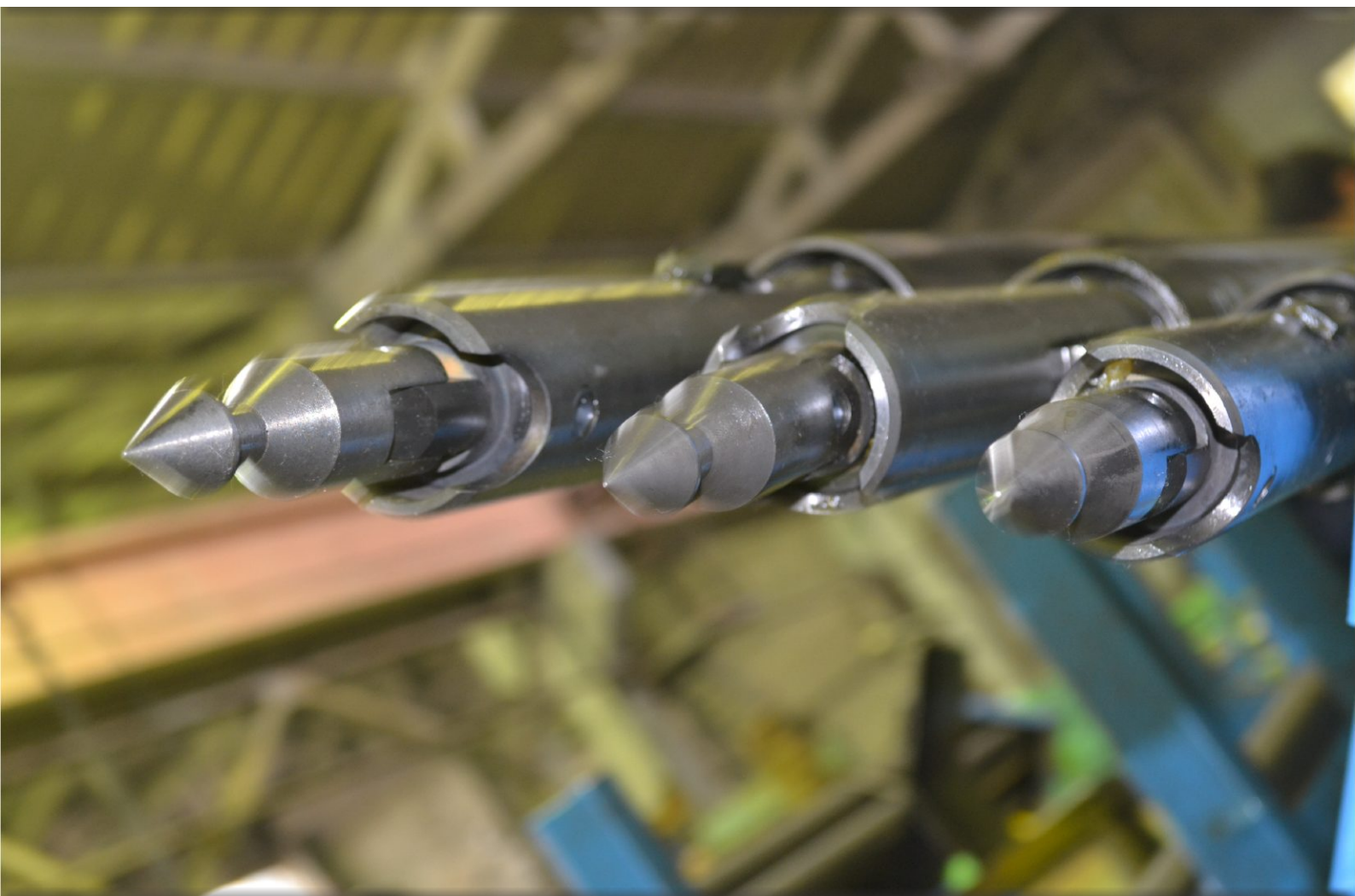




DRILL PIPES and TOOLS
for WIRELINE CORE DRILL SYSTEMS

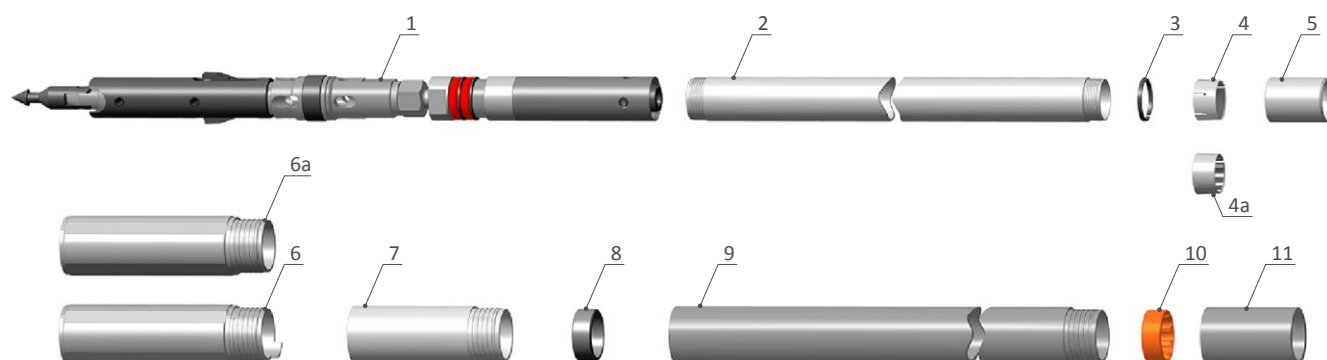


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WireLine N Core Barrel

WL N 10.00.00.000



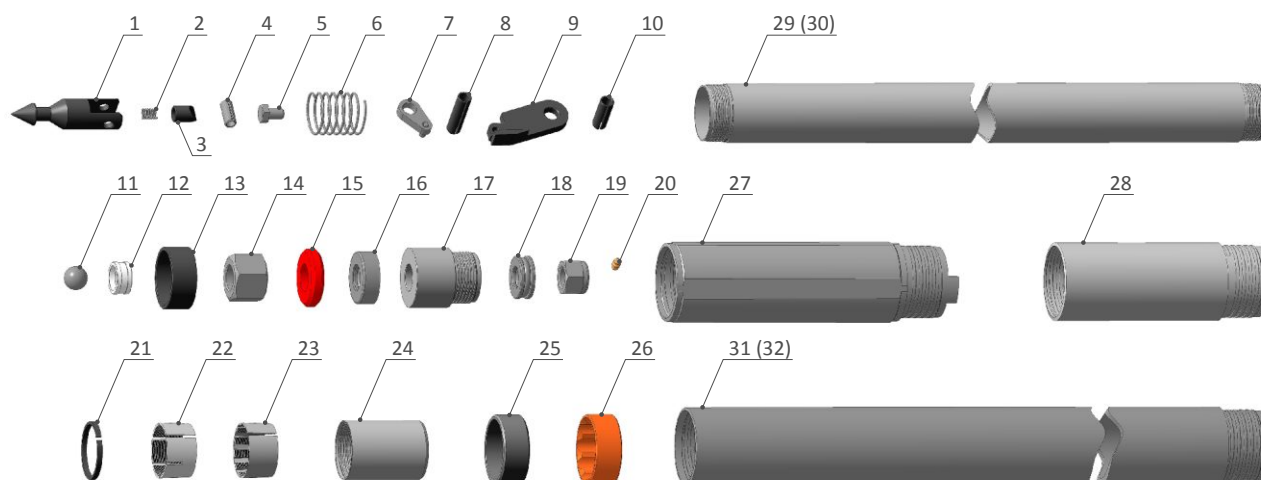
#	Part #	Name	Q-ty, pieces	Assembly										
1-11	WL N 10.01.01.000	NRQC core barrel 1.5 m		↓										
1-11	WL N 10.01.02.000	NRQC core barrel 3.0 m			↓									
1-11	WL N 10.02.01.000	NQC core barrel 1.5 m				↓								
1-11	WL N 10.02.02.000	NQC core barrel 3.0 m					↓							
1-11	WL N 10.03.01.000	NTC core barrel 1.5 m						↓						
1-11	WL N 10.03.02.000	NTC core barrel 3.0 m							↓					
1-5	WL N 09.00.00.000	N inner barrel 1.5 m								↓				
1-5	WL N 09.00.00.000-01	N inner barrel 3.0 m									↓			
1	WL N 01.00.00.000	N head assembly	1	v	v	v	v	v	v	v	v	v	v	v
2	WL N 03.01.00.001	N inner tube 1.5 m	1	v		v		v		v		v		
2	WL N 03.01.00.001-01	N inner tube 3.0 m	1		v		v		v		v		v	
3	WL N 05.01.00.001	N stop ring	1	v	v	v	v	v	v	v	v	v	v	v
4	WL N 05.02.00.001	N core lifter	1	v	v	v	v	v	v	v	v	v	v	v
4a	WL N 05.02.00.002	N core lifter with grooves	1	+	+	+	+	+	+	+	+	+	+	+
5	WL N 05.03.00.001	N core lifter case	1	v	v	v	v	v	v	v	v	v	v	v
6	WL N 04.01.01.001	NRQC locking coupling	1	v	v									
6a	WL N 04.01.01.002	NRQC locking coupling	1	+	+									
6	WL N 04.01.02.001	NQC locking coupling	1			v	v							
6a	WL N 04.01.02.002	NQC locking coupling	1			+	+							
6	WL N 04.01.03.001	NTC locking coupling	1					v	v					
6a	WL N 04.01.03.002	NTC locking coupling	1					+	+					
7	WL N 04.02.00.001	N adapter coupling	1	v	v	v	v	v	v					
8	WL N 05.04.00.001	N landing ring	1	v	v	v	v	v	v					
9	WL N 03.02.00.001	N outer tube 1.5 m	1	v		v		v						
9	WL N 03.02.00.001-01	N outer tube 3.0 m	1		v		v		v					
10	WL N 05.05.00.001	N inner tube stabilizer	1	v	v	v	v	v	v					
11	WL N 04.05.00.001	N thread protector	1	v	v	v	v	v	v					

v – Standard kit of WireLine N core barrel (1-11, except 4a and 6a).

+ – Optional component (4a, 6a).

WireLine N Core Barrel Spare parts kit*

WL N 07.01.00.000

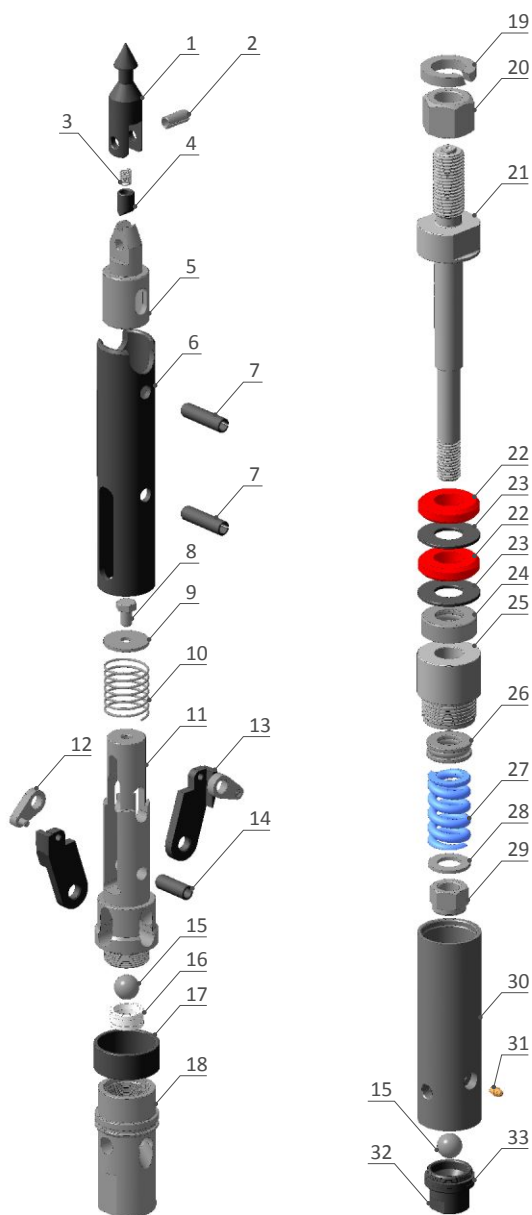


#	Part #	Name	Q-ty, pieces	Assembly		
1	WL N 01.00.01.001	Spearhead	1	v	v	v
2	WL N 01.00.01.002	Compression spring 10	1	v	v	v
3	WL N 01.00.01.003	Stop plunger	1	v	v	v
4		Pin A.10x26 with chemical oxidation SSR 14229-93	2	v	v	v
5		Screw bolt M10-6gx16.58 SSR 7805-70	2	v	v	v
6	WL N 01.00.01.006	Compression spring 40	1	v	v	v
7	WL N 01.00.01.100	Connecting piece	4	v	v	v
8		Pin A.13x50 with chemical oxidation SSR 14229-93	2	v	v	v
9	WL N 01.00.01.008	Stopper	4	v	v	v
10		Pin A.13x35 with chemical oxidation SSR 14229-93	2	v	v	v
11		Ball 22-40 SSR 3722-81	1	v	v	v
12	WL N 01.00.01.009	Bushing	2	v	v	v
13	WL N 01.00.01.010	Landing shoulder	1	v	v	v
14		Nut M 27-6H.8.with chemical oxidation SSR 5915-70	1	v	v	v
15	WL N 01.00.02.002	Shut-off valve	4	v	v	v
16		Bearing 108905 SSR 520-89	1	v	v	v
17	WL N 01.00.02.100	Spindle bushing	1	v	v	v
18		Bearing 8204 SSR 7872-89	1	v	v	v
19		Nut M20-6H.8.NF SSR R 50273-92	1	v	v	v
20		Greaser 1.1 SSR 19853-74	2	v	v	v
21	WL N 05.01.00.001	N stop ring	2	v	v	v
22	WL N 05.02.00.001	N core lifter	20	v	v	v
23	WL N 05.02.00.002	N core lifter with grooves	2	v	v	v
24	WL N 05.03.00.001	N core lifter case	4	v	v	v
25	WL N 05.04.00.001	N landing ring	2	v	v	v
26	WL N 05.05.00.001	N inner tube stabilizer	2	v	v	v
27	WL N 04.01.01.001	NRQC locking coupling	2	v		
27	WL N 04.01.02.001	NQC locking coupling	2		v	
27	WL N 04.01.03.001	NTC locking coupling	2			v
28	WL N 04.02.00.001	N adapter coupling	1	v	v	v
29	WL N 03.01.00.001	N inner tube 1.5 m	1	v	v	v
30	WL N 03.01.00.001-01	N inner tube 3.0 m	2	v	v	v
31	WL N 03.02.00.001	N outer tube 1.5 m	1	v	v	v
32	WL N 03.02.00.001-01	N outer tube 3.0 m	1	v	v	v

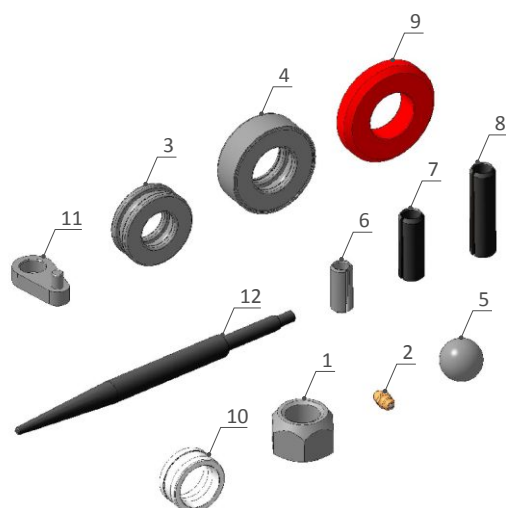
* – WireLine N core barrel spare parts kit for 1000 meter borehole in average drilling conditions.

WireLine N Head Assembly

WL N 01.00.00.000



#	Part #	Name	Q-ty, pieces
1-18	WL N 01.00.01.000	Upper part of N head assembly	1
1	WL N 01.00.01.001	Spearhead assembly	1
2		Pin A.10x26 with chemical oxidation	1
3	WL N 01.00.01.002	Compression spring 10	1
4	WL N 01.00.01.003	Stop plunger	1
5	WL N 01.00.01.004	Basement	1
6	WL N 01.00.01.005	Latch case	1
7		Pin A.13x50 with chemical oxidation	2
8		Screw bolt M10-6gx16.58 SSR 7805-70	1
9	WL N 01.00.01.012	Washer 10x40x3	1
10	WL N 01.00.01.006	Compression spring 40	1
11	WL N 01.00.01.007	Upper latch body	1
12	WL N 01.00.01.100	Link	2
13	WL N 01.00.01.008	Stopper	2
14		Pin A.13x35 with chemical oxidation	1
15		Ball 22-40 SSR 3722-81	2
16	WL N 01.00.01.009	Bushing	1
17	WL N 01.00.01.010	Landing shoulder	1
18	WL N 01.00.01.011	Lower latch body	1
19		Washer 27 T SSR 6402-70	1
20		Nut M 27-6H.8. with chemical oxidation	1
21-32	WL N 01.00.02.000	Lower part of N head assembly	1
21	WL N 01.00.02.001	Spindle	1
22	WL N 01.00.02.002	Shut-off valve	2
23	WL N 01.00.02.003	Valve adjusting washer 25x55x3	2
24		Thrust bearing 108905 SSR 520-89	1
25	WL N 01.00.02.100	Spindle bushing	1
26		Thrust bearing 8204 SSR 7872-89	1
27	WL N 01.00.02.004	Compression spring 38	1
28		Washer A20.37 SSR 11371-78	1
29		Nut M20-6H.8.NF SSR R 50273-92	1
30	WL N 01.00.02.005	Inner tube cap	1
31		Greaser 1.1 SSR 19853-74	1
32	WL N 01.00.02.006	Back pressure valve case	1
33	WL N 01.00.02.007	Back pressure valve washing	1
34	WL N 01.00.01.000 ZI	Spare parts kit of N head assembly	1

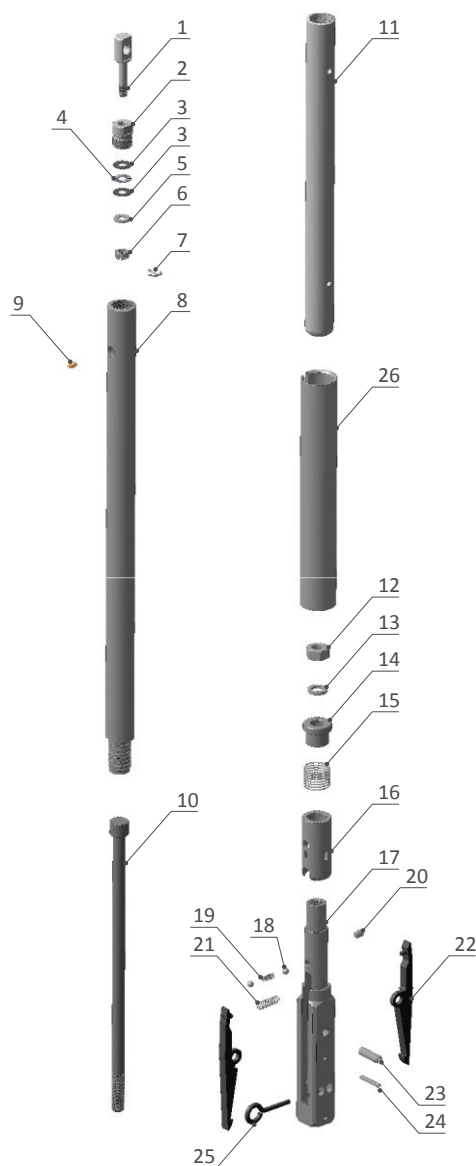


WireLine N head spare parts kit* (WL N 01.00.00.000 ZI)			
1		Nut M20-6H.8.NF SSR R 50273-92	1
2		Greaser 1.1 SSR 19853-74	2
3		Thrust bearing 8204 SSR 7872-89	1
4		Thrust bearing 108905 SSR 520-89	1
5		Ball 22-40 SSR 3722-81	1
6		Pin A.10x26 with chemical oxidation	1
7		Pin A.13x35 with chemical oxidation	1
8		Pin A.13x50 with chemical oxidation	2
9	WL N 01.00.02.002	Shut-off valve	2
10	WL N 01.00.01.009	Liner	2
11	WL N 01.00.01.100	Connection	2
12	WL N 07.00.01.000	Planer	1

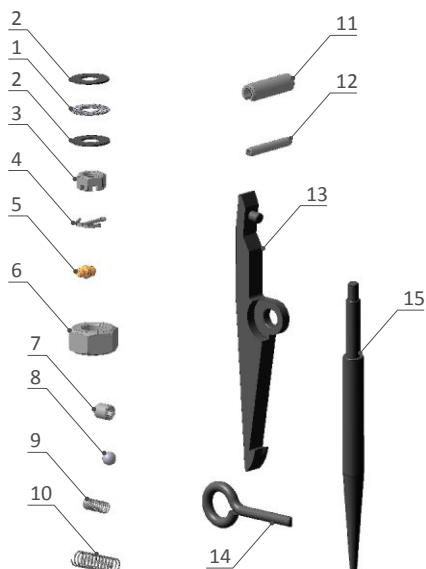
* – WireLine N head spare parts kit for 1000 meter borehole in average drilling conditions.

WireLine N Overshot Assembly

WL N 02.00.00.000



#	Part #	Name	Q-ty, pieces
1-7	WL N 02.00.01.000	Swivel eye	1
1	WL N 02.00.01.001	Strap bolt	1
2	WL N 02.00.01.002	Hub flange	1
3	WL N 02.00.01.003	Thrust washer	2
4		Bearing AK 12x26x2 SSR 26676-85	1
5		Washer A.12.37 SSR 11371-78	1
6		Nut M12x1.25-6N.8.35 with chemical oxidation	1
7		Split pin 2.5x32.4 SSR 397-79	1
8	WL N 02.00.00.001	Cable swivel body (upper part of overshoot)	1
9		Greaser 1.1 SSR 19853-74	1
10	WL N 02.00.00.003	Jar staff	1
11	WL N 02.00.00.002	Jar tube (lower part of overshoot)	1
12		Nut M18-6H.110 35 with chemical oxidation	1
13		Washer 18 L SSR 6402	1
14	WL N 02.00.00.005	Overshot cap	1
15	WL N 02.00.00.006	Compression spring 40	1
16	WL N 02.00.00.007	Overshot sleeve	1
17	WL N 02.00.00.008	Overshot head	1
18		Ball 9-3 SSR 3722-81	2
19	WL N 02.00.00.009	Compression spring 9	1
20		External screw A.M10-6gx12.22H	1
22	WL N 02.00.00.010	Compression spring 10	1
24	WL N 02.00.02.000	Lifting dog	2
21		Pin A.12x40 with chemical oxidation SSR 14229-93	1
23		Pin A.6x40 with chemical oxidation SSR 14229-93	1
25	WL N 02.00.00.011	Locking pin	1
26	WL N 02.00.00.004	Slotted locking sleeve	1
27	WL N 07.02.00.000	Spare parts kit of N overshoot assembly	1

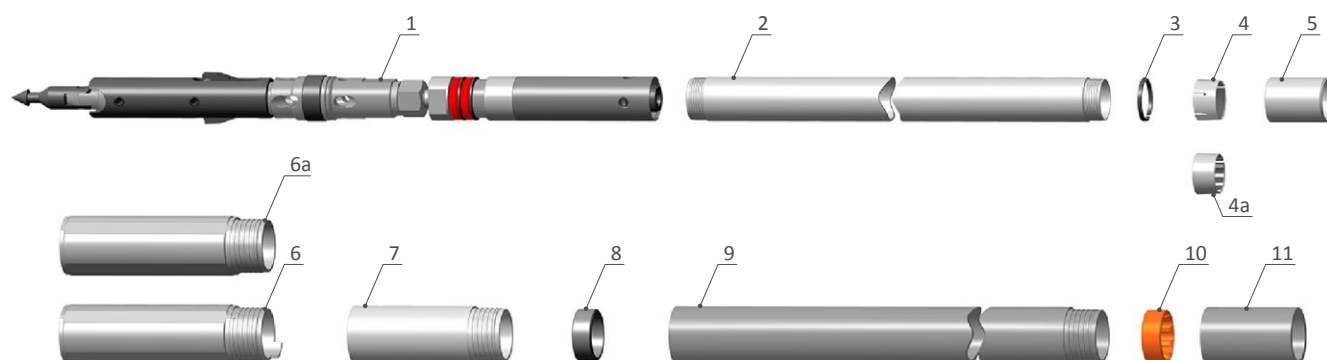


WireLine N Overshot Spare parts kit* (WL N 07.02.00.000)			
1		Bearing AK 12x26x2 SSR 26676-85	2
2	WL N 02.00.01.003	Thrust washer	4
3		Nut M12x1.25-6H.8.35 with chemical oxidation	2
4		Split pin 2.5x32.4 SSR 397-79	4
5		Greaser 1.1 SSR 19853-74	2
6		Nut M18-6H.110 with chemical oxidation	2
7		External screw A.M10-6gx12.22H	2
8		Ball 9-3 SSR 3722-81	2
9	WL N 02.00.00.009	Compression spring 9	2
10	WL N 02.00.00.010	Compression spring 10	2
11		Pin A.12x40 with chemical oxidation SSR 14229-93	2
12		Pin A.6x40 with chemical oxidation SSR 14229-93	2
13	WL N 02.00.02.000	Lifting dog	4
14	WL N 02.00.00.011	Locking pin	2
15	WL N 07.00.01.000	Planer	1

* – Overshot spare parts kit for 2000 meter borehole in average drilling conditions.

WireLine H Core Barrel

WL H 10.00.00.000



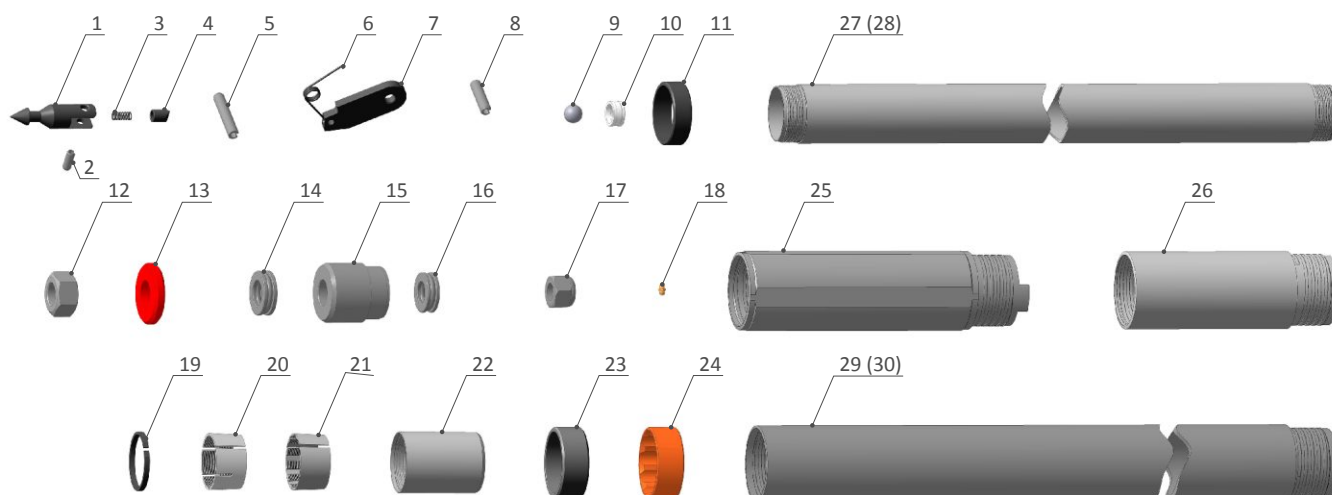
#	Part #	Name	Q-ty, pieces	Assembly										
1-11	WL H 10.01.01.000	HRQC core barrel 1.5 m		↓										
1-11	WL H 10.01.02.000	HRQC core barrel 3.0 m			↓									
1-11	WL H 10.02.01.000	HQC core barrel 1.5 m				↓								
1-11	WL H 10.02.02.000	HQC core barrel 3.0 m					↓							
1-11	WL H 10.03.01.000	HTC core barrel 1.5 m						↓						
1-11	WL H 10.03.02.000	HTC core barrel 3.0 m							↓					
1-5	WL H 09.00.00.000	H inner barrel 1.5 m								↓				
1-5	WL H 09.00.00.000-01	H inner barrel 3.0 m									↓			
1	WL H 01.00.00.000	H head assembly	1	v	v	v	v	v	v	v	v	v	v	v
2	WL H 03.01.00.001	H inner tube 1.5 m	1	v		v		v		v		v		
2	WL H 03.01.00.001-01	H inner tube 3.0 m	1		v		v		v		v		v	
3	WL H 05.01.00.001	H stop ring	1	v	v	v	v	v	v	v	v	v	v	v
4	WL H 05.02.00.001	H core lifter	1	v	v	v	v	v	v	v	v	v	v	v
4a	WL H 05.02.00.002	H core lifter with grooves	1	+	+	+	+	+	+	+	+	+	+	+
5	WL H 05.03.00.001	H core lifter case	1	v	v	v	v	v	v	v	v	v	v	v
6	WL H 04.01.01.001	HRQC locking coupling	1	v	v									
6a	WL H 04.01.01.002	HRQC locking coupling	1	+	+									
6	WL H 04.01.02.001	HQC locking coupling	1			v	v							
6a	WL H 04.01.02.002	HQC locking coupling	1			+	+							
6	WL H 04.01.03.001	HTC locking coupling	1					v	v					
6a	WL H 04.01.03.002	HTC locking coupling	1					+	+					
7	WL H 04.02.00.001	H adapter coupling	1	v	v	v	v	v	v					
8	WL H 05.04.00.001	H landing ring	1	v	v	v	v	v	v					
9	WL H 03.02.00.001	H outer tube 1.5 m	1	v		v		v						
9	WL H 03.02.00.001-01	H outer tube 3.0 m	1		v		v		v					
10	WL H 05.05.00.001	H inner tube stabilizer	1	v	v	v	v	v	v					
11	WL H 04.05.00.001	H thread protector	1	v	v	v	v	v	v					

v – Standard kit of WireLine H core barrel (1-11, except 4a and 6a).

+ – Optional component (4a, 6a).

WireLine H Core Barrel Spare parts kit*

WL H 07.01.00.000

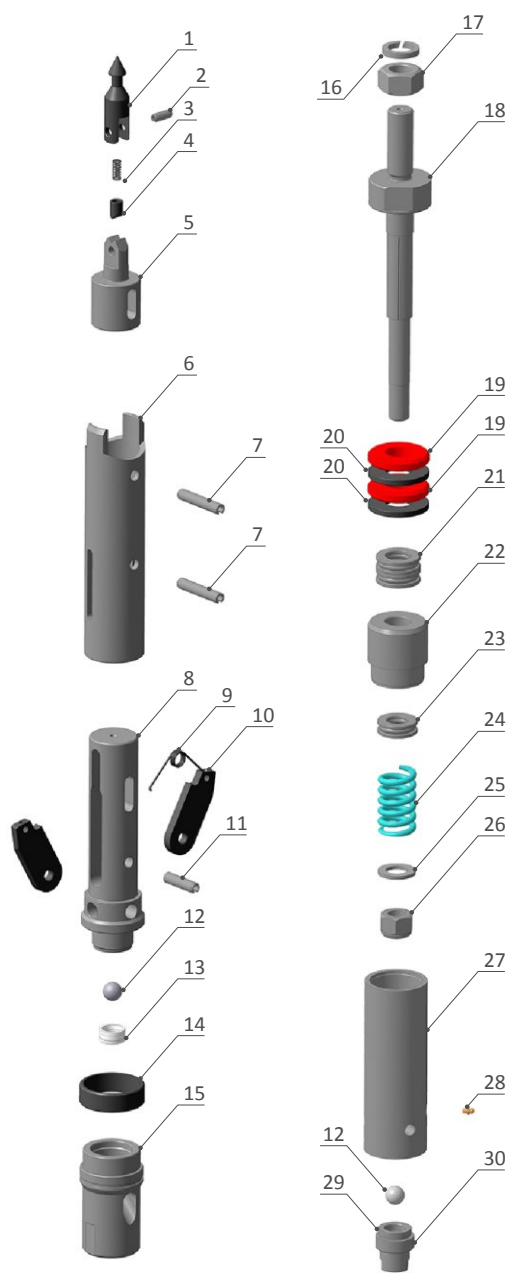


#	Part #	Name	Q-ty, pieces	Assembly		
1	WL N 01.00.01.001	Spearhead	1	v	v	v
2		Pin A.10x26 with chemical oxidation SSR 14229-93	2	v	v	v
3	WL N 01.00.01.002	Compression spring 10	1	v	v	v
4	WL N 01.00.01.003	Stop plunger	1	v	v	v
5		Pin A.13x70 with chemical oxidation SSR 14229-93	2	v	v	v
6	WL H 01.00.01.012	String	2	v	v	v
7	WL H 01.00.01.008	Stopper	4	v	v	v
8		Pin A.13x50 with chemical oxidation SSR 14229-93	2	v	v	v
9		Ball 22-40 SSR 3722-81	1	v	v	v
10	WL N 01.00.01.009	Bushing	2	v	v	v
11	WL H 01.00.01.010	Landing shoulder	1	v	v	v
12		Nut M 30-6H.8.with chemical oxidation SSR 5915-70	1	v	v	v
13	WL H 01.00.02.002	Shut-off valve	4	v	v	v
14		Bearing 98206 TC 37.006.087-79	2	v	v	v
15	WL H 01.00.02.100	Spindle bushing	1	v	v	v
16		Bearing 108905 SSR 520-89	1	v	v	v
17		Stover lock Nut M24-6H.8.NF SSR R 50273-92	1	v	v	v
18		Greaser 1.1 SSR 19853-74	2	v	v	v
19	WL H 05.01.00.001	H stop ring	2	v	v	v
20	WL H 05.02.00.001	H core lifter	20	v	v	v
21	WL H 05.02.00.002	H core lifter with grooves	2	v	v	v
22	WL H 05.03.00.001	H core lifter case	4	v	v	v
23	WL H 05.04.00.001	H landing ring	2	v	v	v
24	WL H 05.05.00.001	H inner tube stabilizer	2	v	v	v
25	WL H 04.01.01.001	HRQC locking coupling	2	v		
26	WL H 04.01.02.001	HQC locking coupling	2		v	
27	WL H 04.01.03.001	HTC locking coupling	2			v
27	WL H 04.02.00.001	H adapter coupling	1	v	v	v
27	WL H 03.01.00.001	H inner tube 1.5 m	1	v	v	v
28	WL H 03.01.00.001-01	H inner tube 3.0 m	2	v	v	v
29	WL H 03.02.00.001	H outer tube 1.5 m	1	v	v	v
30	WL H 03.02.00.001-01	H outer tube 3.0 m	1	v	v	v

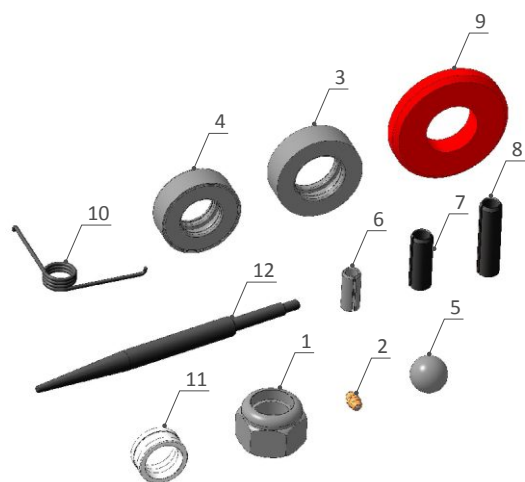
* – WireLine H core barrel spare parts kit for 1000 meter borehole in average drilling conditions.

WireLine H Head Assembly

WL H 01.00.00.000



#	Part #	Name	Q-ty, pieces
1-15	WL H 01.00.01.000	Upper part of H head assembly	1
1	WL N 01.00.01.001	Spearhead assembly	1
2		Pin A.10x26 with chemical oxidation	1
3	WL N 01.00.01.002	Compression spring 10	1
4	WL N 01.00.01.003	Stop plunger	1
5	WL H 01.00.01.004	Basement	1
6	WL H 01.00.01.005	Latch case	1
7		Pin A.13x70 with chemical oxidation	2
8	WL H 01.00.01.007	Upper latch body	1
9	WL H 01.00.01.012	Spring	1
10	WL H 01.00.01.008	Stopper	2
11		Pin A.13x50 with chemical oxidation	1
12		Ball 22-40 SSR 3722-81	2
13	WL N 01.00.01.009	Bushing	1
14	WL H 01.00.01.010	Landing shoulder	1
15	WL H 01.00.01.011	Lower latch body	1
16		Washer 30T SSR 6402-70	1
17		Nut M 30-6H.8. with chemical oxidation	1
18-30	WL H 01.00.02.000	Lower part of H head assembly	1
18	WL H 01.00.02.001	Spindle	1
19	WL H 01.00.02.002	Shut-off valve	2
20	WL H 01.00.02.003	Washer 32x71x9	2
21		Thrust bearing 98206 TC 37.006.087-79	2
22	WL H 01.00.02.100	Spindle bushing	1
23		Thrust bearing 108905 SSR 520-89	1
24	WL H 01.00.02.004	Compression spring 45	1
25		Washer C24.37 SSR 11371-78	1
26		Nut M24-6H.8.NF SSR R 50273-92	1
27	WL H 01.00.02.005	Inner tube cap	1
28		Greaser 1.1 SSR 19853-74	1
29	WL N 01.00.02.006	Back pressure valve case	1
30	WL N 01.00.02.007	Back pressure valve washing	1
31	WL H 01.00.01.000 ZI	Spare parts kit of H head assembly	1

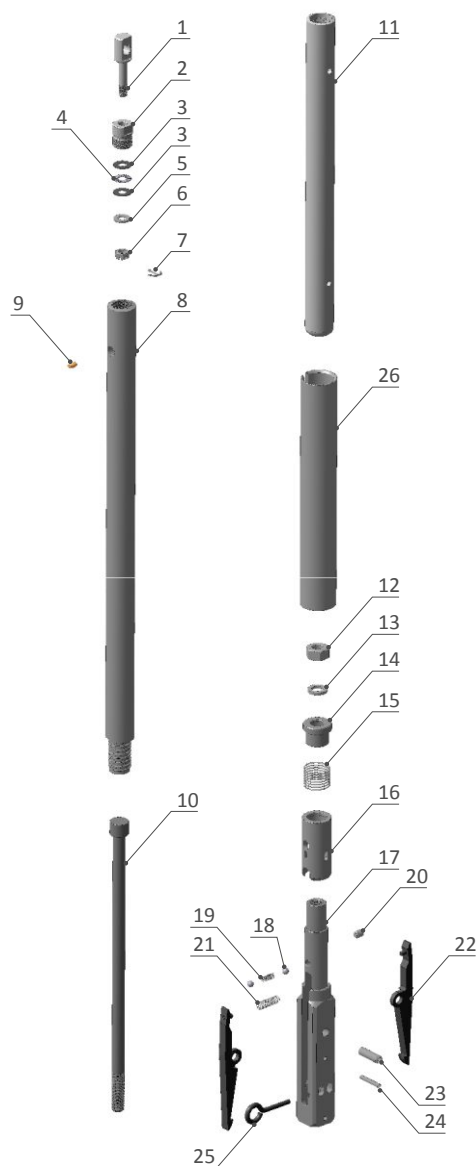


WireLine H head spare parts kit* (WL H 01.00.01.000 ZI)			
1		Nut M24-6H.8.NF SSR R 50273-92	1
2		Greaser 1.1 SSR 19853-74	2
3		Thrust bearing 98206 TC 37.006.087-79	2
4		Thrust bearing 108905 SSR 520-89	1
5		Ball 22-40 SSR 3722-81	1
6		Pin A.10x26 with chemical oxidation	1
7		Pin A.13x50 with chemical oxidation	1
8		Pin A.13x70 with chemical oxidation	2
9	WL H 01.00.02.002	Shut-off valve	2
10	WL H 01.00.01.012	Spring	1
11	WL N 01.00.01.009	Liner	2
12	WL N 07.00.01.000	Planer	1

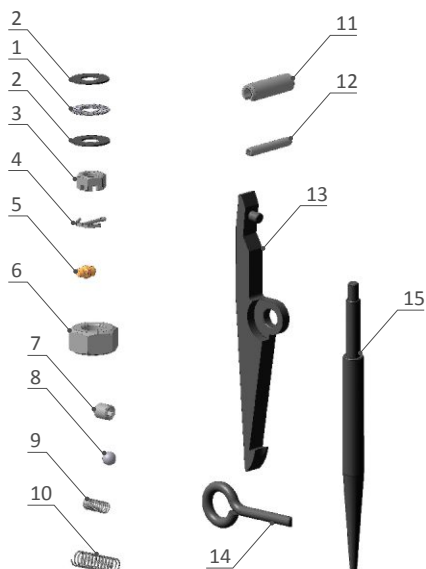
* – WireLine H head spare parts kit for 1000 meter borehole in average drilling conditions.

WireLine H Overshot Assembly

WL H 02.00.00.000



#	Part #	Name	Q-ty, pieces
1-7	WL N 02.00.01.000	Swivel eye	1
1	WL N 02.00.01.001	Strap bolt	1
2	WL N 02.00.01.002	Hub flange	1
3	WL N 02.00.01.003	Thrust washer	2
4		Bearing AK 12x26x2 SSR 26676-85	1
5		Washer A.12.37 SSR 11371-78	1
6		Nut M12x1.25-6H.8.35 with chemical oxidation	1
7		Split pin 2.5x32.4 SSR 397-79	1
8	WL N 02.00.00.001	Cable swivel body (upper part of overshoot)	1
9		Greaser 1.1 SSR 19853-74	1
10	WL N 02.00.00.003	Jar staff	1
11	WL N 02.00.00.002	Jar tube (lower part of overshoot)	1
12		Nut M18-6N.110 35 with chemical oxidation	1
13		Washer 18 L SSR 6402	1
14	WL N 02.00.00.005	Overshot cap	1
15	WL N 02.00.00.006	Compression spring 40	1
16	WL N 02.00.00.007	Overshot sleeve	1
17	WL H 02.00.00.008	Overshot head	1
18		Ball 9-3 SSR 3722-81	2
19	WL N 02.00.00.009	Compression spring 9	1
20		External screw A.M10-6gx 12.22H	1
22	WL N 02.00.00.010	Compression spring 10	1
24	WL N 02.00.02.000	Lifting dog	2
21		Pin A.12x50 with chemical oxidation SSR 14229-93	1
23		Pin A.6x50 with chemical oxidation SSR 14229-93	1
25	WL H 02.00.00.011	Locking pin	1
26	WL N 02.00.00.004	Slotted locking sleeve	1
27	WL H 07.02.00.000	Spare parts kit of H overshoot assembly	1



WireLine H Overshot Spare parts kit* (WL H 07.02.00.000)			
1		Bearing AK 12x26x2 SSR 26676-85	2
2	WL N 02.00.01.003	Bearing washer	4
3		Nut M12x1.25-6N.8.35 with chemical oxidation	2
4		Splint pin 2.5x32.4 SSR 397-79	4
5		Greaser 1.1 SSR 19853-74	2
6		Nut M18-6N.110 with chemical oxidation	2
7		External screw A.M10-6gx12.22H	2
8		Ball 9-3 SSR 3722-81	2
9	WL N 02.00.00.009	Compression spring 9	2
10	WL N 02.00.00.010	Compression spring 10	2
11		Pin A.12x50 with chemical oxidation SSR 14229-93	2
12		Pin A.6x50 with chemical oxidation SSR 14229-93	2
13	WL N 02.00.02.000	Lifting dog	4
14	WL H 02.00.00.011	Locking pin	2
15	WL N 07.00.01.000	Planer	1

* – Overshot spare parts kit for 2000 meter borehole in average drilling conditions.

WL N 01.00.00.000-01 (with orthogonally-directed system of stopper)



Spare parts kit of N head assembly* (WL H 01.00.01.000-01 ZI)			
1		Nut M20-6H.8.NF SSR R 50273-92	1
2		Greaser 1.1 SSR 19853-74	2
3		Thrust bearing 8204 SSR 7872-89	1
4		Thrust bearing 108905 SSR 520-89	1
5		Ball 22-40 SSR 3722-81	1
6		Pin A.10x26 with chemical oxidation	1
7	WL N 01.00.01.014	External screw M10x50	2
8		Pin A.13x50 with chemical oxidation	1
9	WL N 01.00.02.002	Shut-off valve	2
10	WL N 01.00.01.009	Liner	2
11	WL N 07.00.01.000	Planer	1

WireLine H Head Assembly

WL H 01.00.00.000-01 (with orthogonally-directed system of stopper)



#	Part #	Name	Q-ty, pieces
1-17	WL H 01.00.01.000-01	Upper part of N head assembly	1
1	WL N 01.00.01.001	Spearhead assembly	1
2		Pin A.10x26 with chemical oxidation	1
3	WL N 01.00.01.002	Compression spring 10	1
4	WL N 01.00.01.003	Stop plunger	1
5	WL N 01.00.01.004	Basement	1
6	WL N 01.00.01.005-01	Latch case	1
7		Pin A.13x50 with chemical oxidation	1
8		Screw bolt M10-6gx16.58 SSR 7805-70	1
9	WL N 01.00.01.012	Washer 10x40x3	1
10	WL N 01.00.01.006	Compression spring 40	1
11	WL H 01.00.01.007-01	Upper latch body	1
12	WL N 01.00.01.009	Link	1
13	WL N 01.00.01.008-01	Stopper	2
14	WL N 01.00.01.014	External screw M10x50	2
15		Ball 22-40 SSR 3722-81	2
16	WL H 01.00.01.010	Landing shoulder	1
17	WL H 01.00.01.011	Lower latch body	1
18		Washer 27 T SSR 6402-70	1
19		Nut M 27-6H.8. with chemical oxidation	1
20-31	WL H 01.00.02.000	Lower part of N head assembly	1
20	WL H 01.00.02.001	Spindle	1
21	WL H 01.00.02.002	Shut-off valve	2
22	WL H 01.00.02.003	Valve adjusting washer 25x55x3	2
23		Thrust bearing 108905 SSR 520-89	2
24	WL H 01.00.02.100	Spindle bushing	1
25		Thrust bearing 8204 SSR 7872-89	1
26	WL H 01.00.02.004	Compression spring 38	1
27		Washer A20.37 SSR 11371-78	1
28		Nut M20-6H.8.NF SSR R 50273-92	1
29	WL H 01.00.02.005	Inner tube cap	1
30		Greaser 1.1 SSR 19853-74	1
31	WL N 01.00.02.006	Back pressure valve case	1
32	WL H 01.00.01.000-01 ZI	Spare parts kit of H head assembly	1

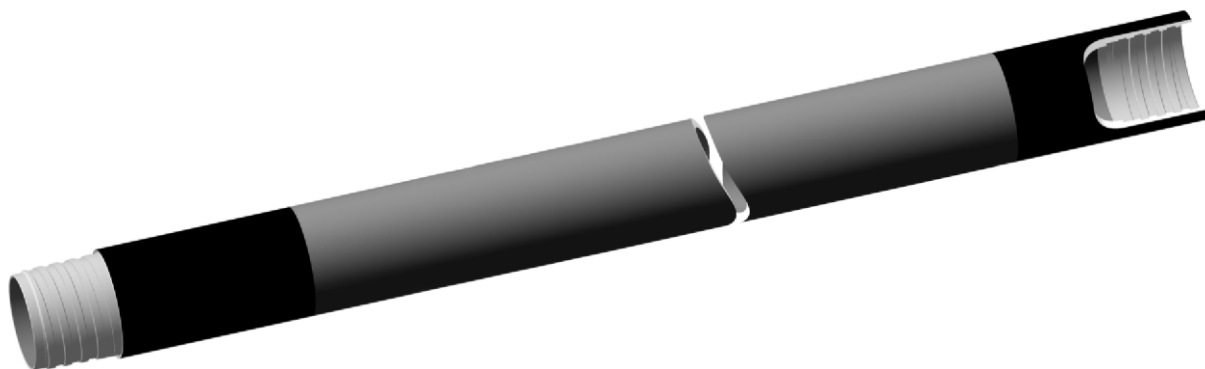


Spare parts kit of H head assembly* (WL H 01.00.01.000-01 ZI)			
1		Nut M20-6H.8.NF SSR R 50273-92	1
2		Greaser 1.1 SSR 19853-74	2
3		Thrust bearing 8204 SSR 7872-89	1
4		Thrust bearing 108905 SSR 520-89	1
5		Ball 22-40 SSR 3722-81	1
6		Pin A.10x26 with chemical oxidation	1
7	WL N 01.00.01.014	External screw M10x50	2
8		Pin A.13x50 with chemical oxidation	1
9	WL H 01.00.02.002	Shut-off valve	2
10	WL N 01.00.01.009	Liner	2
11	WL N 07.00.01.000	Planer	1

* – WireLine H head spare parts kit for 1000 meter borehole in average drilling conditions.

Drill Pipes for WireLine Core Drill Systems

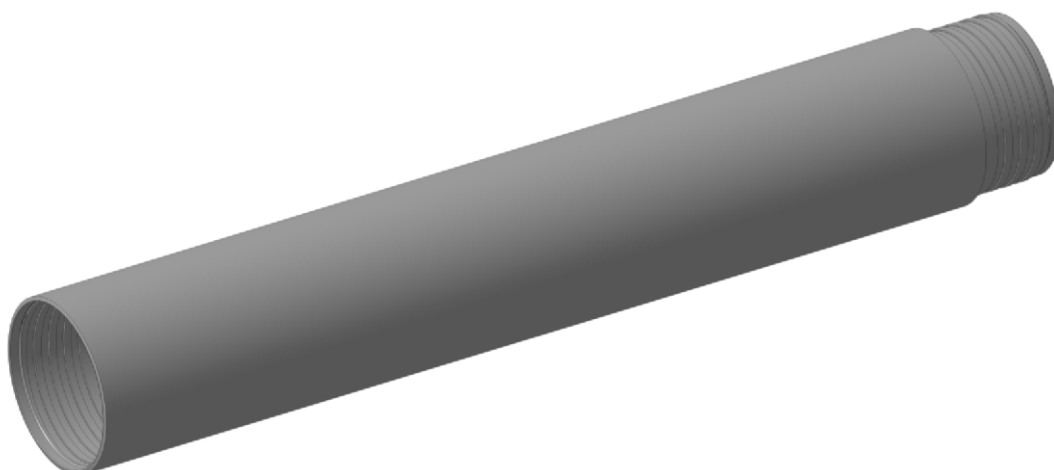
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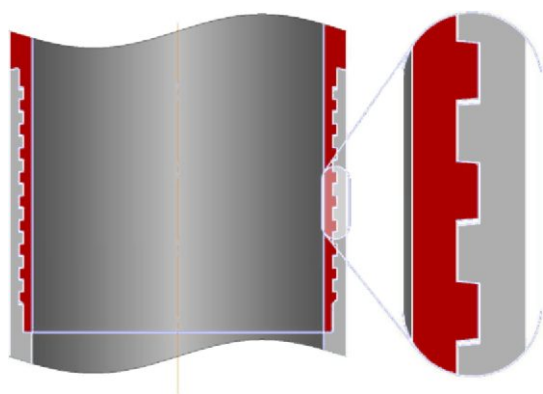
Drill pipes are designed for drilling boreholes for solid minerals at an angle from 90° to 45° in monolithic weakly fissured and fissured rocks (VI-XI categories on rock drillability scale).

Name	Part #	Outer diameter, mm	Inner diameter, mm	Thread length, mm	Pipe length, mm	Weight, kg	Threaded connection tightening torque, Nm		Maximum torque, Nm	Maximum drilling depth, m
							Min	Max		
BQC drill pipe	WLB1-850-1500	55.6	46.1	43.3	1500	8.9	405	550	450	900
	WLB1-850-3000				3000	17.8				
BTC drill pipe	WLB3-850-1500	55.6	46.1	60.5	1500	8.9	405	550	450	1200
	WLB3-850-3000				3000	17.9				
NQC drill pipe	WLN1-850-1500	69.9	60.3	44.4	1500	11.2	600	750	600	1200
	WLN1-850-3000				3000	23.0				
NRQC drill pipe	WLN2-850-1500	69.9	60.3	42.2	1500	11.5	600	1900	1520	1800
	WLN2-850-3000				3000	23.1				
NTC drill pipe	WLN3-850-1500	69.9	60.3	54.0	1500	11.5	600	900	750	1200
	WLN3-850-3000				3000	23.1				
HQC drill pipe	WLH1-850-1500	88.9	77.8	44.4	1500	17.1	1010	1350	1080	900
	WLH1-850-3000				3000	34.2				
HRQC drill pipe	WLH2-850-1500	88.9	77.8	42.2	1500	17.1	1010	3500	2800	1600
	WLH2-850-3000				3000	34.2				
HTC drill pipe	WLH3-850-1500	88.9	77.8	53.0	1500	17.1	1010	1620	1350	900
	WLH3-850-3000				3000	34.2				
PTC drill pipe	WLP3-850-1500	114.3	102.0	60.5	1500	24.5	1010	3500	2950	900
	WLP3-850-3000				3000	49.0				
PHDC drill pipe	WLP4-850-1500	114.3	102.0	58.0	1500	24.5	1010	4000	3400	1200
	WLP4-850-3000				3000	49.0				

Casing Pipes



Casing pipes are intended for single use in case when they left in the well. These casing pipes have universal structure and can be used whenever casing with threaded connection is needed.



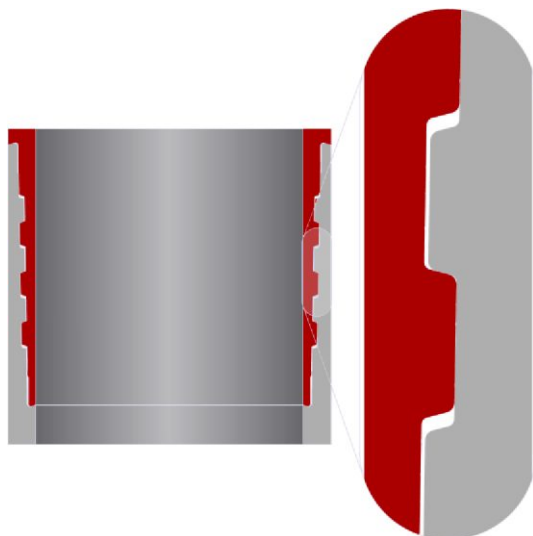
WC thread – on P pipe size (BWC, NWC, HWC drill pipe) thread is compatible to W thread, the letter «C» means the special chemical heat treatment of pipe thread. WC thread has cylindrical shape with 4 threads per inch.

Thread structure:

Connection with two-sided buttress thread perfectly transmits force during installation. Combination of W-thread with unique heat treated high-quality pipe made at high-accuracy. CNC machines allows to meet the world pipe analogues in terms of all characteristics.

Name	Part #	Outer diameter, mm	Inner diameter, mm	Thread length, mm	Pipe length, mm	Weight, kg
BWC casing pipe	WLB 03.03.00.001	73.0	60.30	60.33	1500	16.00
	WLB 03.03.00.001-01				3000	32.00
NWC casing pipe	WLN 03.03.00.001	88.9	76.20	66.68	1500	20.00
	WLN 03.03.00.001-01				3000	40.00
HWC casing pipe	WLH 03.03.00.001	114.3	101.22	73.02	1500	26.75
	WLH 03.03.00.001-01				3000	53.50

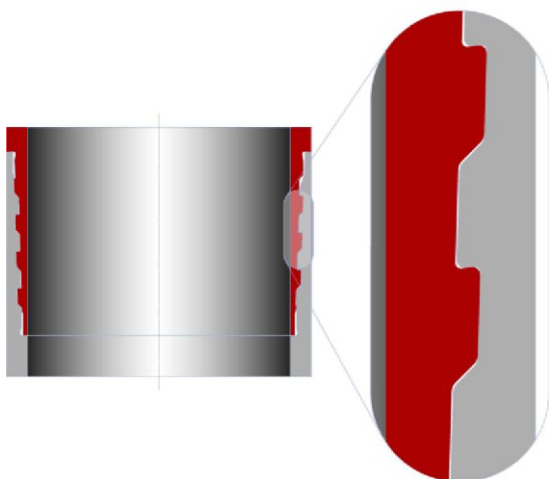
QC thread – on B, N, H pipe size (BQC, NQC, HQC drill pipe) thread is compatible to type Q thread according to ISO 10097-1, and letter «C» means the special chemical heat treatment of pipe thread.



Advantages of QC thread:

- the most common threaded connection;
- easy make-up and break-out;
- load effectiveness of the threaded connection provides the sufficient durability under standard drilling conditions;
- combination of QC thread with high-quality pipe, thread treatment at high-accuracy CNC machines, surface treatment of the thread and near-tool-joint thread area allows to meet the world pipe analogues in terms of all characteristics.

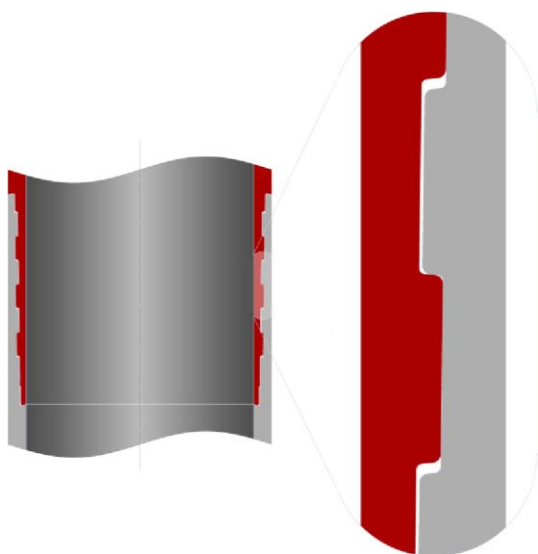
RQC thread – on N, H pipe size (NRQC, HRQC drill pipe) thread is compatible to type RQ thread. The letter «C» means the special chemical heat treatment of pipe thread. The RQC thread profile has unequal trapezoid shape with a negative slope of working side of the profile and with a positive slope of nonworking side of the profile.



Advantages of RQC thread:

- increased maximum drilling depth due to the thread tooth profile, which assure the high resistance to the tensile, compressive and bending loads;
- easy make-up and break-out;
- increased durability for hard drilling conditions due to the load effectiveness of the threaded connection;
- increased hardness and tightness, as the thread forms the double shouldered connection with faces contact at the upper and bottom parts in the screwed state;
- combination of RQC thread with high-quality pipe, thread heat treatment at high-accuracy CNC machines, surface treatment of the thread and near-tool-joint thread area allows to meet the world pipe analogues in terms of all characteristics.

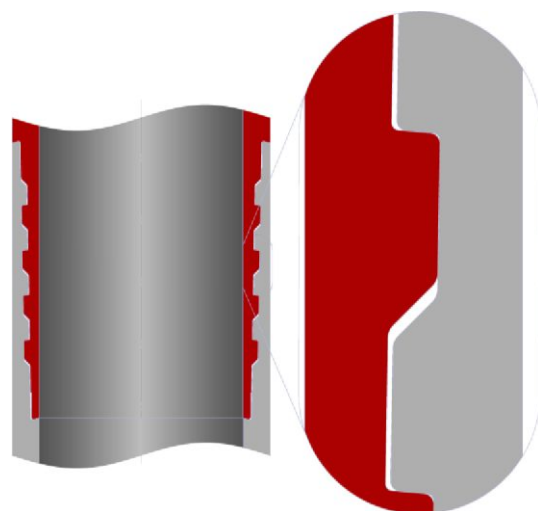
Thread



TC thread – on B, N, H, P pipe size (BTC, NTC, HTC, HTC drill pipe) thread is compatible to T thread. This thread has shape of equilateral trapezium. The pitch of thread is increased (2 turns per inch) and that speeds up the screwing and unscrewing process in comparison with other analogous threads.

Advantages of TC thread:

The main advantage of TC thread is quick-release joint. The number of turns during screwing is reduced and it makes all working operation easier and faster but the load capacity of the threaded joint remains high enough for drilling.



HDC tread – on P pipe size (PHDC drill pipe) thread is compatible to HD thread, the letter «C» means the special chemical heat treatment of pipe thread. This conical HDC thread with deeper and bigger profile (2.5 turns per inch) made on heat-treated pipe provides long-lasting wear life and makes screwing process easier.

Advantages of PHD thread:

High load capacity of HDC thread provides high enough durability for drilling large boreholes.

Designation:

WL



WireLine

N



Outer diameter:
B – Ø55,6 mm
N – Ø69,9 mm
H – Ø88,9 mm
P – Ø114,3 mm

1



Thread:
1 – compatible to type Q
2 – compatible to type RQ
3 – compatible to type T
4 – compatible to type HD

850



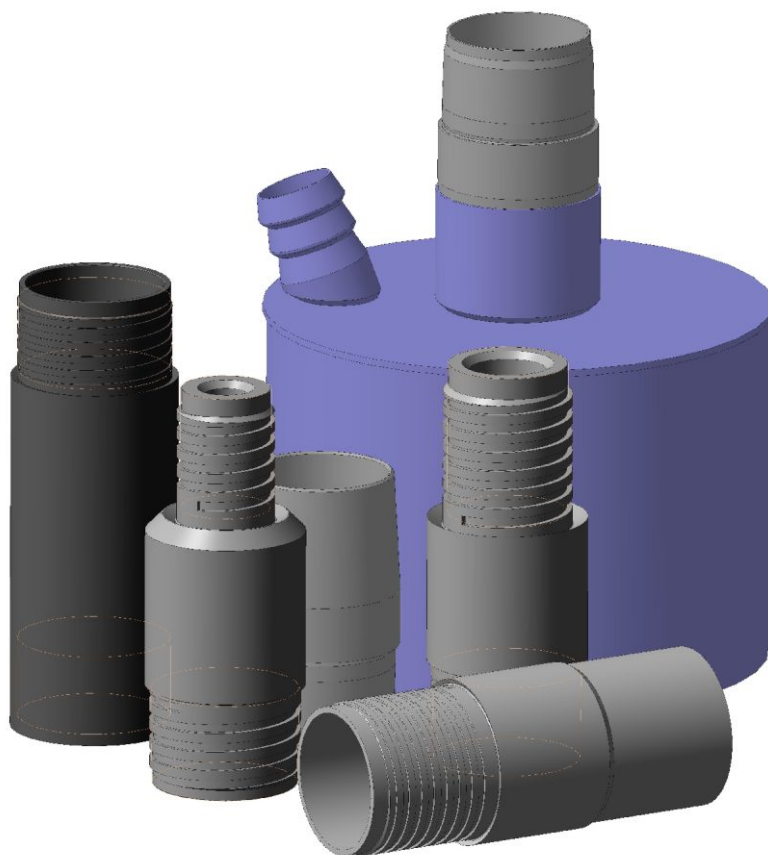
Strength of material:
850 MPa
730 MPa

1500



Pipe length:
1500 mm
3000 mm

Adapters and Couplings of WireLine complex

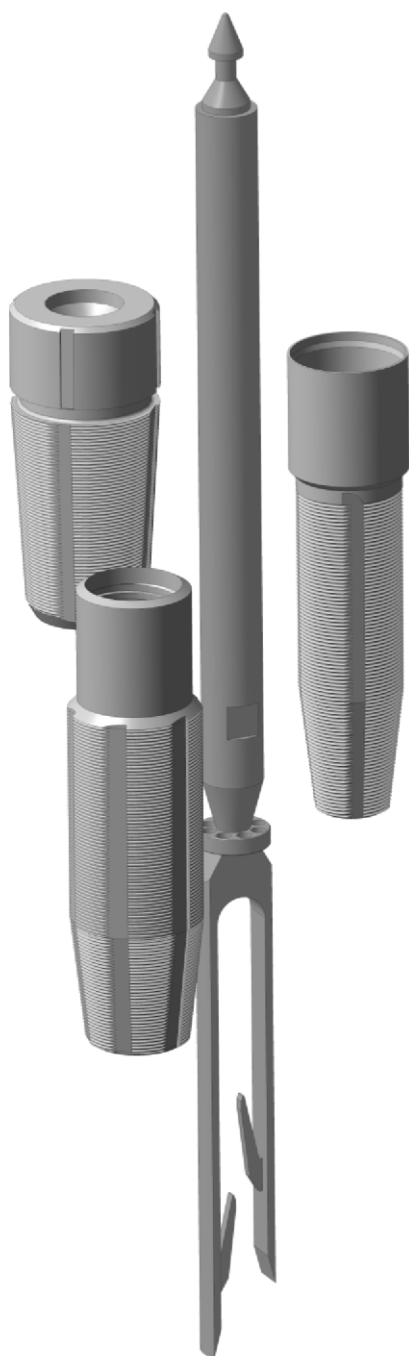


#	Part #	Name
Adapters and Couplings of WireLine N complex		
1	WL N 04.03.01.001	Adapter H AW / H NRQC (with swivel)
2	WL N 04.03.02.001	Adapter H AW / H NQC (with swivel)
3	WL N 04.03.03.001	Adapter H BW / H NRQC (with swivel)
4	WL N 04.03.04.001	Adapter H BW / H NQC (with swivel)
5	WL N 04.03.05.001	Adapter H NW / H NRQC (with swivel)
6	WL N 04.03.06.001	Adapter H NW / H NQC (with swivel)
7	WL N 04.03.07.001	Adapter M NRQC / H NWC (with casing)
8	WL N 04.03.08.001	Adapter M NQC / H NWC (with casing)
9	WL N 04.03.09.001	Adapter M NRQC / H BWC (with casing)
10	WL N 04.03.10.001	Adapter M NQC / H BWC (with casing)
11	WL N 04.03.11.001	Adapter M NRQC / H HWC (with casing)
12	WL N 04.03.12.001	Adapter M NQC / H HWC (with casing)
13	WL N 04.03.13.001	Adapter M NRQC / H BW (with tap)
14	WL N 04.03.14.001	Adapter M NQC / H BW (with tap)
15	WL N 04.03.15.001	Adapter M NRQC / H NW (with tap)
16	WL N 04.03.16.001	Adapter M NQC / H NW (with tap)
17	WL N 04.03.17.001	Adapter H NW / H NWC (cased-swivel)
18	WL N 04.03.18.001	Adapter H AW / H NTC (with swivel)
19	WL N 04.03.19.001	Adapter H BW / H NTC (with swivel)
20	WL N 04.03.20.001	Adapter H NW / H NTC (with swivel)
21	WL N 04.03.21.001	Adapter M NTC / H NWC (with casing)
22	WL N 04.03.22.001	Adapter M NTC / H BWC (with casing)

Adapters and Couplings of WireLine complex

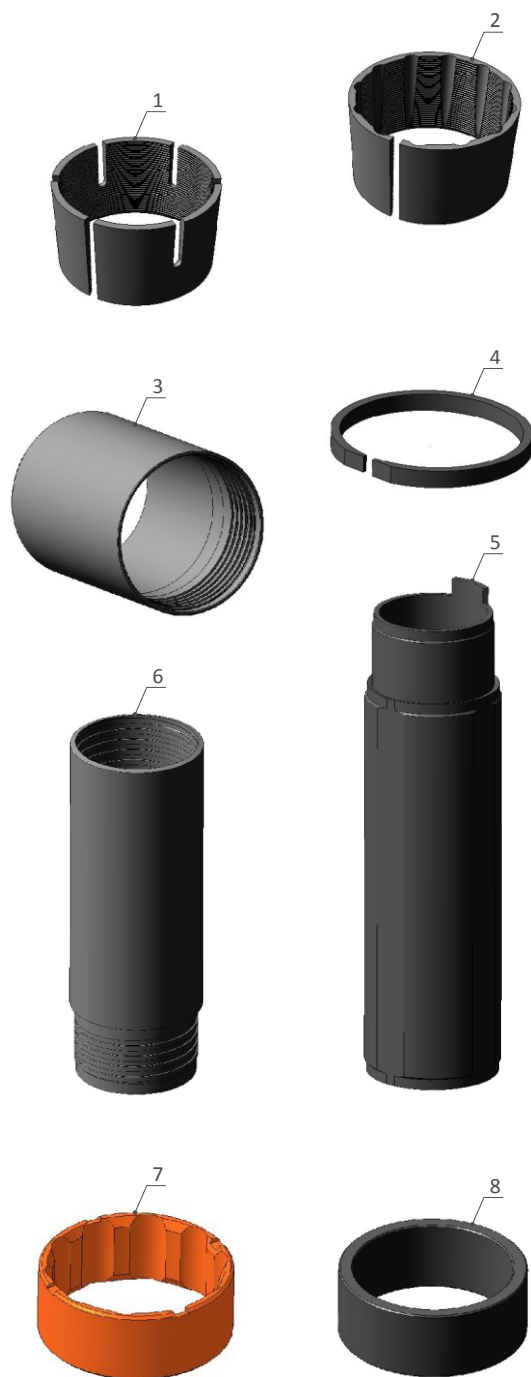
#	Part #	Name
23	WL N 04.03.23.001	Adapter M NTC / H HWC (with casing)
24	WL N 04.03.24.001	Adapter M NTC / H BW (with tap)
25	WL N 04.03.25.001	Adapter M NTC / H NW (with tap)
26	WL N 04.03.26.001	Adapter H NRQC / M BWC (with the casing top)
27	WL N 04.03.27.001	Adapter H NQC / M BWC (with the casing top)
28	WL N 04.03.28.001	Adapter H NTC / M BWC (with the casing top)
29	WL N 04.04.01.001	Adapter coupling NRQC
30	WL N 04.04.02.001	Adapter coupling NQC
31	WL N 04.04.03.001	Adapter coupling NTC
32	WL N 04.05.00.001	Thread protector N
33	WL N 04.06.01.000	Adapter coupling NRQC
34	WL N 04.06.01.000-01	Adapter coupling NQC
35	WL N 04.06.01.000-02	Adapter coupling NTC
Adapters and Couplings of WireLine H complex		
1	WL H 04.03.01.001	Adapter H AW / H HRQC (with swivel)
2	WL H 04.03.02.001	Adapter H AW / H HQC (with swivel)
3	WL H 04.03.03.001	Adapter H BW / H HRQC (with swivel)
4	WL H 04.03.04.001	Adapter H BW / H HQC (with swivel)
5	WL H 04.03.05.001	Adapter H NW / H HRQC (with swivel)
6	WL H 04.03.06.001	Adapter H NW / H HQC (with swivel)
7	WL H 04.03.07.001	Adapter M HRQC / H NWC (with casing)
8	WL H 04.03.08.001	Adapter M HQC / H NWC (with casing)
9	WL H 04.03.09.001	Adapter M HRQC / H HWC (with casing)
10	WL H 04.03.10.001	Adapter M HQC / H HWC (with casing)
11	WL H 04.03.11.001	Adapter M HRQC / H HWTC (with casing)
12	WL H 04.03.12.001	Adapter M HQC / H HWTC (with casing)
13	WL H 04.03.13.001	Adapter M HRQC / H NW (with tap)
14	WL H 04.03.14.001	Adapter M HQC / H NW (with tap)
15	WL H 04.03.15.001	Adapter M HRQC / H HW (with tap)
16	WL H 04.03.16.001	Adapter M HQC / H HW (with tap)
17	WL H 04.03.17.001	Adapter H HW / H HWC (cased-swivel)
18	WL H 04.03.18.001	Adapter H AW / H HTC (with swivel)
19	WL H 04.03.19.001	Adapter H BW / H HTC (with swivel)
20	WL H 04.03.20.001	Adapter H NW / H HTC (with swivel)
21	WL H 04.03.21.001	Adapter M HTC / H NWC (with casing)
22	WL H 04.03.22.001	Adapter M HTC / H HWC (with casing)
23	WL H 04.03.23.001	Adapter M HTC / H HWTC (with casing)
24	WL H 04.03.24.001	Adapter M HTC / H NW (with tap)
25	WL H 04.03.25.001	Adapter M HTC / H HW (with tap)
26	WL H 04.03.26.001	Adapter H HRQC / M NWC (with the casing top)
27	WL H 04.03.27.001	Adapter H HQC / M NWC (with the casing top)
28	WL H 04.03.28.001	Adapter H HTC / M NWC (with the casing top)
29	WL H 04.04.01.001	Adapter coupling HRQC
30	WL H 04.04.02.001	Adapter coupling HQC
31	WL H 04.04.03.001	Adapter coupling HTC
32	WL H 04.05.00.001	Thread protector H
33	WL H 04.06.01.000	Adapter coupling HRQC
34	WL H 04.06.01.000-01	Adapter coupling HQC
35	WL H 04.06.01.000-02	Adapter coupling HTC

WireLine Recovery Tool



#	Part #	Name
WireLine N recovery tool		
1	WL N 06.01.01.000	N WireLine rope grab
2	WL N 06.02.01.000	Tap N / M BW (for N drill pipe or for BWC outer tube)
2.1	WL N 06.02.01.001	Tap N / M BW
2.2	WL N 06.02.01.002	Spearhead N
3	WL N 06.02.01.003	Tap N / M NRQC
4	WL N 06.02.01.004	Tap N / M NQC
5	WL N 06.02.01.005	Tap N / M NTC
6	WL N 06.03.01.001	Tap NWC / M BW (for NWC outer tube)
WireLine H recovery tool		
1	WL H 06.01.01.000	H WireLine rope grab
2	WL H 06.02.01.000	Tap H / M NW (for H drill pipe)
2.1	WL H 06.02.01.001	Tap H / M NW
2.2	WL H 06.02.01.002	Spearhead H
3	WL H 06.02.01.003	Tap H / M HRQC
4	WL H 06.02.01.004	Tap H / M HQC
5	WL H 06.02.01.005	Tap H / M HTC
6	WL H 06.03.01.001	Tap HWC / M NW (for NWC outer tube or HWTC)

Spare parts for WireLine Core Drill Systems



#	Part #	Name
Spare parts for WireLine B		
1	WL B 05.02.00.001	B core lifter
2	WL B 05.02.00.002	B core lifter with grooves
3	WL B 05.03.00.001	B core lifter case
4	WL B 05.01.00.001	B stop Ring
5	WL B 04.01.01.001	BRQC locking coupling
5	WL B 04.01.01.002	BRQC locking coupling
5	WL B 04.01.02.001	BQC locking coupling
5	WL B 04.01.02.002	BQC locking coupling
6	WL B 04.02.00.001	B adapter coupling
7	WL B 05.05.00.001	B inner tube stabilizer
8	WL B 05.04.00.001	B landing ring
Spare parts for WireLine N		
1	WL N 05.02.00.001	N core lifter
2	WL N 05.02.00.002	N core lifter with grooves
3	WL N 05.03.00.001	N core lifter case
4	WL N 05.01.00.001	N stop ring
5	WL N 04.01.01.001	NRQC locking coupling
5	WL N 04.01.01.002	NRQC locking coupling
5	WL N 04.01.02.001	NQC locking coupling
5	WL N 04.01.02.002	NQC locking coupling
5	WL N 04.01.03.001	NTC locking coupling
5	WL N 04.01.03.002	NTC locking coupling
6	WL N 04.02.00.001	N adapter coupling
7	WL N 05.05.00.001	N inner tube stabilizer
8	WL N 05.04.00.001	N landing ring
Spare parts for WireLine H		
1	WL H 05.02.00.001	H core lifter
2	WL H 05.02.00.002	H core lifter with grooves
3	WL H 05.03.00.001	H core lifter case
4	WL H 05.01.00.001	H stop ring
5	WL H 04.01.01.001	HRQC locking coupling
5	WL H 04.01.01.002	HRQC locking coupling
5	WL H 04.01.02.001	HQC locking coupling
5	WL H 04.01.02.002	HQC locking coupling
5	WL H 04.01.03.001	HTC locking coupling
5	WL H 04.01.03.002	HTC locking coupling
6	WL H 04.02.00.001	H adapter coupling
7	WL H 05.05.00.001	H inner tube stabilizer
8	WL H 05.04.00.001	H landing ring

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