner tube		3760008294		
7	Adapter		3760006293		
8	Piston plug		3760006283		
9	Piston		3760006294		
10	O-ring		0663919600		
11	Inner tube stabilizer		3760006244	3760006244	3760008317
12	Stop ring		3760006285	3760006240	3760006326
13	Core lifter		3760006286	3760006241	3760006327
14	Core lifter case		3760006287	3760006242	3760006328
Rshell	Reaming Shell RS++ - STD	Other types available	3760955435		
Bit	Coring bit	Different options	See diamond tools catalogue		

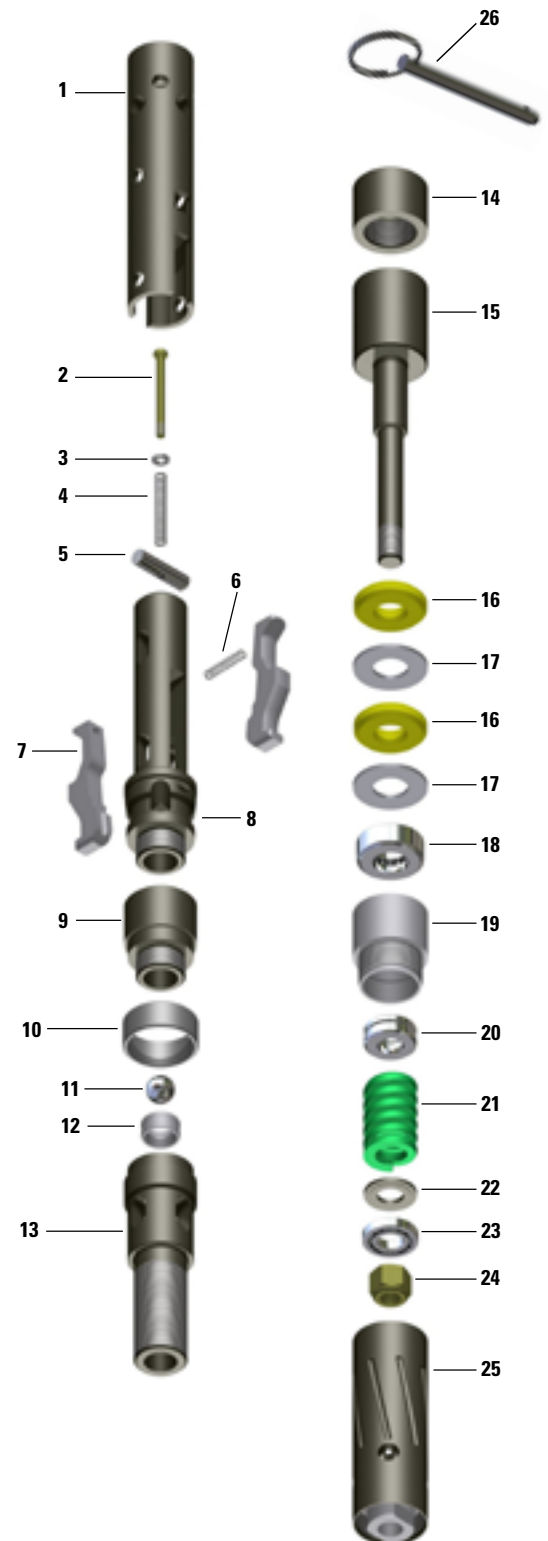
Note: Core barrel assemblies does not include locking coupling which needs to be ordered separately.

*Other options are available. Please contact your sales representative.

Surface DiscovOre Head Assembly

N
N2

Item	Description	Part Number		Qty
		N Size	N2 Size	
–	N-D Head Assembly – Surface	3760017200	3760017221	1
1	Retracting case	3760017233		1
2	Assembly bolt	3760017239		2
3	Wedge lock washer	3760017235		1
4	Spring – Retracting case	3760017236		1
5	Assembly rod	3760017228		1
6	Spring – Latch	3760017237		1
7	Latch	3760017222		2
8	Latch body	3760017220		1
9	Mid body – Surface	3760017223		1
10	Landing shoulder	3760005100	3760005241	1
11	22 mm ball	3760012099		1
12	Landing indicator bushing 600psi	3760012100		1
12	Landing indicator bushing high pressure 800psi (optional)	3760015391		1
13	Lower body	3760017211		1
14	Locknut – Spindle	3760017212		1
15	Spindle	3760017217		1
16	Shut off valve – Yellow	3760008328		2
17	Valve adjusting washer	3760006237		2
18	Thrust bearing	3760006461		1
19	Spindle bearing	3760017219		1
20	Hanger bearing	3760006462		1
21	Compression spring	3760006463		1
22	Washer – Bearing	3760017230		1
23	Ball bearing	3760017234		1
24	Nyloc nut	3760017240		1
25	Inner tube cap assembly	3760017232	3760017243	1
26	Safety pin	3760017291		1



N to N3 Core barrel spare part kits (2000 m / 6600 ft)

Description	Part number		
Spare Part Kits (2000m/6600ft drilling)	N3 core barrel	N core barrel	N2 core barrel
Spare parts kit head assembly	3760017247	3760017247	3760017256
Spare parts kit overshot	3760017265		
Consumables kit core barrel. Universal components common for most DCDMA core barrels	3760016576	3760016574	3760016575

N to N3 Core barrel consumables kit (2000 m / 6600 ft)

Description	Part Number	Qty
N Core barrel consumables kit (2000 m / 6600 ft)	3760016574	1
Core lifter	3760006241	40
Core lifter case	3760006242	8
Landing ring	3760006243	4
Inner tube stabilizer	3760006244	4
Stop ring	3760006240	8
N2 Core barrel consumables kit (2000 m / 6600 ft)	3760016575	1
Core lifter	3760006327	40
Core lifter case	3760006328	8
Landing ring	3760006329	4
Inner tube stabilizer	3760008317	4
Stop ring	3760006326	8
N3 Core barrel consumables kit (2000 m / 6600 ft)	3760016576	1
Core lifter	3760006286	40
Core lifter case	3760006287	8
Landing ring	3760006243	4
Inner tube stabilizer	3760006244	4
Stop ring	3760006285	8

Conversion kits from N to N3 core barrel

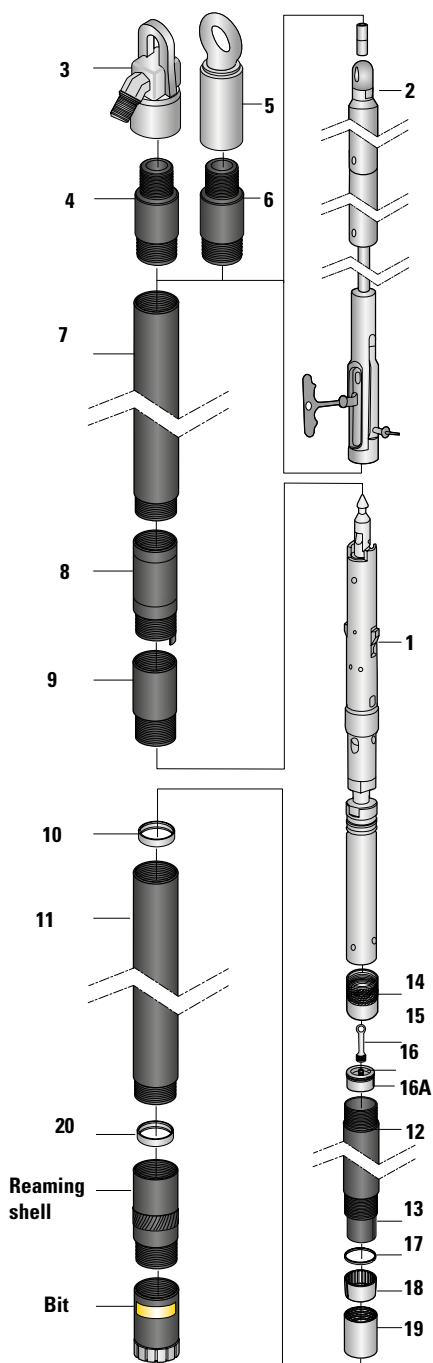
Description	Part Number	Qty
Conversion kit from N to N3 1.5m/5ft	3760004729	1
Stop ring	3760006285	1
Core lifter	3760006286	1
Core lifter case	3760006287	1
Piston plug	3760006283	1
O-ring	0663919600	1
Piston	3760006294	1
Adapter	3760006293	1
1.5 m / 5 m Split inner tube	3760006076	1
Conversion kit from N to N3 3m/10ft	3760009554	1
Stop ring	3760006285	1
Core lifter	3760006286	1
Core lifter case	3760006287	1
Piston plug	3760006283	1
O-ring	0663919600	1
Piston	3760006294	1
Adapter	3760006293	1
3.0 m / 10 ft Split inner tube	3760008294	1

N Head assy spare parts kit (2000 m / 6600 ft)

Description	Part Number	Qty
N Head Assy spare parts kit (2000 m / 6600 ft)	3760017247	1
N-D Latch	3760017222	2
N-D Assembly rod	3760017228	1
Assy bolt 1/4" flanged	3760017239	2
Wedge lock washer 1/4"	3760017235	2
Spring 0.360" x 0.051" x 3"	3760017236	2
N Landing shoulder 3PLB	3760005100	1
N Hard shut off valve – Yellow	3760008328	2
22 mm Stainless steel ball	3760012099	1
Landing indicator bushing 600psi	3760012100	6
Spring 0.300" x 0.030" x 1.50"	3760017237	2
Thrust bearing	3760006461	1
Hanger bearing	3760006462	1
Ball bearing	3760017234	1

N2 Head assy spare parts kit (2000 m / 6600 ft)

Description	Part Number	Qty
N2 Head Assy spare parts kit (2000 m / 6600 ft)	3760017256	1
N-D Latch	3760017222	2
N-D Assembly rod	3760017228	1
Assy bolt 1/4" flanged	3760017239	2
Wedge lock washer 1/4"	3760017235	2
Spring 0.360" x 0.051" x 3"	3760017236	2
N Landing shoulder 3PLB	3760005241	1
N Hard shut off valve – Yellow	3760008328	2
22 mm Stainless steel ball	3760012099	1
Landing indicator bushing 600psi	3760012100	6
Spring 0.300" x 0.030" x 1.50"	3760017237	2
Thrust bearing	3760006461	1
Hanger bearing	3760006462	1
Ball bearing	3760017234	1



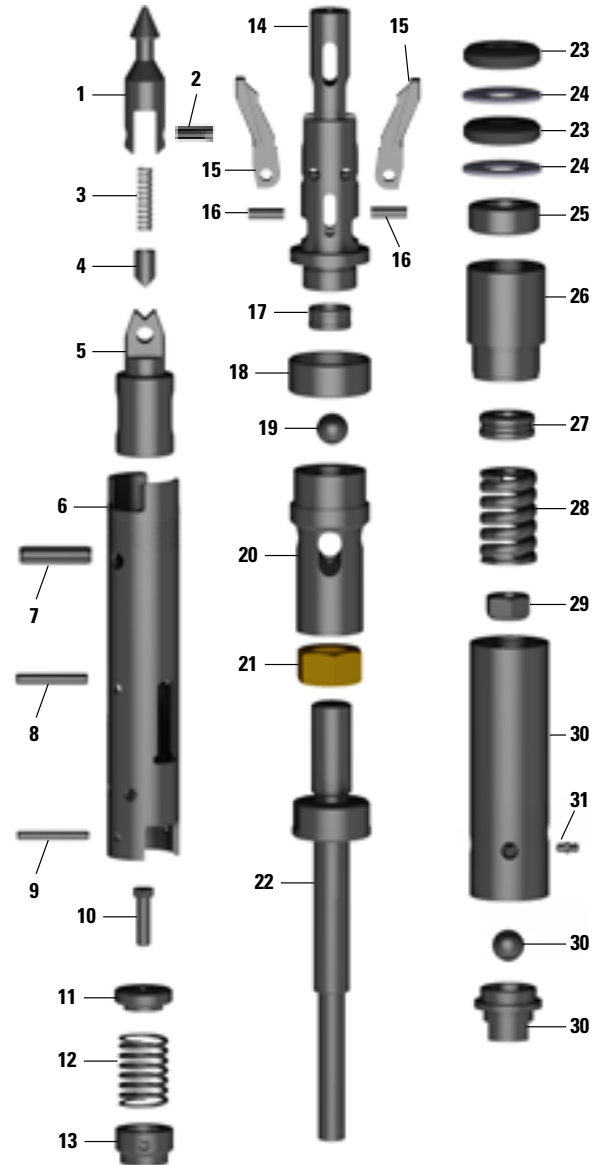
Item	Description	Part number		
	Drill rod connection	N core barrel	N2 core barrel	N3 core barrel
	1,5 m / 5 ft core barrel assembly complete	3760014440	3760014444	3760014448
	3,0 m / 10 ft core barrel assembly complete	3760014442	3760014446	3760014449
	1,5 m / 5 ft inner tube assembly complete	3760015621	3760015587	3760015947
	3,0 m / 10 ft inner tube assembly complete	3760015623	3760015590	3760015944
1	Head assembly complete	3760013452	3760015264	3760013452
Overshot				
2	Overshot assembly complete	3760016278		
2	Dry hole kit	3760016258		
Water swivel*				
3	DEEP Water Swivel, BW rod box	3760014070		
4	Drill rod adapter BW rod pin - NO rod pin	3760006022		
4	Drill rod adapter BW rod pin - NT rod pin	3760006023		
4	Drill rod adapter BW rod pin - NMO rod pin	3760012623		
4	Drill rod adapter BW rod pin - NR rod pin	3760014253		
Hoisting plug*				
5	BNHP hoisting plug assembly, NW box thread	3760006010		
6	NO hoisting plug adapter NW pin	3760015809		
6	NT hoisting plug adapter NW pin	3760015805		
6	NMO hoisting plug adapter NW pin	3760015501		
6	NR hoisting plug adapter NW pin	3760014254		
Drill rods				
7	Drill rod	See options on page 62-63		
Consumables/accessories				
8	Locking coupling	See options on page 54		
9	Adapter coupling	3760006028		
10	Landing ring	3760006243	3760006329	3760006243
11	1,5 m / 5 ft outer tube	3760004837		
11	3,0 m / 10 ft outer tube	3760004839		
12	1,5 m / 5 m inner tube	3760004835	3760006136	3760004835
12	3,0 m / 10 ft inner tube	3760004836	3760006137	3760004836
13	1,5 m / 5 ft split tube	N/A	N/A	3760006076
13	3,0 m / 10 ft split tube			3760008294
14	Adapter			3760006293
15	Piston plug			3760006283
16	Piston			3760006294
16A	O-ring			663919600
17	Stop ring	3760006240	3760006326	3760006285
18	Core lifter	3760006241	3760006327	3760006286
19	Core lifter case	3760006242	3760006328	3760006287
20	Inner tube stabilizer	3760006244	3760008317	3760006244
Full grip wrenches				
Inner tube wrenches		3760006031		
Outer tube wrenches		3760006032		

* Other configurations are available. Please contact your representative.

Surface Excure Head Assembly

N
N2

Item	Description	Part Number		Qty
		N Size	N2 Size	
–	Head assembly complete	3760013452	3760015264	1
1	Spearhead	3760015393		1
2	Spiral pin 7/16 x 1	3760004348		1
3	Compression spring	3760015394		1
4	Detent	3760015395		1
5	Spearhead base	3760015396		1
6	Latch retracting case	3760013470		1
7	Spring pin 1/2 x 2	0108169180		1
8	Spring pin 5/16 x 2	3760015126		1
9	Spring pin 1/4 x 2	5530832600		1
10	HHCS 3/8-16 x 1 1/4	3760013477		1
11	Spring guide	3760013476		1
12	Compression spring	3760013474		1
13	Latch piston	3760013475		1
14	Upper latch body	3760013472		1
15	Latch	3760013471		2
16	Spring pin 5/16 x 1	3760015694		2
17	Landing indicator bushing 600psi	3760012100		1
17	Landing indicator bushing high pressure 800psi (optional)	3760015391		1
18	Landing shoulder	3760005100	3760005241	1
19	SS Ball 22 mm	3760012099		1
20	Lower latch body	3760013473		1
21	Lock nut 1 1/8	3268413824		1
22	Spindle	3760006235		1
23	Shut-off valve	3760006236		2
24	Valve adjusting washer	3760006237		2
25	Thrust bearing	3760006461		1
26	Spindle bearing housing	3760006238		1
27	Hanger bearing	3760006462		1
28	Compression spring	3760006463		1
29	Lock nut stover 3/4 10 UNC SS	3760013003		1
30	Inner tube cap assembly (includes grease fitting)	3760006239	3760006325	1
31	Grease fitting	9469705073		1

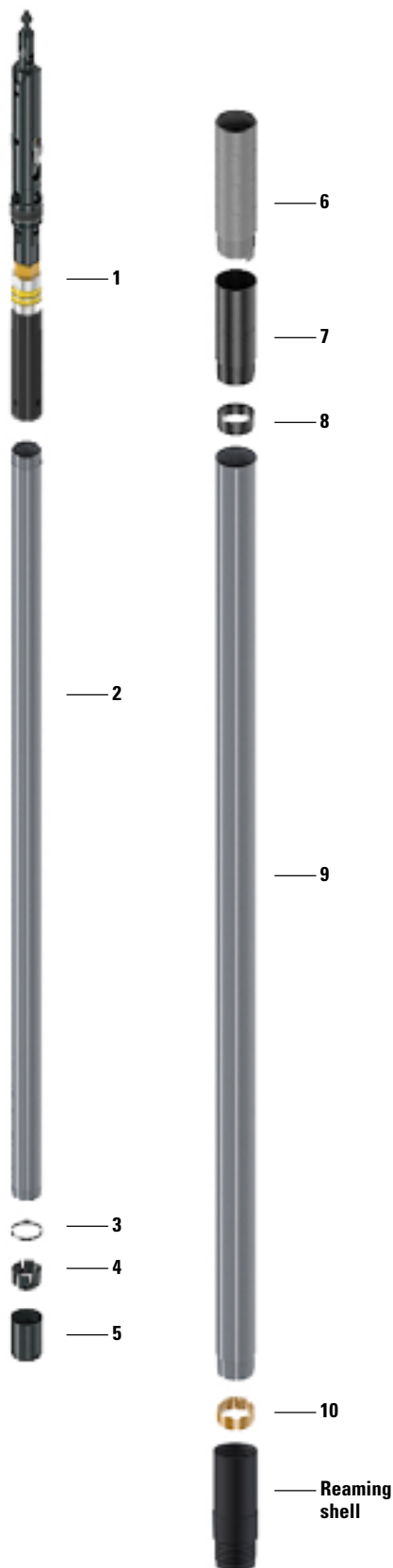


N to N3 Core barrel spare part kits (1000 m / 3300 ft)

Description	Part Number			Qty
	N core barrel	N2 core barrel	N3 core barrel	
Spare Part Kits (1000 m / 3300 ft drilling)				
Spare parts kit head assembly	3760015269	3760015600	3760015602	1
B/N/H Excore spearhead		3760015393		1
Excore detent compression spring		3760015394		1
B/N/H Excore detent plunger		3760015395		2
Spiral pin 7/16 x 1		3760004348		2
Spring pin - 1/2-2 LG		0108169180		2
Spring pin - 5/16 x 1 LG		3760015694		4
Split roll pin 5/16 x 2 LG		0108169189		2
Spring pin - 1/4 x 2 LG		5530832600		2
N Excore compression spring		3760013474		2
N/NU Excore latch		3760013471		2
N compression spring		3760006463		1
N landing shoulder 3 PLB	3760005100	3760005241	3760005100	1
HHCS 3/8-16 UNC x 1 1/4 LG		3760013477		1
Bearing hanger		3760006462		1
Nut stover 3/4 10 UNC SS NO		3760017240		1
Bearing thrust		3760006461		2
N spindle bearing		3760006238		1
1/4 grease fitting		9469705073		2
N stop ring	3760006240	3760006326	3760006285	4
N core lifter	3760006241	3760007764	3760006286	20
N core lifter case	3760006242	3760006328	3760006287	4
N landing ring	3760006243	3760006329	3760006243	2
N inner tube stabilizer	3760006244	3760008317	3760006244	2
N/NU Excore latch piston		3760013475		1
Landing indicator bushing 600psi		3760012100		2
22 mm stainless steel ball		3760012099		1
N locknut 1 1/8 7 UNC		3268413824		1
N shut off valve		3760006236		4

Surface

OWL L-Latch Core Barrel Assembly

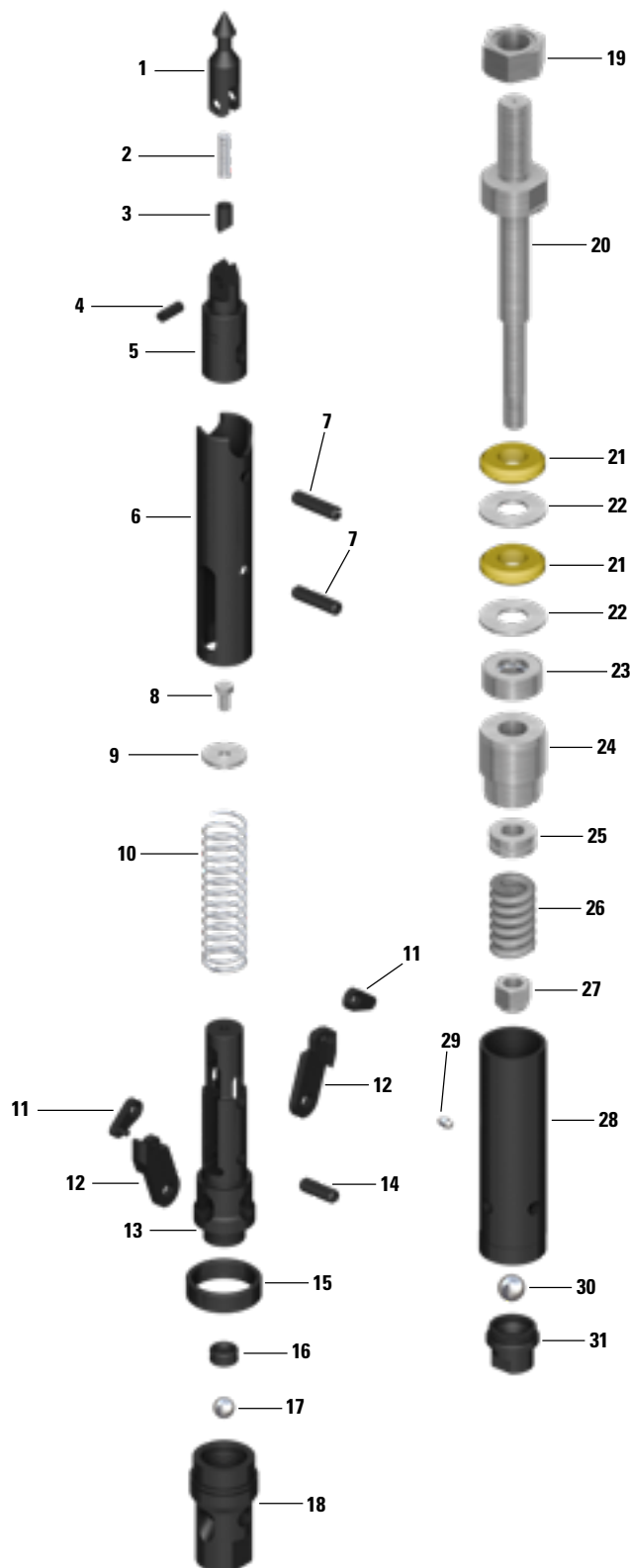


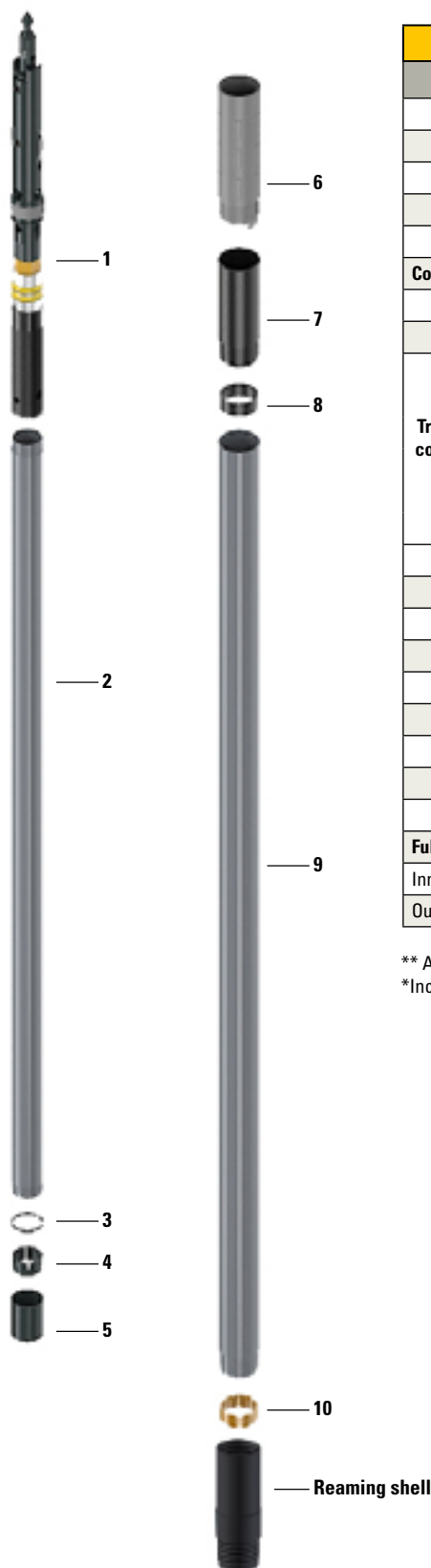
Item	Description	Part number		
Core barrel options		N core barrel	N2 core barrel	N3 core barrel
	1,5m/5ft core barrel assembly w/o locking coupling	9469711757	9469711763	9469711644
	3,0m/10ft core barrel assembly w/o locking coupling	9469711760	9469711766	9469711645
	1,5 m / 5 ft inner tube assembly complete	9469705379	9469705470	9469711642
	3,0 m / 10 ft inner tube assembly complete	9469705382	9469705473	9469711643
1	Head assembly complete	9469705385	9469705476	9469705385
Consumables/accessories				
2	1,5 m / 5 m inner tube	3760004835	3760006136	3760004835
2	3,0 m / 10 ft inner tube	3760004836	3760006137	3760004836
	1,5 m / 5 ft split tube	N/A	N/A	9469705501
	3,0 m / 10 ft split tube			9469705502
	Adaptor			9469705503
	Piston plug			9469705074
	Piston			9469705505
	O-ring			9469705504
3	Stop ring	3760006240	3760006326	9469705499
4	Core lifter	9469705461	3760007764	9469705506
5	Core lifter case	9469705421	3760006328	9469705500
6	Locking coupling	See options on page 54		
7	Adapter coupling	9469705424		
8	Landing ring	3760006243	3760006329	3760006243
9	1,5 m / 5 ft outer tube	3760004837		
9	3,0 m / 10 ft outer tube	3760004839		
10	Inner tube stabilizer	3760006244	3760008317	3760006244
Full grip wrenches				
Inner tube wrenches		3760006031		
Outer tube wrenches		3760006032		

Surface OWL L-Latch Head Assembly

N
N2

Item	Description	Part Number		Qty
		N Size	N2 Size	
–	N Head Assembly - Surface	9469705385	9469705476	1
1	Spearhead point	9469705061		1
2	Compression spring	9469705063		1
3	Detent plunger	9469705064		1
4	Coiled spring pin 7/16" x 1"	9469705062		1
5	Spearhead base L-Latch	9469705396		1
6	Latch retracting case L-Latch	9469705399		1
7	Spring pin 1/2" x 2"	9469705065		2
8	Hex bolt 3/8-16 X 3/4	9469705138		1
9	Latch spring washer	9469705436		1
10	Latch compression spring	9469705394		1
11	Link for L-Latch	9469705437		2
12	Latch for L-Latch	9469705404		2
13	Upper latch body L-Latch	9469705455		1
14	Spring pin 1/2" x 1 1/2"	9469705067		1
15	Landing shoulder	3760005100	3760005241	1
16	Landing indicator bushing 600psi	3760012100		1
16	Landing indicator bushing high pressure 800psi (optional)	3760015391		1
17	Stainless steel ball 22mm	3760012099		1
18	Lower latch body	9469705452		1
19	Hex nut	9469705407		1
20	Spindle shaft	9469705408		1
21	Shut-off valve hard	9469705458		2
Option	Shut-off valve soft	9469706710		2
22	Valve adjusting washer	9469705409		2
23	Hanger bearing	9469705410		1
24	Spindle bearing	9469705411		1
25	Thrust bearing	9469705412		1
26	Compression spring	9469705413		1
27	Stover lock nut	9469705414		1
–	Inner Tube Cap Assembly	9469705415	9469705478	1
28	Inner tube cap	9469705459	9469705488	1
29	Grease fitting 1/4" - 28 straight	9469705073		1
30	Stainless steel ball 22mm	3760012099		1
31	Check valve body	9469705072		1





Item	Description	Part number		
Core barrel options		N core barrel	N2 core barrel	N3 core barrel
	1,5 m / 5 ft core barrel assembly complete	9469711756	9469711762	9469711768
	3,0 m / 10 ft core barrel assembly complete	9469711759	9469711765	9469711770
	1,5 m / 5 ft inner tube assembly complete	9469705378	9469705469	9469705495*
	3,0 m / 10 ft inner tube assembly complete	9469705381	9469705472	9469705497
1	Head assembly complete	9469705384	9469705475	9469705384
Consumables/accessories				
2	1,5 m / 5 m inner tube	3760004835	3760006136	3760004835
2	3,0 m / 10 ft inner tube	3760004836	3760006137	3760004836
Triple tubes components	1,5 m / 5 ft split tube	N/A	N/A	9469705501
	3,0 m / 10 ft split tube			9469705502
	Adaptor			9469705503
	Piston plug			9469705074
	Piston			9469705505
	O-ring			9469705504
3	Stop ring	3760006240	3760006326	9469705499
4	Core lifter	9469705461	3760007764	9469705506
5	Core lifter case	9469705421	3760006328	9469705500
6	Locking coupling	See options on page 54		
7	Adapter coupling	9469705424		
8	Landing ring	9469705425	9469705484	3760006243
9	1,5 m / 5 ft outer tube**	3760004837		
9	3,0 m / 10 ft outer tube**	3760004839		
10	Inner tube stabilizer	3760006244	3760008317	3760006244
Full grip wrenches				
Inner tube wrenches		3760006031		
Outer tube wrenches		3760006032		

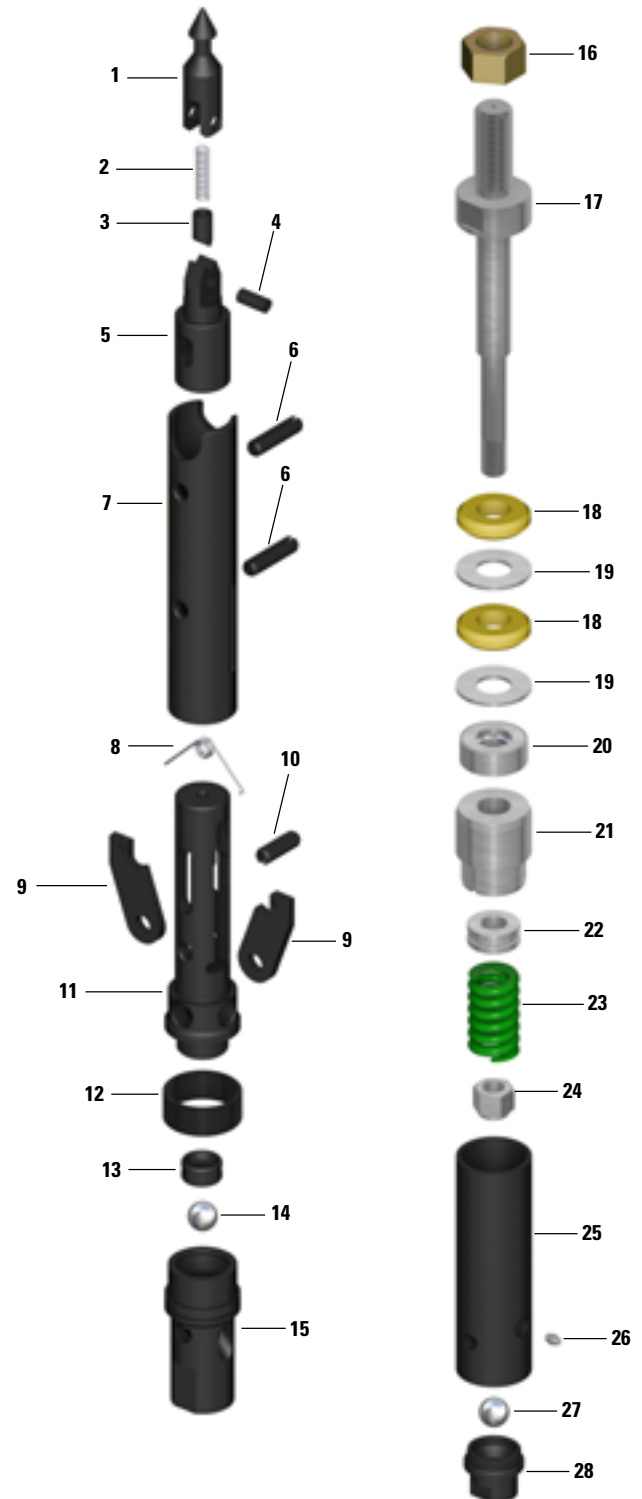
** Also available in full hole. Please contact your Fordia Powered by Epiroc's representative for more information.

*Includes pump-out adaptor and piston plug.

Surface OWL Standard Head Assembly

N
N2

Item	Description	Part Number		Qty
		N Size	N2 Size	
–	N Head Assembly - Surface	9469705384	9469705475	1
1	Spearhead point	9469705061		1
2	Compression spring	9469705063		1
3	Detent plunger	9469705064		1
4	Coiled spring pin 7/16" X 1"	9469705062		1
5	Spearhead base	9469705395		1
6	Slotted spring pin 1/2" X 2"	9469705065		2
7	Latch retracting case	9469705398		1
8	Latch spring	9469705401		1
9	Latch	9469705403		2
10	Spring pin 1/2" X 1-1/2"	9469705067		1
11	Upper latch body	9469705454		1
12	Landing shoulder	3760005100	3760005241	1
13	Landing indicator bushing 600psi	3760012100		1
13	Landing indicator bushing high pressure 800psi (optional)	3760015391		1
14	Stainless steel ball 22mm	3760012099		1
15	Lower latch body	9469705452		1
16	Hex nut	9469705407		1
17	Spindle shaft	9469705408		1
18	Shut-off valve hard	9469705458		2
Option	Shut-off valve soft	9469706710		2
19	Valve adjusting washer	9469705409		2
20	Hanger bearing	9469705410		1
21	Spindle bearing	9469705411		1
22	Thrust bearing	9469705412		1
23	Compression spring	9469705413		1
24	Lock nut	9469705414		1
–	Inner Tube Cap Assembly	9469705415	9469705478	1
25	Inner tube cap	9469705459	9469705488	1
26	Grease fitting 1/4"- 28 straight	9469705073		1
27	Stainless steel ball 22mm	3760012099		1
28	Check valve body	9469705072		1



N Core barrel consumables kit (2000 m / 6600 ft)

Description	Part Number	Qty
N core barrel consumables kit (2000 m / 6600 ft)	3760016574	1
Core lifter	3760006241	40
Core lifter case	3760006242	8
Landing ring	3760006243	4
Inner tube stabilizer	3760006244	4
Stop ring	3760006240	8

N2 Core barrel consumables kit (2000 m / 6600 ft)

Description	Part Number	Qty
N core barrel consumables kit (2000 m / 6600 ft)	3760016575	1
Core lifter	3760006327	40
Core lifter case	3760006328	8
Landing ring	3760006329	4
Inner tube stabilizer	3760008317	4
Stop ring	3760006326	8

N3 Core barrel consumables kit (2000 m / 6600 ft)

Description	Part Number	Qty
N core barrel consumables kit (2000 m / 6600 ft)	3760016576	1
Core lifter	3760006286	40
Core lifter case	3760006287	8
Landing ring	3760006243	4
Inner tube stabilizer	3760006244	4
Stop ring	3760006285	8

Conversion kits from N to N3 core barrel

Conversion kits includes all parts needed to convert N inner tube assembly to N3 inner tube assembly		
Description	Part Number	Qty
Conversion kit from N to N3 1,5 m / 5 ft core barrel	3760004729	1
Stop ring	3760006285	1
Core lifter	3760006286	1
Core lifter case	3760006287	1
Piston plug	3760006283	1
O-ring	0663919600	1
Piston	3760006294	1
Adapter	3760006293	1
1.5 m / 5 m Split inner tube	3760006076	1
Conversion kit from N to N3 3 m / 10 ft core barrel	3760009554	-
Stop ring	3760006285	1
Core lifter	3760006286	1
Core lifter case	3760006287	1
Piston plug	3760006283	1
O-ring	0663919600	1
Piston	3760006294	1
Adapter	3760006293	1
3.0 m / 10 ft Split inner tube	3760008294	1

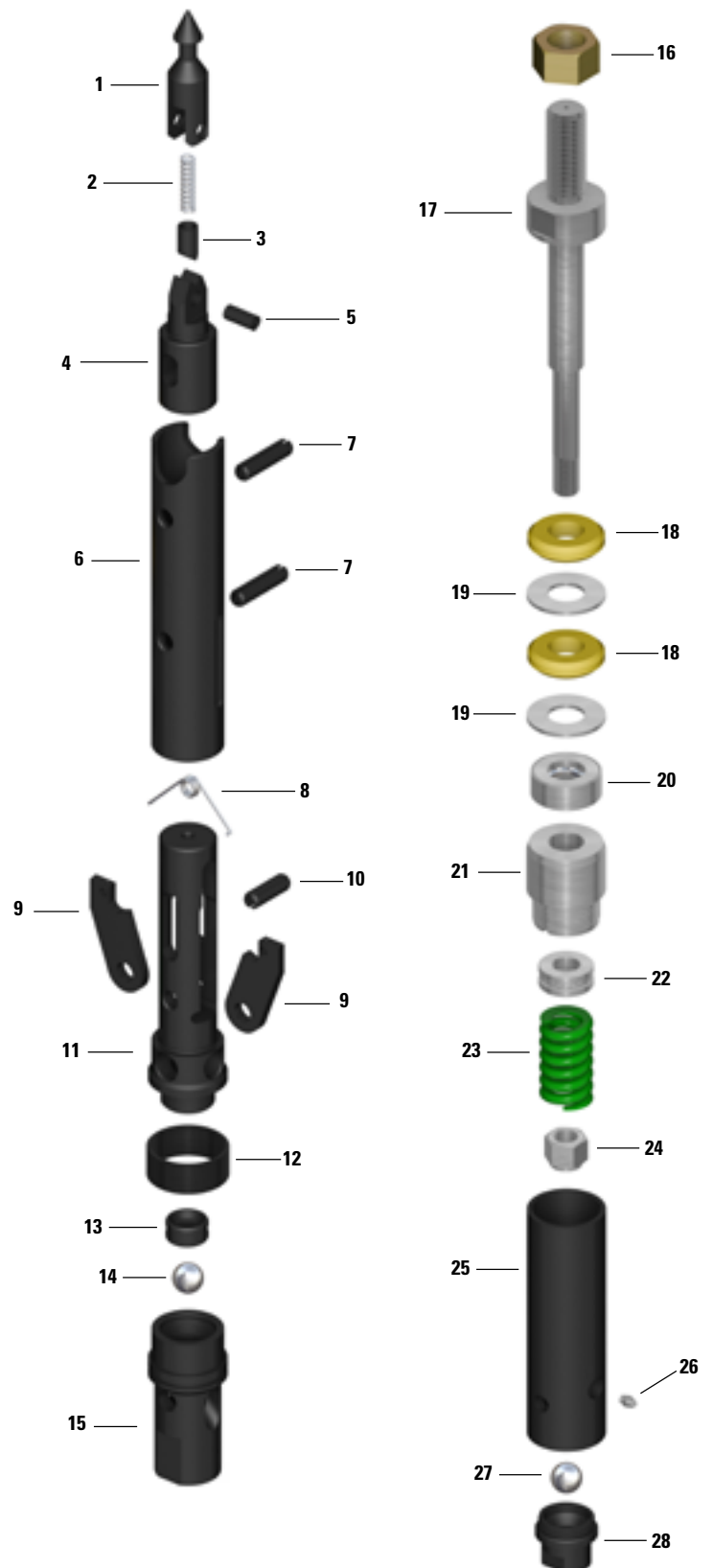


Surface

OWL Standard Head Assembly

NTW

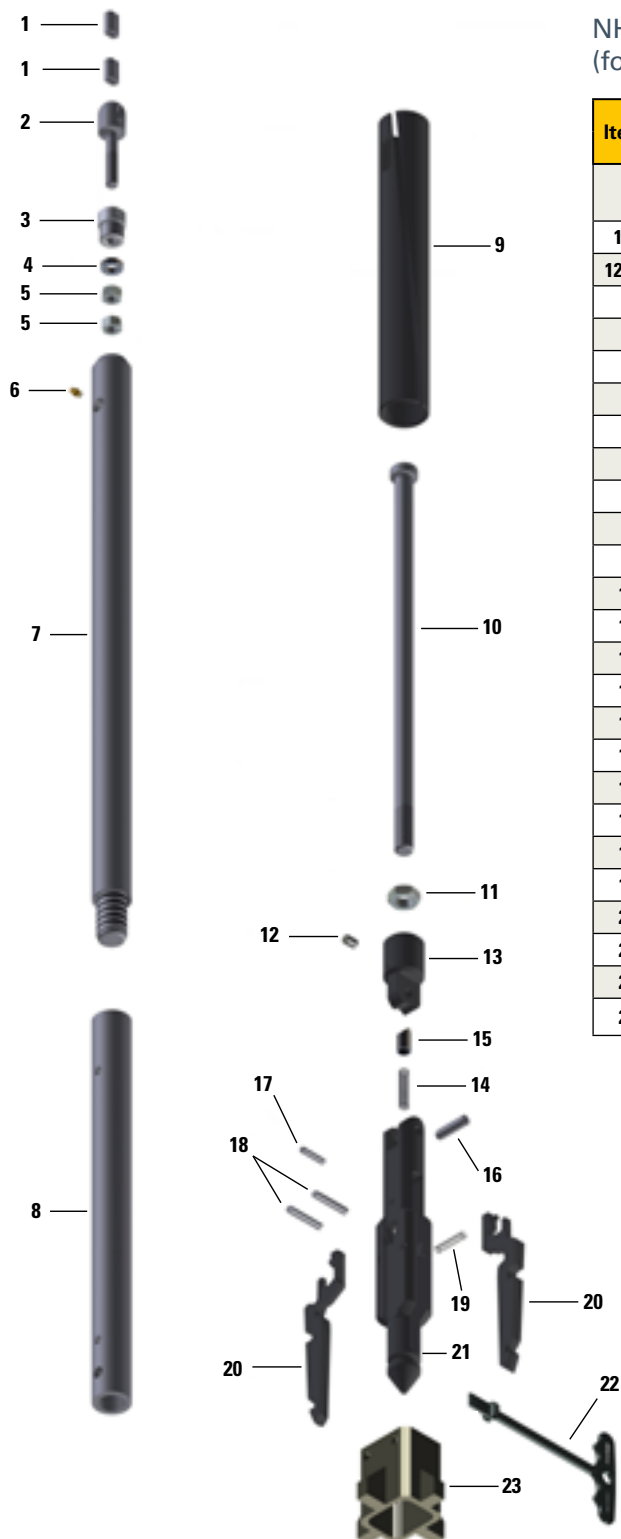
Item	Description	Part Number	Qty
–	NTW Head Assembly - Surface	9469705517	1
1	Spearhead point	9469705061	1
2	Compression spring	9469705063	1
3	Detent plunger	9469705064	1
4	Spearhead base	9469705395	1
5	Coiled spring pin 7/16" X 1"	9469705062	1
6	Latch retracting case	9469705398	1
7	Spring pin 1/2" x 2"	9469705065	2
8	Latch spring	9469705401	1
9	Latch	9469705403	2
10	Spring pin 1/2" x 1-1/2"	9469705067	1
11	Upper latch body	9469705454	1
12	Landing shoulder	9469705549	1
13	Landing indicator bushing	3760012100	1
14	Stainless steel ball 22mm	3760012099	1
15	Lower latch body	9469705452	1
16	Hex nut	9469705407	1
17	Spindle shaft	9469705408	1
18	Shut-off valve	9469705551	2
19	Valve adjusting washer	9469705524	2
20	Ball thrust bearing	9469705410	1
21	Spindle bearing	9469705411	1
22	Hanger bearing	9469705412	1
23	Compression spring	9469705413	1
24	Lock nut	9469705414	1
–	Inner Tube Cap Assembly	9469705525	1
25	Inner tube cap	9469705552	1
26	Grease fitting 1/4" - 28 straight	9469705073	1
27	Stainless steel ball 22mm	3760012099	1
28	Check valve body	9469705072	1



Surface Arrow 3S Overshot and Accessories

NHP Arrow 3S overshot assembly
(for DiscovOre surface head assembly in N, N2, H & P sizes)

Item	Description	Part Number			Qty
		NH Size	P Size	NH Short	
-	Arrow 3S Overshot – Surface	3760017250	3760017550	3760017290	1
1–5	Cable swivel assembly	3760016262			1
12–22	Arrow 3S Overshot head assembly	3760017252	3760017552	3760017252	1
1	Nicopress sleeve	3760008244			2
2	Eye bolt	3760016265			1
3	Cable swivel collar	3760007216			1
4	Bearing	3760006467			1
5	Nut	3760012331			2
6	Grease fitting	9469705073			1
7	Sinking bar body	3760006384			1
8	Jar Tube	3760015660		3760015935	1
9	Release sleeve	3760006381			1
10	Jar staff	3760015663		N/A	1
11	Jam nut	5530616400			1
12	Set screw	3760015495			1
13	Pivot body	3760017258			1
14	Spring – Detent	3760017279			1
15	Detent	3760017280			1
16	7/16" Coiled pin	3760017260			1
17	1/4" x 1 1/4" Spring pin	0108169134			1
18	5/16 x 1 1/2" Coiled pin	3760017259	3760017559	3760017259	2
19	Spring	3760006373			1
20	Lifting dog – Surface	3760017254			2
21	Overshot body – Surface	3760017255			1
22	Release tool	3760017262			1
23	P size Adapter	N/A	3760017570	N/A	



NHP Arrow 3S Overshot standard Surface total length – 1980 mm / 78"

NHP Arrow 3S Short total length 1190 mm / 47"

Use Short overshot for down holes with limited space. (Underground or Surface). The extra weight of the sinking bar and no drag from the propulsion seals will result in faster round trips. The release sleeve will give you the ability to release the overshot in the event of a jammed inner tube.

Surface Arrow 3S Overshot and Accessories

N
N2

NHP Arrow 3S overshot spare part kit

Description	Part Number	Qty
NHP-A3S spare parts kit (2000 m / 6600 ft)	3760017265	1
NHP-A3S Lifting dog	3760017254	2
B N H Lifting dog spring	3760006373	2
Pin coiled spring 5/16 x 1 1/2	3760017259	2
Pin coiled spring 7/16 x 1 1/2	3760017260	1
Round detent plunger	3760017280	1
NH-A3S Detent spring	3760017279	1
Spring pin 1/4" x 1 3/4" LG	010869187	1
3/16" Nicopress sleeve oval	3760008244	2
Add below item to complete Spare Parts kit for P size overshot		
P size Conversion kit	3760017570	1

NH to NH Short overshot conversion kit

Part Number	Description	Qty	Item in NH Std Overshot
3760015935	NH Std to NH Overshot conversion kit		
Item to be replaced in NH A3S Std Overshot to convert to NH Short Overshot			
3760015935	Sinking bar adapter	1	3760015660
Item to be removed from NH A3S Std Overshot to compl. conversion to NH Short			
	Jar staff	1	3760015663
	Jam nut	1	5530616400

NH to P overshot conversion kit

Part Number	Description	Qty	Item in NH Std Overshot
3760017570	NH A3S Std/Short to P A3S Overshot conversion kit		
Item to be replaced in NH A3S Std/Short Overshot to convert to P A3S Overshot			
3760017559	Spiral roll pin 5/16 x 2 " LG	2	3760017259
Item to be added to NH A3S Std or Short Overshot to compl. conversion to P A3S			
3760017562	P size Adapter	1	

N InnerTube Overshot Receiver

Description	Part Number
N Inner Tube Overshot Receiver	3760017727
N Inner tube Vice-Grip with carbides	9469710250

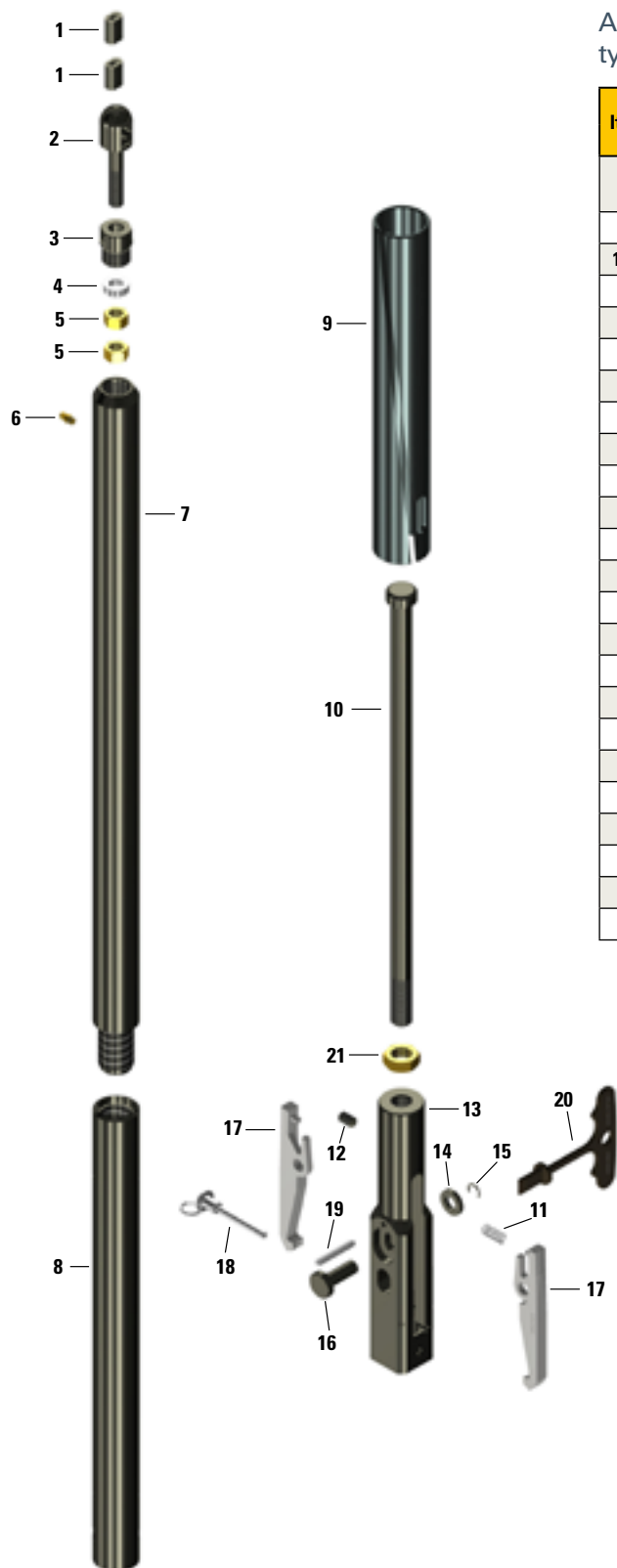


Inner tube overshot receiver allows to connect Arrow 3S overshot directly to inner tube without head assembly in between. This is beneficial when drilling with 6m or longer core barrel and there is not enough space on drill rig mast to accommodate inner tube, head assembly and overshot at once. Vice grip is very handy device to hold inner tube in place when removing head assembly to add overshot receiver.

N Overshot Roller-type Conversion Kit

Description	Part Number	Qty
Roller overshot conversion kit complete	3760015972	1





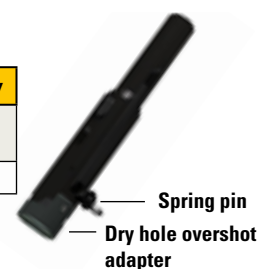
Auto-lock overshoot assembly for all N surface spearhead type head assemblies

Item	Description	Part Number	Qty
		N	
	Excure II overshoot assembly	3760016278	1
1-5	Excure II cable swivel assembly	3760016262	1
13-23	Excure II overshoot head assembly	3760016248	1
1	3/16 nicopress sleeve oval	3760008244	2
2	Excure II eye bolt	3760016265	1
3	N / H Excure cable swivel collar	3760007216	1
4	Bearing	3760006467	1
5	Nut 1/2 20 UNF GR8	3760012331	2
6	Grease fitting	9469705073	1
7	Excure II sinking bar body	3760006384	1
8	Excure II Jar tube	3760015660	1
9	Release sleeve	3760006381	1
10	N Excure Jar staff	3760015663	1
11	N / H Excure II lifting dog spring	3760006373	1
12	Spring pin 1/4 x 1 3/4	0108169187	1
13	N Excure-II safety overshoot head	3760016244	1
14	Pivot pin retainer	3760016246	1
15	Retaining ring	3760015789	1
16	Excure II pivot pin	3760016249	1
17	Excure II lifting dog	3760016245	2
18	Excure II safety pin	3760016247	1
19	Set screw 3/8 24 x 5/8	3760007085	1
20	Safety overshoot release tool	3760017262	1
21	Nut 3/4-10	5530616400	1

Dry hole overshoot kit

Item	Description	Part Number	Qty
	N Excure II dry hole overshoot kit	3760016258	1
	Spring pin 1/4 x 1/2 LG	3760016257	2

*Dry hole overshoot adapter not sold separately



Optional equipment

Description	Part Number
Reducing adapter - overshoot length	
N/H - Excure overshoot sinking bar body/ overshoot head adapter	3760015935

Surface Excore II Safety Overshot and Accessories

N
N2

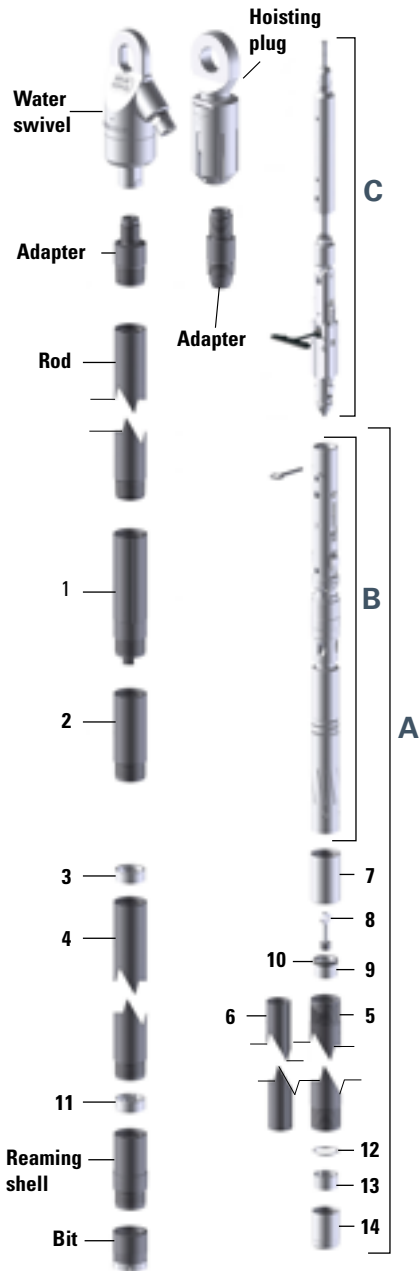
Safety overshoot spare parts kit (1000 m / 3300 ft)

Description	Part Number	Qty
Safety overshoot spare parts kit (1000 m / 3300 ft)	3760016272	1
S 3/16 nicopress sleeve oval	3760008244	2
Nut hex 1/2-20	3760012331	2
Bearing	3760006467	1
1/4 grease fitting	9469705073	2
B N H lifting dog spring	3760006373	4
Spring pin 1/4 x 1 3/4 LG	0108169187	1
N H Excore pivot pin	3760016249	1
N H pivot pin retainer	3760016246	1
N H retaining ring safe over	3760015789	2
N H Excore II lifting dog	3760016245	2

N Overshot Roller-type Conversion Kit

Description	Part Number	Qty
Roller overshoot conversion kit complete	3760015972	1

Surface DiscovOre Core Barrel Assembly



Item	Description		Part number	
	Drill string component	Remarks	H core barrel	H3 core barrel
Water Swivel and Adaptors*				
	DEEP Water Swivel, BW rod box	SHALLOW WS as option	3760000376	
	Drill rod adapter BW rod pin to HO pin	Select one to match rod type	3760006039	
	Drill rod adapter BW rod pin to HT pin		3760006040	
	Drill rod adapter BW rod pin to HMO pin		3760013440	
	Drill rod adapter BW rod pin to HR pin		3760014290	
Hoisting Plug and Adaptors*				
	BNHP (30k Lbs) Hoisting Plug, NW rod box	55k (Lbs) HP as option	3760006010	
	Drill rod adapter NW rod pin to HO rod pin	Select one to match rod type.	3760015810	
	Drill rod adapter NW rod pin to HT rod pin		3760015806	
	Drill rod adapter NW rod pin to HMO rod pin		3760015250	
	Drill rod adapter NW rod pin to HR rod pin	See options on page 62-63	3760014132	
	Wireline Drill Rod			
Locking Coupling				
1	Locking coupling Full Hole - HO rod box	Select one to match drill rod thread type.	3760006043	
	Locking coupling Full Hole - HT rod box		3760006044	
	Locking coupling Full Hole - HMO rod box	See options on page 54	Contact your sales representative	
	Locking coupling Full Hole - HR rod box		3760014039	
B,2-14	1.5 m / 5 ft Core barrel assy	w/o Locking Coupling (order separately)	3760017486	3760017488
	3.0 m / 10 ft Core barrel assy		3760017487	3760017489
A	1.5 m / 5 ft inner tube assy complete		3760017303	3760017397
	3.0 m / 10 ft inner tube assy complete		3760017302	3760017396
B	Head assembly complete		3760017300	
C	Overshot assembly complete		3760017250	
2	Adapter coupling		3760006045	
3	Landing ring		3760006258	
4	1.5 m / 5 ft outer tube		3760006046	
	3.0 m / 10 ft outer tube		3760006047	
5	1.5 m / 5 m inner tube		3760006048	
	3.0 m / 10 ft inner tube		3760006049	
6	1.5 m / 5 m Split inner tube	Triple tube components	Not Applicable	3760005641
	3.0 m / 10 ft Split inner tube		Not Applicable	3760005640
7	Adapter		Not Applicable	3760006295
8	Piston plug		Not Applicable	3760006283
9	Piston		Not Applicable	3760006296
10	O-ring		Not Applicable	0663210093
11	Inner tube stabilizer		3760006259	
12	Stop ring		3760006255	3760006288
13	Core lifter		3760006256	3760006289
14	Core lifter case		3760006257	3760006290
Rshell	Reaming Shell RS++ - STD	Other types available	3760955427	
Bit	Coring bit	Different options	See diamond tools catalogue	

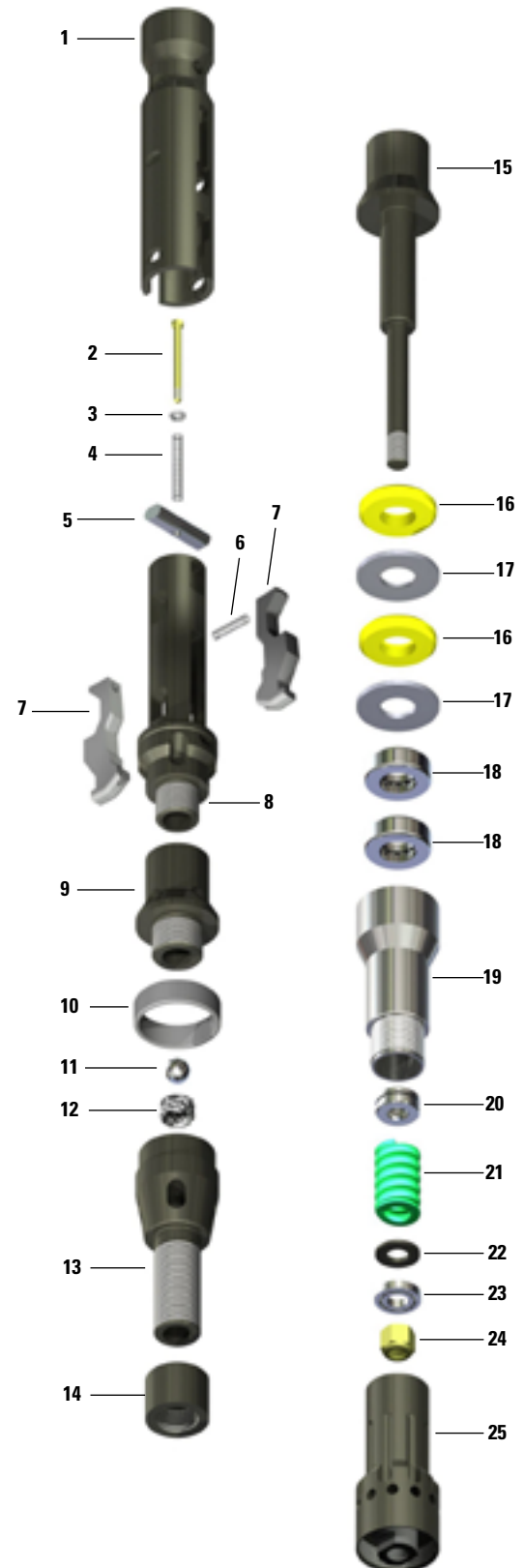
Note: Core barrel assemblies does not include locking coupling which needs to be ordered separately.

*Other options are available. Please contact your sales representative.

Surface DiscovOre Head Assembly

H
H3

Item	Description	Part Number	Qty
–	H-D Head Assembly – Surface	3760017300	1
1	Retracting case	3760017318	1
2	Assembly bolt	3760017239	1
3	Wedge lock washer	3760017235	1
4	Spring – Retracting case	3760017236	1
5	Assembly rod	3760017324	1
6	Spring – Latch	3760017334	1
7	Latch	3760017317	2
8	Latch body	3760017333	1
9	Mid body – Surface	3760017325	1
10	Landing shoulder	3760005150	1
11	22 mm ball	3760012099	1
12	Landing indicator bushing 600psi	3760012100	1
12	Landing indicator bushing high pressure 800psi (optional)	3760015391	1
13	Lower body	3760017311	1
14	Locknut – Spindle	3760017212	1
15	Spindle	3760017322	1
16	Shut off valve – Yellow	3760008379	2
17	Valve adjusting washer	3760006252	2
18	Thrust bearing	3760006471	2
19	Spindle bearing	3760017323	1
20	Hanger bearing	3760006462	1
21	Compression spring	3760006463	1
22	Washer – Bearing	3760017230	1
23	Ball bearing	3760017234	1
24	Nyloc nut	3760017240	1
25	Inner tube cap assembly	3760017315	1
26	Safety pin	3760017291	1



H to H3 Core barrel spare part kits (2000 m / 6600 ft)

Description	Part number	
	H core barrel	H3 core barrel
Spare Part Kits (2000 m / 6600 ft drilling)		
Spare parts kit head assembly	3760017347	
Spare parts kit overshot	3760017265	
Consumables kit core barrel. Universal components common for most DCDMA core barrels	3760016577	3760016578

H to H3 Core barrel consumables kit (2000 m / 6600 ft)

Description	Part Number	Qty
H Core barrel consumables kit (2000 m / 6600 ft)	3760016577	1
Core lifter	3760006256	40
Core lifter case	3760006257	8
Landing ring	3760006258	4
Inner tube stabilizer	3760006259	4
Stop ring	3760006255	8
H3 Core barrel consumables kit (2000 m / 6600 ft)	3760016578	1
Core lifter	3760006289	40
Core lifter case	3760006290	8
Landing ring	3760006258	4
Inner tube stabilizer	3760006259	4
Stop ring	3760006288	8

H DiscovOre Surface head assembly conversion kit to P DiscovOre Surface

Part number	Description	Qty	Item in H head assembly
3760017561	H DiscovOre Surface head assembly conversion kit to P DiscovOre Surface		
Item to be replaced in H head to complete conversion to P DiscovOre			
3760017585	Spring – Latch	1	3760017334
3760017517	Latch	2	3760017317
3760017529	Landing shoulder	1	3760005150
3760016290	Valve adjusting washer	1	3760006252
3760016291	Shut off valve – Yellow	2	3760008379
3760017513	Inner tube cap assembly	1	3760017315
Item to be added to H head to complete conversion to P DiscovOre			
3760017518	P I/T adapter w/check valve	1	N/A
3760017523	1-1/4 in ball	1	
9469705073	Grease fitting 1/4 - 28 unf	1	
3760017512	P D valve washer	2	

Surface DiscovOre Accessories

H
H3

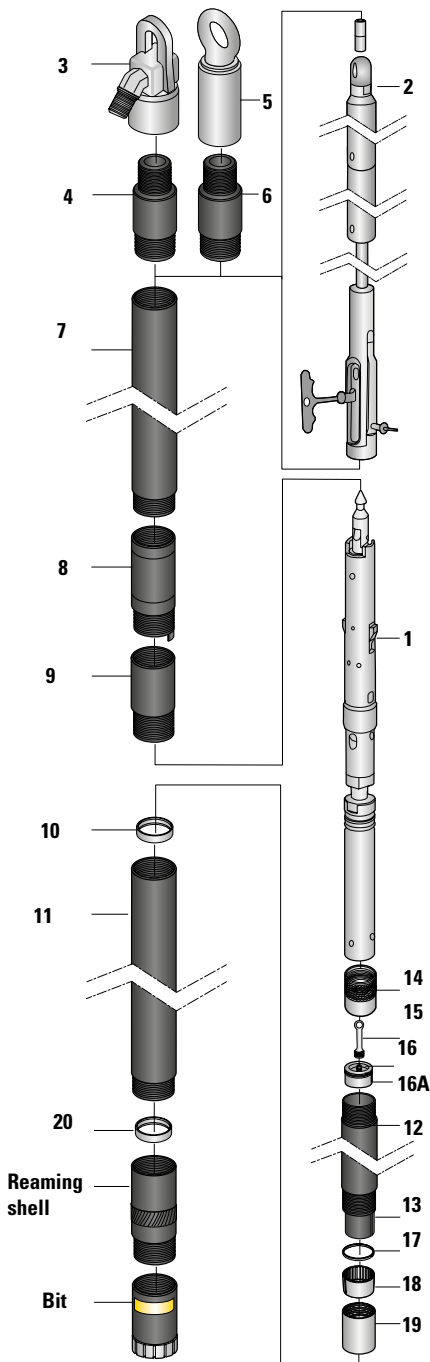
Conversion kits from H to H3 core barrel

Description	Part Number	Qty
Conversion kit from H to H3 1,5 m / 5 ft core barrel	3760009556	1
Stop ring	3760006288	1
Core lifter	3760006289	1
Core lifter case	3760006290	1
Piston plug	3760006283	1
O-ring	0663210093	1
Piston	3760006296	1
Adapter	3760006295	1
1.5 m / 5 m Split inner tube	3760005641	1
Conversion kit from H to H3 3 m / 10 ft core barrel	3760009555	1
Stop ring	3760006288	1
Core lifter	3760006289	1
Core lifter case	3760006290	1
Piston plug	3760006283	1
O-ring	0663210093	1
Piston	3760006296	1
Adapter	3760006295	1
3.0 m / 10 ft Split inner tube	3760005640	1

H Head assy spare parts kit (2000 m / 6600 ft)

Description	Part Number	Qty
H Head assy spare parts kit (2000 m / 6600 ft)	3760017347	1
H-D Latch	3760017317	2
H-D Assembly rod	3760017324	1
Assembly bolt 1/4"	3760017239	2
Wedge lock washer -1/4"	3760017235	2
Spring 0.360" x 0.051" x 3"	3760017236	2
Spring 0.36" x 0.042 x 1.750	3760017334	2
22 mm Stainless steel ball	3760012099	1
Landing indicator bushing 600psi	3760012100	6
H Landing shoulder 3PLB	3760005150	1
H Hard shut off valve – Yellow	3760008379	2
Thrust bearing	3760006471	2
Hanger bearing	3760006462	1
Ball bearing	3760017234	1

Surface Excore Core Barrel Assembly



Item	Description	Part number	
	Drill rod connection	H core barrel	H3 core barrel
	1,5 m / 5 ft core barrel assembly complete	3760014454	3760014458
	3,0 m / 10 ft core barrel assembly complete	3760014456	3760014459
	1,5 m / 5 ft inner tube assembly complete	3760015564	3760015956
	3,0 m / 10 ft inner tube assembly complete	3760015567	3760015949
1	Head assembly complete	3760013454	
Overshot			
2	Overshot assembly complet	3760016280	
2	Dry hole kit	3760016259	
Water swivel*			
3	DEEP water swivel, BW rod box	3760014070	
4	Drill rod adapter BW rod pin - HO rod pin	3760006039	
4	Drill rod adapter BW rod pin - HT rod pin	3760006040	
4	Drill rod adapter BW rod pin - HMO rod pin	3760013440	
4	Drill rod adapter BW rod pin - HR rod pin	3760014290	
Hoisting plug*			
5	BNHP hoisting plug assembly, NW box thread	3760006010	
6	HO hoisting plug adapter NW pin	3760015810	
6	HT hoisting plug adapter NW pin	3760015806	
6	HMO hoisting plug adapter NW pin	3760015250	
6	HR hoisting plug adapter NW pin	3760014132	
Drill rods			
7	H drill rods	See options on page 62-63	
Consumables/accessories			
8	Locking coupling	See options on page 54	
9	Adapter coupling	3760006045	
10	Landing ring	3760006258	
11	1,5 m / 5 ft outer tube**	3760006046	
11	3,0 m / 10 ft outer tube**	3760006047	
12	1,5 m / 5 ft inner tube	3760006048	
12	3,0 m / 10 ft inner tube	3760006049	
13	1,5 m / 5 ft split tube	N/A	3760005641
13	3,0 m / 10 ft split tube		3760005640
14	Adapter		3760006295
15	Piston plug		3760006283
16	Piston		3760006296
16A	O-ring		0663210093
17	Stop ring	3760006255	3760006288
18	Core lifter	3760006256	3760006289
19	Core lifter case	3760006257	3760006290
20	Inner tube stabilizer	3760006259	
Full grip wrenches			
Inner tube wrenches		3760006032	
Outer tube wrenches		3760006053	

* Other configurations are available. Please contact your representative.

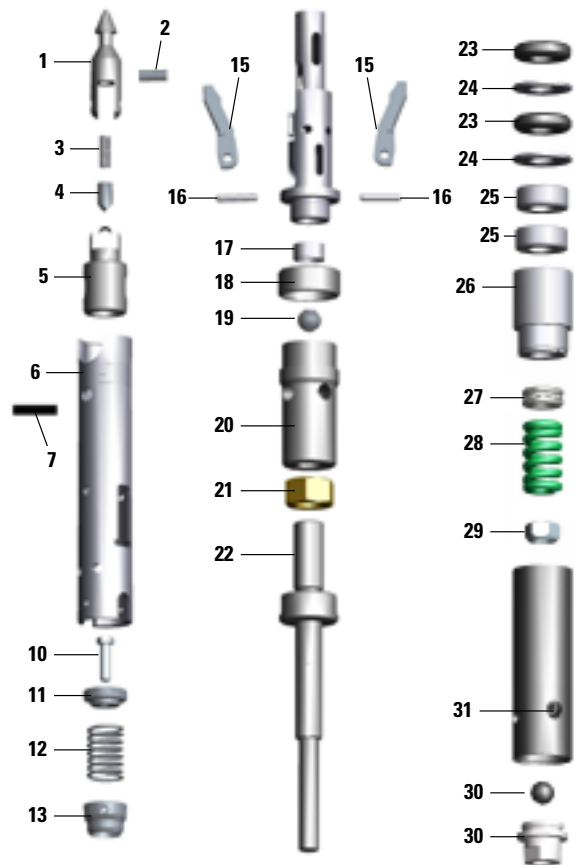
** Also available in full hole. Please contact your Fordia Powered by Epiroc's representative for more information.

Note: Core barrel assemblies does not include locking coupling which needs to be ordered separately.

Surface Excore Head Assembly

H

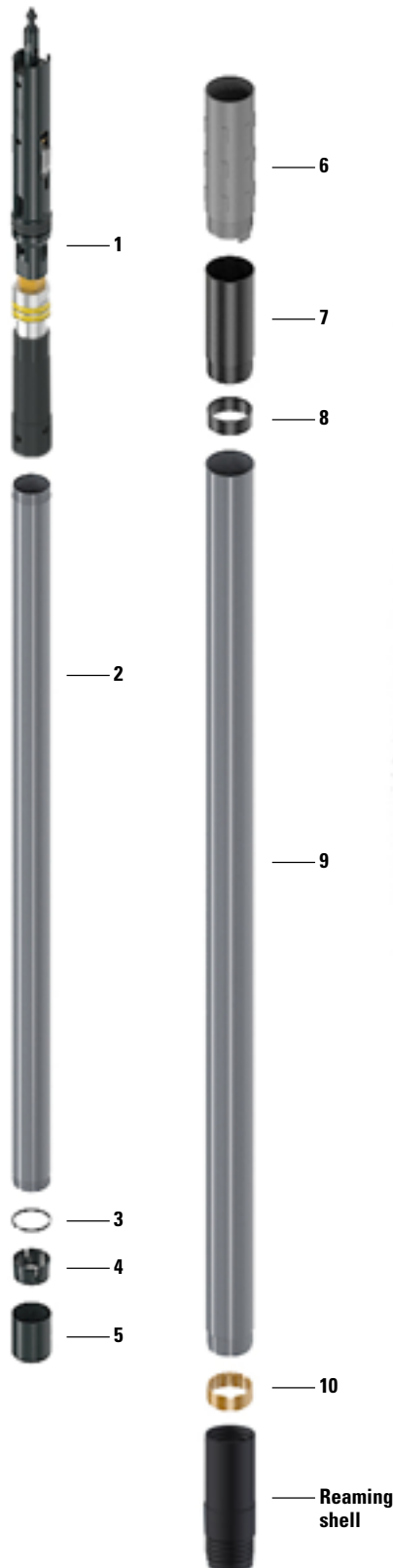
Item	Description	Part Number	Qty
–	Head assembly complete	3760013454	1
1	Spearhead	3760015393	1
2	Spiral pin 7/16 x 1	3760004348	1
3	Compression spring	3760015394	1
4	Detent plunger	3760015395	1
5	Spearhead base	3760014492	1
6	Latch retracting case	3760015671	1
7	Spring pin 1/2 x 2 3/4	0108169146	1
8	Spring pin 3/8 x 2 3/4	3760014500	1
9	Spring pin 1/4 x 2 3/4	3760014502	1
10	HHCS 3/8-16 x 1 1/4	3760013477	1
11	Spring guide	3760015677	1
12	Compression spring	3760015675	1
13	Latch piston	3760015676	1
14	Upper latch body	3760015673	1
15	Latch	3760015672	2
16	Spring pin 3/8 x 1 1/2	3760009916	2
17	Landing indicator bushing 600psi	3760012100	1
17	Landing indicator bushing high pressure 800psi (optional)	3760015391	1
18	Landing shoulder	3760005150	1
19	22 mm stainless steel ball	3760012099	1
20	Lower latch body	3760015674	1
21	Lock nut 1 1/4	3268311500	1
22	Spindle	3760006250	1
23	Shut-off valve	3760006251	2
24	Valve adjusting washer	3760006252	2
25	Bearing	3760006471	2
26	Spindle bearing housing	3760006253	1
27	Thrust bearing	3760006461	1
28	Compression spring	3760007765	1
29	Lock nut stover 1 8 UNC SS	0292131300	1
30	Inner tube cap assembly (includes grease fitting)	3760006254	1
31	Grease fitting	9469705073	1



H to H3 Core barrel spare part kits (1000 m / 3300 ft)

Description	Part Number		Qty
	H core barrel	H3 core barrel	
Spare parts kit head assembly	3760015270	3760015605	1
B/N/H Excore spearhead	3760015393		1
Spiral pin 7/16 x 1	3760004348		1
Excore detent compression spring	3760015394		1
B/N/H Excore detent plunger	3760015395		2
H/HU Excore compression spring	3760015675		2
H/HU Excore latch	3760015672		4
Spring pin 3/8 x 2 3/4	3760014500		2
Spring pin - 1/2 x 2 3/4 LG	0108169146		2
Spring pin - 1/4 x 2 3/4	3760014502		2
Spring pin - 3/8 x 1 1/2	3760009916		4
HHCS 3/8-16 UNC X 1 1/4 LG	3760013477		1
H landing shoulder 3PLB	3760005150		1
H lock nut 1 1/4 7 UNC	3268311500		1
Bearing	3760006471		4
H spindle bearing	3760006253		1
Compression spring H	3760007765		1
Thrust bearing	3760006461		1
Self locking nut 1 8 UNC	3760013004		1
1/4 grease fitting	9469705073		2
H landing ring	3760006258		2
H inner tube stabilizer	3760006259		2
H/HU Excore latch piston	3760015676		1
Landing indicator bushing 600psi	3760012100		2
22 mm stainless steel ball	3760012099		1
H shut off valve medium black	3760006251		4
H stop ring	3760006255	3760006288	4
H core lifter	3760006256	3760006289	20
H core lifter case	3760006257	3760006290	4

Surface OWL L-Latch Core Barrel Assembly

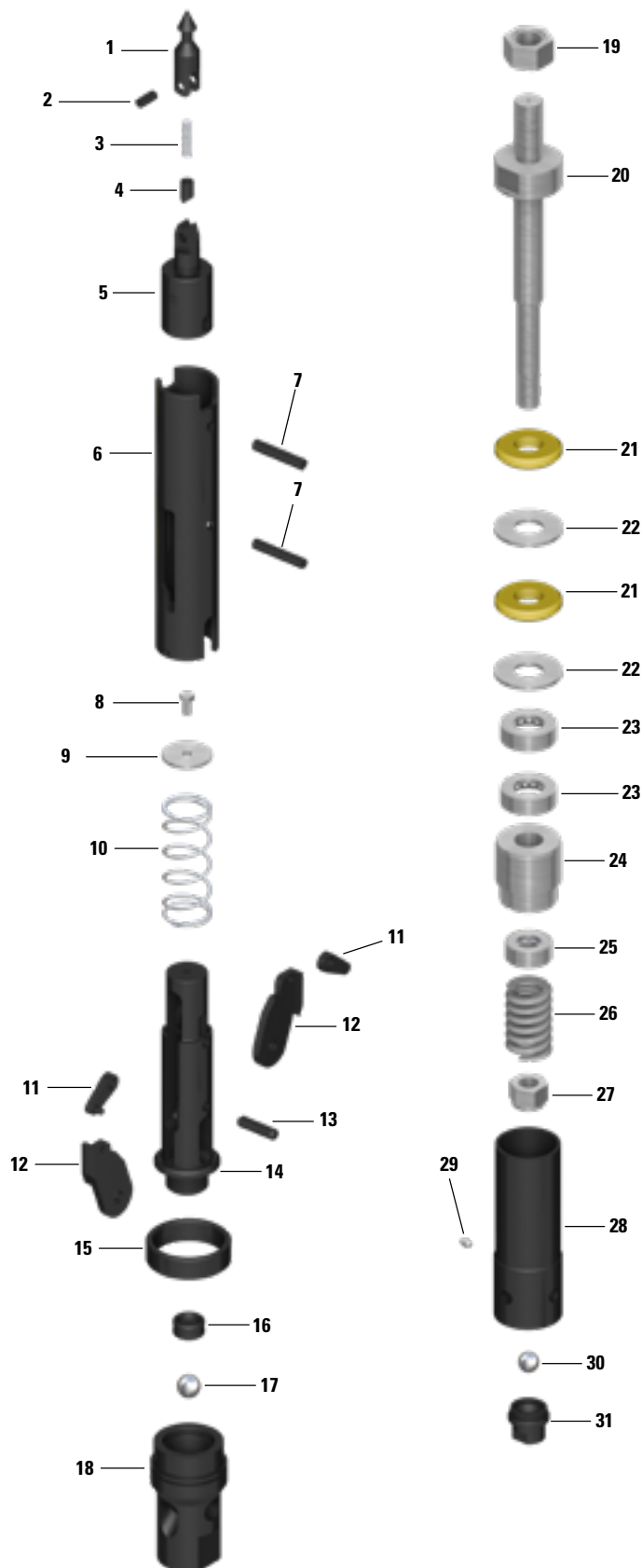


Item	Description	Part number	
	Core barrel options	H core barrel	H3 core barrel
	1,5m/5ft core barrel assembly w/o locking coupling	9469711748	9469711648
	3,0m/10ft core barrel assembly w/o locking coupling	9469711751	9469711649
	1,5 m / 5 ft inner tube assembly complete	9469705212	9469711650
	3,0 m / 10 ft inner tube assembly complete	9469705215	9469711651
1	Head assembly complete	9469705218	
Consumables/accessories			
2	1,5 m / 5 m inner tube	3760006048	
2	3,0 m / 10 ft inner tube	3760006049	
	1,5 m / 5 ft Split Tube	N/A	9469705311
	3 m / 10 ft Split Tube		9469705312
	Adapter		9469705313
	Piston Plug		9469705074
	Piston		9469705315
	O-ring		9469705314
3	Stop ring	9469705254	3760006288
4	Core lifter	9469705295	3760005840
5	Core lifter case	9469705255	3760006290
6	Locking coupling	See options on page 54	
7	Adapter coupling	9469705257	
8	Landing ring	3760006258	
9	1,5 m / 5 ft outer tube	3760006046	
9	3,0 m / 10 ft outer tube	3760006047	
10	Inner tube stabilizer	3760006259	3760006259
Full grip wrenches			
Inner tube wrenches		3760006032	
Outer tube wrenches		3760006053	

Surface OWL L-Latch Head Assembly

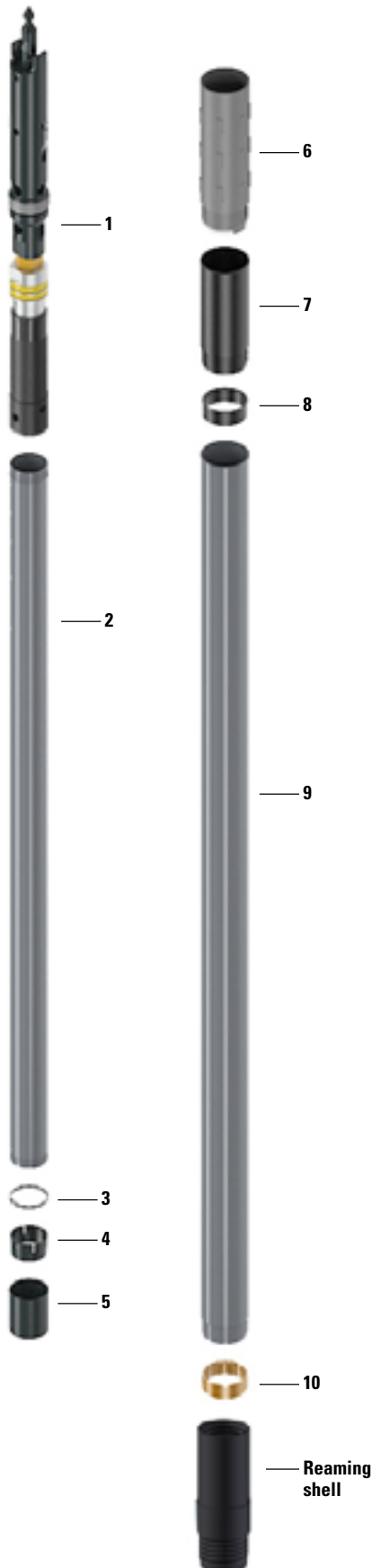
H

Item	Description	Part Number	Qty
		H Size	
–	H Head Assembly - Surface	9469705218	1
1	Spearhead point	9469705061	1
2	Coiled spring pin 7/16" X 1"	9469705062	1
3	Compression spring	9469705063	1
4	Detent plunger	9469705064	1
5	Spearhead base L-Latch	9469705228	1
6	Latch retracting case L-Latch	9469705232	1
7	Coiled spring pin 1/2" X 2-3/4"	9469705282	2
8	Hex bolt 3/8-16 X 3/4	9469705138	1
9	Latch spring washer	9469705269	1
10	Latch compression spring	9469705226	1
11	Link for L-Latch	9469705270	2
12	Latch for L-Latch	9469705237	2
13	Spring pin	9469705065	1
14	Upper latch body L-Latch	9469705288	1
15	Landing shoulder	3760005150	1
16	Landing indicator bushing 600psi	3760012100	1
16	Landing indicator bushing high pressure 800psi (optional)	3760015391	1
17	Stainless steel ball 22mm	3760012099	1
18	Lower latch body	9469705285	1
19	Hex nut	9469705242	1
20	Spindle shaft	9469705243	1
21	Shut-off valve hard	9469705292	2
Option	Shut-off valve soft	9469706577	2
22	Valve adjusting washer	9469705244	2
23	Thrust bearing	9469705245	2
24	Spindle bearing	9469705246	1
25	Hanger bearing	9469705410	1
26	Compression spring	3760007765	1
27	Stover lock nut	9469705248	1
–	Inner Tube Cap Assembly	9469705249	1
28	Inner tube cap	9469705293	1
29	Grease fitting 1/4" - 28 straight	9469705073	1
30	Stainless steel ball 22mm	3760012099	1
31	Check valve body	9469705072	1



Surface

OWL Standard Core Barrel Assembly



Item	Description	Part number	
	Core barrel options	H core barrel	H3 core barrel
	1,5m/5ft core barrel assembly w/o locking coupling	9469711747	9469711804
	3,0m/10ft core barrel assembly w/o locking coupling	9469711750	9469711754
	1,5 m / 5 ft inner tube assembly complete	9469705211	9469705304*
	3,0 m / 10 ft inner tube assembly complete	9469705214	9469705306
1	Head assembly complete	9469705217	
Consumables/accessories			
6	Locking coupling	See options on page 54	
7	Adapter coupling	9469705257	
8	Landing ring	3760006258	
9	1,5 m / 5 ft outer tube **	3760006046	
9	3,0 m / 10 ft outer tube **	3760006047	
2	1,5 m / 5 m inner tube	3760006048	
2	3,0 m / 10 ft inner tube	3760006049	
10	Inner tube stabilizer	3760006259	
	1,5 m / 5 ft split Tube	N/A	9469705311
	3 m / 10 ft split Tube		9469705312
	Adapter		9469705313
	Piston plug		9469705074
	Piston		9469705315
	O-ring		9469705314
3	Stop ring	9469705254	9469705309
4	Core lifter	9469705295	9469705316
5	Core lifter case	9469705255	9469705310
Full grip wrenches			
Inner tube wrenches		3760006032	
Outer tube wrenches		3760006053	

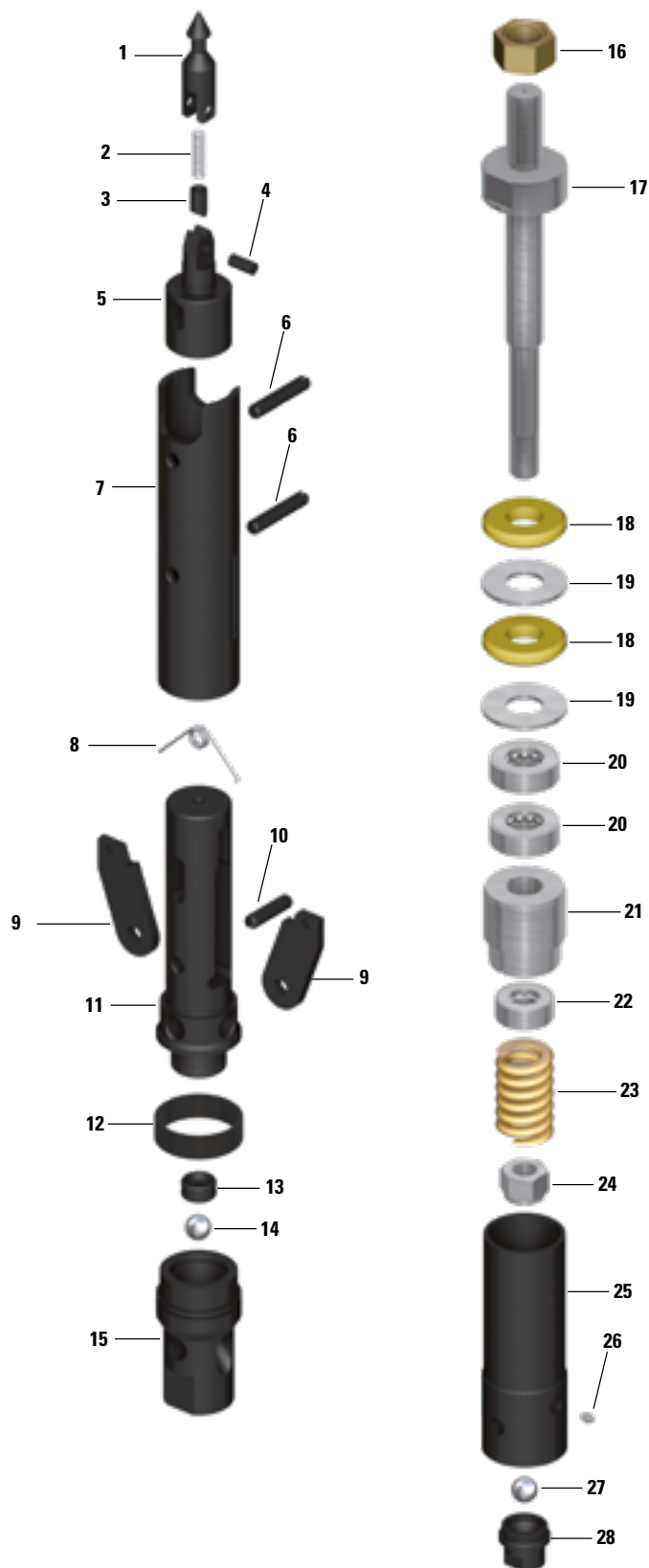
** Also available in full hole. Please contact your Fordia Powered by Epiroc's representative for more information.

*Includes pump-out adaptor and piston plug.

Surface OWL Standard Head Assembly

H

Item	Description	Part Number	Qty
		H Size	
–	H Head Assembly - Surface	9469705217	1
1	Spearhead point	9469705061	1
2	Compression spring	9469705063	1
3	Detent plunger	9469705064	1
4	Spiral pin 7/16" X 1"	9469705062	1
5	Spearhead base	9469705227	1
6	Slotted spring pin 1/2" X 2-3/4"	9469705229	2
7	Latch retracting case	9469705231	1
8	Latch spring	9469705234	1
9	Latch	9469705236	2
10	Slotted spring pin 1/2" X 2"	9469705065	1
11	Upper latch body	9469705287	1
12	Landing shoulder	3760005150	1
13	Landing indicator bushing 600psi	3760012100	1
13	Landing indicator bushing high pressure 800psi (optional)	3760015391	1
14	Stainless steel ball 22mm	3760012099	1
15	Lower latch body	9469705285	1
16	Hex nut	9469705242	1
17	Spindle shaft	9469705243	1
18	Shut-off valve hard	9469705292	2
Option	Shut-off valve soft	9469706577	2
19	Valve adjusting washer	9469705244	2
20	Ball thrust bearing	9469705245	2
21	Spindle bearing	9469705246	1
22	Hanger bearing	9469705410	1
23	Compression spring	3760007765	1
24	Lock nut	9469705248	1
–	Inner Tube Cap Assembly	9469705249	1
25	Inner tube cap	9469705293	1
26	Grease fitting 1/4" - 28 straight	9469705073	1
27	Stainless steel ball 22mm	3760012099	1
28	Check valve body	9469705072	1



H to H3 Core barrel consumables kit (2000 m / 6600 ft)

Description	Part Number	Qty
H Core barrel consumables kit (2000 m / 6600 ft)	3760016577	1
Core lifter	3760006256	40
Core lifter case	3760006257	8
Landing ring	3760006258	4
Inner tube stabilizer	3760006259	4
Stop ring	3760006255	8
H3 Core barrel consumables kit (2000 m / 6600 ft)	3760016578	1
Core lifter	3760006289	40
Core lifter case	3760006290	8
Landing ring	3760006258	4
Inner tube stabilizer	3760006259	4
Stop ring	3760006288	8

Conversion kits from H to H3 core barrel

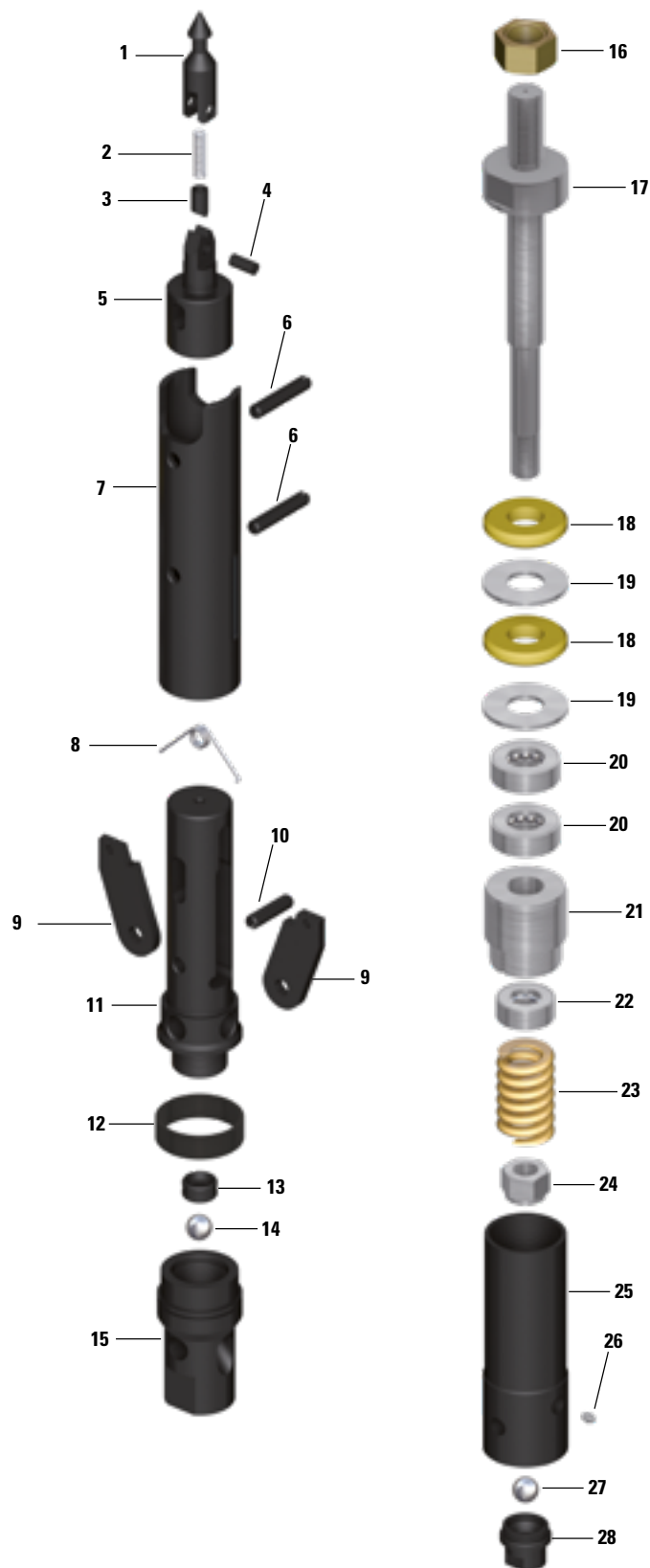
Description	Part Number	Qty
Conversion kit from H to H3 1,5 m / 5 ft core barrel	3760009556	1
Stop ring	3760006288	1
Core lifter	3760006289	1
Core lifter case	3760006290	1
Piston plug	3760006283	1
O-ring	0663210093	1
Piston	3760006296	1
Adapter	3760006295	1
1.5 m / 5 m Split inner tube	3760005641	1
Conversion kit from H to H3 3 m / 10 ft core barrel	3760009555	1
Stop ring	3760006288	1
Core lifter	3760006289	1
Core lifter case	3760006290	1
Piston plug	3760006283	1
O-ring	0663210093	1
Piston	3760006296	1
Adapter	3760006295	1
3.0 m / 10 ft Split inner tube	3760005640	1



Surface OWL Standard Head Assembly

HTW

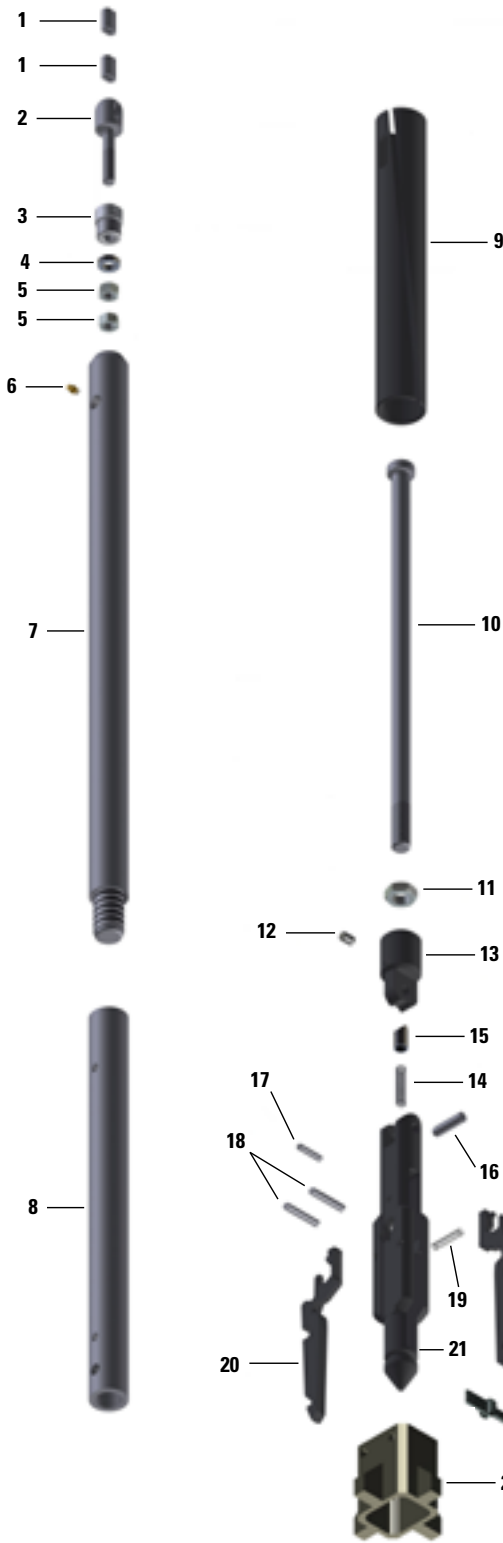
Item	Description	Part Number	Qty
–	HTW Head Assembly - Surface	9469705325	1
1	Spearhead point	9469705061	1
2	Compression spring	9469705063	1
3	Detent plunger	9469705064	1
4	Spiral pin 7/16" X 1"	9469705062	1
5	Spearhead base	9469705227	1
6	Slotted spring pin 1/2" X 2-3/4"	9469705229	2
7	Latch retracting case	9469705231	1
8	Latch spring	9469705234	1
9	Latch	9469705236	2
10	Slotted spring pin 1/2" X 2"	9469705065	1
11	Upper latch body	9469705287	1
12	Landing shoulder	9469705349	1
13	Landing indicator bushing	3760012100	1
14	Stainless steel ball 22mm	3760012099	1
15	Lower latch body	9469705285	1
16	Hex nut	9469705242	1
17	Spindle shaft	9469705243	1
18	Shut-off valve hard	9469705350	2
19	Valve adjusting washer	3760006252	2
20	Ball thrust bearing	9469705245	2
21	Spindle bearing	9469705246	1
22	Hanger bearing	9469705410	1
23	Compression spring	3760007765	1
24	Lock nut	9469705248	1
–	Inner Tube Cap Assembly	9469705332	1
25	Inner tube cap	9469705351	1
26	Grease fitting 1/4" - 28 straight	9469705073	1
27	Stainless steel ball 22mm	3760012099	1
28	Check valve body	9469705072	1



Surface

Arrow 3S Overshot and Accessories

NHP Arrow 3S overshot assembly
(for DiscovOre surface head assy in N, N2, H & P sizes)



Item	Description	Part Number			Qty
		NH Size	P Size	NH Short	
	Arrow 3S Overshot – Surface	3760017250	3760017550	3760017290	1
1–5	Cable swivel assembly	3760016262			1
12–22	Arrow 3S Overshot head assembly	3760017252	3760017552	3760017252	1
1	Nicopress sleeve	3760008244			2
2	Eye bolt	3760016265			1
3	Cable swivel collar	3760007216			1
4	Bearing	3760006467			1
5	Nut	3760012331			2
6	Grease fitting	9469705073			1
7	Sinking bar body	3760006384			1
8	Jar Tube	3760015660		3760015935	1
9	Release sleeve	3760006381			1
10	Jar staff	3760015663		N/A	1
11	Jam nut	5530616400			1
12	Set screw	3760015495			1
13	Pivot body	3760017258			1
14	Spring – Detent	3760017279			1
15	Detent	3760017280			1
16	7/16" Coiled pin	3760017260			1
17	1/4" x 1 1/4" Spring pin	0108169134			1
18	5/16 x 1 1/2" Coiled pin	3760017259	3760017559	3760017259	2
19	Spring	3760006373			1
20	Lifting dog – Surface	3760017254			2
21	Overshot body – Surface	3760017255			1
22	Release tool	3760017262			1
23	P size Adapter	N/A	3760017570	N/A	

H Overshot Roller-type Conversion Kit

Description	Part Number	Qty
Roller overshot conversion kit complete	3760015978	1

This kit converts both Arrow 3S and Excore overshots.

NHP Arrow 3S Short total length 1190 mm / 47\"

Use Short overshot for down holes with limited space. (Underground or Surface). The extra weight of the sinking bar and no drag from the propulsion seals will result in faster round trips. The release sleeve will give you the ability to release the overshot in the event of a jammed inner tube.

H InnerTube Overshot Receiver

Description	Part Number
H Inner Tube Overshot Receiver	3760017339
H inner tube vice-grip	9469710239

Inner tube overshot receiver allows to connect Arrow 3S overshot directly to inner tube without head assembly in between. This is beneficial when drilling with 6m or longer core barrel and there is not enough space on drill rig mast to accommodate inner tube, head assembly and overshot at once. Vice grip is very handy device to hold inner tube in place when removing head assembly to add overshot receiver.

NHP Arrow 3S Overshot standard Surface total length – 1980 mm / 78\"

Surface Excore Overshot and Accessories

H
H3

Auto-lock overshoot assembly for all H surface spearhead type head assemblies

Item	Description	Part Number	Qty
–	Excore II overshoot assembly	3760016280	1
1-5	Excore II cable swivel assembly	3760016262	1
13-23	Excore II overshoot head assembly	3760016261	1
1	3/16 nicopress sleeve oval	3760008244	2
2	Excore II eye bolt	3760016265	1
3	N / H Excore cable swivel collar	3760007216	1
4	Bearing	3760006467	1
5	Nut 1/2 20 UNF GR8	3760012331	2
6	Grease fitting	9469705073	1
7	Excore II sinking bar body	3760006384	1
8	Excore II jar tube	3760015660	1
9	Locking sleeve	3760006381	1
10	N Excore jar staff	3760015663	1
11	N / H Excore II lifting dog spring	3760006373	1
12	Spring pin 1/4 x 1 3/4	0108169187	1
13	N Excore II safety overshoot head	3760016244	1
14	Pivot pin retainer	3760016246	1
15	Retaining ring	3760015789	1
16	Excore II pivot pin	3760016249	1
17	Excore II lifting dog	3760016245	2
18	Excore II safety pin	3760016247	1
19	Set screw 3/8 24 x 5/8	3760007085	1
20	Safety overshoot release tool	3760017262	1
21	Nut 3/4-10	5530616400	1
22	H Excore II overshoot adapter sleeve	3760016269	1
23	Roll pin 3/16 x 3/4 LG	3108169184	4

Dry hole overshoot kit

Description	Part Number	Qty
Excore II Dry hole overshoot kit	3760016259	1
Spring pin 1/4 x 11/16	3760015688	2

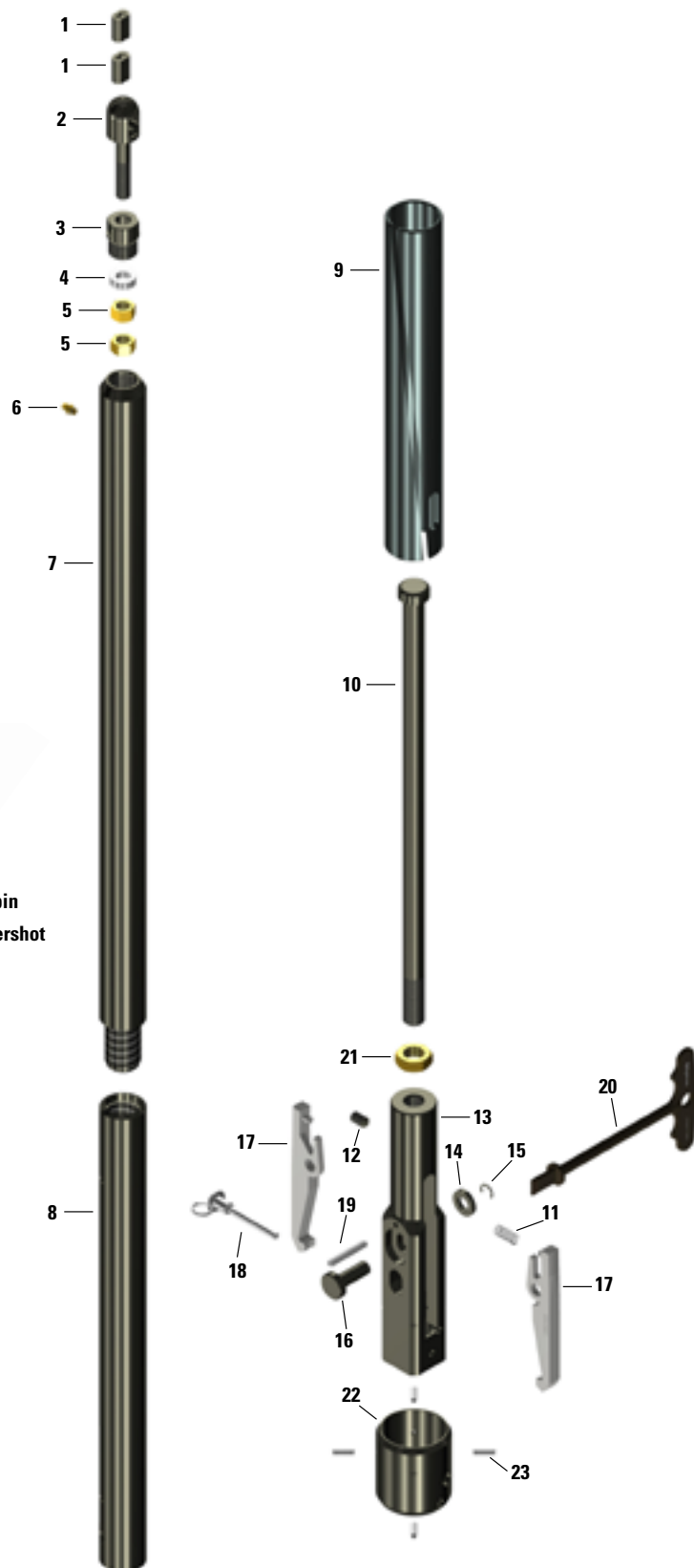
*Dry hole overshoot adapter not sold separately

Safety overshoot spare parts kit (1000 m / 3300 ft)

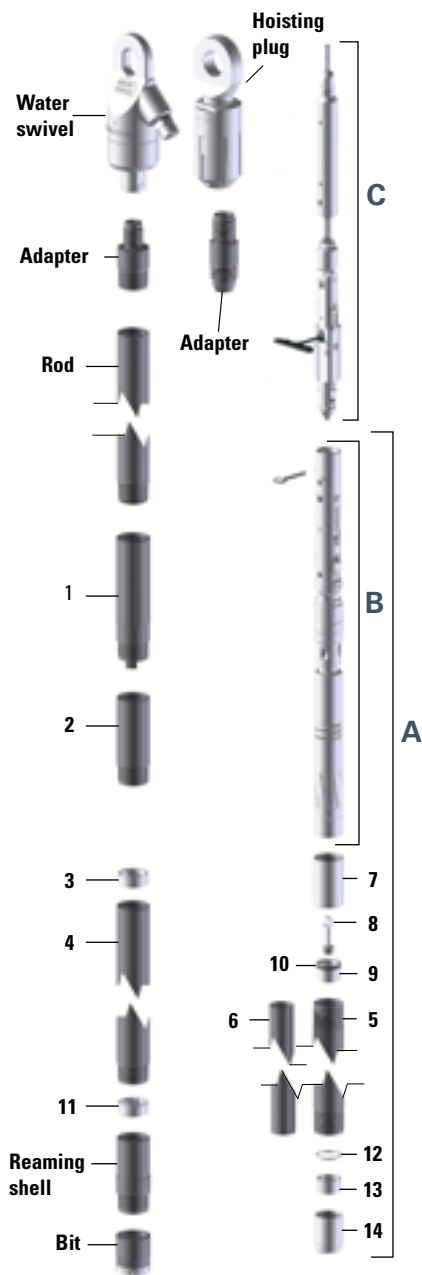
Description	Part Number	Qty
Safety overshoot spare parts kit (1000 m/3300 ft)	3760016274	1
3/16 nicopress sleeve oval	3760008244	2
Nut Hex 1/2-20	3760012331	2
Bearing	3760006467	1
1/4 grease fitting	9469705073	2
B N H lifting dog spring	3760006373	4
Spring pin 1/4 x 1 3/4 LG	0108169187	1
N H Excore pivot pin	3760016249	1
N H pivot pin retainer	3760016246	1
N H retaining ring safe over	3760015789	2
N H Excore II lifting dog	3760016245	2
H Excore adapter sleeve	3760016269	1
Spring pin 3/16 x 3/4 LG	3108169184	8

Optional equipment

Description	Part Number
Reducing adapter - overshoot length	
N/H - Excore overshoot sinking bar body/ overshoot head adapter	3760015935



Surface DiscovOre Core Barrel Assembly



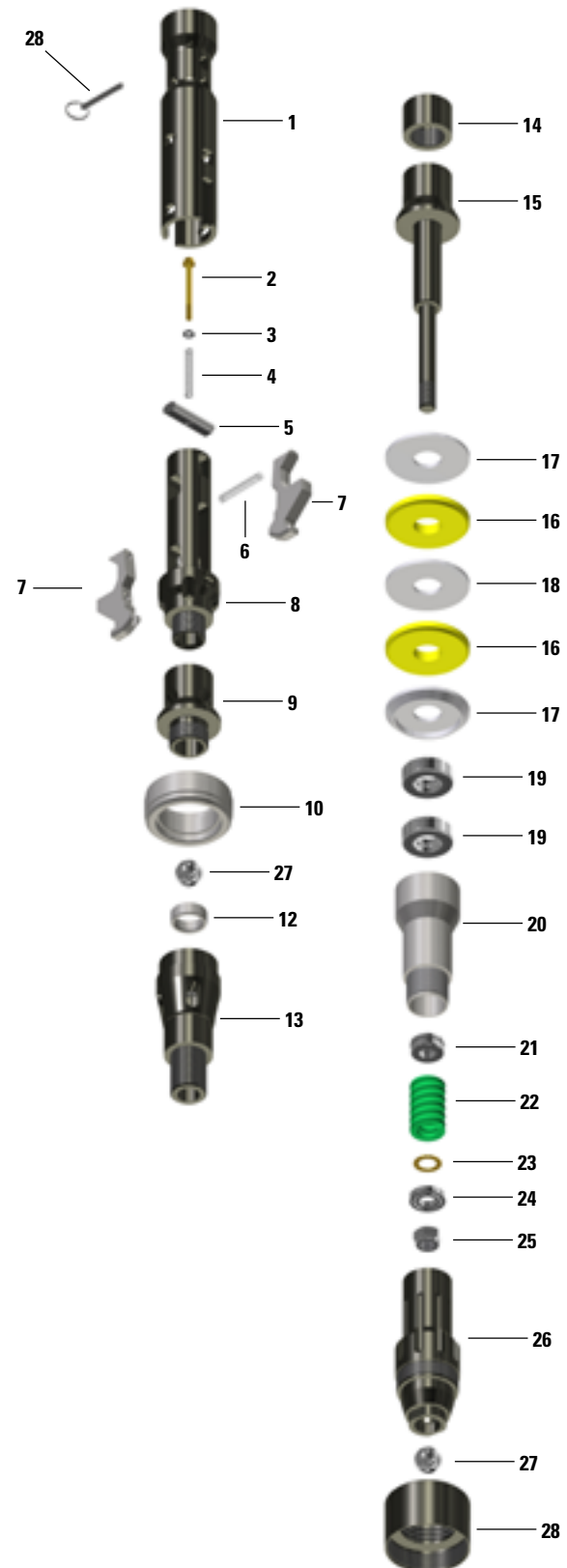
Note: P/P3 DiscovOre core barrel assemblies does not include locking coupling which needs to be ordered separately. Core barrel assembly and head assembly are compatible with Boart Longyear PHD outer tube (HWT taper box thread) and adapter coupling (HWT taper pin thread). Head assembly can be used with standard streight thread outer tube (3m - 3760006063 & 1.5m - 3760006062) by replacing adapter coupling 3760017524 (with HWT pin thread) with 3760017522 (streight pin thread).

Item	Description		Part number	
	Drill string component	Remarks	P3 core barrel	P core barrel
W.S.	DEEP Water Swivel, BW rod box	SHALLOW WS as option	3760000376	
W.S. adapter	Drill rod adapter BW rod pin to PO pin	Select one to match rod type	3760013320	
	Drill rod adapter BW rod pin to PT pin		3760006055	
	Drill rod adapter BW rod pin to PMO pin		3760005541	
H.P.	BNHP (30k Lbs) Hoisting Plug, NW rod box	55k (Lbs) HP as option	3760006010	
H.P. adapter	Drill rod adapter NW rod pin to PO rod pin	Select one to match rod type	3760014125	
	Drill rod adapter NW rod pin to PT rod pin		3760014121	
	Drill rod adapter NW rod pin to PMO rod pin		3760014129	
Rod	Wireline Drill Rod	Different thread options	See page 113 for available options	
1	Locking coupling TC Weld - PO rod box	Select one to match drill rod thread type	9469706821	
	Locking coupling TC Weld - PT rod box		9469711437	
	Locking coupling TC Weld - PMO rod box		9469705594	
B,2-14	1.5 m / 5 ft Core barrel assy	w/o Locking Coupling	3760017599	3760017505
	3.0 m / 10 ft Core barrel assy		3760017598	3760017504
A	1.5 m / 5 ft inner tube assy complete		3760017597	3760017503
	3.0 m / 10 ft inner tube assy complete		3760017596	3760017502
B	Head assembly complete		3760017500	
C	Overshot assembly complete		3760017550	
2	Adapter coupling		3760017524	
3	Landing ring		3760017508	
4	1.5 m / 5 ft outer tube HWT thread		3760017507	
	3.0 m / 10 ft outer tube HWT thread		3760017506	
5	1.5 m / 5 m inner tube		3760006064	
	3.0 m / 10 ft inner tube		3760006065	
6	1.5 m / 5 m Split inner tube	Triple tube components	3760005629	Not Applicable
	3.0 m / 10 ft Split inner tube		3760008293	Not Applicable
7	Adapter		3760006282	Not Applicable
8	Piston plug		3760006283	Not Applicable
9	Piston		3760006284	Not Applicable
10	O-ring		0663921600	Not Applicable
11	Inner tube stabilizer		3760006275	
12	Stop ring		3760006291	3760006271
13	Core lifter		3760006292	3760004185
14	Core lifter case		9469705593	
Rshell	Reaming Shell RS++ - STD	Other types available	3760955439	
Bit	Coring bit	Different options	See diamond tools catalogue	
	Spare Part Kits (2000m/6600ft drilling)			
	Spare parts kit head assembly		3760017519	
	Spare parts kit overshot		3760017265	
	Consumables kit core barrel		3760017521	3760017520
	Universal components common for most DCDMA core barrels			

Surface DiscovOre Head Assembly

P

Item	Description	Part Number	Qty
–	P Head Assembly – Surface	3760017500	1
1	Retracting case	3760017318	1
2	Assembly bolt	3760017239	1
3	Wedge lock washer	3760017235	1
4	Spring – Retracting case	3760017236	1
5	Assembly rod	3760017324	1
6	Spring – Latch	3760017585	1
7	Latch	3760017517	2
8	Latch body	3760017333	1
9	Mid body – Surface	3760017525	1
10	Landing shoulder - standard	3760017529	1
12	1-1/4" Landing indicator bushing - Low PSI	3760017531	1
	1-1/4" Landing indicator bushing - High PSI (optional)	3760017530	1
13	Lower body	3760017511	1
14	Locknut – Spindle	3760017212	1
15	Spindle	3760017322	1
16	Shut off valve – Yellow	3760016291	2
17	Taper washer	3760017512	2
18	Valve adjusting washer	3760016290	1
19	Thrust bearing	3760006471	2
20	Spindle bearing	3760017323	1
21	Hanger bearing	3760006462	1
22	Compression spring	3760006463	1
23	Washer – Bearing	3760017230	1
24	Ball bearing	3760017234	1
25	Nut stover 3/4-10 N	3760013003	1
26	Inner tube cap body	3760017513	1
27	1-1/4" Stainless steel ball	3760017523	2
28	Inner tube cap body	3760017516	1

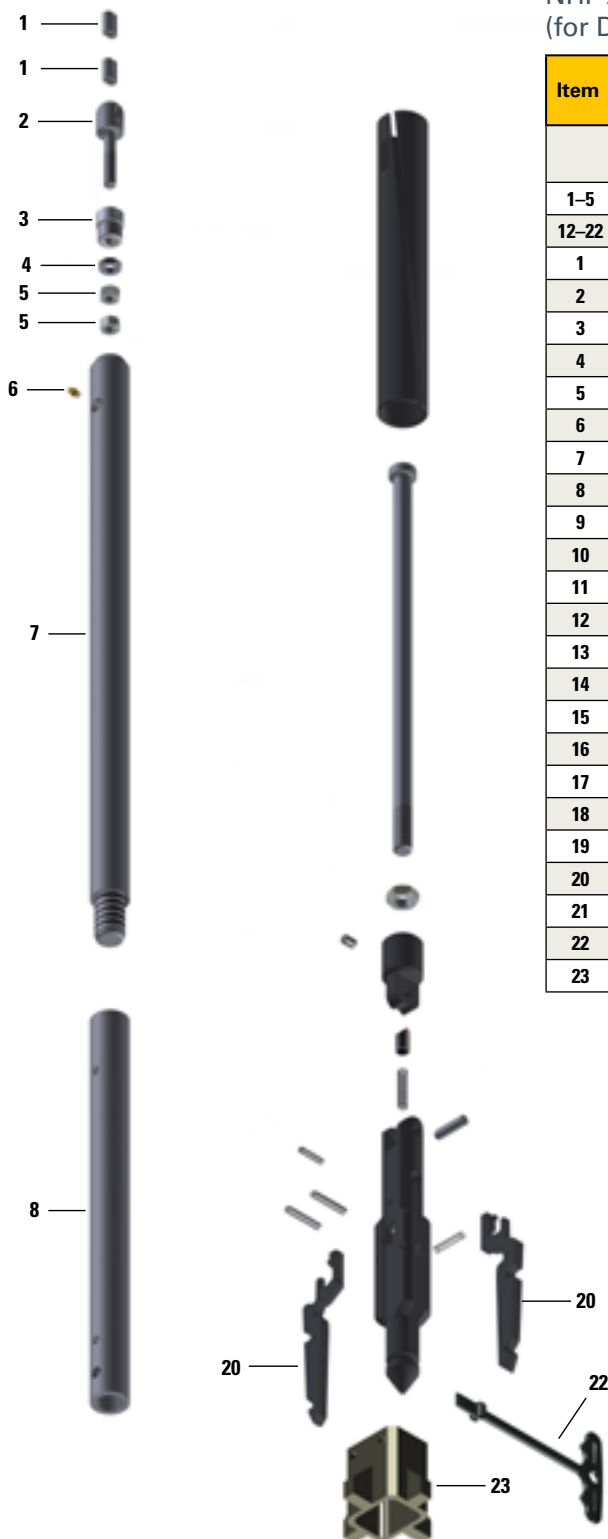


For damaged Inner Tube thread on head assembly replace Inner Tube thread adapter 3760017518.

Surface Arrow 3S Overshot and Accessories

NHP Arrow 3S overshot assembly
(for DiscovOre surface head assy in N, N2, H & P sizes)

Item	Description	Part Number			Qty
		NH Size	P Size	NH Short	
	Arrow 3S Overshot – Surface	3760017250	3760017550	3760017290	1
1–5	Cable swivel assembly	3760016262			1
12–22	Arrow 3S Overshot head assembly	3760017252	3760017552	3760017252	1
1	Nicopress sleeve	3760008244			2
2	Eye bolt	3760016265			1
3	Cable swivel collar	3760007216			1
4	Bearing	3760006467			1
5	Nut	3760012331			2
6	Grease fitting	9469705073			1
7	Sinking bar body	3760006384			1
8	Jar Tube	3760015660		3760015935	1
9	Release sleeve	3760006381			1
10	Jar staff	3760015663		N/A	1
11	Jam nut	5530616400			1
12	Set screw	3760015495			1
13	Pivot body	3760017258			1
14	Spring – Detent	3760017279			1
15	Detent	3760017280			1
16	7/16" Coiled pin	3760017260			1
17	1/4" x 1 1/4" Spring pin	0108169134			1
18	5/16 x 1 1/2" Coiled pin	3760017259	3760017559	3760017259	2
19	Spring	3760006373			1
20	Lifting dog – Surface	3760017254			2
21	Overshot body – Surface	3760017255			1
22	Release tool	3760017262			1
23	P size Adapter	N/A	3760017570	N/A	



NHP Arrow 3S Short total length 1190 mm / 47"

Use Short overshot for down holes with limited space. (Underground or Surface). The extra weight of the sinking bar and no drag from the propulsion seals will result in faster round trips. The release sleeve will give you the ability to release the overshot in the event of a jammed inner tube.

NHP Arrow 3S Overshot standard Surface total length – 1980 mm / 78"



Surface DiscovOre & Core Barrel Accessories

P
P3

P Core Barrel Consumables Kit (2000 m / 6600 ft)

Description	Part Number	Qty
P core barrel consumables kit 2000 m / 6600 ft	3760017520	1
Core lifter	3760004185	40
Core lifter case	9469705593	8
Landing ring	3760017508	4
Inner tube stabilizer	3760006275	4
Stop ring	3760006271	8
1-1/4" Landing indicator bushing - Low PSI	3760017531	6
Shut off valve – Yellow	3760016291	1
1-1/4" ball	3760017523	2

P3 Core Barrel Consumables Kit (2000 m / 6600 ft)

Description	Part Number	Qty
P3 core barrel consumables kit 2000 m / 6600 ft	3760017521	1
Core lifter	3760006292	40
Core lifter case	9469705593	8
Landing ring	3760017508	4
Inner tube stabilizer	3760006275	4
Stop ring	3760006291	8
1-1/4" Landing indicator bushing - Low PSI	3760017531	6
Shut off valve – Yellow	3760016291	1
1-1/4" ball	3760017523	2

P to H DiscovOre Head Assembly Conversion Kit

3760017560	Head assembly conversion kit from P to H DiscovOre		
Part Number	Description	Qty	Item in P head assembly
Item to be replaced in P DiscovOre head to convert to H DiscovOre			
3760017317	Latch	2	3760017517
3760005150	Landing shoulder	1	3760017529
3760006252	Valve adjusting washer	2	3760016290
3760008379	Shut off valve – Yellow	2	3760016291
3760017315	Spindle cap assy	1	3760017513
3760017334	Spring - Latch	1	3760017585
Item to be removed from P head to complete conversion to H DiscovOre			
	Taper washer	2	3760017512
	Inner tube adapter	1	3760017518

P DiscovOre Head Spare Part Kit (2000 m / 6600 ft)

Description	Part Number	Qty
P DiscovOre head spare part kit (2000m/6600ft)	3760017519	1
Assembly bolt	3760017239	2
Wedge lock washer	3760017235	2
Spring – Retracting case	3760017236	1
Assembly rod	3760017324	2
Latch	3760017517	2
1-1/4" Landing indicator bushing - Low PSI	3760017531	6
Shut off valve – Yellow	3760016291	2
1-1/4" ball	3760017523	2
Spring - Latch	3760017585	2
Bearing	3760006471	2
Ball bearing	3460017234	1
Hanger bearing	3760006462	1

Conversion Kits From P to P3 Core Barrel

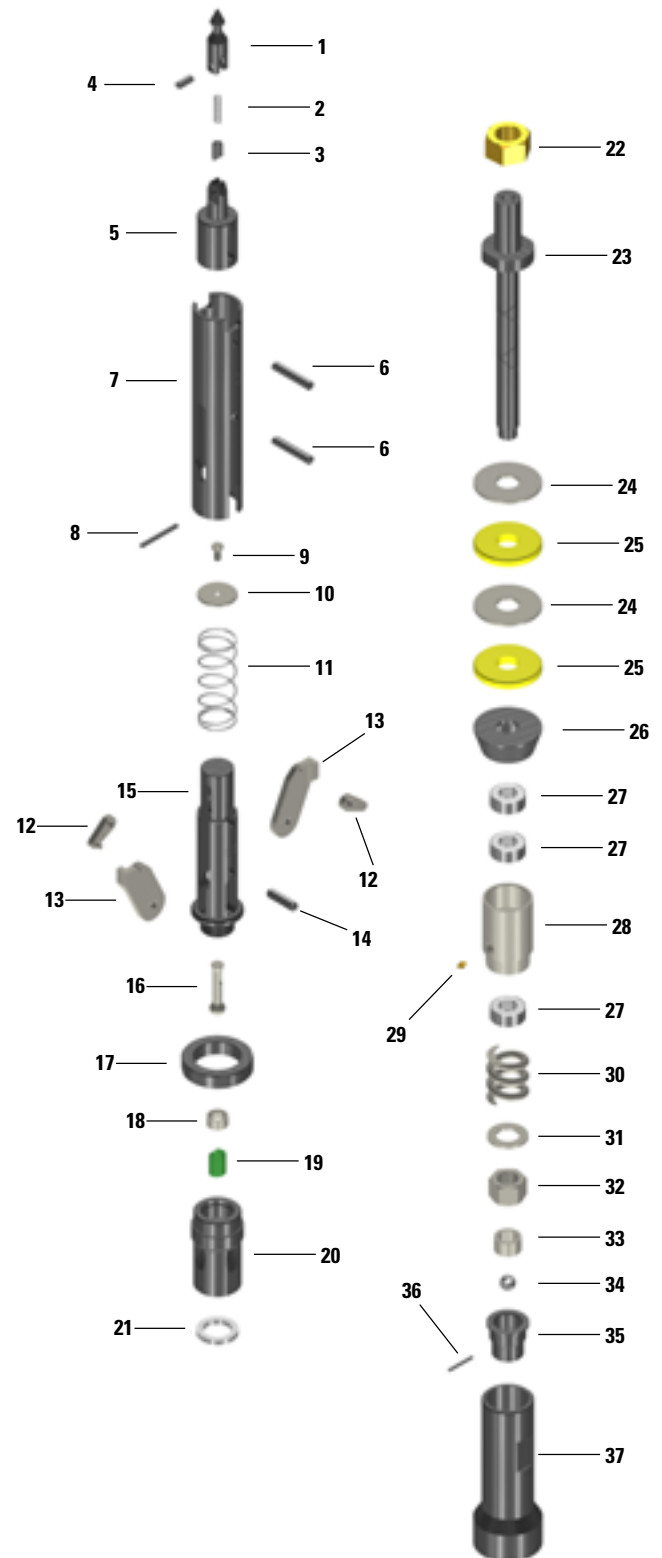
Conversion kits includes all parts needed to convert P inner tube assembly to P3 inner tube assembly		
Description	Part Number	Qty
Conversion kit from P to P3 1,5m/5ft core barrel	3760017557	1
Stop ring	3760006291	1
Core lifter	3760006292	1
Piston plug	3760006283	1
O-ring	0663921600	1
Piston	3760006284	1
Adapter	3760006282	1
1.5 m / 5 m Split inner tube	3760005629	1
Conversion kit from P to P3 3m/10ft core barrel	3760017558	1
Stop ring	3760006291	1
Core lifter	3760006292	1
Piston plug	3760006283	1
O-ring	0663921600	1
Piston	3760006284	1
Adapter	3760006282	1
3.0 m / 10 ft Split inner tube	3760008293	1

For damaged Inner Tube thread on head assembly replace Inner Tube thread adapter 3760017518.

Surface OWL L-Latch Head Assembly

P

Item	Description	Part Number	Qty
		P Size	
–	P Head Assembly - Surface	9469712566	1
1	Spearhead point	9469705061	1
2	Compression spring	9469705063	1
3	Detent plunger	9469705064	1
4	Coiled spring pin (7/16" x 1")	9469705062	1
5	Spearhead base L-Latch	9469705228	1
6	Coiled spring pin 1/2" X 2-3/4"	9469705282	2
7	Latch retracting case L-Latch	9469705232	1
8	Slotted spring pin 1/4" X 2-3/4"	9469706388	1
9	Hex bolt 3/8"-16 X 3/4"	9469705138	1
10	Latch spring washer	9469705269	1
11	Latch compression spring	9469705226	1
12	Link for L-Latch	9469705270	2
13	Latch for L-Latch	9469711478	2
14	Spring pin	9469705065	1
15	Upper latch body L-Latch	9469705288	1
16	Piston ball valve	9469712445	1
17	Landing shoulder	9469705613	1
18	Landing indicator bushing	9469705446	1
19	Landing indicator spring (light)	9469705049	1
20	Lower latch body	9469705612	1
21	Nord-lock washer 1-1/2"	9469711484	1
22	Hex nut 1-1/2" UNC	9469705583	1
23	Spindle shaft	9469711480	1
24	Valve adjusting washer	3760016290	2
25	Shut-off valve hard	9469706840	2
26	Tapered shut-off washer	9469706833	1
27	Thrust bearing	9469705410	3
28	Spindle bearing	9469706815	1
29	Grease fitting 1/4-28	9469705073	1
30	Compression spring	9469705586	1
31	Narrow washer	9469705587	1
32	Nylon-insert locknut	9469708124	1
33	Valve bushing	9469711666	1
34	Stainless steel ball 22mm	3760012099	1
35	Check valve body	9469706842	1
36	Coiled spring pin 3/16" x 1-3/4"	9469706835	1
37	Inner tube cap	9469711665	1



Surface Locking Coupling Options

Surface Locking Couplings Options

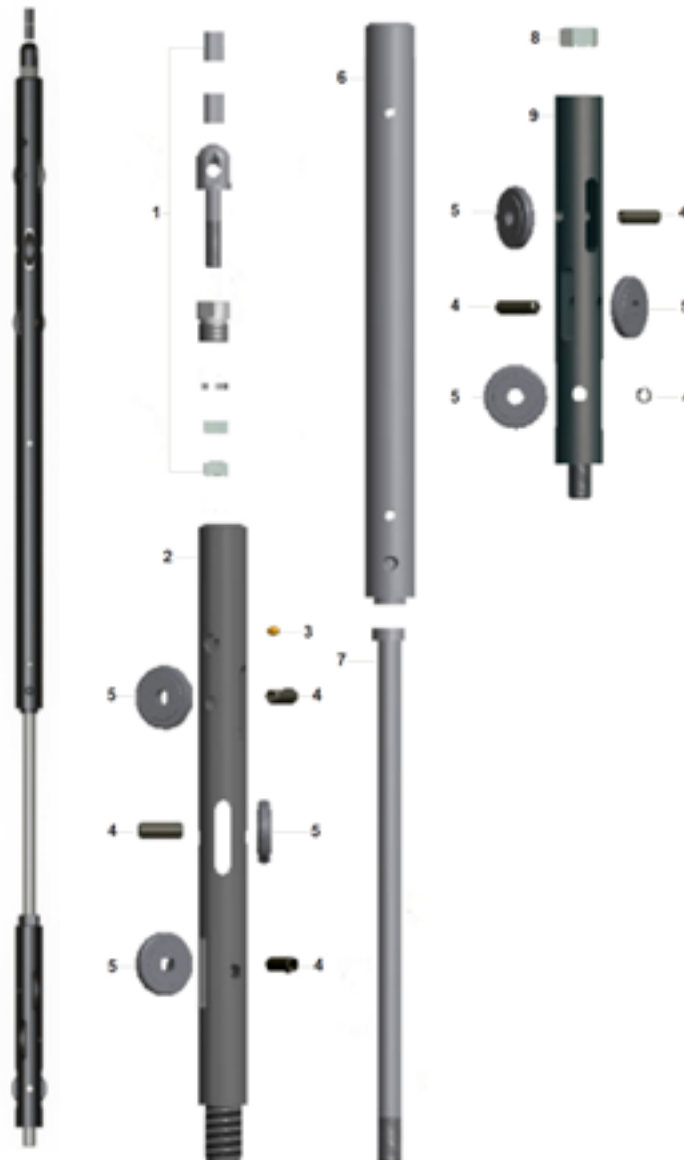


Rod type	Carbide No Tang	Carbide with Tang	Diamond with Tang	Welded No Tang	Welded with Tang	Hex/Full-hole No Tang	Hex/Full-hole with Tang
BO	9469704740	9469704728	9469704731	9469705128	9469705127	9469712084	3760006012
BT	9469704736	9469704735	3760012085			9469712415	3760006013
BMO						*On request	*On request
BR			3760014228			9469712416	3760014035
NO	9469704762	9469704751	9469704754	9469705423	9469705422	9469712081	3760006026
NT	9469704761	9469704760	3760016510	9469706780	9469706778	9469712385	3760006027
NMO		9469704757	3760016511			*On request	*On request
NR			3760014274			9469712386	3760014037
HO	9469704750	9469704741	9469704744		9469705256	9469712087	3760006043
HT		9469704749	3760016496			9469712417	3760006044
HMO		9469704747	3760016495			*On request	*On request
HR			3760014309			9469712418	3760014039
PO			3760015173		9469706821		
PT			3760015174		9469711437		
PMO (HWT)			3760015175		9469705594		

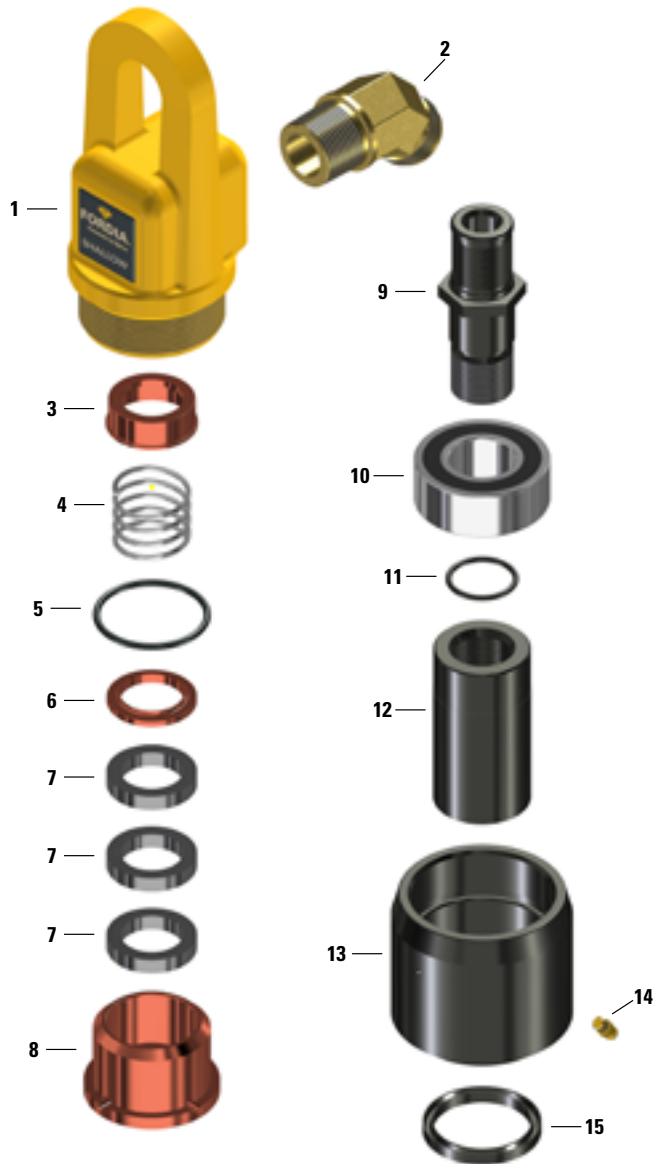
Other options may be available. If the part number does not appear on this chart, please contact your sales representative.

Surface Roller Overshot Conversion Kits

Item	Description	Part number			Qty
		B size	N size	H size	
1-9	Roller overshoot conversion kit complete	3760015971	3760015972	3760015978	1
2-5	Upper roller body assembly	3760015969	3760015970	3760015994	1
4,5,9	Lower roller body assembly	3760015974	3760015975	3760015993	1
1	Excore II cable swivel assembly	3760016262	3760016262	3760016262	1
2	Roller body upper	3760015979	3760015986	3760015997	1
3	1/4 NPT grease fitting	9469705073	9469705073	9469705073	1
4	Spring pin 3/8 x 1 1/4	0108169139	N/A	N/A	6
4	Spring pin 1/2 x 1 1/2	N/A	0108169143	0108169143	6
5	Excore II steel roller	3760015977	3760015984	3760015998	6
6	Excore II jar tube	3760015559	3760015660	3760015660	1
7	Excore II jar staff	3760015556	3760015663	3760015663	1
8	Nut hex 9/16-12 GRD5	0268413826	N/A	N/A	1
8	Nut hex 3/4-10 GRD5	N/A	5530616400	5530616400	1
9	Roller lower body	3760015976	3760015983	3760015996	1



Surface Shallow Water Swivel



Shallow Water Swivel Assembly

Item	Description	Part number	Qty
–	Shallow water swivel assembly	3760003627	1
1	Bale	3760006444	1
2	Connector (NPT16/JIC16)	5290414	1
3	Spring seat	3760006445	1
4	Compression spring	3760006443	1
5	O-ring	0663919701	1
6	Packing gland	3760006446	1
7	Teflon packing (set of 3)	3760006447	1
8	Packing cage	3760006448	1
9	Spindle	3760006449	1
10	Bearing	3760006479	1
11	O-ring	0663911000	1
12	Spindle extension	3760006442	1
13	Body	3760006451	1
14	Grease fitting	9469705073	1
15	Water swivel seal	3760006450	1

Shallow Water Swivel Repair Kits

Description	Part number	Qty
Shallow water swivel assembly	3760003765	1
O-ring	0663919701	2
Water swivel seat	3760006445	1
Water swivel spring	3760006443	1
Water swivel gland	3760006446	1
Water swivel packing set	3760006447	2
Water swivel cage	3760006448	1
Water swivel spindle	3760006449	1
O-ring	0663911000	2
Bearing	3760006479	1

Surface Shallow Water Swivel

Technical Data

Technical data	Metric	Imperial
Shallow water swivel assembly weight	4,7 kg	10.4 lbs
Static hoisting capacity	6 350 kg	14 000 lbs
Rotation with load capacity	2 700 kg	6 000 lbs
Unit length (less adapter)	279 mm	11 in
Assembly diameter	76 mm	3 in
Max RPM	2500	
Inlet hose connection	1" NPT	
Spindle rod thread	AW rod box	



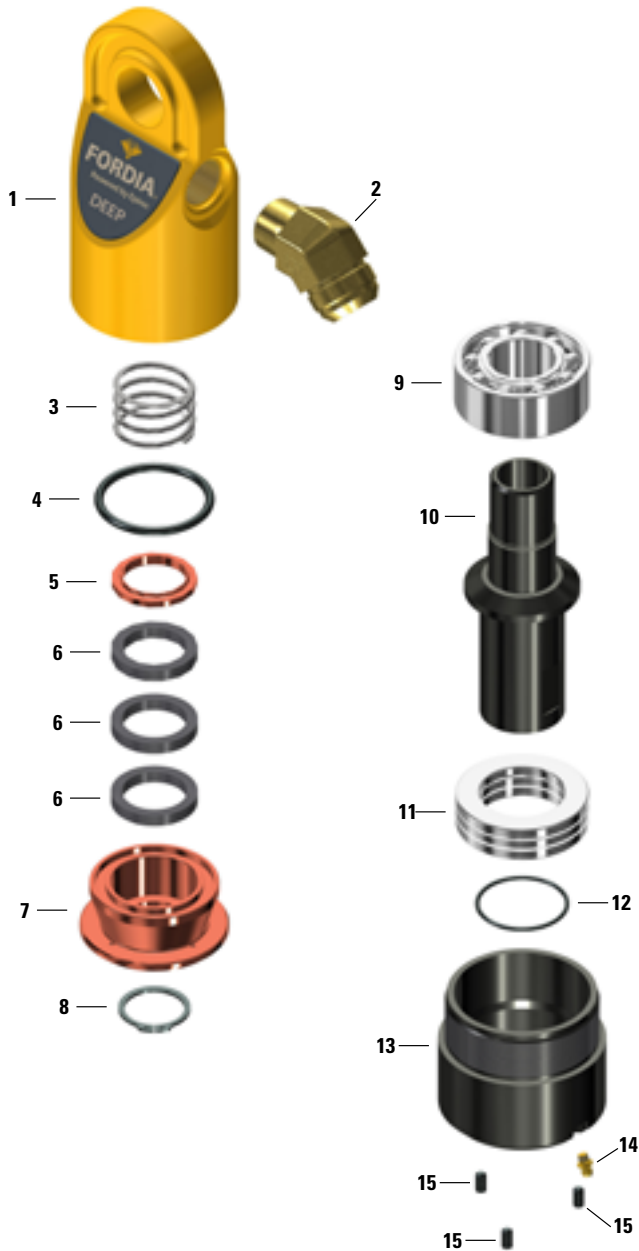
Water Swivel Drill Rod Adapters

Drill rod pin	Drill rod pin	Type	Part number
AW	AWJ	Standard	3760008411
AW	ATW	Standard	3760006090
AW	BO	Standard	3760006008
AW	BT	Standard	3760006009
AW	BR	Standard	3760014209
AW	BTW	Standard	3760006116
AW	NO	Standard	3760008108
AW	NT	Standard	3760008105
AW	NMO	Standard	3760015311
AW	NR	Standard	3760014042
AW	NR	Long 350mm	3760014252
AW	HO	Standard	3760008109
AW	HT	Standard	3760008106
AW	HMO	Standard	3760015744
AW	HR	Standard	3760014214
AW	PMO (HWT)	Standard	3760015482
AW	PT	Standard	3760000925

Drilling Depth Capacity

	B rod	N rod	H rod	P rod
Shallow Drilling depth capacity (meters/feet)	1100m/3600ft	850m/2800ft	550m/1800ft	350m/1150ft
Deep Drilling depth capacity (meters/feet)	2000m/6560ft	1560m/5100ft	1030m/3380ft	680m/2230ft

Surface Deep Water Swivel



Deep Water Swivel Assembly

Item	Description	Part number	Qty
–	Deep water swivel assembly	3760014170	1
1	Bale	3760014171	1
2	Connector	3760014182	1
3	Compression spring	3760006457	1
4	O-ring ID 59.69mm X Wd 5.33mm	9469707357	1
5	Packing gland 25000-TC W/S	3760006459	1
6	Packing 25000-TC W/S (set of 3)	3760000380	3
7	Packing cage	3760014172	1
8	Retaining ring 38mm	3760014175	1
9	Bearing 3208 ATN9	3760014176	1
10	Spindle	3760014174	1
11	Thrust bearing	3760014177	1
12	O-ring ID 50mm X Wd 2.5mm	3760014178	1
13	Body	3760014173	1
14	Grease fitting	9469705073	1
15	Set screw 1/4-20 UNC X 1/2LG	3760014180	3

Deep Water Swivel Repair Kits

Description	Part number		Qty
Deep water swivel repair kits	Complete 3760014167	Basic 3760014169	1
Compression spring	3760006457	N/A	1
Packing gland	3760006459		1
Packing set	3760000380		1
O-ring ID 59.69mm X Wd 5.33mm	9469707357	N/A	1
O-ring ID 50mm X Wd 2.5mm	3760014178		1
Bearing	3760014176		1
Thrust bearing - SKF 51210	3760014177		1
Packing cage	3760014172		1
Spindle	3760014174		1
Retaining ring 38mm	3760014175	N/A	1
Set screw 1/4-20 UNC X 1/2LG	3760014180		3
Grease fitting	9469705073		1

Surface Deep Water Swivel



Water Swivel Drill Rod Adapters

Drill rod pin	Drill rod pin	Type	Part number
BW	B0	Standard	3760007720
BW	BT	Standard	3760008102
BW	BR	Standard	3760014210
BW	NO	Standard	3760006022
BW	NT	Standard	3760006023
BW	NMO	Standard	3760012623
BW	NR	Standard	3760014253
BW	NTW/NGM	Standard	3760015746
BW	HO	Standard	3760006039
BW	HT	Standard	3760006040
BW	HMO	Standard	3760013440
BW	HR	Standard	3760014290
BW	PO	Standard	3760013320
BW	PT	Standard	3760006055
BW	PMO/HWT	Standard	3760005541
BW	B0	Bullnose 19" long	3760014105
BW	BT	Bullnose 19" long	3760014101
BW	BR	Bullnose 19" long	3760014113
BW	NO	Bullnose 19" long	3760014106
BW	NT	Bullnose 19" long	3760014102
BW	NR	Bullnose 19" long	3760014114
BW	HO	Bullnose 19" long	3760014107
BW	HT	Bullnose 19" long	3760014103
BW	HR	Bullnose 19" long	3760014115
BW	PO	Bullnose 19" long	3760014108
BW	PT	Bullnose 19" long	3760014104
BW	PMO/HWT	Bullnose 19" long	3760014112
Drill rod pin	Casing pin	Type	Part number
BW	NW	Standard	3760011336
BW	HW	Standard	3760005566
BW	HWT	Standard	3760005541

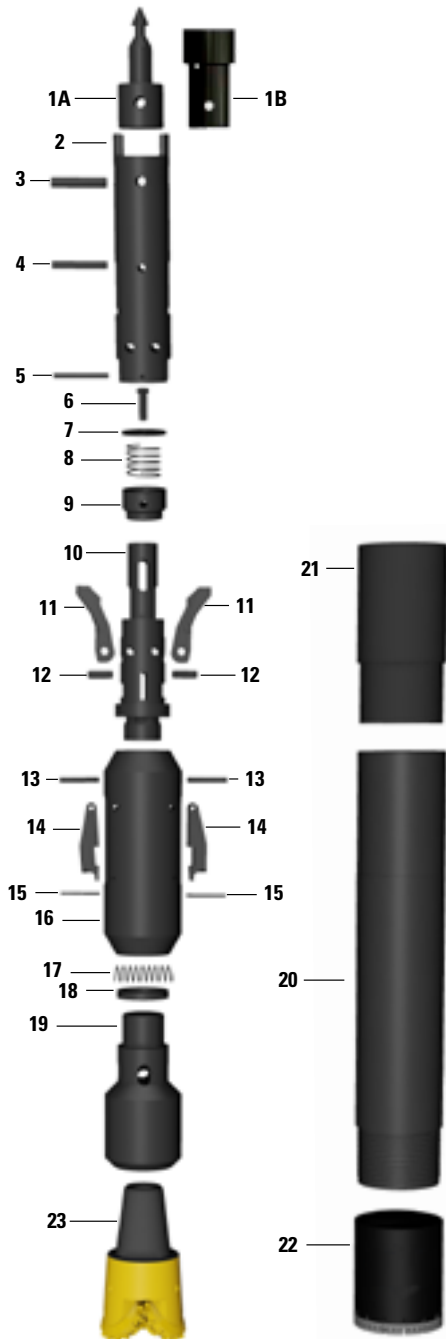
Technical Data

Technical data	Metric	Imperial
Deep water swivel assembly weight	7,6 kg	16.75 lbs
Static hoisting capacity	11 800 kg	26 000 lbs
Rotation with load capacity	5000 kg	11 000 lbs
Unit length (less adapter)	296,8 mm	11.683 in
Assembly diameter	98,5 mm	3.875 in
Spindle inner diameter	30,0 mm	1.181 in
Max RPM	2300	
Inlet hose connection	20 JIC (1 1/4" thread)	
Spindle rod thread	BW	

Drilling Depth Capacity

	B rod	N rod	H rod	P rod
Deep Drilling depth capacity (meters/feet)	2000m/6560ft	1560m/5100ft	1030m/3380ft	680m/2230ft
Shallow Drilling depth capacity (meters/feet)	1100m/3600ft	850m/2800ft	550m/1800ft	350m/1150ft

Wireline Casing Advancer Assembly



Item	Description	NW	HW	HWT	PW	PWT	QTY.
-	Standard & Excore Casing advancer	3760016233	3760016313	3760015073	3760015037	3760015074	1
-	DiscovOre Casing advancer	3760017565	3760017566	3760017567	3760017568	3760017569	1
1A	Spearhead (for STD & EX Casing Advancer)	3760008252					1
1B	Adapter (for DiscovOre Casing Advancer)	3760017564					1
2	Latch retracting case	3760015671			3760015036		1
3	Spring pin 1/2 x 2 3/4	9469705229					1
4	Spring pin 3/8 x 2 3/4	3760014500					1
5	Spring pin 1/4 x 2 3/4	3760014502					1
6	Hex bolt 3/8-16 unc	9469705138			3760013477		1
7	Spring seat washer	3760016238			3760015677		1
8	Compressing spring	3760015675					1
9	Latch piston	3760015676					1
10	Upper latch body	3760015673					1
11	Latch	3760015672	3760016286		3760015043		2
12	Spring pin 3/8 x 1-1/2	3760009916					2
13	Dowel pin	3760016239	3760009370		3760014146		2
14	Drive blade	3760011053	3760008186		3760011152		2
15	Dowel pin/spring pin	3760011018	3760011052		3760009370		2
16	Drive latch body	3108110305	3760016315		3760015042		1
17	Compression spring	3760008185	3760009364		3760011058		1*
18	Shim set	3760008223	3760008225		3760011109		1
19	Tricone adapter	3760011090	3760008205		3760011137		1
20	Driving coupling assembly	3760016235	3760016316	3760015071	3760015041	3760015058	1
21	Loading funnel	3760015632	3760016319		3760015045		1
Optional equipment							
22	Casing shoe-gator super	9469704578	9469704507	9469704532	9469704662	9469704682	1
23	Tricone bit - steel tooth 3 7/8"	93002010	93002224		93002037		1
23	Tricone bit - tungsten carbide 3 7/8	93002155	93002165		93002171		1
Optional equipment (not shown)							
24	Casing 0.6m	3760001266	3760001269	3760005093	3760007887	3760015060	1
25	Casing 1.5m	3760001267	3760001270	3760005094	3760007888	3760012066	1
26	Casing 3.0m	3760001268	3760001271	3760004281	3760007879	3760015062	1
27A	Ex safety plus overshot (for STD & EX Casing Advancer)	3760016280	3760016193		3760016192		1
27B	Arrow 3S overshot (for DiscovOre Casing Advancer)	3760017250	3760017250 or 3760017550		3760017550		1

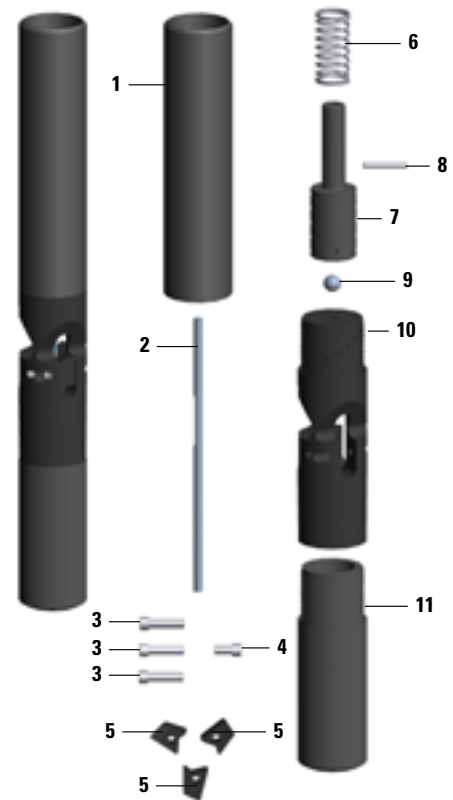
* Note: Sleeves for N size Excore overshot. The overshot is used to remove inner assembly of Casing Advancer after casing is installed in a hole.

Surface Casing & Rod Cutter Assembly

BW casing/N rod cutter assembly - 3760009436

BW rod box connection DCDMA standard rod (cutting range 2.4"- 3.25" / 61.0 m- 82.6 mm)

Item	Description	BW Part No.	Qty
1	Pilot tube DIA. 2.312" (58.74 mm)	3760011118	1
2	Ball release rod	3760011119	1
3	Jaw pin	3760009437	2
4	Screw set	3760011017	1
5	Cutter kit - 2 per kit	3760009254	1
6	Compression spring	3760011238	1
7	Piston	3760011117	1
8	Spring pin 3/16 x 1 1/8 LG	3760011030	1
9	Ball 3/4	0517142800	1
10	Housing	3760011116	1
11	Piston housing	3760011115	1



NW casing/H rod cutter assembly – 3760009431

NW rod box connection DCDMA standard rod (cutting range 3.0"- 3.75" / 76.2 mm- 95.2 mm)

Item	Description	NW Part No.	Qty
1	Pilot tube DIA. 2.906" (73.8 mm)	3760009432	1
2	Ball rod release	3760009433	1
3	Cap screw 3/8 x 1 1/2 LG	3760010590	3
4	Capscrew 3/8 x 3/4	376 011016	1
5	Cutter kit - 3 per kit	3760008368	1
6	Compression spring	3760011020	1
7	Piston	3760009251	1
8	Spring pin 1/4 x 2 LG	5530832600	1
9	Ball 3/4	0517142800	1
10	Housing	3760009434	1
11	Piston housing	3760009435	1

HW casing/P rod cutter assembly – 3760009252

NW rod box connection DCDMA standard rod (cutting range 3.85"- 4.75" / 97.8 mm- 120,6 mm)

Item	Description	HW Part No.	Qty
1	Pilot tube DIA. 3.843 (97.6 mm)	3760011114	1
2	Ball rod release	3760009433	1
3	Cap screw 3/8 x 3/4	3760011016	3
4	Cap screw 3/8 x 1 1/2 LG	3760010590	1
5	Cutter kit - 3 per kit	3760008218	1
6	Compression spring	3760011020	1
7	Piston	3760009251	3
8	Spring pin 1/4 x 2	5530832600	3
9	Ball 3/4	0517142800	1
10	Housing	3760009434	1
11	Piston housing	3760009435	1

Operational recommendations:

1. Put tension on casing/rod string that is to be cut.
2. Determine depth location you want to cut off.
3. Lower the Casing/Rod Cutter to that depth on well sealed drill string and set for cutting.
4. Began rotation slowly (50 rpm) before increasing water pressure in the drill string.
5. As water pressure is applied increase rotation (to approximately 100 rpm for NWH/HW-P casings-rods & 140 rpm for BW-N casings-rods) for standard casing/rod material.
6. Maintain water pressure during rotation until the cutting process is complete.
7. When cutters have reached their maximum diameter, the internal flow system is mechanically opened which drops the water pressure and signals the cut is complete.

NOTE: Cutter assembly must be lubricated before use and is cleaned and lubricated after each use to prevent corrosion from causing the internal components to malfunction (submersing entire unit into a rust prevention media or lubricating oil before storing is a good idea).



Underground

Quick Description

Underground Core Drilling Tools

DiscovOre Underground



This new generation, underground spring-latch head assembly targets safety-minded companies who are willing to invest in a premium product with new technology in order to improve performance. The DiscovOre Underground head focuses on safety without compromising speed and simplicity. Its design reduces driller's hands-on interaction, thanks to its built-in automatic safety. It eliminates the roll pin altogether and failures associated with the traditional spearhead.

- Easy conversion to surface applications
- Outstanding durability and low maintenance
- Reduced length by 254mm (10 inches) for easier maneuvers in confined spaces
- Light, quick, and easy to use
- Patented design that minimizes inner tube jamming
- Loading tool to load inner tube safely and easy

OWL L-Latch Underground



The OWL L-Latch Underground head assembly is known and chosen for its durability and is ideal for drilling against gravity. The L-Latch assembly provides an additional option to drillers who are familiar with a link style latch system.

- Simple and tested design
- Long lasting and interchangeable pieces
- Available in BWL, NWL and NWL2 sizes

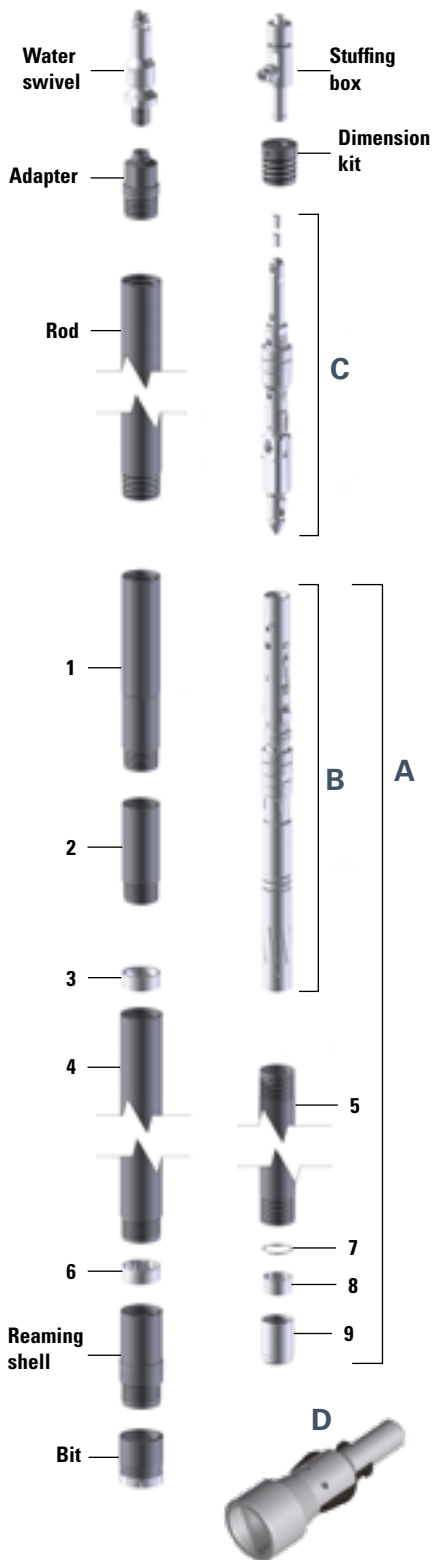
Excore Underground



Piston latch head assembly features double seals in front of the latches. The secure latching and the mechanical piston that locks the head in the locking coupling is extremely strong, even in high back pressure holes. Along with primary landing indication, a secondary indication will let the driller know if the latches are not fully engaged. The Excore Underground head uses a patented design to deliver improved durability and performance when compared to more standard head types available in the market.

- Easy conversion to surface applications
- Improved durability
- Easy to maintain and repair
- Patented design

Underground DiscovOre Core Barrel Assembly



Item	Description	Remarks	Part number	
	Drill string component		BU core barrel	BTWU core barrel
Water swivel	PR018+ WS with B0 pin	Select one to match rod type	3760016545	N/A
	PR018+ WS with BT pin		3760016546	
	PR018+ WS with BMO pin		3760016563	
	PR018+ WS with BR pin		3760016547	
	PR018+ WS with BTW pin		N/A	3760016549
	PR018+ WS with BTT pin			3760016548
Stuffing box	Stuffing box body	w/o rod adapter	8393081965	
Stuffing box dimension kit	Dimension kit for B0 rod	Select one to match rod type	8393081986	N/A
	Dimension kit for BT rod		3760015114	
	Dimension kit for BMO rod		3760015750	
	Dimension kit for BR rod		3760015755	
	Dimension kit for BTW rod		N/A	8393081987
	Dimension kit for BTT rod			3760015201
Rod	Wireline drill rod	Different thread options	See page 102-103 for available options	
1	Locking coupling UG - B0 rod box	See page 98 for available options	9469712084	N/A
	Locking coupling UG - BT rod box		9469712415	
	Locking coupling UG - BMO rod box		Contact your sales representative	
	Locking coupling UG - BR rod box		9469712416	
	Locking coupling UG - BTW rod box		N/A	9469712555
	Locking coupling UG - BTT rod box			3760003017
B,2-9	1.5 m / 5 ft core barrel assy	w/o locking coupling	3760017409	3760017635
	3.0 m / 10 ft core barrel assy		3760017408	3760017634
A	1.5 m / 5 ft inner tube assy complete		3760017405	3760017637
	3.0 m / 10 ft inner tube assy complete		3760017404	3760017636
B	Head assembly complete		3760017401	3760017631
C	Overshot assembly complete		3760017451	3760017653
D	B loading tool		3760017470	
2	Adapter coupling		3760006014	3760006212
3	Landing ring		3760006228	3760006303
4	1.5 m / 5 ft outer tube		3760004831	3760006126
	3.0 m / 10 ft outer tube		3760004832	3760006127
5	1.5 m / 5 m inner tube		3760004830	3760006128
	3.0 m / 10 ft inner tube		3760004829	3760006129
6	Inner tube stabilizer		3760006229	3760004910
7	Stop ring		3760006225	N/A
8	Core lifter		3760006226	3760006301
9	Core lifter case		3760006227	3760006302
Rshell	Reaming Shell	Different options	See diamond tools catalogue	
Bit	Coring bit	Different options	See diamond tools catalogue	

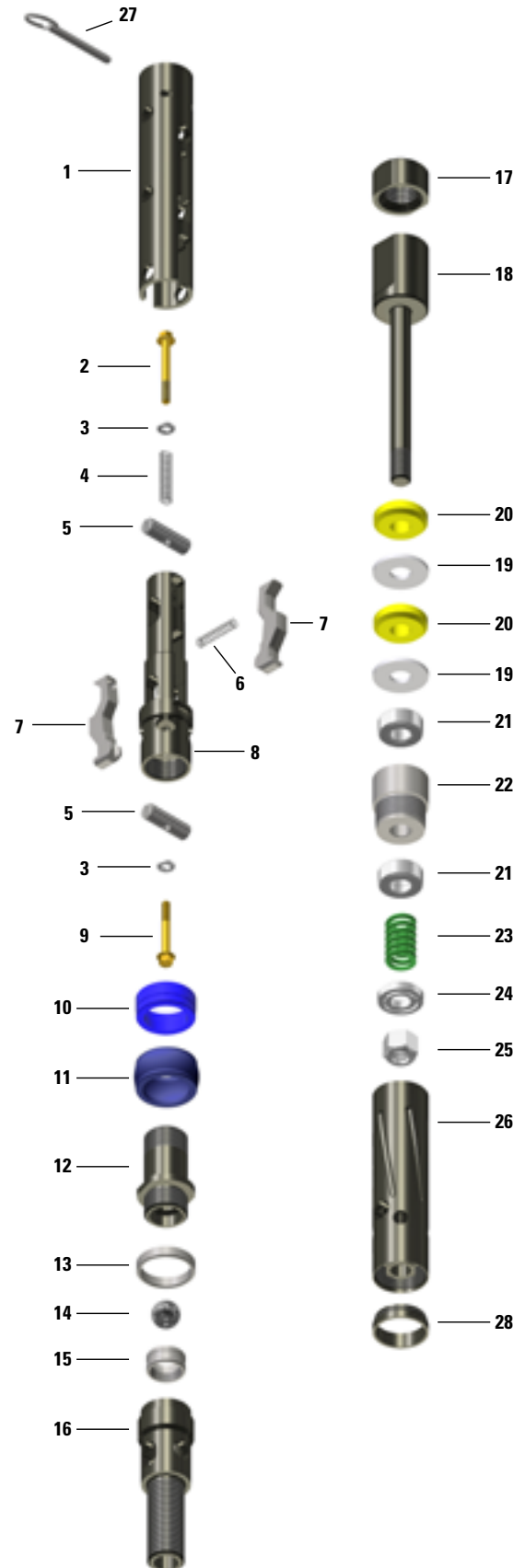
Note: Core barrel assemblies does not include locking coupling which needs to be ordered separately.
See DiscovOre other accessories and head assembly conversion kits on pages 108-109.

Underground DiscovOre Head Assembly

BU
BTWU

Item	Description	Part Number		Qty
		BU Size	BTWU Size	
–	Head Assembly – Underground	3760017401	3760017631	1
1	Retracting case	3760017418		1
2	Assembly bolt	3760017439		1
3	Wedge lock washer	3760017235		2
4	Spring – retracting case	3760017462		1
5	Assembly pin	3760017424		2
6	Spring – latch	3760017237		1
7	Latch	3760017417		2
8	Latch body	3760017433		1
9	Assembly bolt	3760017437		1
10	BU-D upper propulsion seal	3760017420	3760017645	1
11	Lower propulsion seal	3760017479	3760017646	1
12	Mid body – underground	3760017419		1
13	BU-D landing shoulder	3760017421	3760017642	1
14	22 mm stainless steel ball	3760012099		1
15	Landing indicator bushing 600psi	3760012100		1
16	Lower body	3760017411		1
17	Locknut – spindle	3760017410		1
18	Spindle	3760017422		1
19	Shut off valve	3760008340	3760006298	2
20	Valve adjusting washer	3760006222		2
21	Thrust bearing	3760006470		2
22	Spindle bearing housing	3760017423		1
23	Compression spring	3760006475		1
24	Ball bearing	3760017434		1
25	Nyloc nut	3760017431		1
26	Inner tube cap assembly	3760017415	3760017640	1
27	Safety pin	3760017291		1
28	Thread protector	3760017472	3760017647	1

Note: Loading tool is required to insert the head into the drill string.
See DiscovOre other accessories and head assembly conversion kits on pages 108-109.



BU Core barrel spare part kits (2000m/6600 ft)

Description	Part Number	
	BU Size	BTWU Size
BU core barrel spare Part Kits (2000m/6600ft drilling)		
Spare parts kit head assembly	3760017448	3760017651
Spare parts kit overshot	3760017466	3760017652
Consumables kit core barrel. Universal components common for most DCDMA core barrels	3760017449	3760017654

BU Core barrel consumables kit (2000m/6600 ft)

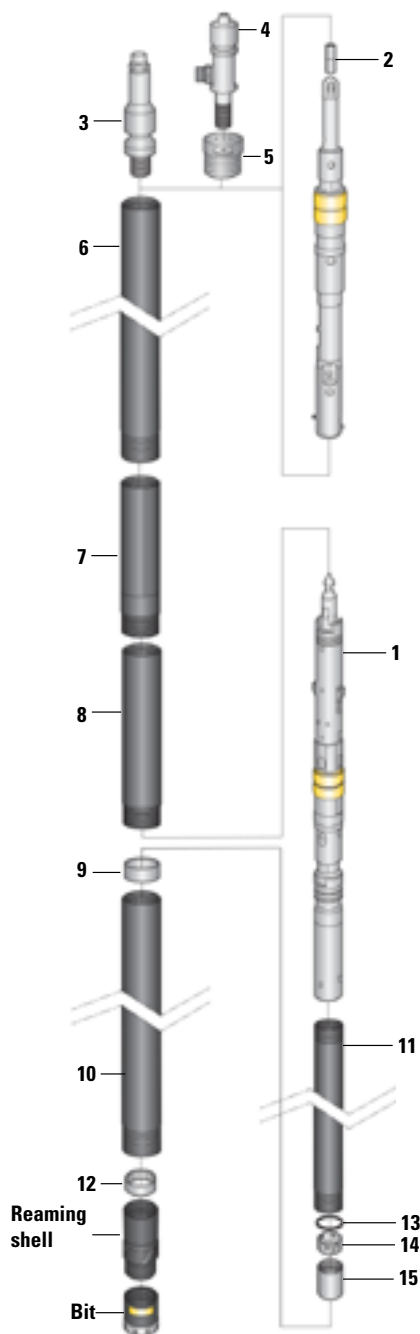
Description	Part Number		Qty
	BU Size	BTWU Size	
BU Core barrel consumables kit (2000 m / 6600 ft)	3760017449	3760017654	1
Core lifter	3760006226	3760006301	40
Core lifter case	3760006227	3760006302	8
Landing ring	3760006228	3760006303	4
Inner tube stabilizer	3760006229	3760004910	4
Stop ring	3760006225	N/A	8

BU Head assy spare parts kits (2000m/6600 ft)

Description	Part Number		Qty
	BU Size	BTWU Size	
BU Head assy spare parts kit (2000 m / 6600 ft)	3760017448	3760017632	1
Latch	3760017417		2
Assembly rod	3760017424		2
Assy bolt 1/4in x 2.250	3760017439		2
Assy bolt 1/4in x 2.000	3760017437		2
Wedge lock washer 1/4"	3760017235		4
Retracting case spring	3760017462		2
Landing shoulder	3760017421	3760006298	1
Hard shut off valve - Yellow	3760008340	3760012099	2
Stainless steel ball 22mm	3760012099		1
Landing indicator bushing 600 psi	3760012100		6
Spring latch 0.300"X0.030"X1.50"	3760017237		2
Uper propulsion seal	3760017420	3760017645	2
Lower propulsion seal	3760017479	3760017646	2
Thrust bearing	3760006470		2
Ball bearing	3760017434		1

See DiscovOre other accessories and head assembly conversion kits on pages 108-109.

Underground Excure Core Barrel Assembly



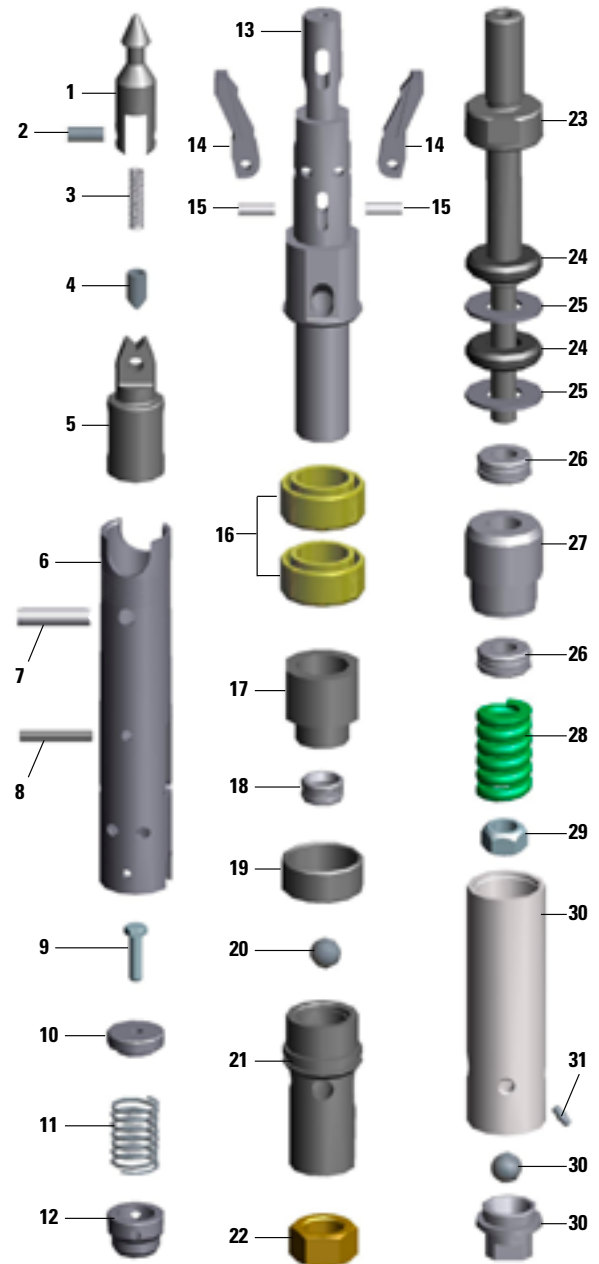
Item	Description	Part number
Core barrel options		BU core barrel
	1,5 m / 5 ft core barrel assembly without Locking Coupling	3760014431
	3,0 m / 10 ft core barrel assembly without Locking Coupling	3760014433
	1,5 m / 5 ft inner tube assembly complete	3760016011
	3,0 m / 10 ft inner tube assembly complete	3760016012
1	Head assembly complete	3760016010
Overshot		
2	Excure overshot assembly complete	3760016277
Water swivel		
3	PR018+ WS with B0 pin	3760016545
3	PR018+ WS with BT pin	3760016546
3	PR018+ WS with BMO pin	3760016563
3	PR018+ WS with BR pin	3760016547
Stuffing box dimension kit		
4	Stuffing box body	8393081965
5	Dimension kit for B0 rod	8393081986
5	Dimension kit for BT rod	3760015114
5	Dimension kit for BMO rod	3760015750
5	Dimension kit for BR rod	3760015755
Drill rods		
6	B drill rods	See options on page 102-103
Consumables/accessories		
7	Locking coupling UG - B0 rod box	3760017426
7	Locking coupling UG - BT rod box	3760017427
7	Locking coupling UG - BMO rod box	3760017429
7	Locking coupling UG - BR rod box	3760017430
8	Adapter coupling - long	3760013469
9	Landing ring	3760006228
10	1,5 m / 5 ft outer tube	3760004831
10	3,0 m / 10 ft outer tube	3760004832
11	1,5 m / 5 m inner tube	3760004830
11	3,0 m / 10 ft inner tube	3760004829
12	Inner tube stabilizer	3760006229
13	Stop ring	3760006225
14	Core lifter	3760006226
15	Core lifter case	3760006227
Full grip wrenches		
Inner tube wrenches		3760006017
Outer tube wrenches		3760006018

Note: Core barrel assemblies does not include locking coupling which needs to be ordered separately.

Underground Excure Head Assembly

BU

Item	Description	Part Number	Qty
–	BU-Excure Head assembly complete	3760016010	1
1	Spearhead	3760015393	1
2	Spring pin 7/16 x 1	3760004348	1
3	Compression spring	3760015394	1
4	Detent	3760015395	1
5	Spearhead base	3760013879	1
6	Latch retracting case	3760013456	1
7	Spring pin 3/8 x 1 5/8 LG	0108169190	1
8	Spring pin 1/4 x 1 5/8	3760015119	2
9	HHCS 3/8 - 16	3760013477	1
10	Spring guide	3760013462	1
11	Compression spring HD	3760016150	1
12	Latch piston	3760013461	1
13	Upper latch body	3760015880	1
14	Latch	3760013457	2
15	Spring pin 1/4 x 3/4 LG	3108169186	2
16	Pump-in lip seal	3760015383	2
17	Latch body coupler	3760015881	1
18	Landing indicator bushing 600psi	3760012100	1
19	Landing shoulder	3760005796	1
20	22 mm stainless steel ball	3760012099	1
21	Lower latch body	3760013459	1
22	Hex nut 3/4 - 10 UNC	3268311200	1
23	Spindle	3760006220	1
24	Shut off valve	3760006221	2
25	Valve adjusting washer	3760006222	2
26	Thrust bearing	3760006470	2
27	Spindle bearing	3760006223	1
28	Compression spring	3760006475	1
29	Lock nut 5/8 11 UNC stover	3760013002	1
30	Inner tube cap assembly (includes grease fitting)	3760006224	1
31	Grease fitting	9469705073	1

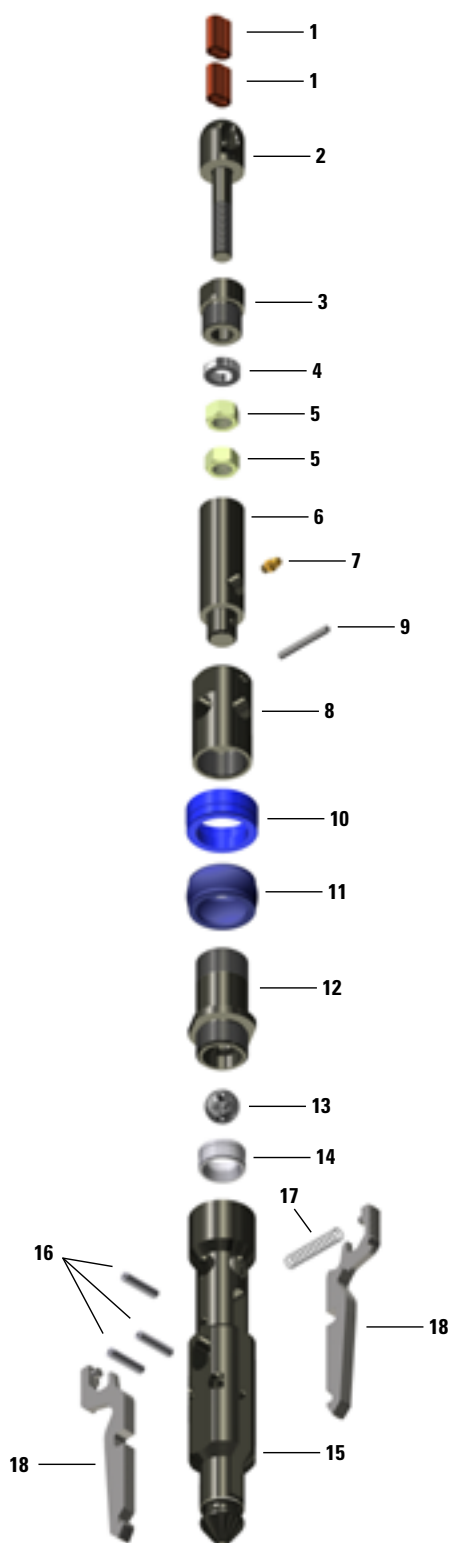


BU Core barrel spare part kits (1000m/3300 ft)

Description	Part Number	Qty
BU Core barrel spare part kits	3760015608	1
B landing ring	3760006228	2
B core lifter case	3760006227	4
B inner tube stabilizer	3760006229	2
B core lifter	3760006226	20
B stop ring	3760006225	4
B/N/H Excure spearhead	3760015393	1
Spiral pin 7/16 x 1	3760004348	2
EX detent compression spring	3760015394	1
B/N/H Excure detent plunger	3760015395	2
BU Excure compression spring HD	3760014503	2
B/BU Excure latch piston	3760013461	1
B/BU Excure latch	3760013457	2
Spring pin 1/4 x 1 5/8	3760015119	2
Landing indicator bushing 600psi	3760012100	2
B landing shoulder	3760005796	1
22 mm stainless steel ball	3760012099	1
Hex nut 7/8 9 UNC	3268311200	1
B shut off valve	3760006221	4
Thrust bearing	3760006470	2
B spindle bearing	3760006223	1
B compression spring	3760006475	1
Lock nut 5/8 11 UNC stover	3760013002	1
Spring pin 3/8 x 1 5/8	0108169190	2
B/N/H Excure bolt hexagon 3/8 - 16	3760013477	1
Spring pin - 1/4 x 3/4 LG	3108169186	4
Grease fitting	9469705073	1
BU Excure pump-in lip seal	3760015383	4

BU Core barrel consumables kit (2000m/6600 ft)

Description	Part Number		Qty
	BU Size	BTWU Size	
BU Core barrel consumables kit (2000 m / 6600 ft)	3760017449	3760017654	1
Core lifter	3760006226	3760006301	40
Core lifter case	3760006227	3760006302	8
Landing ring	3760006228	3760006303	4
Inner tube stabilizer	3760006229	3760004910	4
Stop ring	3760006225	N/A	8



BU Arrow 3S overshot assembly - for DiscovOre core barrels

Item	Description	Part Number		Qty
		BU Size	BTWU Size	
–	BU-Arrow 3S Overshot – Underground	3760017451	3760017653	1
1-7	Cable swivel assy	3760016415		1
1	Nicopress sleeve	3760008244		2
2	Eye bolt	3760016265		1
3	Cable swivel collar	3760007216		1
4	Bearing	3760006467		1
5	Nut	3760012331		2
6	Cable swivel body	3760007767		1
7	Grease fitting	9469705073		1
8	BU A3S valve body	3760017463		1
9	BTWU shear pin 3/16 x 1 11/16	3760006416		1
10	BU-D upper propulsion seal	3760017420	3760017645	1
11	BU A3S lower propulsion seal	3760017479	3760017646	1
12	BU-D mid body	3760017419		1
13	22 mm stainless stell ball	3760012099		1
14	Landing indicator bushing	3760012100		1
14	Landing indicator bushing high pressure (optional)	3760015391		1
15	BU A3S overshot body	3760017461		1
16	Pin coiled spring 1/4 X 1-1/8	3760017459		3
17	B N H lifting dog spring	3760006373		1
18	B A3S lifting dog	3760017454		2

BU Arrow 3S spare parts kits (2000m/6600 ft)

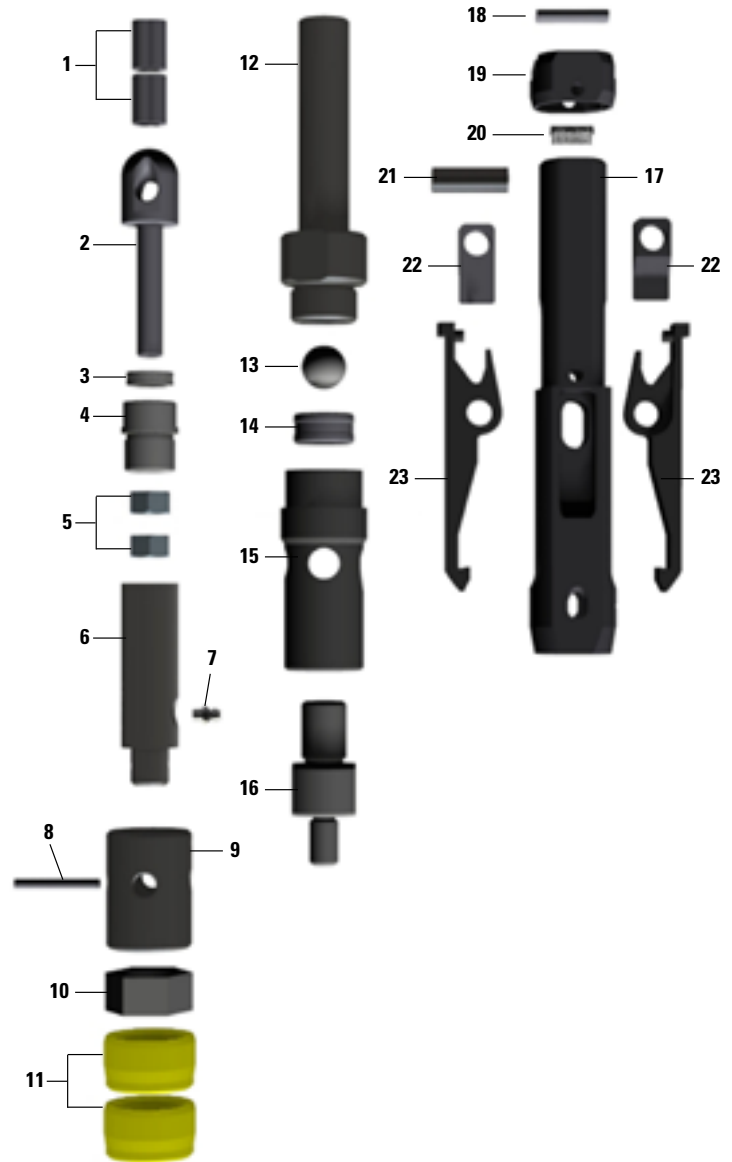
Description	Part Number		Qty
	BU Size	BTWU Size	
BU-A3S spare parts kit (2000 m / 6600 ft)	3760017466	3760017652	1
B-A3S lifting dog	3760017454		2
B N H lifting dog spring	3760006373		2
22 mm stainless steel ball	3760012099		1
Landing indicator bushing 600psi	3760012100		6
BTWU shear pin 3/16 x 1 11/16	3760006416		4
BU-D upper propulsion seal	3760017420	3760017645	2
BU A3S lower propulsion seal	3760017479	3760017646	2
Nicopress sleeve	3760008244		2
Pin coiled spring 1/4 x 1-1/8	3760017459		3

Underground Excure Overshot and Accessories

BU

BU-EX Excure overshoot assembly - for all spearhead type core barrels

Item	Description	Part Number	Qty
–	BU-Excure overshoot assembly	3760016277	1
1-5	Excure cable swivel assembly	3760016262	1
17-23	Excure overshoot head assembly	3760016124	1
1	3/16 nicopress sleeve oval	3760008244	2
2	Excure eye bolt	3760016265	1
3	Bearing	3760006467	1
4	Excure cable swivel collar	3760007216	1
5	Nut 1/2 20 UNF GR8	3760012331	2
6	Cable swivel body	3760007767	1
7	Grease fitting	9469705073	1
8	Shear pin 3/16 x 1-11/16	3760006416	1
9	Valve cap	3760006411	1
10	1-8 UNC Lock nut	3760006412	1
11	BU-Excure pump-in lip seal	3760015383	2
12	B overshoot seal seat	3760015814	1
13	22 mm stainless steel ball	3760012099	1
14	Landing indicator bushing 600psi	3760012100	1
15	Lower latch body	3760013459	1
16	Overshoot threaded adapter	3760015827	1
17	B-Excure safety overshoot head	3760016126	1
18	Spring pin 1/4 x 1 3/8	3760016130	1
19	Protection sleeve	3760016128	1
20	BU / NU dog spring	3760006417	2
21	Pivot pin	3760006380	1
22	Release bar	3760016129	2
23	B-Excure lifting dog	37600161 7	2



Excure safety overshoot spare parts kit (1000m/3300 ft)

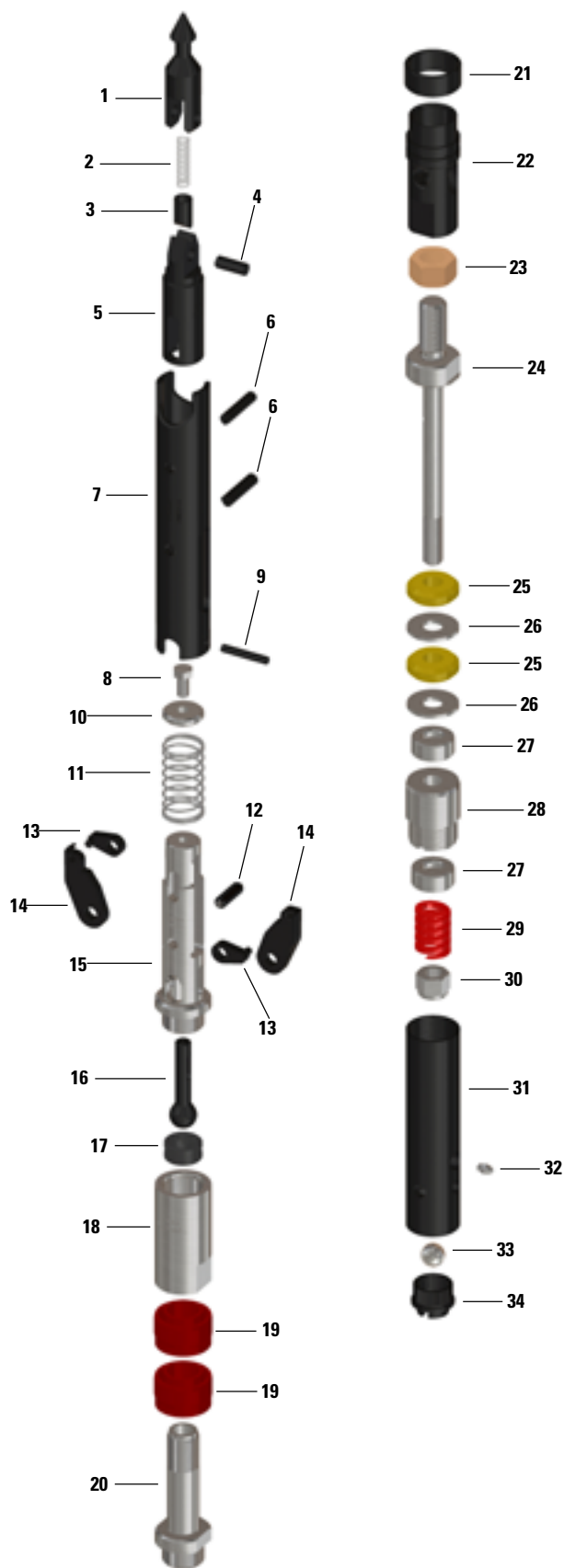
Description	Part Number	Qty
Excure safety overshoot spare parts kit (1000 m/3300 ft)	3760016271	1
3/16 nicopress sleeve oval	3760008244	4
B N H lifting dog spring	3760006373	4
B pivot pin 1/2 x 1 1/2	3760006380	2
Spring pin 1/4 x 1 3/8	3760016130	1
B Excure safety overshoot protection sleeve	3760016128	1
BU NU lock nut	3760006412	1
Stainless steel ball 22 mm	3760012099	1
Nut hex 1/2 20 UNF GR8	3760012331	2
1/4 grease fitting	9469705073	2
B Excure safety overshoot lifting dog	3760016127	2
B Excure safety overshoot release bar	3760016129	2
Bearing	3760006467	1
B Excure pump in lip seal	3760015383	1
Landing indicator bushing 600psi	3760012100	4



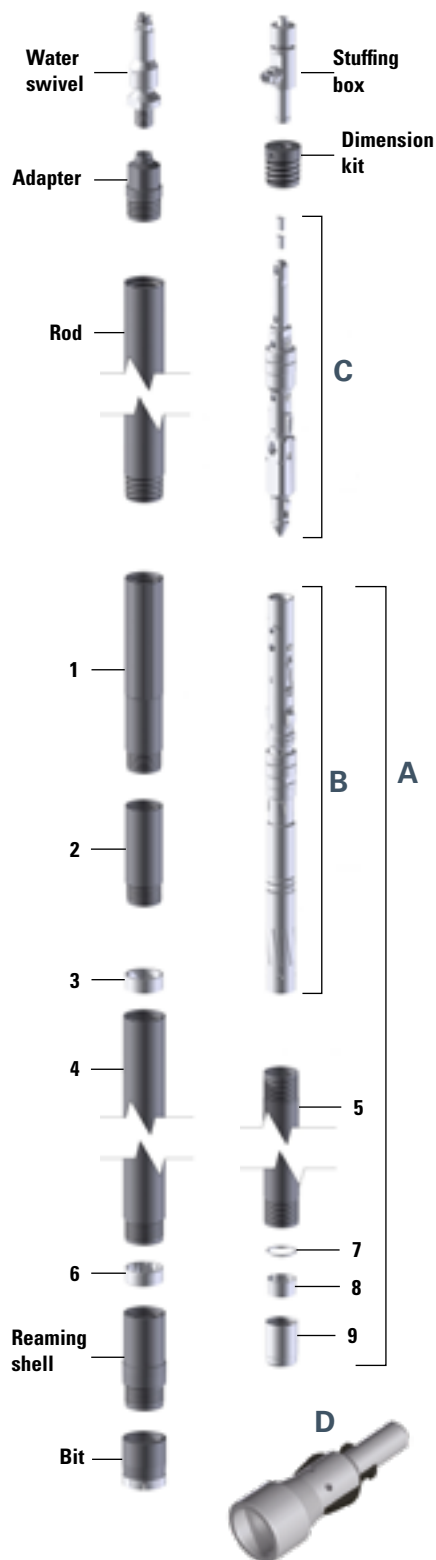
Underground OWL L-Latch Head Assembly

BU

Item	Description	Part Number	Qty
		BU Size	
–	BU Head Assembly - Surface	9469705638	1
1	Spearhead point	9469705061	1
2	Compression spring	9469705063	1
3	Detent plunger	9469705064	1
4	Coiled spring pin 7/16" X 1"	9469705062	1
5	Spearhead base	9469705100	1
6	Coiled spring pin 3/8"x1-5/8"	9469705102	2
7	Latch retracting case	9469705643	1
8	Hex bolt	9469705138	1
9	Coiled pin 1/4"x1-5/8"	9469705141	1
10	Latch spring washer	9469705139	1
11	Latch compression spring	9469705642	1
12	Spring pin 1/4"x1-5/8"	9469705141	1
13	Link	9469705140	2
14	Latch	9469705109	2
15	Upper latch body L-Latch	9469705653	1
16	Piston ball valve	9469705627	1
17	Indicator bushing	9469705628	1
18	Adaptor	9469705649	1
19	Lip seal	9469705647	2
20	Seal seat	9469705648	1
21	Landing shoulder	3760005796	1
22	Lower latch body	9469705147	1
23	Hex nut	9469705113	1
24	Spindle shaft	9469705114	1
25	Shut-off valve hard	9469705152	2
26	Valve adjusting washer	9469705115	2
27	Thrust bearing	9469705116	2
28	Spindle bearing	9469705117	1
29	Compression spring	9469705118	1
30	Stover lock nut	9469705119	1
–	Inner Tube Cap Assembly	9469705120	1
31	Inner tube cap	9469705153	1
32	Grease fitting	9469705073	1
33	Stainless steel ball 22mm	9469705155	1
34	Check valve body	9469705154	1



Underground DiscovOre Core Barrel Assembly



Item	Description	Remarks	Part number	
			NU core barrel	N2U core barrel
Water swivel	PRO18+ WS with NO pin	Select one to match rod type	3760016540	
	PRO18+ WS with NT pin		3760016541	
	PRO18+ WS with NMO pin		3760016542	
	PRO18+ WS with NR pin		3760016543	
Stuffing box	Stuffing box body	w/o rod adapter	8393081965	
Stuffing box dimension kit	Dimension kit for NO rod	Select one to match rod type	8393081988	
	Dimension kit for NT rod		3760015115	
	Dimension kit for NMO rod		3760015752	
	Dimension kit for NR rod		3760015756	
Rod	Wireline Drill Rod	Different thread options	See options on page 102-103	
1	Locking coupling UG - NO rod box	Select one to match drill rod thread type	9469712081	
	Locking coupling UG - NT rod box		9469712385	
	Locking coupling UG - NMO rod box		Contact your sales representative	
	Locking coupling UG - NR rod box		9469712386	
B,2-9	1.5 m / 5 ft core barrel assy	w/o Locking Coupling	3760017490	3760017492
	3.0 m / 10 ft core barrel assy		3760017491	3760017493
A	1.5 m / 5 ft inner tube assy complete		3760017283	3760017359
	3.0 m / 10 ft inner tube assy complete		3760017282	3760017358
B	Head assembly complete		3760017201	3760017245
C	Overshot assembly complete		3760017251	
D	NH loading Tool		3760017443	
2	Adapter coupling		3760006028	
3	Landing ring		3760006243	3760006258
4	1.5 m / 5 ft outer tube		3760004837	
	3.0 m / 10 ft outer tube		3760004839	
5	1.5 m / 5 m inner tube		3760004835	3760006136
	3.0 m / 10 ft inner tube		3760004836	3760006137
6	Inner tube stabilizer		3760006244	3760008317
7	Stop ring		3760006240	3760006326
8	Core lifter		3760006241	3760006327
9	Core lifter case		3760006242	3760006328
Rshell	Reaming Shell	Different options	See diamond tools catalogue	
Bit	Coring bit	Different options	See diamond tools catalogue	

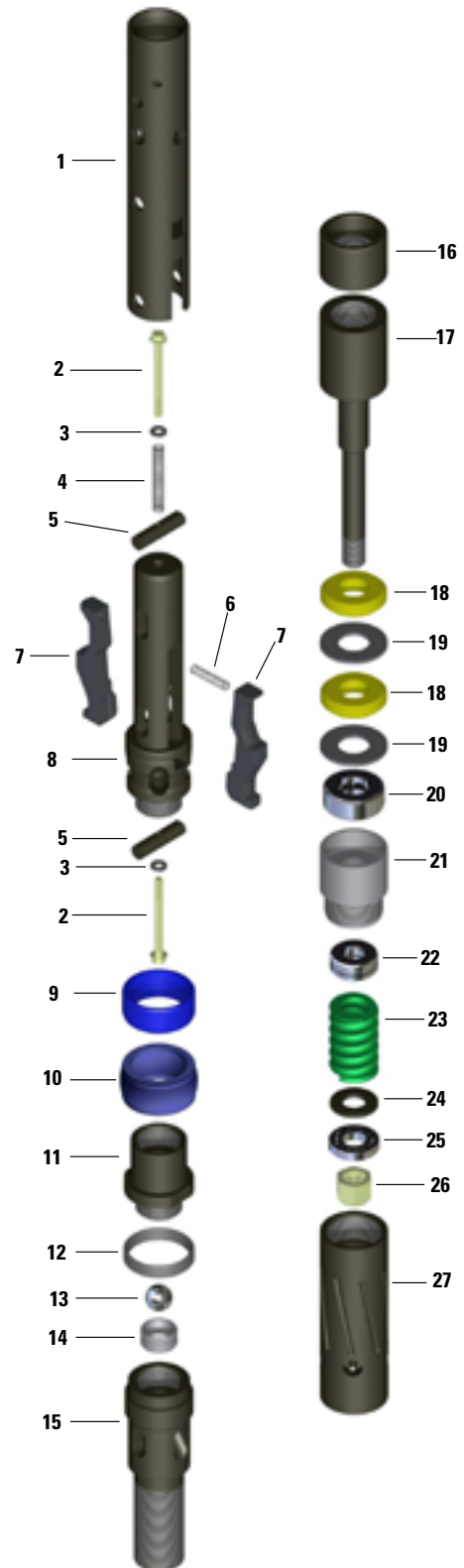
Note: Core barrel assemblies does not include locking coupling which needs to be ordered separately.
See DiscovOre other accessories and head assembly conversion kits on pages 108-109.

Underground DiscovOre Head Assembly

NU
N2U

Item	Description	Part Number		Qty
		NU Size	N2U Size	
–	NU DiscovOre Head Assy	3760017201	3760017245	1
1	Retracting case	3760017233		1
2	Assembly bolt	3760017239		2
3	Wedge lock washer	3760017235		2
4	Spring – retracting case	3760017236		1
5	Assembly rod	3760017228		2
6	Spring – latch	3760017237		1
7	Latch	3760017222		2
8	Latch body	3760017220		1
9	Propulsion seal	3760017225		1
10	Lower seal	3760017341		1
11	Mid body – UG	3760017224		1
12	Landing shoulder UG	3760017264	3760017241	1
13	22 mm stainless steel ball	3760012099		1
14	Landing indicator bushing 600psi	3760012100		1
15	Lower body	3760017211		1
16	Locknut – spindle	3760017212		1
17	Spindle	3760017217		1
18	Shut off valve – yellow	3760008328		2
19	Valve adjusting washer	3760006237		2
20	Thrust bearing	3760006461		1
21	Spindle bearing	3760017219		1
22	Hanger bearing	3760006462		1
23	Compression spring	3760006463		1
24	Washer – bearing	3760017230		1
25	Ball bearing	3760017234		1
26	Nyloc nut	3760017240		1
27	Inner tube cap assembly	3760017232	3760017243	1

Note: Loading tool is required to insert the head into the drill string.
See DiscovOre other accessories and head assembly conversion kits on pages 108-109.



NU to N2U Core barrel spare part kits (2000m/6600 ft)

Description	Part number	
Spare Part Kits (2000m/6600ft drilling)	NU core barrel	N2U core barrel
Spare parts kit head assembly	3760017248	3760017257
Spare parts kit overshot	3760017266	
Consumables kit core barrel. Universal components common for most DCDMA core barrels	3760016574	3760016575

N/NU Core barrel consumables kit (2000m/6600 ft)

Description	Part Number	Qty
N/NU Core barrel consumables kit (2000 m / 6600 ft)	3760016574	1
Core lifter	3760006241	40
Core lifter case	3760006242	8
Landing ring	3760006243	4
Inner tube stabilizer	3760006244	4
Stop ring	3760006240	8

N2/N2U Core barrel consumables kit (2000m/6600 ft)

Description	Part Number	Qty
N2/N2U Core barrel consumables kit (2000m/ 6600 ft)	3760016575	1
Core lifter	3760006327	40
Core lifter case	3760006328	8
Landing ring	3760006243	4
Inner tube stabilizer	3760008317	4
Stop ring	3760006326	8

NU Head assy spare parts kit (2000m/6600 ft)

Description	Part Number	Qty
NU Head assy spare parts kit (2000 m / 6600 ft)	3760017248	1
N-D latch	3760017222	2
N-D assembly rod	3760017228	2
Assy bolt 1/4" flanged	3760017239	4
Wedge lock washer 1/4"	3760017235	4
Spring 0.360" X 0.051" X 3"	3760017236	2
Spring 0.300" X 0.030" X 1.50"	3760017237	2
N hard shut off valve yellow	3760008328	2
22 mm stainless steel ball	3760012099	1
Landing indicator bushing 600psi	3760012100	6
NU-D landing shoulder	3760017264	1
NU-D propulsion seal	3760017225	2
Lower propulsion seal	3760017341	2
Thrust bearing	3760006461	1
Hanger bearing	3760006462	1
Ball bearing	3760017234	1

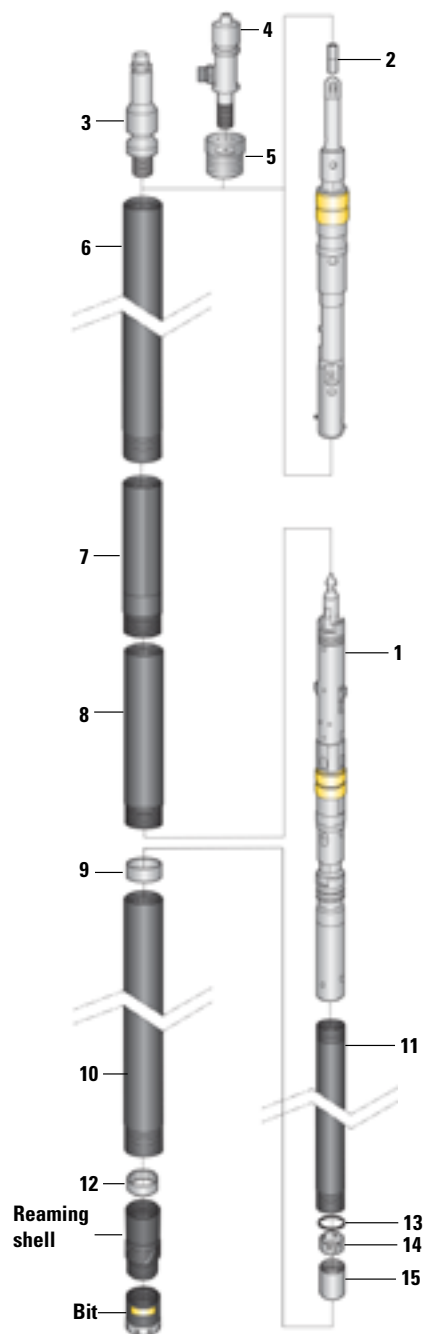
N2U Head assy spare parts kit (2000m/6600 ft)

Description	Part Number	Qty
N2U Head assy spare parts kit (2000 m / 6600 ft)	3760017257	1
N-D Latch	3760017222	2
N-D Assembly rod	3760017228	2
Assy bolt 1/4" flanged	3760017239	4
Wedge lock washer 1/4"	3760017235	4
Spring 0.360" x 0.051" x 3"	3760017236	3
Spring 0.300" x 0.030" x 1.50"	3760017237	3
N Hard shut off valve – Yellow	3760008328	3
22 mm stainless steel ball	3760012099	1
Landing indicator bushing 600psi	3760012100	6
N2U-D Landing shoulder	3760017241	1
NU-D propulsion seal	3760017225	2
Lower propulsion seal	3760017341	2
Thrust bearing	3760006461	1
Hanger bearing	3760006462	1
Ball bearing	3760017234	1

See DiscovOre other accessories and head assembly conversion kits on pages 108-109.

Underground

Excore Core Barrel Assembly



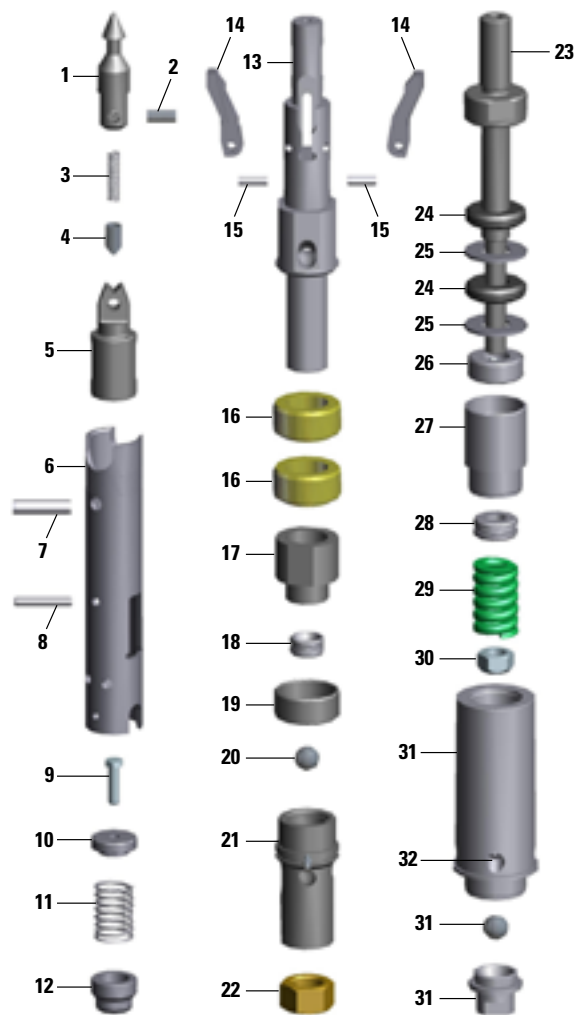
Item	Description	Part number	
	Core barrel options	NU core barrel	N2U core barrel
	1,5 m / 5 ft core barrel assembly without locking coupling	3760014441	3760014445
	3,0 m / 10 ft core barrel assembly without locking coupling	3760014443	3760014447
	1,5 m / 5 ft inner tube assembly complete	3760016031	3760016076
	3,0 m / 10 ft inner tube assembly complete	3760016032	3760016077
1	Head assembly complete	3760016030	3760016075
Overshot			
2	Overshot assembly complete	3760016279	
Water swivel			
3	PRO18+ WS with NO pin	3760016540	
3	PRO18+ WS with NT pin	3760016541	
3	PRO18+ WS with NMO pin	3760016542	
3	PRO18+ WS with NR pin	3760016543	
Stuffing box and dimension kit			
4	Stuffing box	8393081965	
5	Dimension kit for NO rod	8393081988	
5	Dimension kit for NT rod	3760015115	
5	Dimension kit for NMO rod	3760015752	
5	Dimension kit for NR rod	3760015756	
Drill rods			
6	Wireline drill rod	See options on page 102-103	
Consumables/accessories			
7	Locking coupling UG - NO rod box	9469712081	
7	Locking coupling UG - NT rod box	9469712385	
7	Locking coupling UG - NMO rod box	Contact your sales representative	
7	Locking coupling UG - NR rod box	9469712386	
8	Adapter coupling - long	3760015670	
9	Landing ring	3760006243	3760006329
10	1,5 m / 5 ft outer tube	3760004837	
10	3,0 m / 10 ft outer tube	3760004839	
11	1,5 m / 5 m inner tube	3760004835	3760006136
11	3,0 m / 10 ft inner tube	3760004836	3760006137
12	Inner tube stabilizer	3760006244	3760008317
13	Stop ring	3760006240	3760006326
14	Core lifter	3760006241	3760006327
15	Core lifter case	3760006242	3760006328
Full grip wrenches			
Inner tube wrenches		3760006031	3760000568
Outer tube wrenches		3760006032	3760006032

Note: Core barrel assemblies does not include locking coupling which needs to be ordered separately.

Underground Excure Head Assembly

NU
N2U

Item	Description	Part Number		Qty
		NU Size	N2U Size	
–	Head assembly complete	3760016030	3760016075	1
1	Spearhead	3760015393		1
2	Spiral pin 7/16 x 1	3760004348		1
3	Detent compression spring	3760015394		1
4	Detent plunger	3760015395		1
5	Spearhead base	3760015396		1
6	Latch retracting case	3760013470		1
7	Spring pin 1/2 x 2 LG	0108169180		1
8	Spring pin 5/16 x 2 LG	3760015126		1
9	HHCS 3/8-16	3760013477		1
10	N NU Excure spring guide	3760013476		1
11	Compression spring HD	3760014504		1
12	Latch piston	3760013475		1
13	Upper latch body	3760015882		1
14	Latch	3760013471		2
15	Spring pin 5/16 x 1 LG	3760015694		2
16	Pump-in lip seal	3760015831*		2
17	Latch body coupler	3760015883		1
18	Landing indicator bushing 600psi	3760012100		1
19	Landing shoulder	3760005100	3760005241	1
20	22 mm stainless steel ball	3760012099		1
21	Lower latch body	3760013473		1
22	Lock nut 1 1/8 7 UNC	3268413824		1
23	Spindle	3760006235		1
24	Shut off valve - black	3760006236		2
25	Valve adjusting washer	3760006237		2
26	Thrust bearing	3760006461		1
27	Spindle bearing housing	3760006238		1
28	Hanger bearing	3760006462		1
29	Compression spring	3760006463		1
30	Lock nut stover 3/4 10 UNC SS Stover	3760013003		1
31	Inner tube cap assembly (includes grease fitting)	3760006239	3760006325	1
32	Grease fitting	9469705073		1



NU Core barrel spare part kits (1000m/3300 ft)

Description	Part Number		Qty
	NU Size	N2U Size	
Core barrel spare part kits	3760015609		1
B/N/H Excure spearhead	3760015393		1
EX detent compression spring	3760015394		1
B/N/H EX detent plunger	3760015395		2
Spring pin 7/16 x 1	3760004348		2
Spring pin - 1/2 x 2 LG	9469705065		2
Spring pin - 5/16 x 1 LG	3760015126		4
Spring pin 5/16 x 2 LG	3760015126		2
Spring pin - 1/4 Xx 2 LG	5530832600		2
N Excure compression spring HD	3760014504		2
N/NU Excure latch	3760013471		2
N compression spring	3760006463		1
N landing shoulder 3 PLB	3760005100	3760005241	1
HHCS 1 3/8-16 UNC x 1 1/4 LG	3760013477		1
Bearing hanger	3760006462		1
Nut stover 3/4 10 UNC SS NO	3760013003		1
Bearing thrust	3760006461		2
N Spindle bearing	3760006238		1
1/4 grease fitting	9469705073		2
N stop ring	3760006240	3760006326	4
N core lifter	3760006241	3760006327	20
N core lifter case	3760006242	3760006328	4
N landing ring	3760006243	3760006329	2
N inner tube stabilizer	3760006244	3760008317	2
N/NU Excure latch piston	3760013475		1
Landing indicator bushing 600psi	3760012100		2
22 mm stainless steel ball	3760012099		1
N locknut 1 1/8 7 UNC	3268413824		1
N Shut off valve	3760006236		4
NU Excure pump-in lip seal	3760015831		4

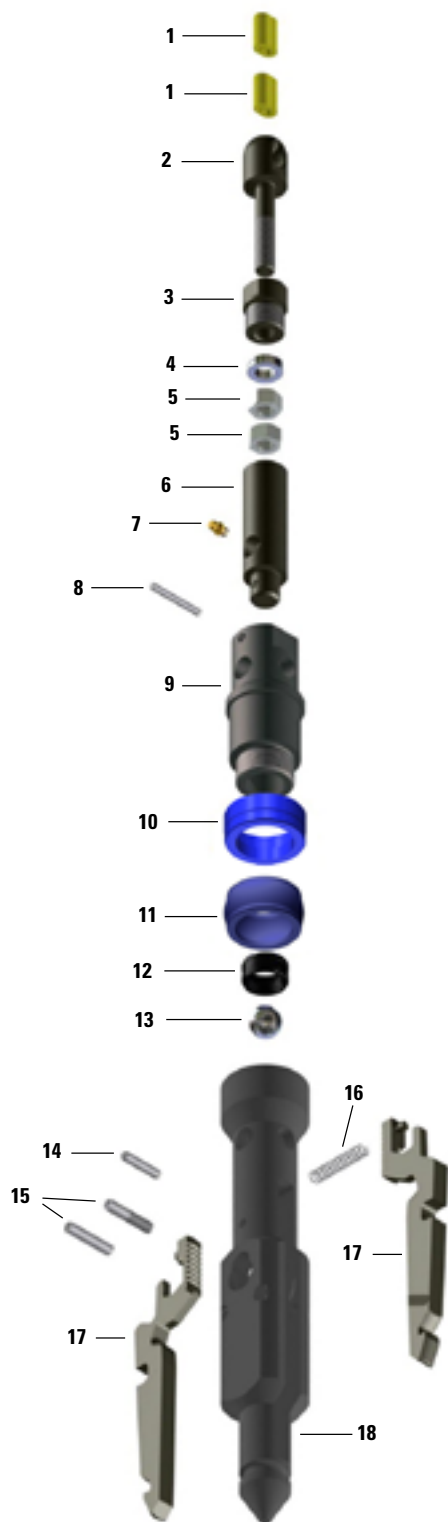
N/NU Core barrel consumables kit (2000m/6600 ft)

Description	Part Number	Qty
N/NU Core barrel consumables kit (2000 m / 6600 ft)	3760016574	1
Core lifter	3760006241	40
Core lifter case	3760006242	8
Landing ring	3760006243	4
Inner tube stabilizer	3760006244	4
Stop ring	3760006240	8

N2/N2U Core barrel consumables kit (2000m/6600 ft)

Description	Part Number	Qty
N2/N2U Core barrel consumables kit (2000m/ 6600 ft)	3760016575	1
Core lifter	3760006327	40
Core lifter case	3760006328	8
Landing ring	3760006329	4
Inner tube stabilizer	3760008317	4
Stop ring	3760006326	8

Underground Arrow 3S Overshot and Accessories



Total length 570 mm / 22.5"

NU Arrow 3S overshot assembly - for DiscovOre core barrels

Item	Description	Part Number	Qty
-	NU Overshot Assembly	3760017251	1
1-7	Cable swivel assembly	3760016415	1
1	Nicopress	3760008244	2
2	Eye bolt	3760016265	1
3	Cable swivel collar	3760007216	1
4	Thrust bearing	3760006467	1
5	Nut 1/2-20	3760012331	2
6	Cable swivel body	3760007767	1
7	Grease fitting	9469705073	1
8	Shear pin	3760006416	1
9	NU-A3S valve body	3760017263	1
10	Upper propulsion seal	3760017225	1
11	Lower propulsion seal	3760017341	1
12	Landing indicator bushing 600psi	3760012100	1
13	22 mm stainless steel ball	3760012099	1
14	1/4" spring pin	9469706434	1
15	5/16" coiled pin	3760017259	2
16	Spring - lifting dog	3760006373	1
17	Lifting dog - underground	3760017254	2
18	Overshot body - underground	3760017261	1
17	B N H lifting dog spring	3760006373	1
18	B A3S lifting dog	3760017454	2

NU Arrow 3S spare parts kits (2000m/6600 ft)

Description	Part Number	Qty
NU-A3S O/S Spare parts kit (2000 m / 6600 ft)	3760017266	1
NH-A3S lifting dog	3760017254	2
B N H lifting dog spring	3760006373	2
22 mm stainless steel ball	3760012099	1
Landing indicator bushing	3760012100	6
Botwu shear pin 3/16 x 1 11/16	3760006416	4
NU-D propulsion seal	3760017225	2
3/16" nicopress sleeve oval	3760008244	2
Pin coiled spring 5/16 x 1 1/2	3760017259	2
Lower propulsion seal	3760017341	2

Underground Excore II Overshot and Accessories

NU

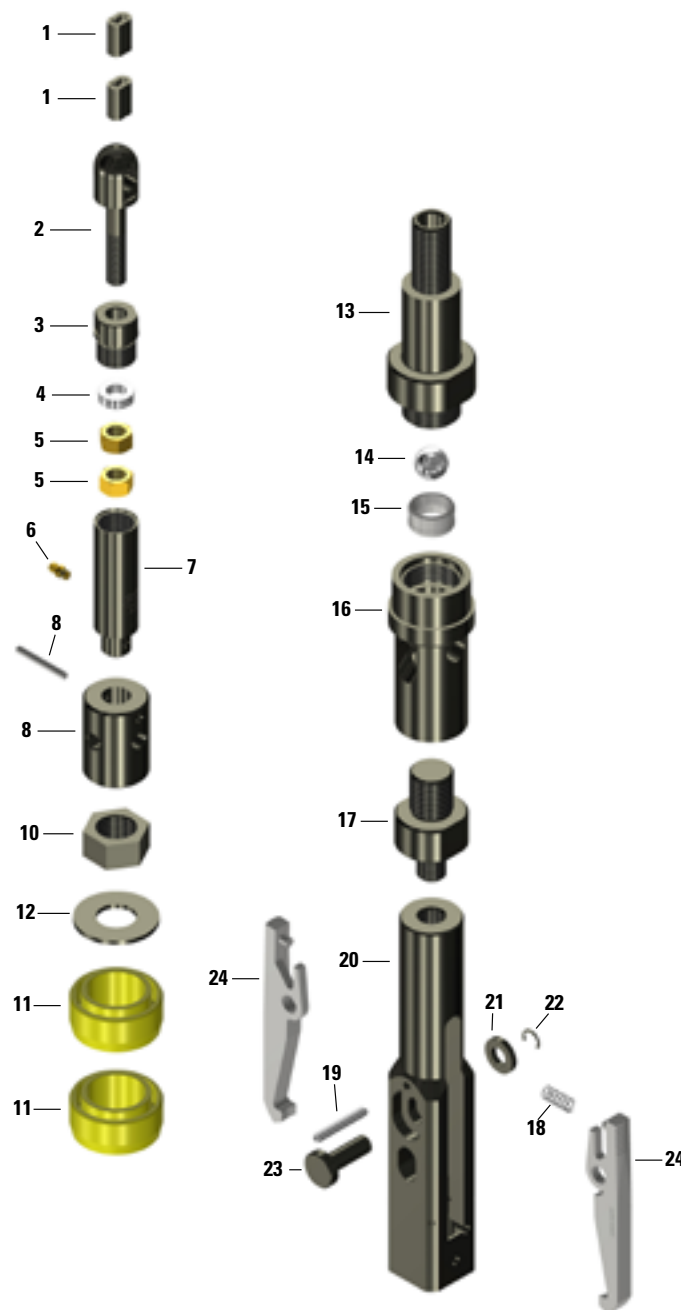
Excore II overshoot assembly - for all spearhead type core barrels

Item	Description	Part Number	Qty
–	NU-Excore II overshoot assembly	3760016279	1
1-6	Excore II cable swivel assembly	3760016262	1
1	Nicopress sleeve oval	3760008244	2
2	Excore II eye bolt	3760016265	1
3	Cable swivel collar	3760007216	1
4	Bearing	3760006467	1
5	Nut 1/2 20 UNF GR8	3760012331	2
6	Grease fitting	9469705073	1
7	Cable swivel body	3760007767	1
8	Shear pin 3/16 x 3/16 x 1 11/16	3760006416	1
9	Valve cap	3760006411	1
10	Lock nut UNC 1-8	3760006412	1
11	Pump-in lip seal	3760015831	2
12	Valve adjusting washer	3760006237	1
13	Seal seat	3760015818	1
14	22 mm stainless steel ball	3760012099	1
15	Landing indicator bushing 600psi	3760012100	1
16	Lower latch body	3760013473	1
17	Overshot threaded adapter	3760015817	1
18	Lifting dog spring	3760006373	1
19	Spring pin 1/4 x 1 3/4	0108169187	1
20	N0 Excore II overshoot head	3760016244	1
21	Pivot pin retainer	3760016246	2
22	Retaining ring	3760015789	1
23	Excore II pivot pin	3760016249	1
24	EX-II lifting dog	3760016245	2

* The lifting capacity rating has a safety factor of 5:1 engraved on the overshoot head which was independently tested on the the surface version only. The actual lift capacity on the underground assemblies is 450 kg with a safety factor of 4:1.

Excore II-U safety overshoot spare parts kit (1000m/3300 ft)

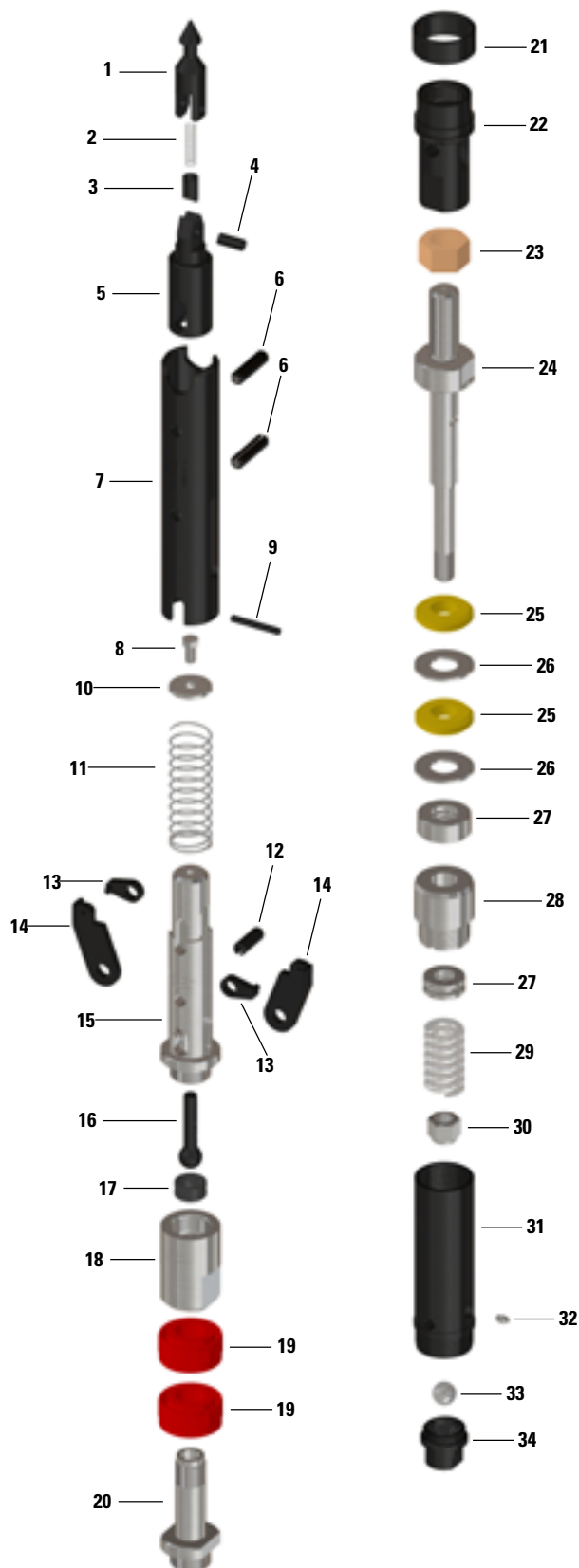
Description	Part Number	Qty
Excore II-U safety overshoot spare parts kit (1000 m/3300 ft)	3760016273	1
3/16 nicopress sleeve oval	3760008244	2
Bearing	3760006467	1
Nut Hex 1/2 20	3760012331	2
1/4 greese fitting	9469705073	2
BU NU lock nut	3760006412	1
NU Excore pump in lip seal	3760015831	4
B N H lifting dog spring	3760006373	4
22 mm stainless steel ball	3760012099	1
Spring pin 1/4 x 1 3/4 LG	0108169187	2
N H Excore pivot pin	3760016249	1
N H pivot pin retainer	3760016246	2
N H retaining ring safe over	3760015789	3
N H Excore II lifting dog	3760016245	2
Landing indicator bushing	3760012100	4



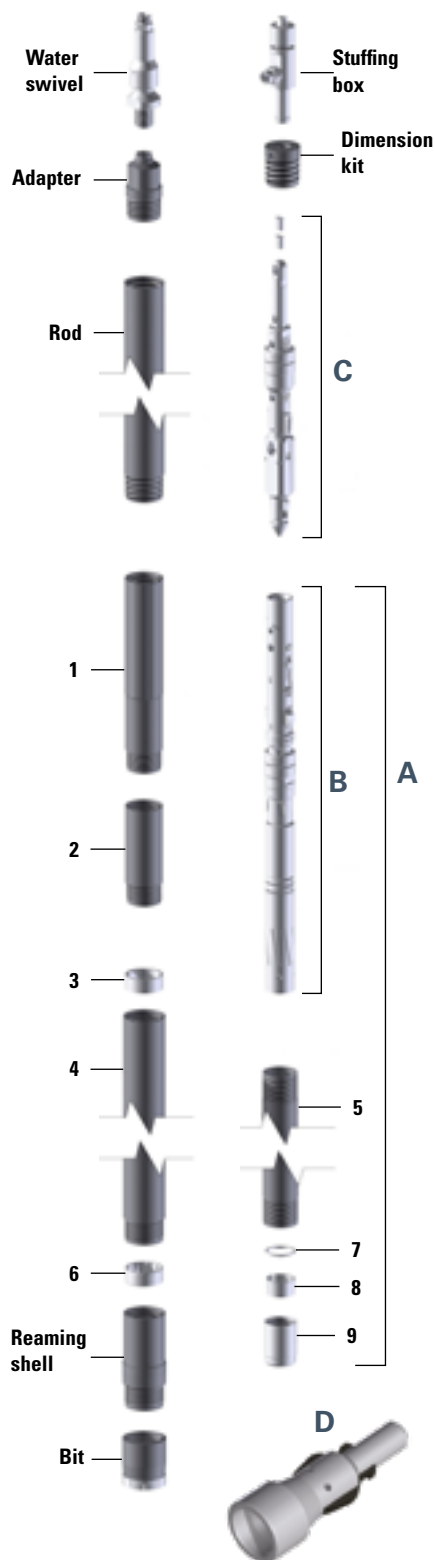
Underground OWL L-Latch Head Assembly

NU
N2U

Item	Description	Part Number		Qty
		NU Size	N2U Size	
–	Head Assembly - Surface	9469705673	9469705666	1
1	Spearhead point	9469705061		1
2	Compression spring	9469705063		1
3	Detent plunger	9469705064		1
4	Coiled spring pin 7/16" X 1"	9469705062		1
5	Spearhead base	9469705396		1
6	Spring pin	9469705065		2
7	Latch retracting case	9469705677		1
8	Hex bolt	9469705138		1
9	Spring pin 1/2" x 1-1/2"	9469705067		1
10	Latch spring washer	9469705436		1
11	Latch compression spring	9469705678		1
12	Spring pin 1/2" x 1-1/2"	9469705067		1
13	Link	9469705679		2
14	Latch	9469705404		2
15	Upper latch body L-Latch	9469705686		1
16	Piston ball valve	9469705627		1
17	Indicator bushing	9469705628		1
18	Adaptor	9469705683		1
19	Lip seal	9469705681		2
20	Seal seat	9469705682		1
21	Landing shoulder	3760005100	3760005241	1
22	Lower latch body	9469705452		1
23	Hex nut	9469705113		1
24	Spindle shaft	9469705408		1
25	Shut-off valve hard	9469705458		2
26	Valve adjusting washer	9469705409		2
27	Hanger bearing	9469705412		2
28	Spindle bearing	9469705411		1
29	Compression spring	9469705118		1
30	Stover lock nut	9469705414		1
–	Inner Tube Cap Assembly	9469705415		1
31	Inner tube cap	9469705459	9469705488	1
32	Grease fitting	9469705073		1
33	Stainless steel ball 22mm	3760012099		1
34	Check valve body	9469705072		1



Underground DiscovOre Core Barrel Assembly



Item	Description	Remarks	Part number
	Drill string component		HU core barrel
Water swivel	PRO18+ WS with HO pin	Select one to match rod type	3760016550
	PRO18+ WS with HT pin		3760016551
	PRO18+ WS with HMO pin		3760016552
	PRO18+ WS with HR pin		3760016553
Stuffing box	Stuffing box body	w/o rod adapter	8393081965
Stuffing box dimension kit	Dimension kit for HO rod	Select one to match rod type	8393081990
	Dimension kit for HT rod		3760015205
	Dimension kit for HMO rod		3760015754
	Dimension kit for HR rod		3760015757
Rod	Wireline drill rod	Different thread options	See options on page 102-103
1	Locking coupling UG - HO rod box	Select one to match drill rod thread type	9469712087
	Locking coupling UG - HT rod box		9469712417
	Locking coupling UG - HMO rod box		Contact your sales representative
	Locking coupling UG - HR rod box		9469712418
B,2-9	1.5 m / 5 ft core barrel assy	w/o locking coupling	3760017494
	3.0 m / 10 ft core barrel assy		3760017495
A	1.5 m / 5 ft inner tube assy complete		3760017383
	3.0 m / 10 ft inner tube assy complete		3760017382
B	Head assembly complete		3760017301
C	Overshot assembly complete		3760017351
D	NH loading Tool		3760017443
2	Adapter coupling		3760006045
3	Landing ring		3760006258
4	1.5 m / 5 ft outer tube		3760006046
	3.0 m / 10 ft outer tube		3760006047
5	1.5 m / 5 m inner tube		3760006048
	3.0 m / 10 ft inner tube		3760006049
6	Inner tube stabilizer		3760006259
7	Stop ring		3760006255
8	Core lifter		3760006256
9	Core lifter case		3760006257
Rshell	Reaming Shell	Different options	See diamond tools catalogue
Bit	Coring bit	Different options	See diamond tools catalogue

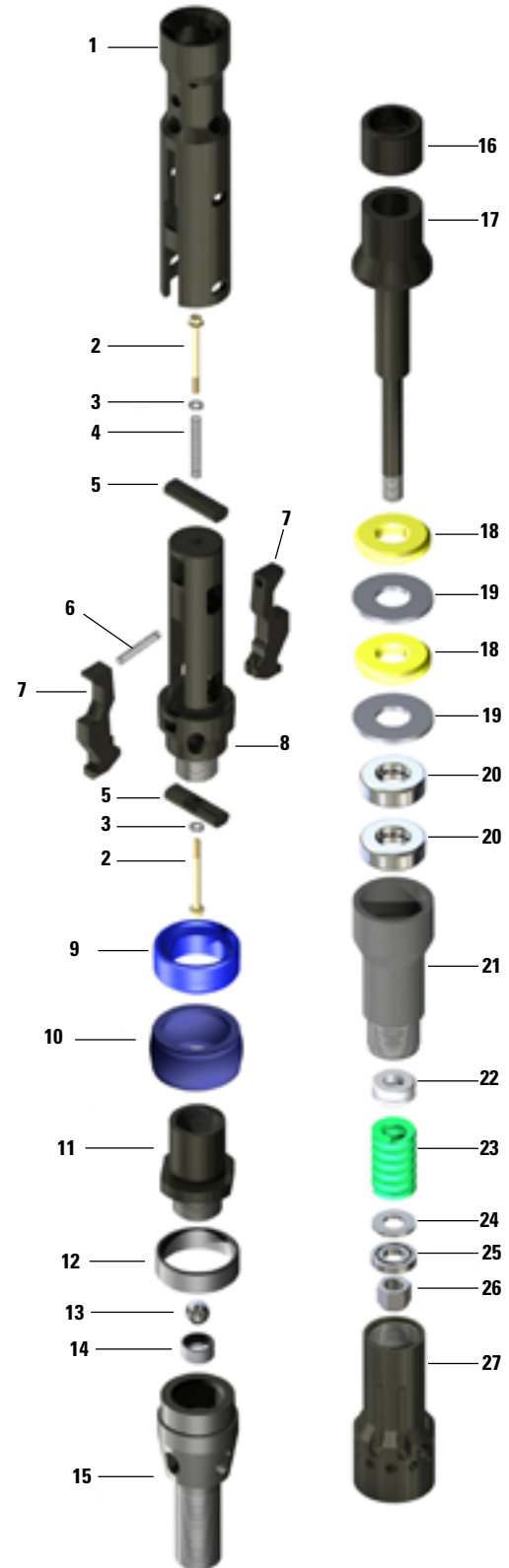
Note: Core barrel assemblies does not include locking coupling which needs to be ordered separately.

Underground DiscovOre Head Assembly

HU

Item	Description	Part Number	Qty
		HU Size	
–	HU DiscovOre Head assembly	3760017301	1
1	Retracting case	3760017318	1
2	Assembly bolt	3760017239	2
3	Wedge lock washer	3760017235	2
4	Spring – retracting case	3760017236	1
5	Assembly rod	3760017324	2
6	Spring – latch	3760017334	1
7	Latch	3760017317	2
8	Latch body	3760017333	1
9	Propulsion seal	3760017320	1
10	Lower propulsion seal	3760017340	1
11	Mid body – underground	3760017319	1
12	Landing shoulder	3760005150	1
13	22 mm stainless steel ball	3760012099	1
14	Landing indicator bushing 600psi	3760012100	1
15	Lower body	3760017311	1
16	Locknut – spindle	3760017212	1
17	Spindle	3760017322	1
18	Shut off valve – yellow	3760008379	2
19	Valve adjusting washer	3760006252	2
20	Thrust bearing	3760006471	2
21	Spindle bearing	3760017323	1
22	Hanger bearing	3760006462	1
23	Compression spring	3760006463	1
24	Washer - bearing	3760017230	1
25	Ball bearing	3760017234	1
26	Nyloc nut	3760017240	1
27	Inner tube cap assembly	3760017315	1

Note: Loading tool is required to insert the head into the drill string.



HU Core barrel spare part kits (2000m/6600 ft)

Description	Part Number
HU core barrel spare Part Kits (2000m/6600ft drilling)	
Spare parts kit head assembly	3760017348
Spare parts kit overshot	3760017367
Consumables kit core barrel. Universal components common for most DCDMA core barrels	3760016577

H/HU Core barrel consumables kit (2000m/6600 ft)

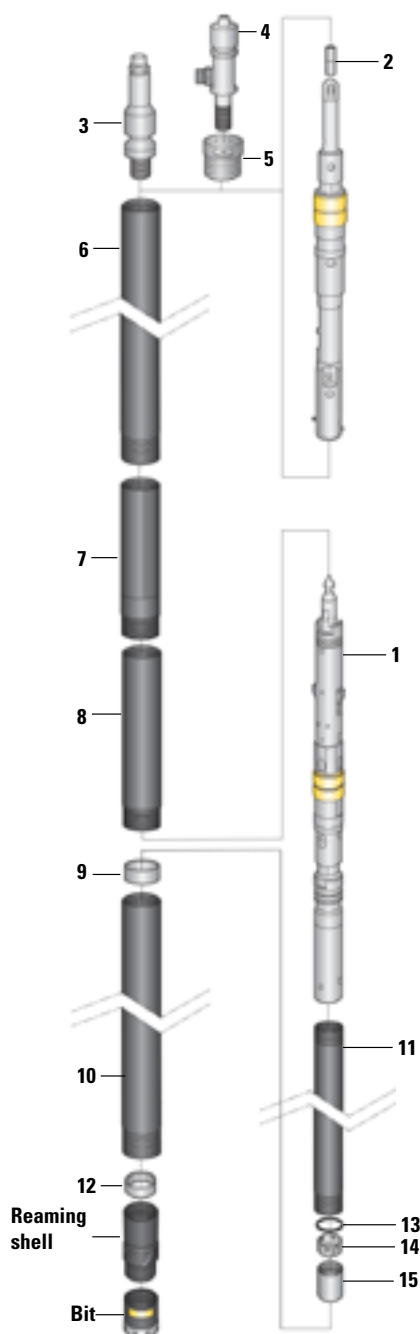
Description	Part Number	Qty
H/HU Core barrel consumables kit (2000 m / 6600 ft)	3760016577	1
Core lifter	3760006256	40
Core lifter case	3760006257	8
Landing ring	3760006258	4
Inner tube stabilizer	3760006259	4
Stop ring	3760006255	8

HU Head assy spare parts kits (2000m/6600 ft)

Description	Part Number	Qty
HU Head assy spare parts kit (2000 m / 6600 ft)	3760017348	1
H-D latch	3760017317	2
H-D assembly rod	3760017324	2
Assy bolt 1/4" x 20" flanged	3760017239	4
Wedge lock washer 1/4"	3760017235	4
Spring 0.360" x 0.051" x 3"	3760017236	3
Spring 0.360 x 0.042 x 1.750	3760017334	3
H hard shut off valve yellow	3760008379	2
22 mm stainless steel ball	3760012099	1
Landing indicator bushing 600psi	3760012100	6
H landing shoulder	3760005150	1
HU-D propulsion seal	3760017320	2
Lower propulsion seal	3760017340	2
Thrust bearing	3760006471	2
Hanger bearing	3760006462	1
Ball bearing	3760017234	1

See DiscovOre other accessories and head assembly conversion kits on pages 108-109.

Underground Excore Core Barrel Assembly



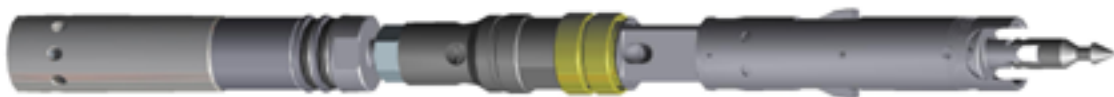
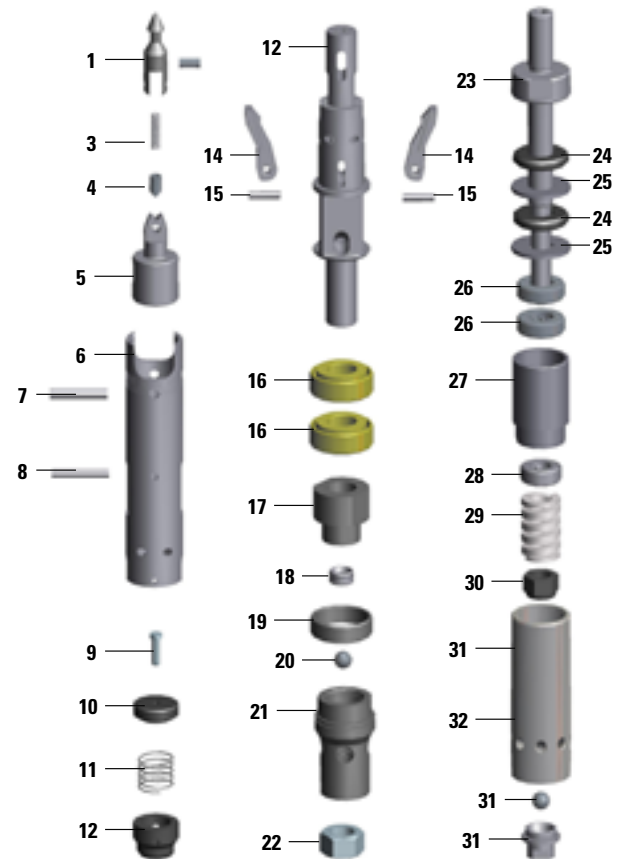
Item	Description	Part number
Core barrel options		HU core barrel
	1,5 m / 5 ft core barrel assembly complete	3760014455
	3,0 m / 10 ft core barrel assembly complete	3760014457
	1,5 m / 5 ft inner tube assembly complete	3760016051
	3,0 m / 10 ft inner tube assembly complete	3760016052
1	Head assembly complete	3760016050
Overshot		
2	Overshot assembly complete	3760016281
Water swivel		
3	PRO18+ WS with HO pin	3760016550
3	PRO18+ WS with HT pin	3760016551
3	PRO18+ WS with HMO pin	3760016552
3	PRO18+ WS with HR pin	3760016553
Stuffing box and dimension kit		
4	Stuffing box	8393081965
5	Dimension kit for HO rod	8393081990
5	Dimension kit for HT rod	3760015205
5	Dimension kit for HMO rod	3760015754
5	Dimension kit for HR rod	3760015757
Drill rods		
6	Wireline drill rod	See options on page 102-103
Consumables/accessories		
7	Locking coupling UG - HO rod box	9469712087
7	Locking coupling UG - HT rod box	9469712417
7	Locking coupling UG - HMO rod box	Contact your sales representative
7	Locking coupling UG - HR rod box	9469712418
8	Adapter coupling - long	3760015257
9	Landing ring	3760006258
10	1,5 m / 5 ft outer tube	3760006046
10	3,0 m / 10 ft outer tube	3760006047
11	1,5 m / 5 m inner tube	3760006048
11	3,0 m / 10 ft inner tube	3760006049
12	Inner tube stabilizer	3760006259
13	Stop ring	3760006255
14	Core lifter	3760006256
15	Core lifter case	3760006257
Full grip wrenches		
Inner tube wrenches		3760006032
Outer tube wrenches		3760006053

Note: Core barrel assemblies does not include locking coupling which needs to be ordered separately.

Underground Excure Head Assembly

HU

Item	Description	Part Number	Qty
–	HU Excure Head assembly complete	3760016050	1
1	Spearhead	3760015393	1
2	Spiral pin 7/16 x 1	3760004348	1
3	Detent compression spring	3760015394	1
4	Detent	3760015395	1
5	Spearhead base	3760014492	1
6	Latch retracting case	3760015671	1
7	Spring pin 1/2 x 2 3/4 LG	0108169146	1
8	Spring pin 3/8 x 2 3/4	3760014500	1
9	HHCS 3/8-16	3760013477	1
10	Spring guide	3760015677	1
11	Compression spring HD	3760014505	1
12	Latch piston	3760015676	1
13	Upper latch body	3760015884	2
14	Latch	3760015672	2
15	Spring pin 3/8 x 1 1/2	3760009916	2
16	Pump-in lip seal	3760012059	2
17	Latch body coupler	3760015885	1
18	Landing indicator bushing 600psi	3760012100	1
19	Landing shoulder	3760005150	1
20	22 mm stainless steel ball	3760012099	1
21	Lower latch body	3760015674	1
22	Lock nut 1 1/4 - 7 UNC	3268311500	1
23	Spindle	3760006250	2
24	Shut off valve - black	3760006251	2
25	Valve adjusting washer	3760006252	1
26	Bearing	3760006471	2
27	Spindle bearing	3760006253	1
28	Thrust bearing	3760006461	1
29	Compression spring	3760007765	1
30	Self locking nut 1 8 UNC	3760013004	1
31	Inner tube cap assembly (includes grease fitting)	3760006254	1
32	Grease fitting	9469705073	1



HU Core barrel spare part kits (1000m/3300 ft)

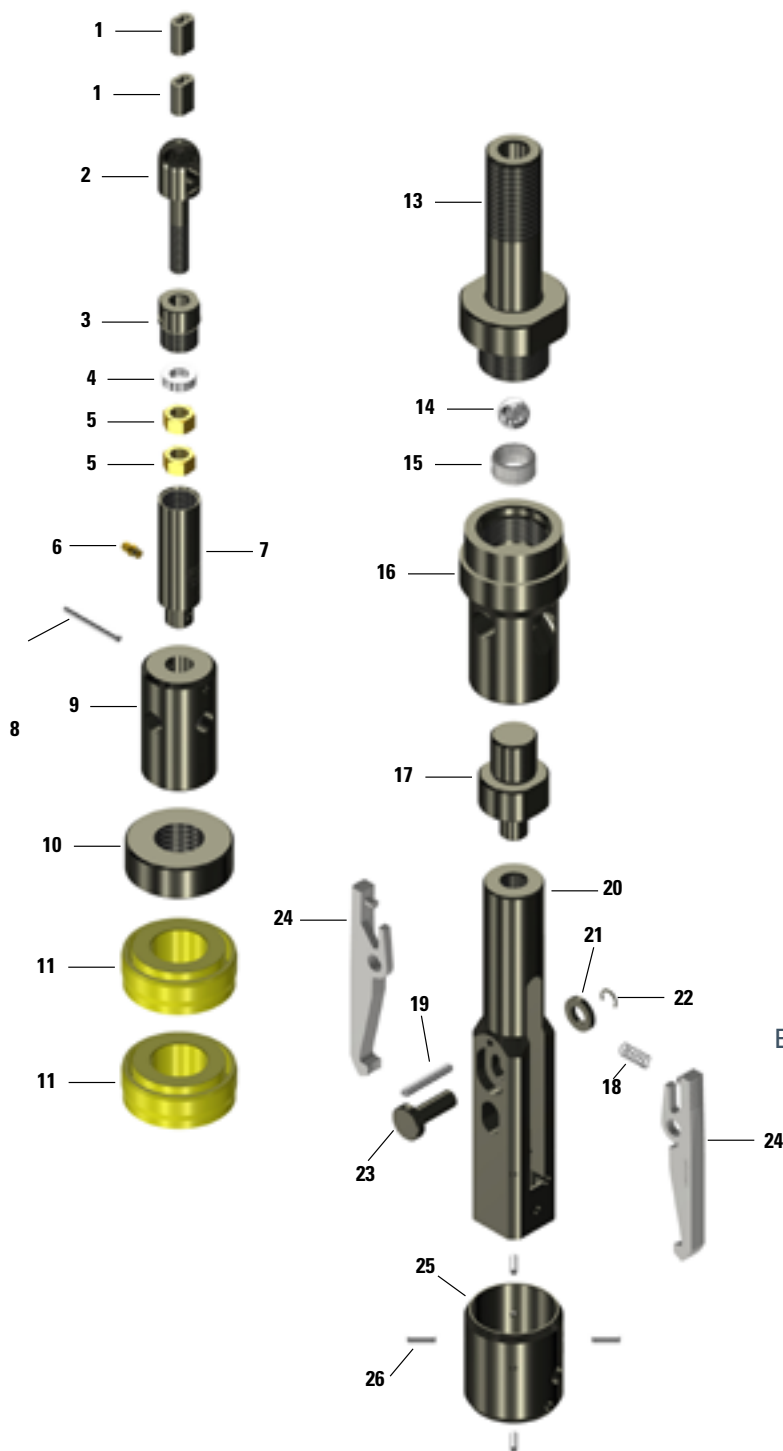
Description	Part Number	Qty
HU Core barrel spare part kits	3760015604	1
B/N/H Excore spearhead	3760015393	1
Spiral pin 7/16 x 1	3760004348	1
Excore detent compression spring	3760015394	1
B/N/H Excore detent plunger	3760015395	2
H/HU Excore compression spring HD	3760014505	2
H/HU Excore latch	3760015672	4
Spring pin 3/8 x 2 3/4	3760014500	2
Spring pin - 1/2 x 2 3/4 LG	9469705229	2
Spring pin - 1/4 x 2 3/4	3760014502	2
Spring pin - 3/8 x 1 1/4	9469705112	4
HHCS 3/8-16 UNC x 1 1/4 LG	3760013477	1
H landing shoulder 3 PLB	3760005150	1
H lock nut 1 1/4 7 UNC	3268311500	1
Bearing	3760006471	4
H spindle bearing	3760006253	1
Compresison spring H	3760007765	1
Thrust bearing	3760006461	1
Self locking nut 1 8 UNC	3760013004	1
1/4 grease fitting	9469705073	2
H core lifter - slotted	3760006256	20
H core lifter case	3760006257	4
H landing ring	3760006258	2
H inner tube stabilizer	3760006259	2
H/HU Excore latch piston	3760015676	1
Landing indicator bushing 600psi	3760012100	2
22 mm stainless steel ball	3760012099	1
H shut off valve - black	3760006251	4
H stop ring	3760006255	4
HU Excore pump-in lip seal	3760012059	4

H/HU Core barrel consumables kit (2000m/6600 ft)

Description	Part Number	Qty
H/HU Core barrel consumables kit (2000 m / 6600 ft)	3760016577	1
Core lifter	3760006256	40
Core lifter case	3760006257	8
Landing ring	3760006258	4
Inner tube stabilizer	3760006259	4
Stop ring	3760006255	8

Underground Excure II Overshot and Accessories

Excure II overshoot assembly - for all spearhead type core barrels



Item	Description	Part Number	Qty
-	HU Excure II overshoot assembly	3760016281	1
1-6	Excure II cable swivel assembly	3760016262	1
1	Nicopress sleeve oval	3760008244	2
2	Excure II eye bolt	3760016265	1
3	Cable swivel collar	3760007216	1
4	Bearing	3760006467	1
5	Nut 1/2 20 UNF GR8	3760012331	2
6	Grease fitting	9469705073	1
7	Cable swivel body	3760007767	1
8	Shear pin 3/16 x 3/16 x 1 11/16	3760006429	1
9	Valve cap	3760006425	1
10	Lock nut UNC 1 1/12-6	3760006426	1
11	Pump-in lip seal	3760012059	2
12	Valve adjusting washer (Not shown)	3760006237	1
13	Seal seat	3760015820	1
14	22 mm stainless steel ball	3760012099	1
15	Landing indicator bushing 600psi	3760012100	1
16	Lower latch body	3760015674	1
17	Overshot threaded adapter	3760015829	1
18	Lifting dog spring	3760006373	1
19	Spring pin 1/4 x 1 3/4	9469705725	1
20	N Excure II overshoot head	3760016244	1
21	Pivot pin retainer	3760016246	2
22	Retaining ring	3760015789	1
23	Excure II pivot pin	3760016249	1
24	Excure II lifting dog	3760016245	2
25	H Excure II overshoot adapter sleeve	3760016269	1
26	Spring pin 3/16 x 3/4 LG	3108169184	4

Excure II-U safety overshoot spare parts kit (1000m/3300 ft)

Description	Part Number	Qty
Excure II-U safety overshoot spare parts kit (1000 m/3300 ft)	3760016275	1
3/16 nicopress sleeve oval	3760008244	2
Bearing	3760006467	1
Nut Hex 1/2 20	3760012331	2
1/4 grease fitting	9469705073	1
HU Excure pump in lip seal	3760012059	4
B N H lifting dog spring	3760006373	4
22 mm stainless steel ball	3760012099	1
Spring pin 1/4 x 1 3/4 LG	9469705725	2
N H Excure pivot pin	3760016249	1
N H pivot pin retainer	3760016246	2
N H retaining ring safe over	3760015789	3
N H Excure II lifting dog	3760016245	2
Landing indicator bushing 600psi	3760012100	4
Pin 3/16 x 2	3760006429	2
HU lock nut	3760006426	1
HU Excure pump in lip seal	3760012059	4
Spring pin 3/16 x 3/4 LG	3108169184	8

* The lifting capacity rating has a safety factor of 5:1 engraved on the overshoot head which was independently tested on the the surface version only. The actual lift capacity on the underground assemblies is 450 kg with a safety factor of 4:1.

Underground Arrow 3S Overshot and Accessories

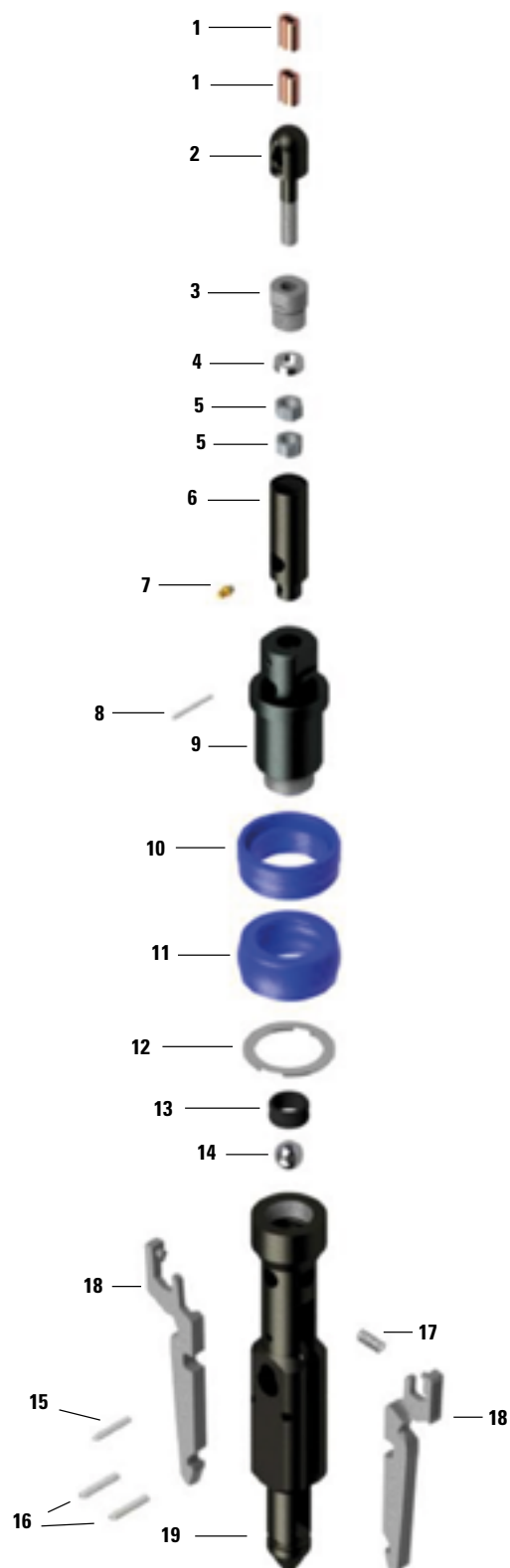
HU

HU Arrow 3S overshot assembly - for DiscovOre core barrels

Item	Description	Part Number	Qty
–	HU Overshot Assembly	3760017351	1
1–7	Cable swivel assembly	3760016415	1
1	Nicopress	3760008244	2
2	Eye bolt	3760016265	1
3	Cable swivel collar	3760007216	1
4	Thrust bearing	3760006467	1
5	Nut 1/2–20	3760012331	2
6	Cable swivel body	3760007767	1
7	Grease fitting	9469705073	1
8	Shear pin	3760006416	1
9	NU-A3S valve body	3760017362	1
10	Upper propulsion seal	3760017320	1
11	Lower propulsion seal	3760017340	1
12	HU-D backup washer	3760017332	1
13	Landing indicator bushing 600psi	3760012100	1
14	22 mm stainless steel ball	3760012099	1
15	1/4" spring pin	9469705725	1
16	5/16" coiled pin	3760017259	2
17	Spring – lifting dog	3760006373	1
18	Lifting dog – underground	3760017254	2
19	Overshot body	3760017261	1

HU Arrow 3S spare parts kits (2000m/6600 ft)

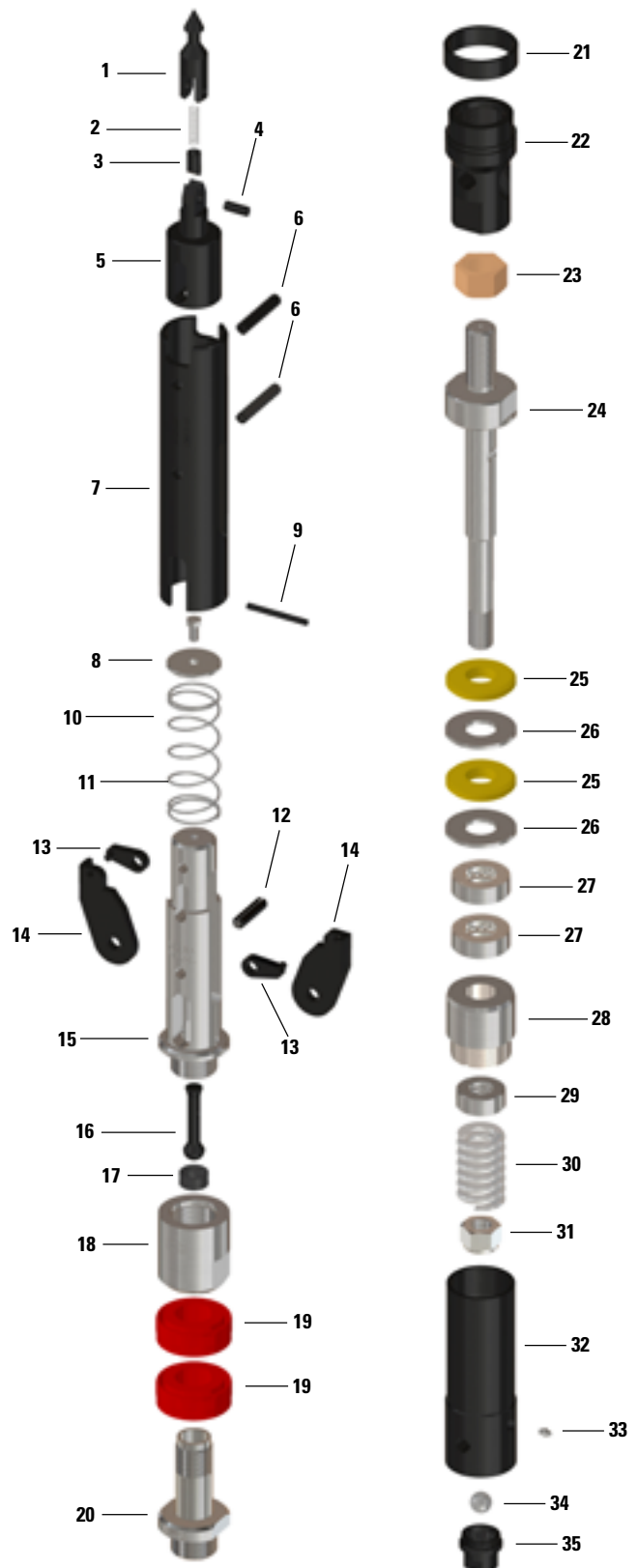
Description	Part Number	Qty
HU-A3S O/S Spare parts kit (2000 m / 6600 ft)	3760017367	1
NH-A3S lifting dog	3760017254	2
B N H lifting dog spring	3760006373	2
22 mm stainless steel ball	3760012099	1
Landing indicator bushing 600psi	3760012100	6
Botwu shear pin 3/16 x 1 11/16	3760006416	4
HU-D propulsion seal	3760017320	2
3/16" nicopress sleeve oval	3760008244	2
Pin coiled spring 5/16 x 1 1/2	3760017259	2
Lower propulsion seal	3760017340	2



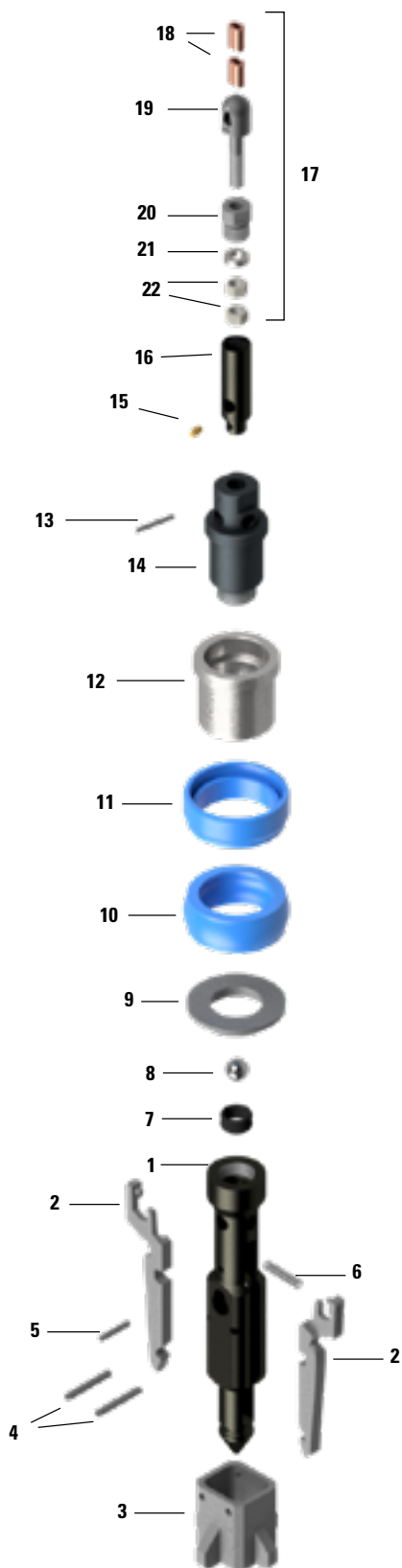
Underground OWL L-Latch Head Assembly

HU

Item	Description	Part Number	Qty
		HU Size	
–	Head Assembly - Surface	9469712463	1
1	Spearhead point	9469705061	1
2	Compression spring	9469705063	1
3	Detent plunger	9469705064	1
4	Coiled spring pin 7/16" X 1"	9469705062	1
5	Spearhead base	9469705228	1
6	Coiled pin 1/2" x 2-3/4"	9469705282	2
7	Latch retracting case	9469706907	1
8	Hex bolt	9469705138	1
9	Spring pin 1/4" x 2-3/4"	9469706388	1
10	Latch spring washer	9469705269	1
11	Latch compression spring	9469706916	1
12	Spring pin	9469705065	1
13	Link	9469706924	2
14	Latch	9469705237	2
15	Upper latch body L-Latch	9469706911	1
16	Piston ball valve	9469712445	1
17	Indicator bushing	9469705628	1
18	Adaptor	9469712447	1
19	Lip seal	9469705658	2
20	Seal seat	9469712446	1
21	Landing shoulder	3760005150	1
22	Lower latch body	9469705285	1
23	Hex nut	9469705242	1
24	Spindle shaft	9469705243	1
25	Shut-off valve hard	9469705292	2
26	Valve adjusting washer	3760006252	2
27	Thrust bearing	9469705410	2
28	Spindle bearing	9469705246	1
29	Hanger spring	9469705118	1
30	Compression spring	3760007765	1
31	Stover lock nut	9469705248	1
–	Inner Tube Cap Assembly	9469705249	1
32	Inner tube cap	9469705293	1
33	Grease fitting	9469705073	1
34	Stainless steel ball 22mm	3760012099	1
35	Check valve body	9469705072	1



Underground Arrow 3S Overshot and Accessories



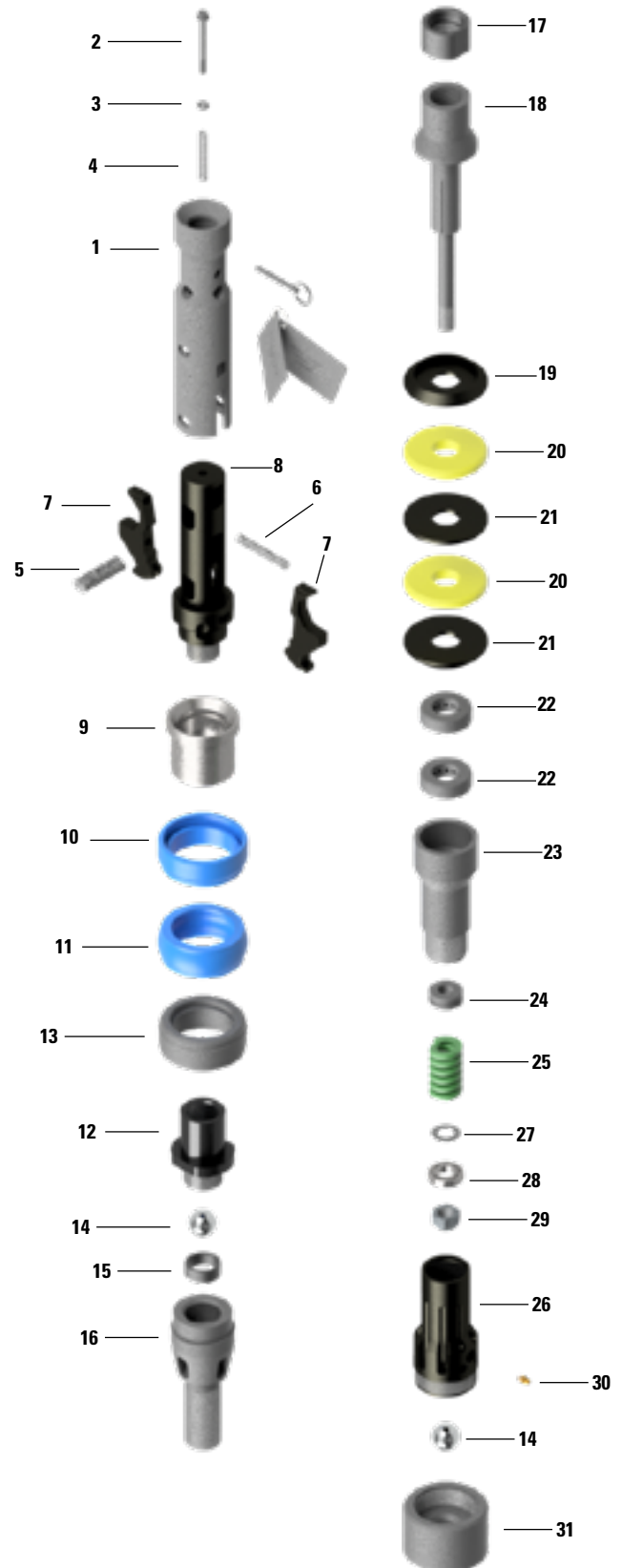
PU Arrow 3S overshoot assembly - for DiscovOre core barrels

Item	Description	Part Number	Qty
–	PU Overshoot Assembly	3760017551	1
1	Overshoot body	3760017261	1
2	Lifting dog – underground	3760017254	2
3	Centralizer	3760017675	1
4	5/16" coiled pin	3760017676	2
5	Spring pin 1/4 X 1-1/2	9469706671	1
6	Spring – lifting dog	3760006373	1
7	Landing indicator bushing 600psi	3760012100	1
8	22 mm stainless steel ball	3760012099	1
9	Backup washer	3760017674	1
10	Lower seal	3760017670	1
11	Propulsion seal	3760017671	1
12	Valve body sleeve	3760017673	1
13	Shear pin	3760006416	1
14	HU-D valve body	3760017362	1
15	Grease fitting	9469705073	1
16	BOU/NOU/HOU cable swivel body	3760007767	1
17	Cable swivel assembly	3760016262	1
18	3/16" nicopress sleeve oval	3760008244	2
19	Eye bolt	3760016265	1
20	Cable swivel collar	3760007216	1
21	Bearing	3760006467	1
22	Nut 1/2–20	3760012331	2

Underground DiscovOre Head Assembly

PU

Item	Description	Part Number	Qty
		PU Size	
–	PU DiscovOre Head assembly	3760017501	1
1	Retracting case	3760017318	1
2	Assembly bolt	3760017239	1
3	Wedge lock washer	3760017235	1
4	Spring – retracting case	3760017236	1
5	Assembly rod	3760017324	1
6	Spring – latch	3760017585	1
7	Latch	3760017555	2
8	Latch body	3760017333	1
9	Mid body sleeve	3760017672	1
10	Propulsion seal	3760017671	1
11	Lower seal	3760017670	1
12	Mid body – underground	3760017319	1
13	Landing shoulder	3760017529	1
14	1 1/4 " steel ball	3760017523	2
15	Landing indicator bushing low psi	3760017531	1
16	Lower body	3760017511	1
17	Locknut spindle	3760017212	1
18	Spindle	3760017322	1
19	Valve washer	3760017512	2
20	Shut off valve	3760016291	2
21	Valve adjusting washer	3760016290	1
22	Thrust bearing	3760006471	2
23	Spindle bearing	3760017323	1
24	Bearing hanger	3760006462	1
25	Compression spring	3760006463	1
26	Inner tube cap body	3760017513	1
27	Washer - bearing	3760017230	1
28	Ball bearing	3760017234	1
29	Stover locknut	3760013003	1
30	Grease fitting	9469705073	1
31	Adapter check valve	3760017518	1
32	Een cap PWL	9469705611	1
33	Safety pin	3760017291	1
34	3/4" tag holder	9469706071	1
35	PU-D safety warning tag	3760017682	1
36	Generic UG safety warning tag	9469705656	1



PU Core barrel spare part kits (2000m/6600 ft)

Description	Part Number
PU core barrel spare Part Kits (2000m/6600ft drilling)	
Spare parts kit head assembly	3760017677
Spare parts kit overshot	3760017679
Consumables kit core barrel. Universal components common for most DCDMA core barrels	3760017520

PU Arrow 3S spare parts kits (2000m/6600 ft)

Description	Part Number	Qty
PU-A3S O/S Spare parts kit (2000 m / 6600 ft)	3760017679	1
NH-A3S lifting dog	3760017254	2
BO NO HO lifting dog spring	3760006373	2
22mm stainless steel ball	3760012099	1
Landing indicator bushing	3760012100	6
Shear pin - BOU/NOU overshot	3760006416	4
PU-D propulsion seal	3760017671	2
PU-D lower seal	3760017670	2
Coiled spring pin, 5/16 x 2 1/4 Lg	3760017676	2
3/16" nicopress sleeve oval	3760008244	2
PU-A3S centralizer	3760017675	1

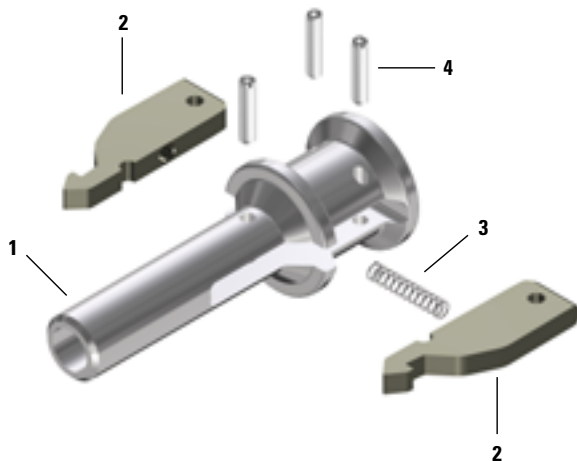
PU Head assy spare parts kits (2000m/6600 ft)

Description	Part Number	Qty
PU Head assy spare parts kit (2000 m / 6600 ft)	3760017677	1
P-D flat latch	3760017555	2
H-D assembly rod	3760017324	2
1/4-20 x 3 GR.8 flanged hex	3760017239	2
Wedge lock washer 1/4"	3760017235	2
Spring 0.360" X 0.051" X 2.5"	3760017236	2
Spring 0.360" X 0.258" X 3.000" Lg	3760017585	2
PO EX shut off valve	3760016291	2
1-1/4 stainless steel ball	3760017523	1
1-1/4 bushing - low psi	3760017531	6
P-D landing shoulder	3760017529	1
PU-D propulsion seal	3760017671	2
PU-D lower seal	3760017670	2
Thrust bearing	3760006471	2
Hanger bearing	3760006462	1
Ball bearing 1 5/8" x 3/4" x 5/16"	3760017234	1

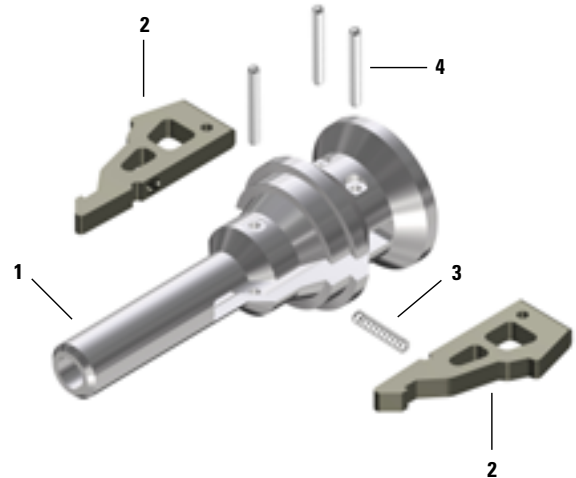
Underground DiscovOre Accessories

Loading Tools

Item	Description	Part Number	Qty
–	B Loading Tool Assembly	3760017470	1
1	B loading tool body	3760017467	1
2	B loading tool latch	3760017468	2
3	Latch spring	3760017237	1
4	Spring pins	3760017459	3



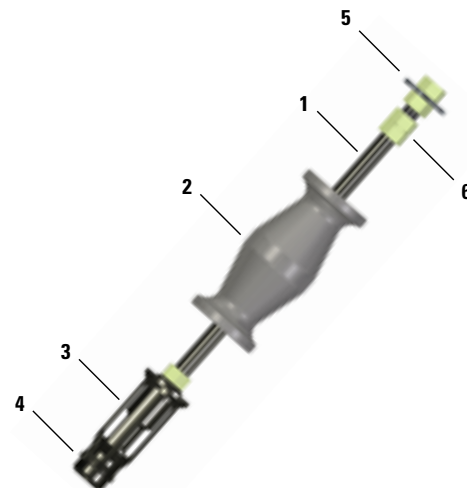
Item	Description	Part Number	Qty
–	NH Loading Tool Assembly	3760017443	1
1	NH loading tool body	3760017444	1
2	NH loading tool latch	3760017445	2
3	Latch spring	3760017237	1
4	Spring pins	5530832600	3



Loading indicator bushing removal tool

Item	Description	Part Number	Qty
–	Landing Indicator Bushing Removal Tool Assembly	3760017157	1
1	Bushing puller rod	3760017151	1
2	Bushing puller slide	3760017152	1
3	Bushing puller shaft	3760017153	1
4	Bushing puller collet	3760017154	1
5	Bushing puller install washer	3760017155	1
6	Hex nut	3760017156	5

To easily replace landing indicator bushing in head assembly use above removal tool.



Survey instrument spearhead replacement assembly

Description	Part Number
B spearhead replacement assembly	3760017534
N spearhead replacement assembly	3760017540
H/P spearhead replacement assembly	3760017544

To use Arrow 3S overshoot with existing borehole survey instruments, use above Arrow 3S adapter assembly.



Underground DiscovOre Head Assembly Conversion Kits

Surface to underground kits

Description	Part Number	Qty
B to BU head assembly conversion kit	3760017446	1
BUD mid body	3760017419	1
BUD landing shoulder	3760017421	1
BUD upper propulsion seal	3760017420	1
BUD lower propulsion seal	3760017479	1
Assembly bolt	3760017437	1
Assembly rod	3760017424	1
Wedge lock washer	3760017235	1

Description	Part Number	Qty
N2 to N2U head assembly conversion kit	3760017337	1
NUD mid body	3760017224	1
NU2D landing shoulder	3760017241	1
NUD lower propulsion seal	3760017341	1
NUD upper propulsion seal	3760017225	1
Assembly bolt	3760017239	1
Assembly rod	3760017228	1
Wedge lock washer	3760017235	1
N2 landing ring	3760006329	1

Description	Part Number	Qty
N to NU head assembly conversion kit	3760017336	1
NUD mid body	3760017224	1
NUD landing shoulder	3760017264	1
NUD lower propulsion seal	3760017341	1
NUD upper propulsion seal	3760017225	1
Assembly bolt	3760017239	1
Assembly rod	3760017228	1
Wedge lock washer	3760017235	1

Description	Part Number	Qty
H to HU head assembly conversion kit	3760017344	1
HUD mid body	3760017319	1
HUD lower propulsion seal	3760017340	1
HUD upper propulsion seal	3760017320	1
Assembly bolt	3760017239	1
Assembly rod	3760017324	1
Wedge lock washer	3760017235	1

Underground to surface kits

Description	Part Number	Qty
NU to N head assembly conversion kit	3760017246	1
N-D mid body	3760017223	1
NO landing shoulder	3760005100	1

Description	Part Number	Qty
HU to H head assembly conversion kit	3760017346	1
H mid body	3760017325	1

Description	Part Number	Qty
N2U to N2 head assembly conversion kit	3760017338	1
ND mid body	3760017223	1
NO2 landing shoulder	3760005241	1

Description	Part Number	Qty
N to N2 head assembly conversion kit	3760017244	1
N2-D innertube cap assembly	3760017243	1
NO2 landing shoulder	3760005241	1
N2 landing ring	3760006329	1

To convert underground head assembly (NU, N2U or HU) to down hole version, replace the mid body on the head assembly (and landing shoulder on N and N2) to eliminate the drag from the propulsion seals for faster round trips.

Underground Locking Coupling Options

Underground Locking Coupling Options



Rod type	Carbide	Diamond	Welded	Hex/Full-hole
BO	9469704740	9469715075	9469705644	9469712084
BT	9469704736			9469712415
BMO				*On request
BR		3760014229		9469712416
NO	9469704762	9469715076	9469705423	9469712081
NT	9469704761	9469715077	9469706780	9469712385
NMO		9469715074		*On request
NR		3760014275		9469712386
HO	9469704750	3760016499	9469706921	9469712087
HT				9469712417
HMO				*On request
HR		3760014310		9469712418

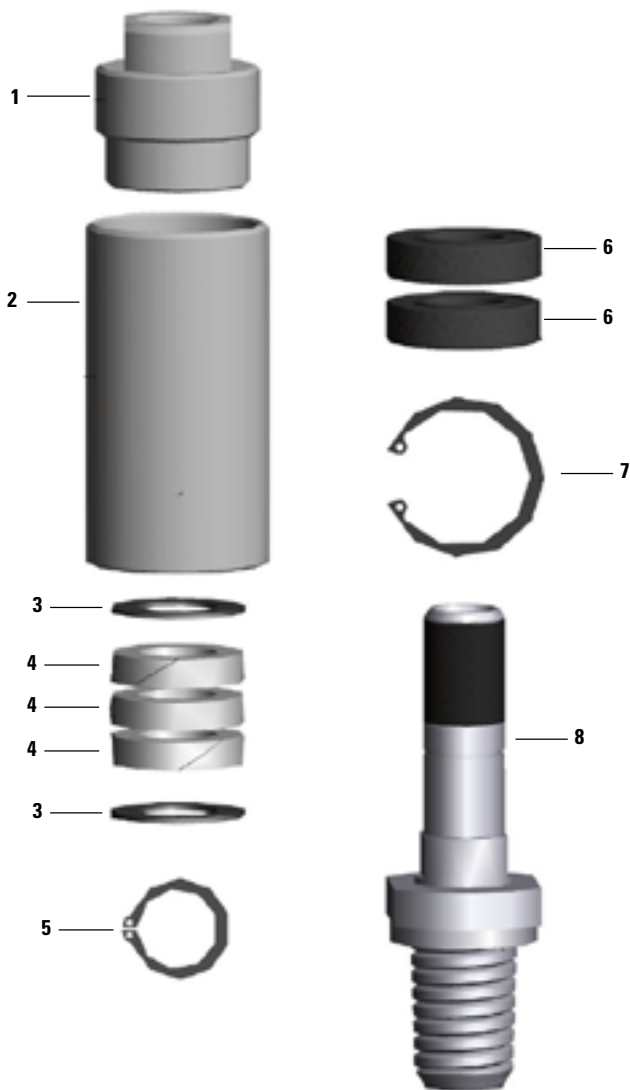


Other options may be available. If the part number does not appear on this chart, please contact your sales representative.

All models are manufactured with no tang.

Underground

AWJ Teflon & Ceramic Water Swivel



AWJ Teflon & Ceramic Water Swivel

Item	Description	Part Number	Qty
1-8	AWJ Teflon and Ceramic (T.C) water swivel	3760008363	1
1	Gland nut	3760008358	1
2	Water swivel body	3760008362	2
3	Gland washer	3760008360	1
4	Packing (Set of 3)	3760008359	1
5	External snap ring	3760008246	2
6	Bearing	3760008526	1
7	Internal snap ring	0335214300	1
8	Spindle (teflon coated)	3760008361	1
Not shown	Trido mud pump hose adapter 3/4 NPT to JIC 12	3760009926	1

Data

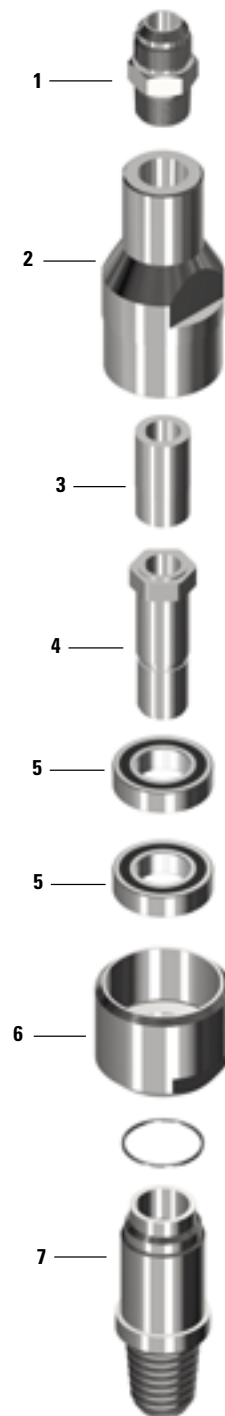
Unit length	190,5 mm	7.5 in
Spindle I.D.	15,8 mm	0.62 in
Spindle diameter	26,9 mm	1.06 in
Max RPM	2500	
Inlet hose connection	3/4 in NPT	
Spindle rod thread	AWJ	
Adjustable packing: turn top brass nut counter clockwise		
No greasing required	2 sealed bearings	

Underground Pro 18+ Water Swivel

PRO 18+ Water swivel

Item	Description	Part Number	Qty
1-7	PRO 18+ Water swivel assembly	See chart below	1
1	Hose fitting	3760009926	1
2	Housing	3760016537	1
3	Stationary seal	3760015090	1
4	Rotary sleeve	3760015089	1
5	Sealed bearing	3760008526	2
6	Bearing cap	3760016538	1
7	Swivel coupling	See chart below	1

Rod Connection	Part Number	
	Water swivel – compl. 1 – 7	Swivel coupling
AW	3760016554	3760004471
AWJ	3760016555	3760005656
AT	3760016556	3760003115
AO	3760016557	3760003931
ATT	3760016558	3760001083
ATW (AGM)	3760016559	3760004462
BT	3760016546	3760000902
BO	3760016545	3760004464
BTT	3760016548	3760003936
BTW (BGM)	3760016549	3760008515
NT	3760016541	3760000565
NO	3760016540	3760000699
NMO	3760016542	3760015308
NTW	3760016544	3760015696
HMO	3760016552	3760015217
HT	3760016551	3760011980
HO	3760016550	3760015320
BR	3760016547	3760014043
NR	3760016543	3760014044
HR	3760016553	3760014045
BWJ	3760016561	3760005653
BMO	3760016563	3760015639
HTW	3760016564	3760015697
BT2S	3760016566	3760014540
NT2S	3760016567	3760014193
HT2S	3760016568	3760014520
CR42	3760016569	3760017183
BO with chuck stop	3760016565	3760014428



PRO 18+ Water swivel repair kit

Item	Description	Part Number	Qty
-	PRO18+ Water swivel repair kit	3760016560	1
3	Stationary seal	3760015090	1
4	Rotary sleeve	3760015089	1
5	Sealed bearing	3760008526	2

Data

Unit length	147 mm	5.8 in
Spindle I.D.	18 mm	0.7 in
Max RPM	1800	
Inlet hose connection	JIC12	
Tungsten carbide mechanical sela, with rubber spring		
No greasing required	2 sealed bearings	

Underground Pro 25+ Water Swivel

PRO 25+ Water swivel

Item	Description	Part Number	Qty
1-7	PRO 25+ Water swivel assembly	See chart below	1
1	Hose fitting - #16 JIC male	3760016064	1
2	Bearing housing	3760016303	1
3	Stationary seal	3760016301	1
4	Rotary seal	3760016302	1
5	Sealed ball bearing	3760015218	2
6	Bearing cap	3760016304	1
7	Swivel coupling	See chart below	1

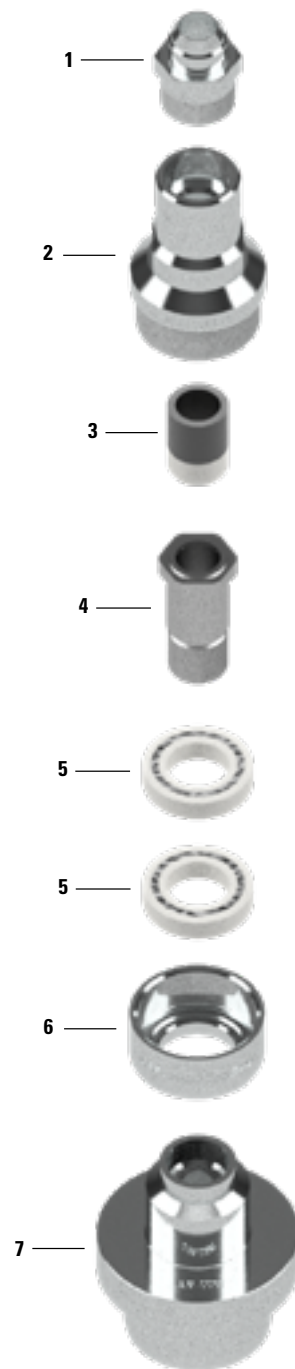
Rod Connection	Part Number	
	Water swivel – compl. 1 – 7	Swivel coupling
NO	3760015219	3760016305
NMO	3760015223	3760016066
NR	3760015224	3760016306
NT	3760015225	3760016307
NT2S	3760015226	3760016308
NTW	3760015227	3760016067
HO	3760015228	3760016310
HMO	3760015229	3760016311
HR	3760015230	3760016312
HT	3760015231	3760016055
HTW	3760015233	3760016068
PMO	3760015235	3760016061

PRO 25+ Water swivel repair kit

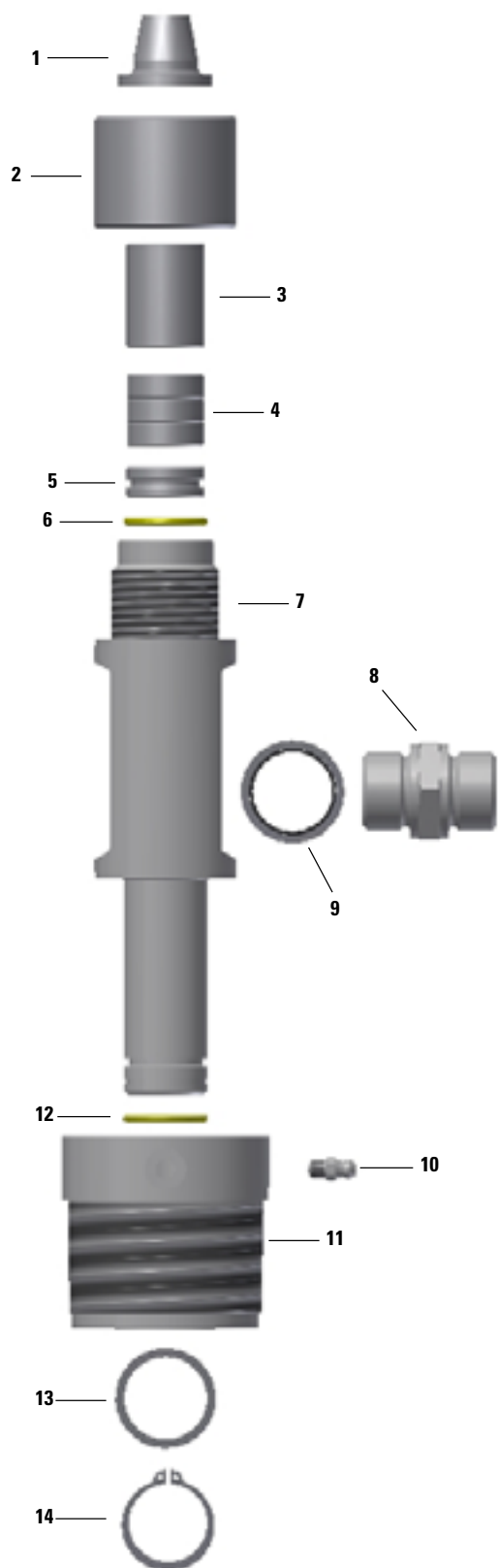
Item	Description	Part Number	Qty
-	PRO25+ Water swivel repair kit	3760015240	1
3	Stationary seal	3760016301	1
4	Rotary sleeve	3760016302	1
5	Sealed bearing	3760015218	2

Hose fitting options

Item	Description	Part Number	Qty
1	Hose fitting - #12 JIC male	3760016065	1
2	Hose fitting - #16 JIC male	3760016064	1
3	Hose fitting - #20 JIC male	3760012314	1



Underground Standard Stuffing Box



The Standard Stuffing Box is used in most situations when pumping-in overshot with attached wireline to retrieve inner tube. If wireline has been spliced after breakage much more efficient solution is to use Rotating Pump Trough stuffing box presented on following pages.

When ordering a stuffing box assembly, you must select (1) dimension kit with the appropriate drill rod thread, (1) seal kit to suit your application. Dimension kits are interchangeable to suit your changing drill rod requirements. We recommend that you also purchase additional seals (item 4) and guides (items 1 and 3) as these are high wear items.

Stuffing Box

Item	Description	Part Number	Qty
1-9	Stuffing box complete	8393081965	1
1-3-6	Seal kit	See chart below	1
2	Head screw	8393081783	1
7	Housing	8393081782	1
8	Nipple	3715254500	1
9	Seal washer	0661103800	1
10-14	Dimension kit	See chart below	1

Seal kit

Item	Description	Part Number		Qty
		5 mm cable	5-6 mm cable	
-	Stuffing box seal kits	8393081985	8393082109	1
1	Guide	8393081804	8393082106	1
3	Guide	8393081784	8393082105	1
4	Seal	8393081960	8393082107	3
5	Piston	8393081961	8393082108	1
6	O-ring	3663210988	3663210988	1

Underground Standard Stuffing Box

Dimensions kit

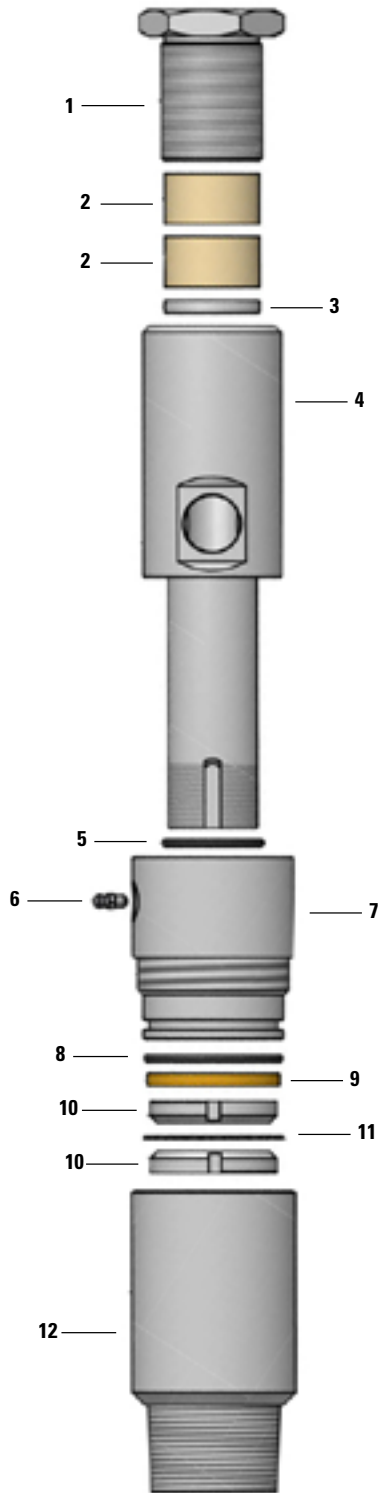
Description		Lubricating nipple	Swivel adapter	O-ring	Washer	Circlip
Item		10	11	12	13	14
Adapter size	Complete dimension kit	Part No.				
ATW	8393081966	3544586500	8393081785	3663210120	8393082243	0335113000
BTW	8393081987	3544586500	8393081984	3663210120	8393082243	0335113000
BTT	3760015201	3544586500	3760015202	3663210120	8393082243	0335113000
BO	8393081986	3544586500	8393081981	3663210120	8393082243	0335113000
BMO	3760015750	3544586500	3760015749	3663210120	8393082243	0335113000
BT	3760015114	3544586500	3760008568	3663210120	8393082243	0335113000
BR	3760015755	3544586500	3760014313	3663210120	8393082243	0335113000
NO	8393081988	0544110009	8393081982	3663210120	8393082243	0335113000
NMO	3760015752	0544110009	3760015751	3663210120	8393082243	0335113000
NT	3760015115	0544110009	3760008569	3663210120	8393082243	0335113000
NR	3760015756	0544110009	3760014314	3663210120	8393082243	0335113000
HO	8393081990	0544110009	8393081983	3663210120	8393082243	0335113000
HMO	3760015754	0544110009	3760015753	3663210120	8393082243	0335113000
HT	3760015205	0544110009	3760015206	3663210120	8393082243	0335113000
HR	3760015757	0544110009	3760014315	3663210120	8393082243	0335113000



Stuffing box repair kit

Description	Part Number		Qty
	5 mm cable	5-6 mm cable	
Stuffing box repair kit	3760016597	3760016598	1
Guide	8393081804	8393082106	1
Guide	8393081784	8393082105	1
Seal	8393081960	8393082107	9
Piston O-ring	3663210988		3
Adapter O-ring	3663210120		3
Nipple washer G 3/4"	0661103800		3
Adapter washer 28 x 34 x 1.5 mm	8393082243		3
Circlip	0335113000		3

Underground Rotating Pump Through Stuffing Box



Rotating Pump Through Stuffing Box

Item	Description	Part Number	Qty
-	B0 Rotating Pump Through Stuffing Box	9469711921	1
-	BT Rotating Pump Through Stuffing Box	9469712050	1
-	BR Rotating Pump Through Stuffing Box	9469712049	1
-	NO Rotating Pump Through Stuffing Box	9753247679	1
-	NT Rotating Pump Through Stuffing Box	9469712052	1
-	NR Rotating Pump Through Stuffing Box	9469712051	1
-	HO Rotating Pump Through Stuffing Box	9753247970	1
-	HT Rotating Pump Through Stuffing Box	9469712054	1
-	HR Rotating Pump Through Stuffing Box	9469712053	1
-	PMO(HWT) Rotating Pump Through Stuffing Box	9469712055	1
1	Cable packing nut	9469711983	1
2	Cable packing	9753248043	2
3	Cable packing washer	9469711981	1
4	Stationary body	9469711980	1
5	O-ring	9469711979	1
6	Grease zerk	9469711978	1
7	Rotating body	9469711977	1
8	O-ring	9469711976	1
9	Brass thrust washer	9469711975	1
10	Locking nut	9469711973	2
11	Locking washer	9469711974	1
12	B0 Adapter sub	9469711971	1
12	BT Adapter sub	9469712057	1
12	BR Adapter sub	9469712056	1
12	NO Adapter sub	9469711972	1
12	NT Adapter sub	9469712059	1
12	NR Adapter sub	9469712058	1
12	HO Adapter sub	9753248173	1
12	HT Adapter sub	9469712061	1
12	HR Adapter sub	9469712060	1
12	PMO(HWT) Adapter sub	9469712062	1

Underground Rotating Pump Through Stuffing Box

The Rotating Pump Through (RPT) stuffing box allows to use spliced wireline cable. The splices (nico press) can pass through cable packing nut (1) and packings (2). That solution saves significant amount of time when working with spliced wireline cable.

Note: the cable packing nut (1) hole has 16mm/0.625" diameter. Use as small size splices as possible to extend life of packings.

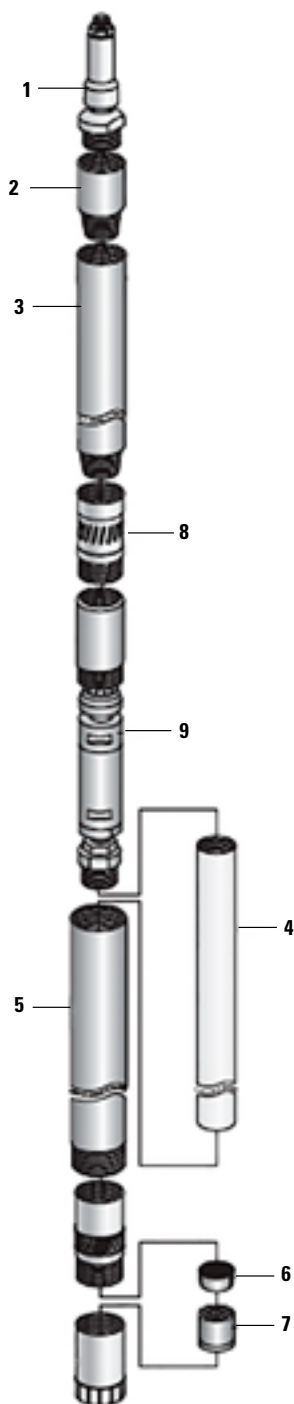
RPT Stuffing Box Rebuild Kit

Description	Part Number	Qty
RPT Stuffing Box Rebuild Kit	9469711984	1
Locking nut	9469711973	2
Locking washer	9469711974	1
Brass thrust washer	9469711975	1
O-ring	9469711979	1
O-ring	9469711976	1
Cable packing	9753248043	2



48TT

Underground Conventional Core Barrel System



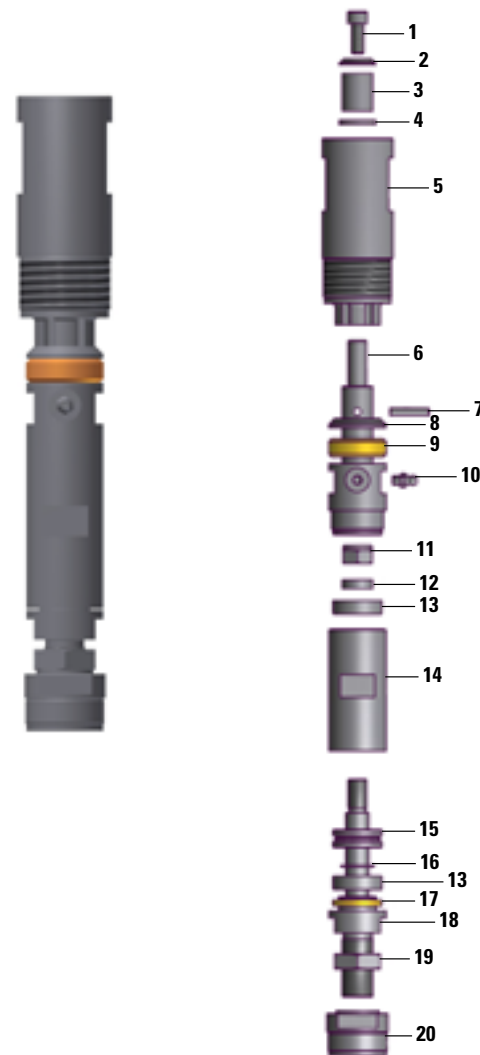
Item	Description	Kg	Lbs	Part Number
4-10	Complete 1,5 m core barrel box AWJ	10,5	23.148	8393081056
4-10	Complete 3,0 m core barrel box AWJ	17,5	38.580	8393081162
Water swivels				
1	AWJ Water swivel	1,95	4.299	3760008363
2	Spindle adapter (incl. in AWJ water swivel)	0,64	1.410	3760008361
Drill rods				
3	AWJ x 500 m compolite drill rod	2,59	5.709	8393081166
3	AWJ x 1500 m compolite drill rod	6,5	14.330	8393081167
3	AWJ x 3000 m compolite drill rod	12,0	26.455	8393081168
Consumables				
4	Inner tube, 1,5 m	2,4	5.291	8393081016
4	Inner tube, 3,0 m	4,73	10.427	8393081055
5	Outer tube, 1,5 m	4,3	9.479	8393081035
5	Outer tube, 3,0 m	8,2	18.077	8393081036
6	Core lifter	0,016	0.035	3863216500
7	Core case	0,09	0.198	8393081050
8	Stabilizer	0,81	1.785	8393081059
9	48TT core barrel head assembly	2,38	5.247	8393081186
10	Thread protector (not shown)	-	-	8393081117
Accessories				
AWJ Rod box to AW casing pin		3,9	8.598	3760011368
Sub AWJ box to CR 42 pin		0,64	1.410	3862669400
Recovery tap 30-42 mm box CR 42		1,19	2.623	3862587400
Full grip wrenches				
Inner tube wrench		8393081389		
Outer tube wrench		9469710216		

System information		
	Metric system (mm)	Imperial system (in)
Hole diameter	48,000	1.890
Core diameter	35,300	1.390
AWJ		

Underground Conventional Core Barrel System

48TT

Item	Description	Part Number	Qty
-	Head assembly	8393081186	1
1	SHCS M8 x 1.25 x 20 mm LG	0211132300	1
2	End washer	8393081165	1
3	Plastic spring	8393081163	1
4	Washer	8393081164	1
5	Coupling AWJ	8393081049	1
6	Guide shaft	8393081052	1
7	Spirol pin 5 x 26 mm	0108329800	1
8	Washer	8393081051	1
9	Shut off valve	8393081103	1
10	Lube nipple M6	0544210600	1
11	Lock nut	0291111200	1
12	Washer	8393081603	1
13	Ball bearing	0502110200	1
14	Bearing housing	8393081054	2
15	Thrust bearing	0510040200	1
16	Spacer 22 x15 x 1 mm	0324155117	1
17	Seal	9469712423	1
18	Bearing shaft	8393081057	1
19	Hex nut	0261109911	1
20	Inner tube adapter	8393081058	1



Consumable kit (500 m) – 8393081200

Core barrel consumable kit covers wearing parts based on experience is estimated to cover 500 m of drilling. Minimum one set is recommended to be ordered with one core barrel system but will depend on the drilling program and location of the drill.

Description	Part Number	Qty
Core lifter	3863216500	10
Core lifter case	8393081050	6

Spare parts kit (500 m) – 3760015999

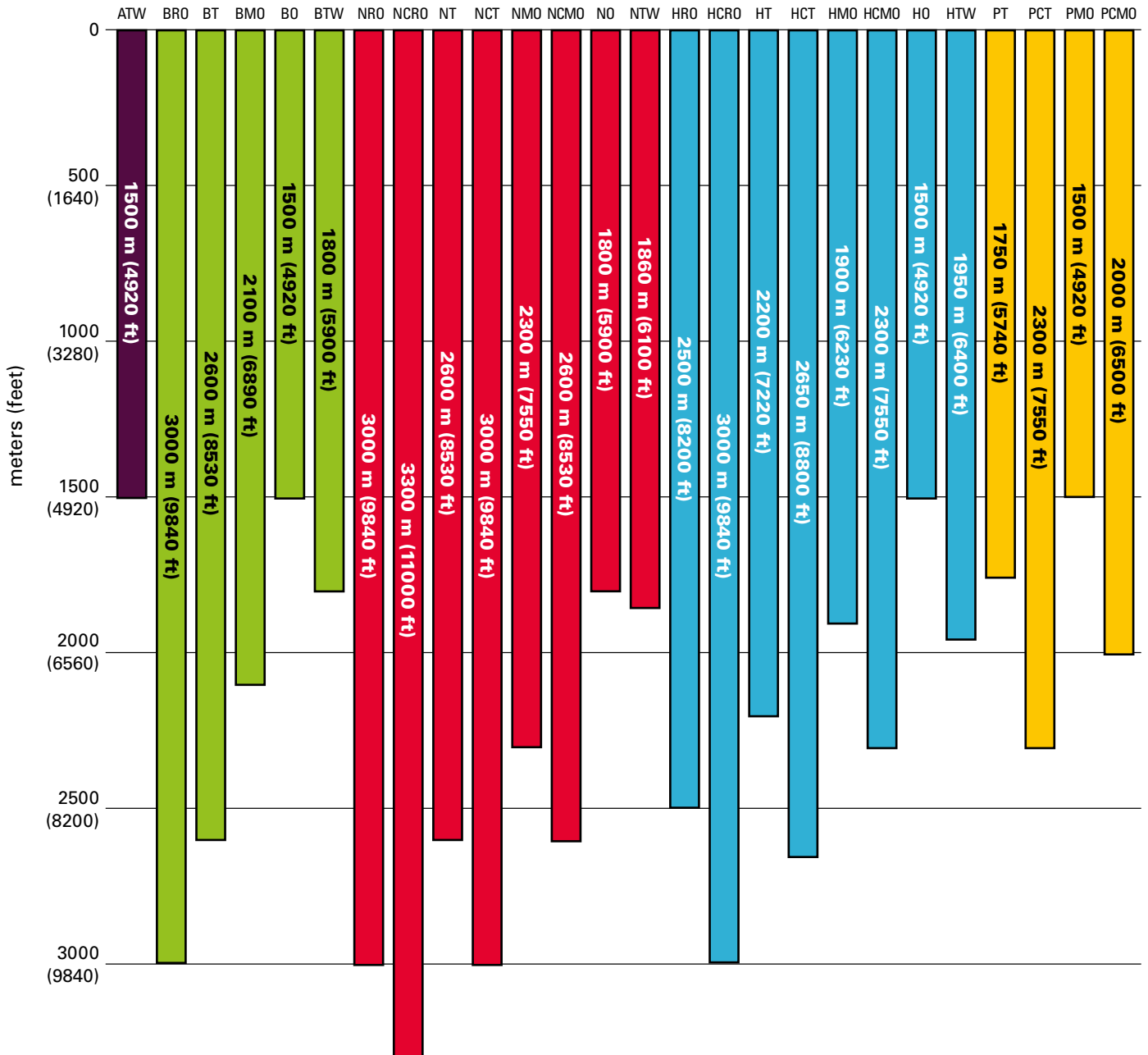
Core barrel spare parts kit covers more parts than the consumable kit. The consumable parts kit are estimated to cover 500 meters of drilling. So additional consumable parts need to be ordered e.g. core lifter, core lifter case ect. Minimum one set of spare parts kit is recommended to be ordered with one core barrel but will depend on the drilling program and location of the drill site.

Description	Part Number	Qty
Shut-off valve	8393081103	1
Spring	8393081163	1
Lock nut	0291111200	1
Lubricating nipple	0544210600	2
Ball bearing	0502110200	2
Bearing	0510040200	1
Seal washer	9469712423	2
Spacer	0324155117	1
Spring pin	0108329800	2

Wireline

Drill Rod Depth Capacity Chart

Depth capacities for vertical and straight holes filled with water



Drill rod recommended usage



Do not mix drill rods from different manufacturers. This may lead to failure or loss of drill string down the hole.

The use of high quality drill rod thread compound is essential to drill rod thread performance and to maintain your warranty. Failure to use it will cause premature wear and galling. For best results we recommend the use of thread compound containing metal particulate, ideally zinc, copper or graphite compositions. The use of NTW, HTW rods is not recommended with top-drive drills.

Wireline

Drill Rod Dimensions

Drill rod dimensions

O Rod Metric	Length m	Part No.	T Rod Metric	Length m	Part No.	R Rod Metric	Length m	Part No.	TW Rod Metric	Length m	Part No.	MO Rod Metric	Length m	Part No.	Tube Walls
									ATW	0,6 m	3760007873				Parallel
									ATW	1,5 m	3760006094				Parallel
									ATW	3,0 m	3760006095				Parallel
BO	0,6 m	3760003436	BT	0,6 m	3760001223	BRO	0,6 m	3760014014	BTW	0,6 m	3760005631				Parallel
BO	1,5 m	3760001250	BT	1,5 m	3760001224	BRO	1,5 m	3760014015	BTW	1,5 m	3760005632				Parallel
BO	3,0 m	3760001251	BT	3,0 m	3760001225	BRO	3,0 m	3760014016	BTW	3,0 m	3760005633				Parallel
NO	0,6 m	3760003440	NT	0,6 m	3760001229	NRO	0,6 m	3760014020							Parallel
NO	1,5 m	3760001254	NT	1,5 m	3760-001230	NRO	1,5 m	3760014021	NTW	1,5 m	9469705787				Parallel
NO	3,0 m	3760001255	NT	3,0 m	3760001231	NRO	3,0 m	3760014022	NTW	3,0 m	9469705788				Parallel
			NCT	3,0 m	3760005313	NCRO	3,0 m	3760014030							Internally Upset
HO	0,6 m	3760003438	HT	0,6 m	3760001235	HRO	0,6 m	3760014026	HTW	1,5 m	9469705765				Parallel
HO	1,5 m	3760001258	HT	1,5 m	3760001236	HRO	1,5 m	3760014027	HTW	3,0 m	9469705766				Parallel
HO	3,0 m	3760001259	HT	3,0 m	3760001237	HRO	3,0 m	3760014028							Parallel
			HCT	3,0 m	3760015208	HCRO	3,0 m	3760014050							Internally Upset
			PT	0,6 m	3760001238							PMO (HWT)	0,6 m	3760015249	Parallel
			PT	1,5 m	3760001239							PMO (HWT)	1,5 m	3760015244	Parallel
			PT	3,0 m	3760001240							PMO (HWT)	3,0 m	3760015245	Parallel
Imperial	ft	Part No.	Imperial	ft	Part No.	Imperial	ft	Part No.	Imperial	ft		Imperial	ft	Part No.	Tube Walls
BO	2 ft	On request	BT	2 ft	3760016415	BRO	2 ft	3760014011							Parallel
BO	5 ft	3760001248	BT	5 ft	On request	BRO	5 ft	3760014012							Parallel
BO	10 ft	3760001249	BT	10 ft	On request	BRO	10 ft	3760014013							Parallel
NO	2 ft	3760003441	NT	2 ft	3760001226	NRO	2 ft	3760014017	NTW	2 ft	9469705784				Parallel
NO	5 ft	3760001252	NT	5 ft	On request	NRO	5 ft	3760014018	NTW	5 ft	9469705785				Parallel
NO	10 ft	3760001253	NT	10 ft	3760001228	NRO	10 ft	3760014019	NTW	10 ft	9469705786				Parallel
			NCT	10 ft	3760015141	NCRO	10 ft	3760014029							Internally Upset
HO	2 ft	3760003439	HT	2 ft	3760001232	HRO	2 ft	3760014023	HTW	3 ft	9469711535				Parallel
HO	5 ft	3760001256	HT	5 ft	3760001233	HRO	5 ft	3760014024	HTW	5 ft	9469705763				Parallel
HO	10 ft	3760001257	HT	10 ft	3760001234	HRO	10 ft	3760014025	HTW	10 ft	9469705764				Parallel
			HCT	10 ft	3760015142	HCRO	10 ft	3760014049							Internally Upset
												PMO (HWT)	2 ft	3760015246	Parallel
												PMO (HWT)	5 ft	3760015247	Parallel
												PMO (HWT)	10 ft	3760015248	Parallel