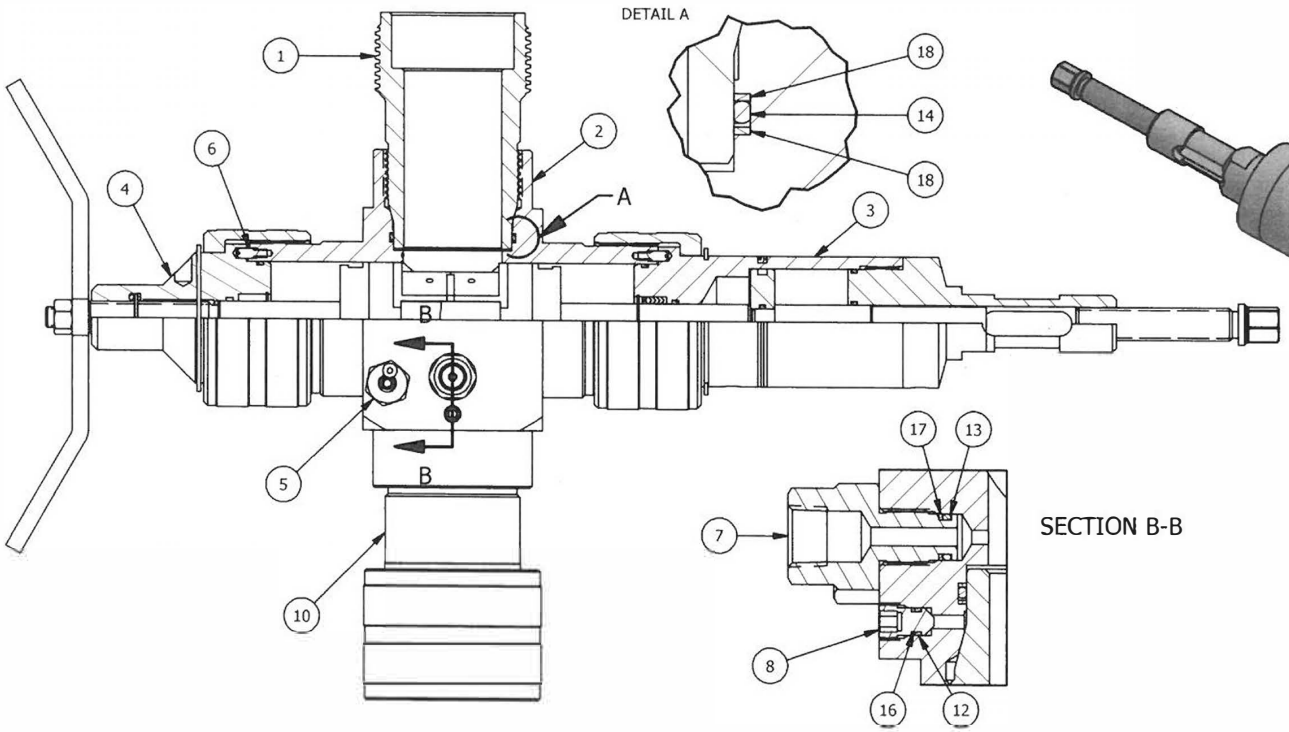
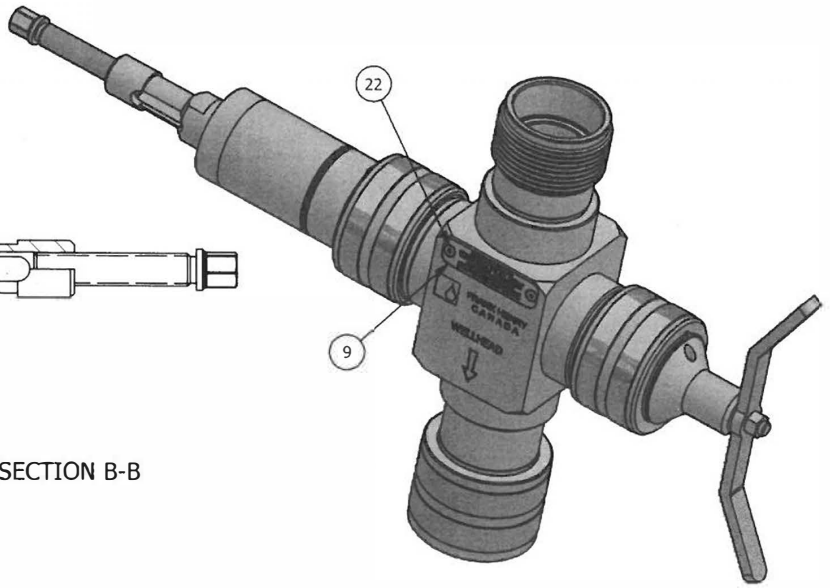
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	WV-300-002	TOP SUB
2	1	WV-300-001	BODY
3	1	WVH-300-000	HYDRAULIC RAM ASSY
4	1	WVM-300-000	MANUAL RAM ASSY
5	1	WVE-300-000	EQUALIZING ASSY
6	2	WV-300-004	ALIGNMENT PIN
7	2	WV-300-005	ADAPTER PLUG

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
8	4	WV-300-006	SEALING PLUG
9	1	WV-300-007	LABEL
10	1	WV-300-003	BOTTOM SUB
11	1	UNS475BNUT	
12	4	#010	O-RING
13	2	#111	O-RING
14	2	#239	O-RING

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
15	1	#340	O-RING
16	4	#010	BACKUP RING
17	2	#111	BACKUP RING
18	4	#239	BACKUP RING
19	1	#340	BACKUP RING
22	2	1/4 - UNC x 0.38	Flat Head Cap Screw



SECTION B-B



DATE	REVISION	BY	APPR	MATERIAL
				SURFACE COATING

UNLESS OTHERWISE STATED

TOLERANCE

0.0 = ±.030 DO NOT SCALE DRAWING

0.00 = ±.015 REMOVE SHARP EDGES

0.000 = ±.005 SURFACE FINISH √125

ANGLES = ±.5°

CONCENTRICITY .010 TIR

FRANK HENRY
C A N A D A

DRAWN	DATE	APPRD
R.A.S.	12/8/2011	

TITLE & PROJECT

WIRELINE VALVE 3.0

MAIN ASSEMBLY

PART NUMBER	REV
WV-300-000	

DESCRIPTION & OPERATION

The Wireline Valve (BOP) is located between the wellhead and lubricator and is designed to provide a positive seal around slickline or cable. This allows work to be performed under pressure, on surface equipment with the line in the wellbore.
The WLV closure design consists of either mechanical or hydraulic actuators which are connected to the Ram Assemblies. This enables compression of the Rams around the line from opposite sides. This creates a seal which contains well bore pressure from below the rams. Pressure across the Rams is equalized through an external equalizing assembly prior to retracting the Rams and opening the WLV. Hydraulic actuators are fitted with manual overrides in case of hydraulic failure.
Frank Henry Canada Wireline Valves with 3.00 & 4.06 nominal ID, are available with working pressures of 5000, 10.000 or 15,000 psi. All are suitable for sour service. The 10,000 & 15,000 working pressure WLV's are available with dual or triple ram configurations.

MAINTENANCE

Daily Inspection

Wireline Valves should be visually inspected and function tested prior to each use by qualified personnel.
After each use the Ram Assemblies should be removed, cleaned of any wellbore fluids and visually inspected. The Body should also be cleaned of any traces of well bore fluids or contaminants. If the WLV is not expected to be in immediate use, it should have all wetted surfaces coated with anti- corrosive.

Every 3 months

All seals exposed to wellbore fluids should be replaced. Wireline Valve should be pressure and function tested to working pressure by qualified personnel. Results to be recorded.

Annually

The Wireline Valve should be returned to the manufacturer for a complete Level 3 inspection, and re-certification in accordance with IRP 13.6. Every third year a complete Level 4 inspection and re-certification must be carried out by the manufacturer in accordance with IRP 13.6

DATE	REVISION	BY	APPR	MATERIAL
				SURFACE COATING

UNLESS OTHERWISE STATED
TOLERANCE
0.0 = ±.030 DO NOT SCALE DRAWING
0.00 = ±.015 REMOVE SHARP EDGES
0.000 = ±.005 SURFACE FINISH √125
ANGLES = ±.5°
CONCENTRICITY .010 TIR

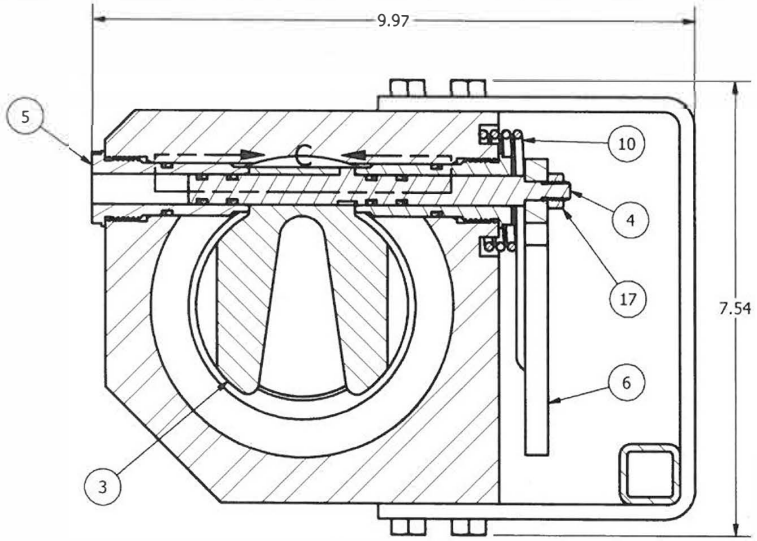
FRANK HENRY
C A N A D A

DRAWN	DATE	APPRD
R.A.S.	12/8/2011	

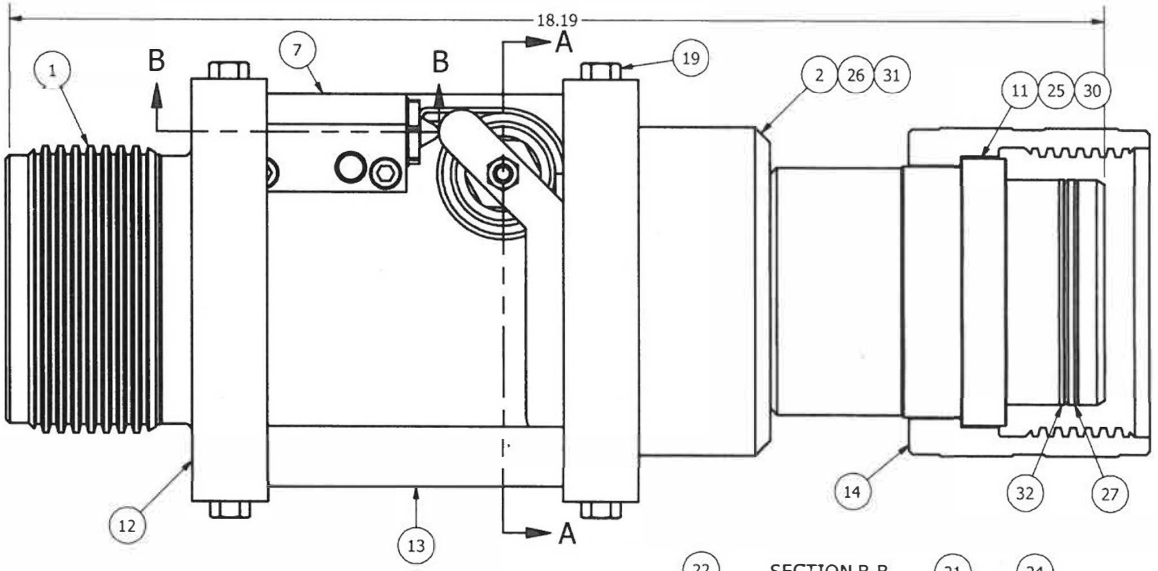
TITLE & PROJECT
WIRELINE VALVE 3.0
MAIN ASSEMBLY

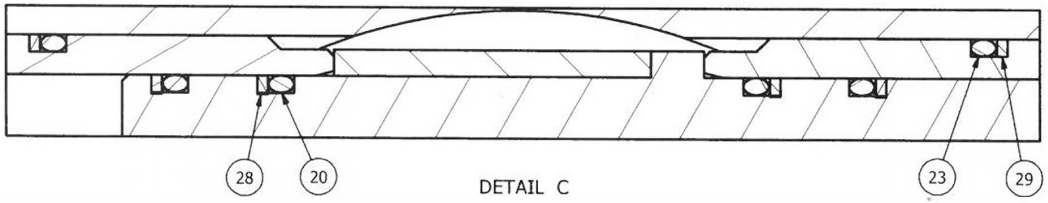
PART NUMBER	REV
WV-300-000	

ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	BODY	TRP29910KBODY	9	1	PLUNGER	TRP29910KPLUNGER	19	8	HEX BOLT	3/8-16 UNC x 1"	27	1	O-RING	# 340
2	1	BOTTOM SUB	TRP29910KBOTSUB	10	1	SPRING	TRP29910KSPRING	20	4	O-RING	# 109	28	4	BACKUP RING	# 109
3	1	FLAPPER	TRP29910KFLAPPER	11	1	MALE UNION	SUB29910KF06XAM	21	1	O-RING	# 112	29	2	BACKUP RING	# 115
4	1	SHAFT	TRP29910KSHAFT	12	2	FRAME	TRP29910KFRAME	22	1	O-RING	# 113	30	1	BACKUP RING	# 239
5	2	SHAFT RETAINER	TRP29910KSHAFTRT	13	1	HANDLE	TRP29910KHANDLE	23	2	O-RING	# 115	31	1	BACKUP RING	# 248
6	1	LEVER	TRP29910KLEVER	14	1	HAND NUT	UNS475BNUT	24	1	O-RING	# 116	32	1	BACKUP RING	# 340
7	1	ACTUATOR BODY	TRP29910KACTBODY	17	1	NYLOC NUT	5/16 - 18 UNC	25	1	O-RING	# 239				
8	1	PLUNGER RETAINER	TRP29910KPLUNGRT	18	2	ALLEN CAP SCREW	5/16 - 18 UNC - 1 1/2"	26	1	O-RING	# 248				

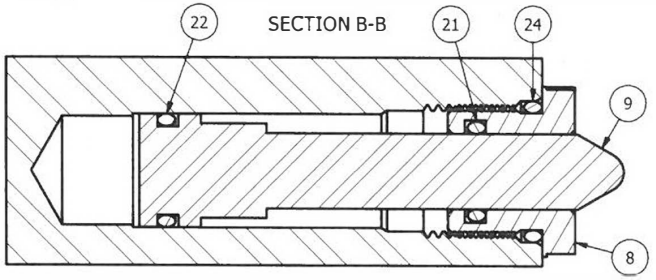


SECTION A-A





DETAIL C



SECTION B-B

WEIGHT APPROX 89 lbs

NO.	DATE	REVISION		MATERIAL	TOLERANCES UNLESS OTHERWISE STATED	FRANK HENRY C A N A D A	MAIN ASSY
				HEAT TREATMENT	0.0 = +/- .030 0.00 = +/- .015 0.000 = +/- .005 ∠ = +/- 1° ⌀ = .010 TIR	DO NOT SCALE DRAWING REMOVE SHARP EDGES SURFACE FINISH 125	3.0 10K TOOL TRAP
				COATING		DRAWN R.A.S. / DATE 26 MAR 2014 / APPR APP.	PART NUMBER

TABLE OF CONTENTS

5.1 INTRODUCTION
5.2 OPERATION
5.3 MAINTAINANCE

5.1 INTRODUCTION

The tool trap is attached to the bottom of the riser section, above the bop, in the wellhead string. The flapper of the tool trap is designed to catch the tool string if it crowns out and the wireline breaks or slips out of the rope socket. The Frank Henry Tool Trap is available in 3.00, 4.06 and 5.13 sizes with 10K or 15K working pressures.

5.2 OPERATION

To open the flapper in the tool trap hydraulic pressure is applied through the ¼ NPT port using a hand pump or can be opened manually by using the indicator lever. When using a hand pump to apply hydraulic pressure, a plunger presses on the lever moving the flapper to the open position allowing the tool string to pass through. Once the string has passed through the hydraulic pressure is release and the tension spring, on the lever, takes over moving the flapper to the closed position. The wireline can be operated in the V shaped slot in the flapper.
The indicator lever doubles as a manual over ride as well as an indicator of the flapper being in the open or closed position.
When pulling out of the hole the tool string will open the flapper, which will be indicated by the lever position. The tension spring will close the flapper once the tool string has passed though and into the lubricator.

5.3 MAINTAINANCE

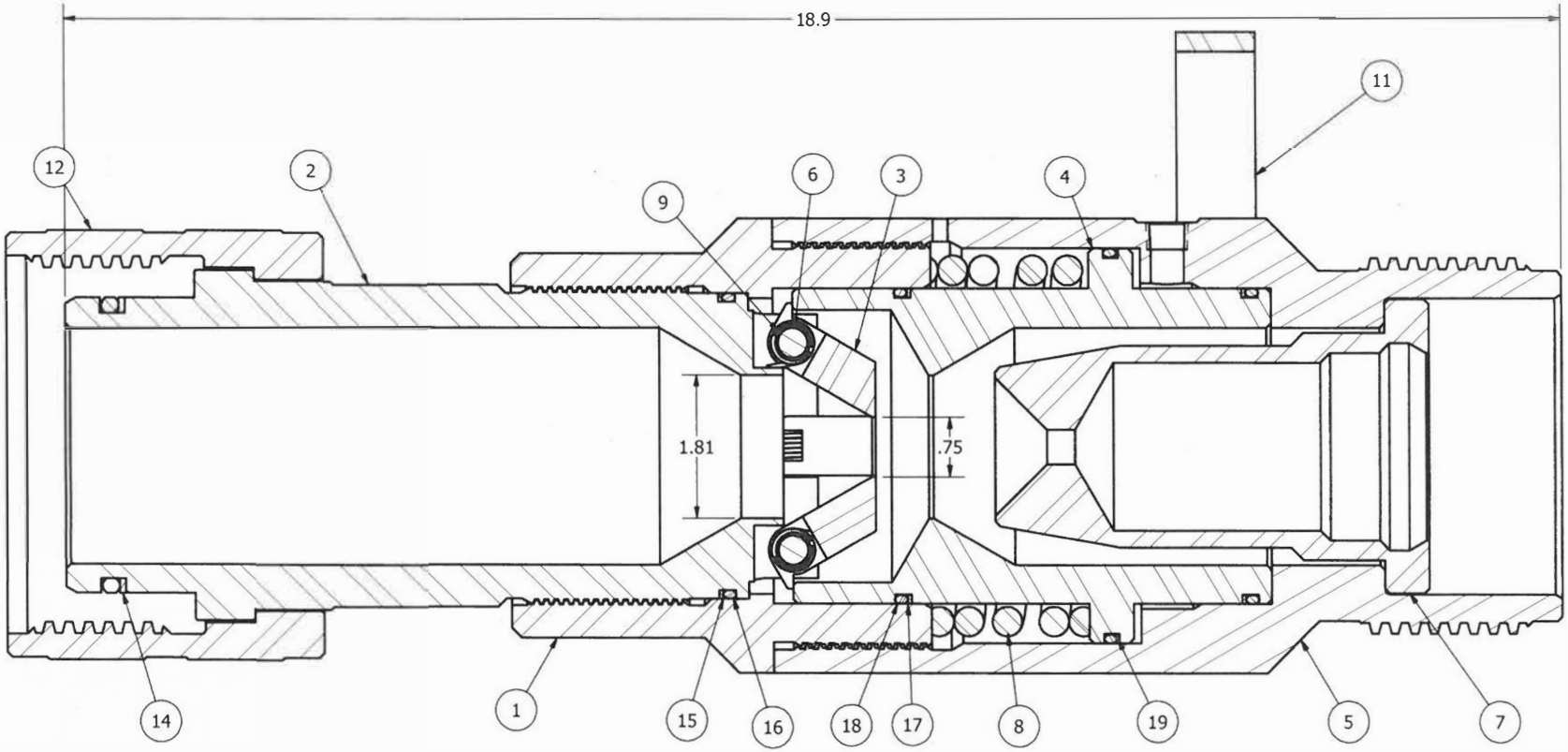
A visual inspection should be done on the O-ring in the bottom sub (male union) after every use to ensure there was no damage to it during rig up or take down. The tool trap should be cleaned of well bore fluids after every use. Once wiped down a coat of WD-40 or similar lubricant should be applied the top and bottom connections to help prevent any rusting.
If the tool trap has caught the tool string a visual inspection of the flapper should take place to ensure that no damage has occurred and that it functions freely by manually moving indicator lever from open to closed position.
If major damage has occurred to the flapper and shaft the tool trap should be sent back to the manufacture or certified shop for a full inspection and recertification.
Once every year the tool trap should be returned to the manufacture for complete tear down, inspection of all parts and pressure testing.

NO.	DATE	REVISION	MATERIAL / HEAT TREATMENT / COATING	TOLERANCES UNLESS OTHERWISE STATED 0.0 = +/- .030 0.00 = +/- .015 0.000 = +/- .005 ∠ = +/- 1° ○ = .010 TIR DO NOT SCALE DRAWING REMOVE SHARP EDGES SURFACE FINISH 125	FRANK HENRY C A N A D A DRAWN R.A.S. DATE 26 MAR 2014 APPR APP.	TOOL TRAP ASSY OPERATING INSTRUCTIONS PART NUMBER

PARTS LIST			
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	BODY	HDCAT310KBODY
2	1	BOTTOM SUB	HDCAT310KBOTSUB
3	4	DOG	HDCAT310KDOG
4	1	PISTON	HDCAT310KPISTON
5	1	TOP SUB	HDCAT310KTOPSUB
6	4	PIN	HDCAT310KDOGPIN
7	1	FN STOP	HDCAT310KFNSTOP

PARTS LIST			
ITEM	QTY	DESCRIPTION	PART NUMBER
8	1	SPRING	HDCAT310KSPRING
9	4	DOG SPRING	HDCAT310KDOGSPG
11	1	HANDLE	HDCAT310KHANDLE
12	1	NUT	UNS475BNUT
14	1	BACKUP RING	# 340
15	1	BACKUP RING	# 239
16	1	O-RING	# 239

PARTS LIST			
ITEM	QTY	DESCRIPTION	PART NUMBER
17	2	BACKUP RING	# 240
18	2	O-RING	# 240
19	1	O-RING	# 248
20	1		O-Ring #340
21	4	Hex Bolt	3/8-16 UNC x 5/8



WEIGHT APPROX 71 lbs

NO	DATE	REVISION

MATERIAL

HEAT TREATMENT

COATING

TOLERANCES UNLESS OTHERWISE STATED
0.0 = +/- .030
0.00 = +/- .015
0.000 = +/- .005
∠ = +/- 1°
⌖ = .010 TIR
DO NOT SCALE DRAWING
REMOVE SHARP EDGES
SURFACE FINISH 125

FRANK HENRY
C A N A D A

DRAWN R.A.S. | DATE 15 MAY 2014 | APPR APP.

HEAD CATCH ASSEMBLY

3.0 10K

PART NUMBER
HDCAT310KASSY

TABLE OF CONTENTS

5.1 INTRODUCTION
5.2 OPERATION
5.3 MAINTAINANCE

5.1 INTRODUCTION

The head catch is attached to the bottom of the grease head or stuffing box and is designed to catch and hold the fish neck if the tool string is pulled to the top of the lubricator and the wire strips from the rope socket. The Frank Henry head catch is available in 10K or 15K working pressures. The standard dogs will cover fishneck
sizes from 1.00 to 1.75 and support a tool string weight of up to 2000 lbs

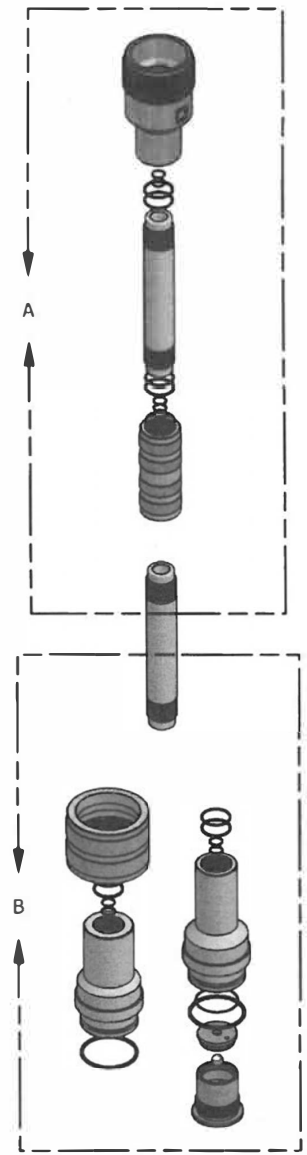
5.2 OPERATION

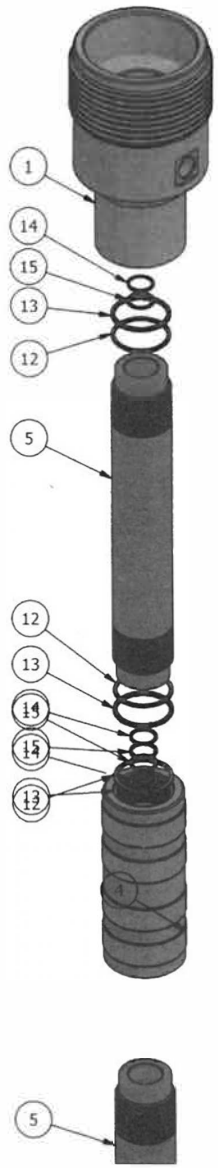
To open the dogs in the head catch, hydraulic pressure is applied through the ¼ NPT port using a hand pump. This opens the dogs releasing the tool string. Once the hydraulic pressure is released the return spring will reset the dogs to the operation position

5.3 MAINTAINANCE

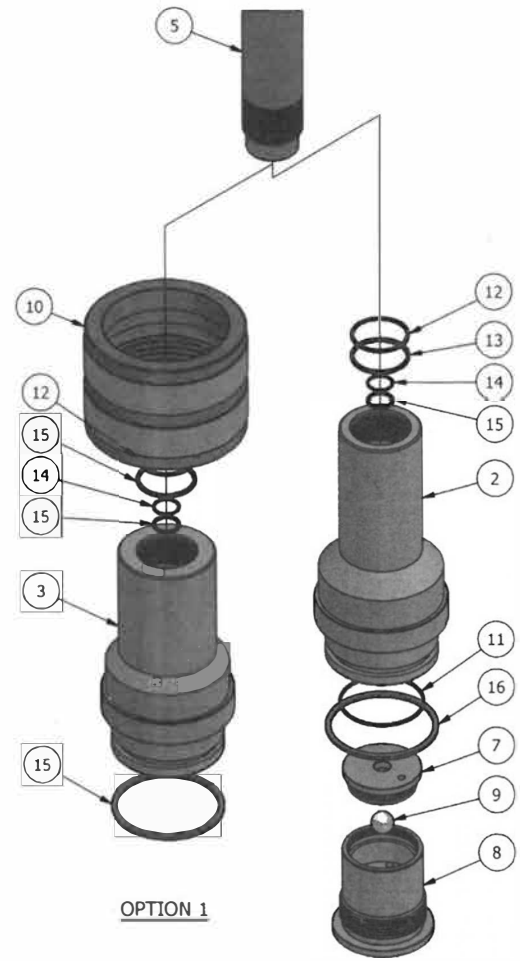
A visual inspection should be done on the O-ring in the bottom sub (male union) before every use. The head catch should be cleaned from well bore fluid after use and coated with WD-40 or similar lubricant to prevent corrosion.
In the event that the head catch has caught the tool string a visual inspection of the dogs should take place, to ensure that no damage has occurred to the dog or dog springs and that it functions freely.
The head catch should be returned to the manufacturer for a complete tear down, inspection, seal replacement and pressure testing annually.

NO.	DATE	REVISION		MATERIAL / HEAT TREATMENT / COATING	TOLERANCES: 0.0 = +/- .030; 0.00 = +/- .015; 0.000 = +/- .005; ∠ = +/- 1°; ⌀ = .010 TIR	UNLESS OTHERWISE STATED: DO NOT SCALE DRAWING, REMOVE SHARP EDGES, SURFACE FINISH 125	FRANK HENRY CANADA	DRAWN: R.A.S.	DATE: 15 MAY 2014	APPR: APP	HEAD CATCH ASSY — OPERATING INSTRUCTIONS	PART NUMBER





DETAIL A
SCALE 1 / 4



OPTION 1

OPTION 2
w/ VELOCITY CHECK

DETAIL B
SCALE 1 / 4

Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	GHD-BFTOP	GREASEHEAD TOP SUB
2	1	GHD-BFBOTVEL	GREASEHEAD VELOCITY CHECK BOTTOM SUB
3	1	GHD-BFBOT	GREASEHEAD BOTTOM SUB
4	3	GHD-BFCOUPLER	GREASEHEAD COUPLER
5	4	GHD-BFTUBESLV	GREASEHEAD FLOW TUBE SLEEVE
7	1	GHD-VELCAPPLUG	GREASEHEAD VELOCITY CHECK CAP PLUG
8	1	GHD-VELCARTRIDGE	GHD VELOCITY CHECK CARTRIDGE INSERT
9	1	GHD-VELBALL3/4SS	GREASEHEAD VELOCITY CHECK 3/4" SS BALL
10	1	UNS475BNUT	
11	1	ORG-XXX-0147-0000	VELOCITY CHECK CARTRIDGE O-ORING
12	8	ORG-XXX-0224-00BU	O-RING BACKUP
13	8	ORG-XXX-0224-0000	O-RING SEAL
14	8	ORG-XXX-0210-00BU	O-RING BACKUP
15	8	ORG-XXX-0210-0000	O-Ring SEAL
16	1	ORG-XXX-0340-0000	BOTTOM SUB O-RING SEAL

NO	DATE	REVISION	APP
1	4 OCT 2012	0210 O-RING & BACKUP RING WAS 0116	R.A.S.
0	08.08.12	ISSUED FOR REVIEW	DKM

9810 - 80 AVENUE
EDMONTON, ALBERTA T6E 0C5
BUS: (780)434.8778
FAX: (780)436-4471

SCALE: 1/8 SIZE | APPROVED BY: | DRAWN BY: DANCAM
DATE: AUG. 2008

GREASEHEAD
ASSEMBLY
EXPLODED VIEW

MATERIAL SPECIFICATION | PART NUMBER

TOLERANCES

0.0	± 0.020
0.00	± 0.010
0.000	± 0.003
FRACTIONS	± 1/32"
ANGLES	± 1/2°

TABLE OF CONTENTS

5.1 INTRODUCTION
5.2 OPERATION
5.3 MAINTAINANCE

5.1 INTRODUCTION

The Frank Henry grease head is attached to the top of the risers and allows well bore intervention under pressure. The Frank Henry grease head is 10K or 15K rated and comes in either 4,5 or 6 tube configurations.

5.2 OPERATION

The Frank Henry grease head can be supplied with either a stuffing box, which is designed to pack-off on a stationary line or a pack-off head with a wiper which is used to create a seal and wipe off excess grease while line is moving. Once the wireline equipment is ready to be run, grease is injected into the couplers at slightly higher than well bore pressure. This fills the space between the flow tubes ID and the wireline creating a liquid seal that contains well bore fluid allowing the wireline to have movement

5.3 MAINTAINANCE

A visual inspection should be done on the O-ring in the bottom sub (male union) after every use to ensure there was no damage to it during rig up or take down. The grease head top and bottom subs should be cleaned from well bore fluid after every use. Once wiped down a coat of WD-40 or similar lubricant should be applied the top and bottom connections to help prevent any rusting.
Once pack-off is removed from the grease head, a visual inspection can be done on the inner rubbers to ensure that the rubber did not extrude while equipment was operating.
Once per year the Frank Henry grease head should be sent back to the manufacture or a certified shop for complete tear down and inspection.

NO.	DATE	REVISION	APP.

9810 - 60 AVENUE
EDMONTON, ALBERTA T6E 0C5
BUS. (780)434-8778
FAX (780)436-4471

SCALE:	APPROVED BY	DRAWN BY
DATE:		DANCAM

GREASE HEAD ASSY

OPERATING INSTRUCTIONS

MATERIAL SPECIFICATION	PART NUMBER

TOLERANCES

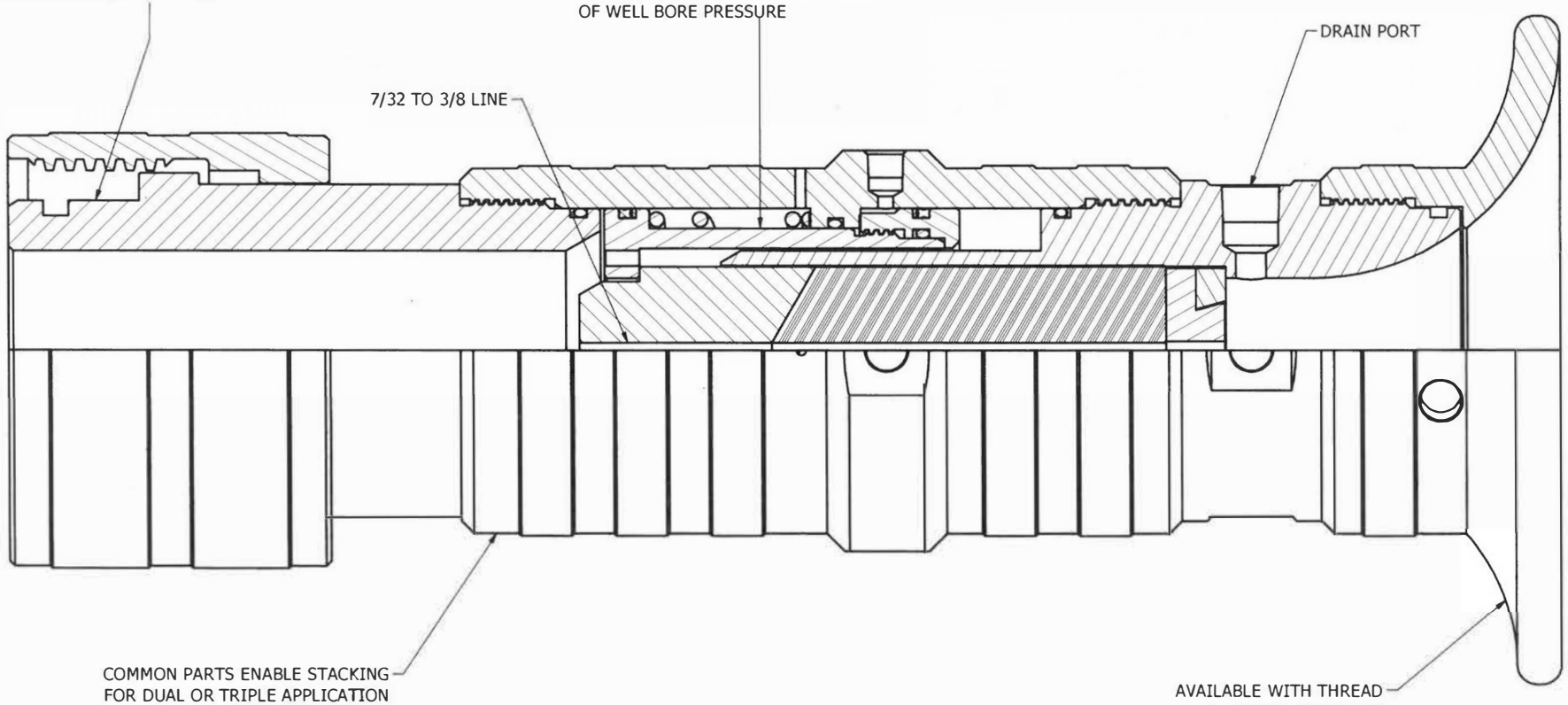
0.0	± 0.020
0.00	± 0.010
0.000	± 0.003
FRACTIONS	± 1/32"
ANGLES	± 1/2°

F06 / BO1 - 4.75 BOWEN CONNECTION
OTHERS AVAILABLE ON REQUEST

INCORPORATES BALANCED PISTON DESIGN
HYDRAULIC PRESSURE INDEPENDANT
OF WELL BORE PRESSURE

DRAIN PORT

7/32 TO 3/8 LINE



COMMON PARTS ENABLE STACKING
FOR DUAL OR TRIPLE APPLICATION

AVAILABLE WITH THREAD
PROTECTOR OR TULIP

NO.	DATE	REVISION

MATERIAL
HEAT TREATMENT
COATING

TOLERANCES UNLESS OTHERWISE STATED
0.0 = +/- .030
0.00 = +/- .015
0.000 = +/- .005
∠ = +/- 1°
◎ = .010 TIR
DO NOT SCALE DRAWING
REMOVE SHARP EDGES
SURFACE FINISH 125

FRANK HENRY
C A N A D A

DRAWN	DATE	APPR
R.A.S.	22 APR 2014	APP.

PACKOFF HEAD

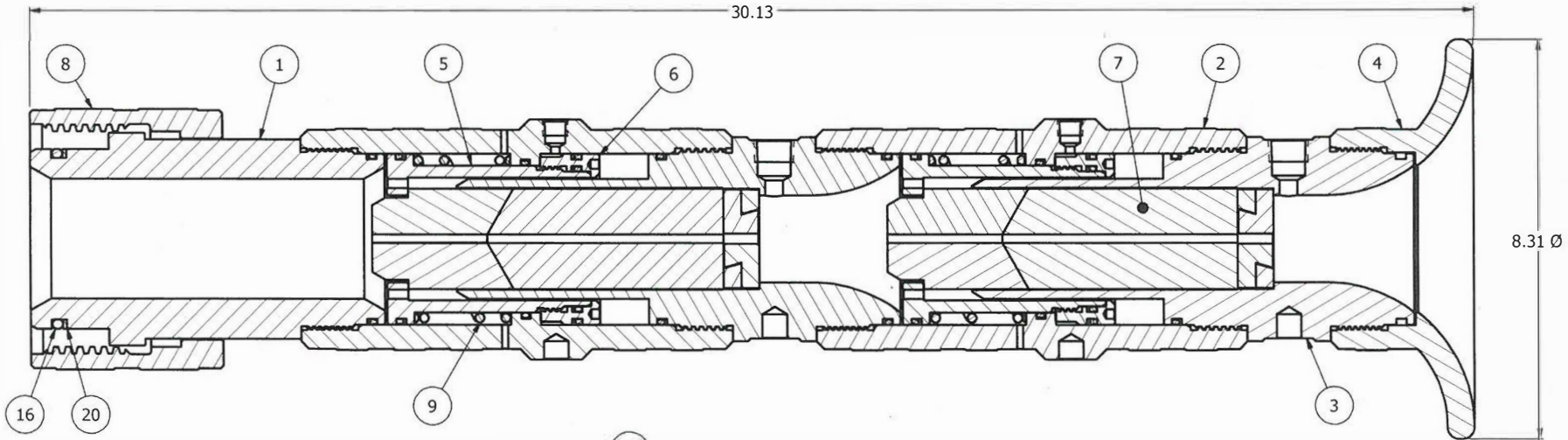
INFORMATION SHEET

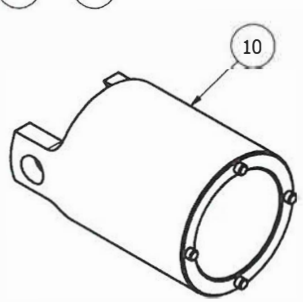
PART NUMBER

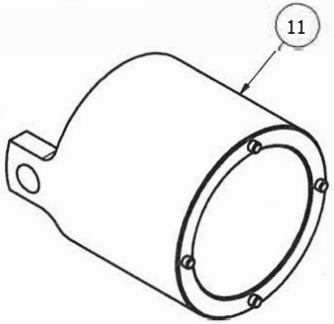
PARTS LIST			
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	BOTTOM SUB	SVRFHEBOTSUB
2	2	BODY	SVRFHEBODY
3	2	SEAL HOUSING	SVRFHESEALHOUSE
4	1	TULIP	SVRFHETULIP
5	2	PISTON	SVRFHEPISTON
6	2	NUT PISTON	SVRFHEPISTONNUT
7	2	SEAL ASSEMBLY	

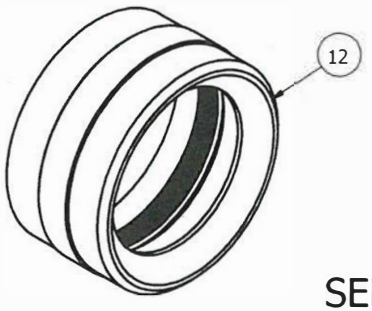
PARTS LIST			
ITEM	QTY	DESCRIPTION	PART NUMBER
8	1	NUT MALE UNION	WV-300-017
9	2	SPRING	SVRFHESPRING
10	1	PISTON WRENCH	SVRFHEWRENCH1
11	1	NUT WRENCH	SVRFHEWRENCH2
12	1	THREAD PROTECTOR	SVRFHETHRDPRO
13	2	O-RING	# 233
14	2	O-RING	# 235

PARTS LIST			
ITEM	QTY	DESCRIPTION	PART NUMBER
15	4	O-RING	# 236
16	1	O-RING	# 340
17	4	QUAD RING	# 236
18	2	BACKUP RING	# 232 Backup Ring
19	8	BACKUP RING	# 236
20	1	BACKUP RING	# 340









WEIGHT APPROX 104 lbs

SEE SHEET 2 FOR SEAL DETAILS

NO	DATE	REVISION

MATERIAL

HEAT TREATMENT

COATING

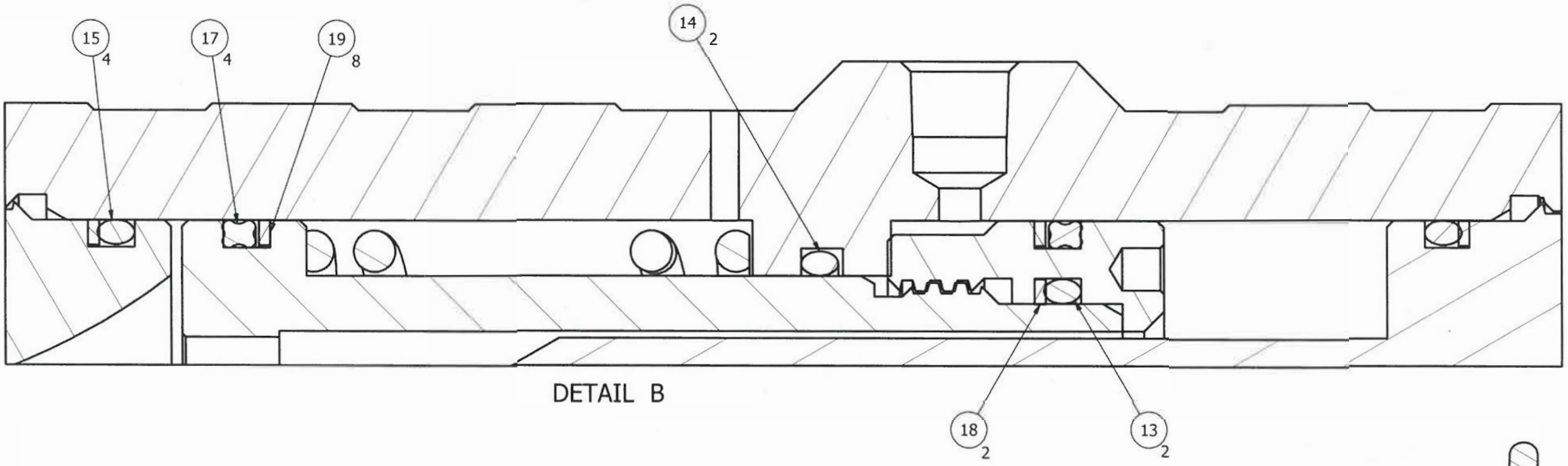
TOLERANCES UNLESS OTHERWISE STATED
0.0 = +/- .030
0.00 = +/- .015
0.000 = +/- .005
∠ = +/- 1°
⌀ = .010 TIR
DO NOT SCALE DRAWING
REMOVE SHARP EDGES
SURFACE FINISH 125

FRANK HENRY
C A N A D A

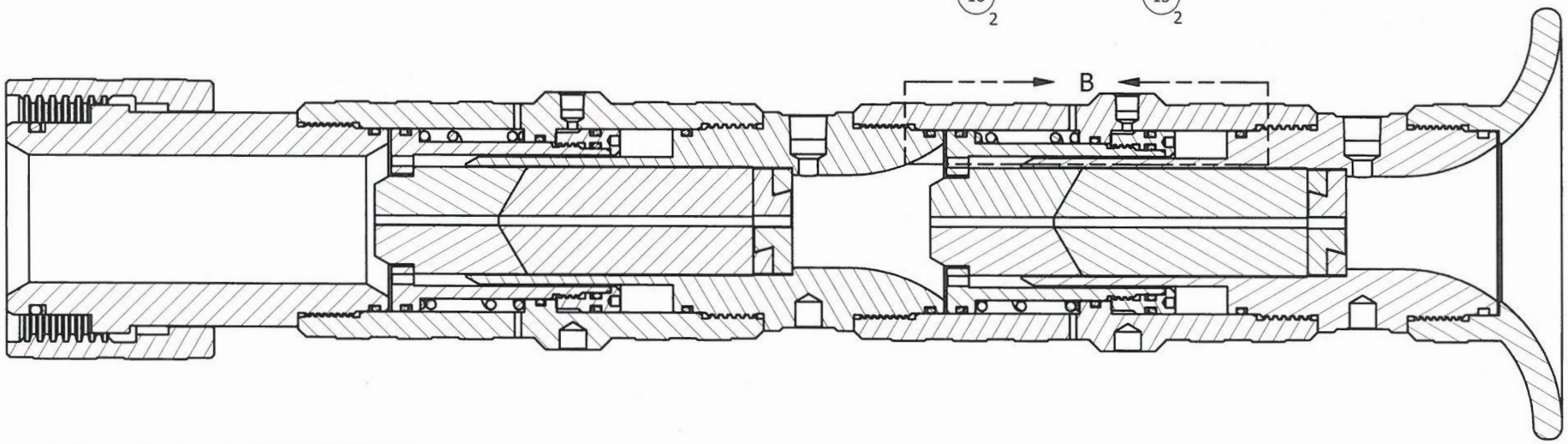
DRAWN	DATE	APPR
R.A.S.		APP.

Ackoff

PART NUMBER



DETAIL B



NO	DATE	REVISION

MATERIAL

HEAT TREATMENT

COATING

TOLERANCES UNLESS OTHERWISE STATED
0.0 = +/- .030
0.00 = +/- .015
0.000 = +/- .005
∠ = +/- 1°
○ = .010 TIR

DO NOT SCALE DRAWING
REMOVE SHARP EDGES
SURFACE FINISH 125

FRANK HENRY
C A N A D A

DRAWN	DATE	APPR
R.A.S.		APP.

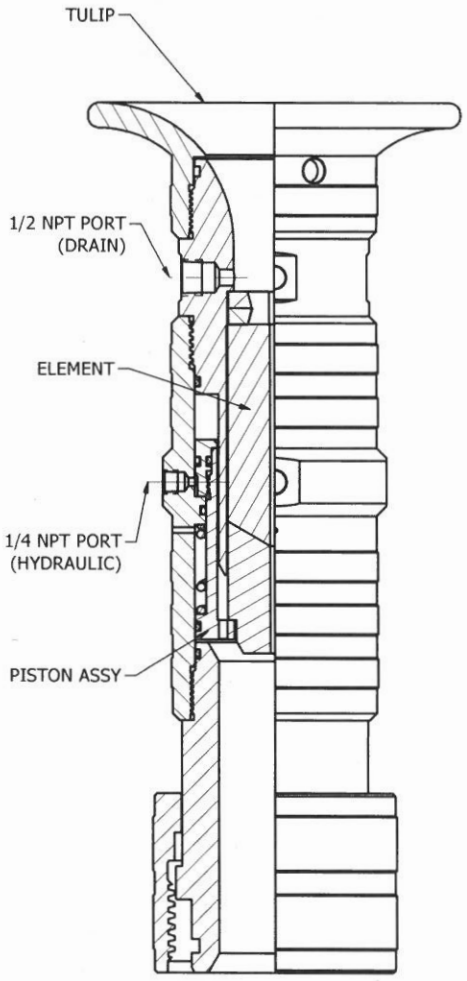
SEAL DETAILS

packoff

PART NUMBER

Description:

The Packoff Head is typically attached to the top of the Grease Head or Lubricator and provides a method of sealing around static line with a rubber element.
Elements are available in a variety of compounds, and sized to suit most lines.
The aluminum entry guide (tulip) protects the line during rigging up/down.



Operation:

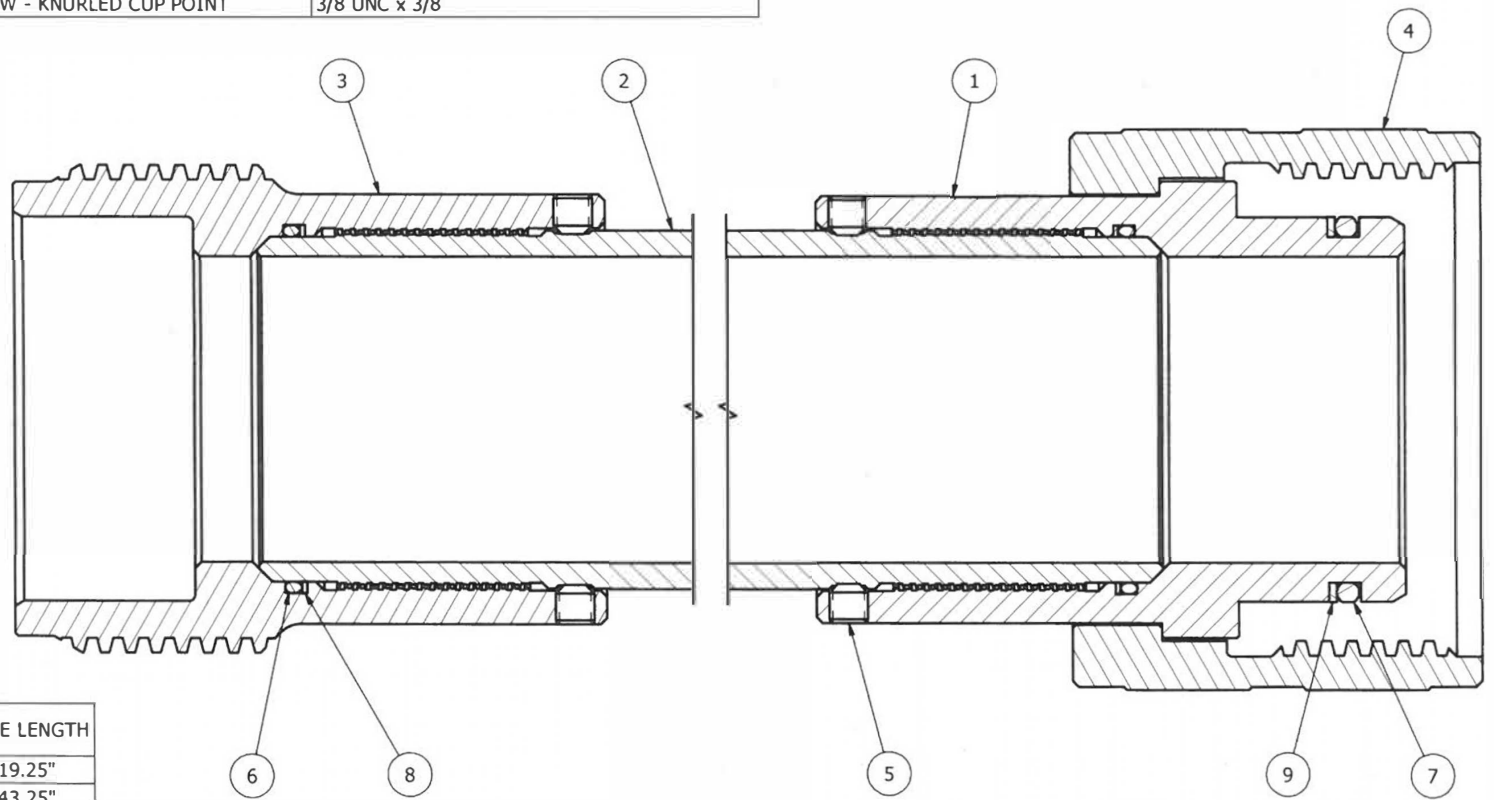
Once assembled, hydraulic pressure is applied to the 1/4 NPT port from a hand pump at ground level to the Piston Assembly, which compresses the element to seal around the cable.
Note: The Piston Assembly is pressure balanced, therefor, only minimal pressure is required to seal effectively. (hydraulic pressure above well bore pressure is not required)

Any excess wellbore fluids or grease stripped from the line can be drained via the 1/2 NPT port.

NO.	DATE	REVISION		FRANK HENRY C A N A D A	PACKOFF ASSY
				DRAWN R.A.S. APP.	OPERATING INSTRUCTIONS
				DATE 3 JAN 2017	PART NUMBER

PARTS LIST			
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	MALE UNION	UNS29910KF06M
2	1	TUBE	TBG29910K3500A (02, 04, 06, 08, 10)
3	1	FEMALE UNION	UNS29910KF06F
4	1	NUT MALE UNION	UNS475BNUT
5	8	SET SCREW - KNURLED CUP POINT	3/8 UNC x 3/8

PARTS LIST			
ITEM	QTY	DESCRIPTION	PART NUMBER
6	2	O-RING	# 237
7	1	O-RING	# 340
8	2	BACK UP RING	# 237
9	1	BACK UP RING	# 340



RISER ASSY LENGTH	TUBE LENGTH
2 FT	19.25"
4 FT	43.25"
6 FT	67.25"
8 FT	91.25"
10 FT	115.25"
12 FT	139.25"

WEIGHTS
2 ft = 40 lbs
4 ft = 59 lbs
6 ft = 77 lbs
8 ft = 96 lbs
10 ft = 114 lbs

NO.	DATE	REVISION

MATERIAL
HEAT TREATMENT
COATING

TOLERANCES
0.0 = +/- .030
0.00 = +/- .015
0.000 = +/- .005
∠ = +/- 1°
○ = .010 TIR

UNLESS OTHERWISE STATED
DO NOT SCALE DRAWING
REMOVE SHARP EDGES
SURFACE FINISH 125

FRANK HENRY
C A N A D A

DRAWN	DATE	APPR
R.A.S.	14 NOV 2013	APP

RISER ASSY

3" 10K F06

PART NUMBER
RIS29910KF06U (02, 04, 06, 08, 10)

TABLE OF CONTENTS

5.1 INTRODUCTION
5.2 OPERATION
5.3 MAINTAINANCE

5.1 INTRODUCTION

The risers are attached to the top of the tool trap. The riser is designed to allow the tool string to be positioned above the wellhead, allowing the bop to be opened and closed. Frank Henry risers can be supplied in 5K, 10K or 15K ratings with ID sizes of 3.0", 4.06" and 5.125"

5.2 OPERATION

The risers are threaded together using either, Bowen, Otis, Elmar or FHC 2 TPI quick union threads. Once thread together a lube dolly is threaded to the bottom connection, so the string can be lifted to the wellhead and attached.

5.3 MAINTAINANCE

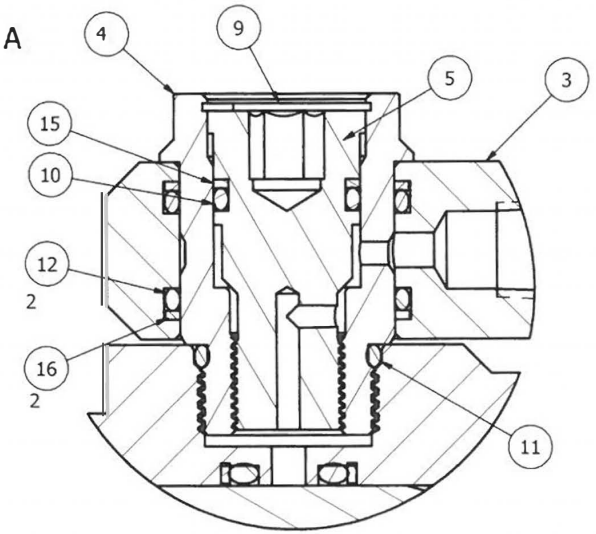
A visual inspection should be done on the O-ring in the bottom sub (male union) after every use to ensure there was no damage to it during rig up or take down. The risers should be cleaned from well bore fluid after every use. Top and bottom unions wiped down and a coat of WD-40 or similar lubricant should be applied to the connections to help prevent any rusting.
Once per year the riser should be returned to the manufacture for tear down, inspection and pressure testing.

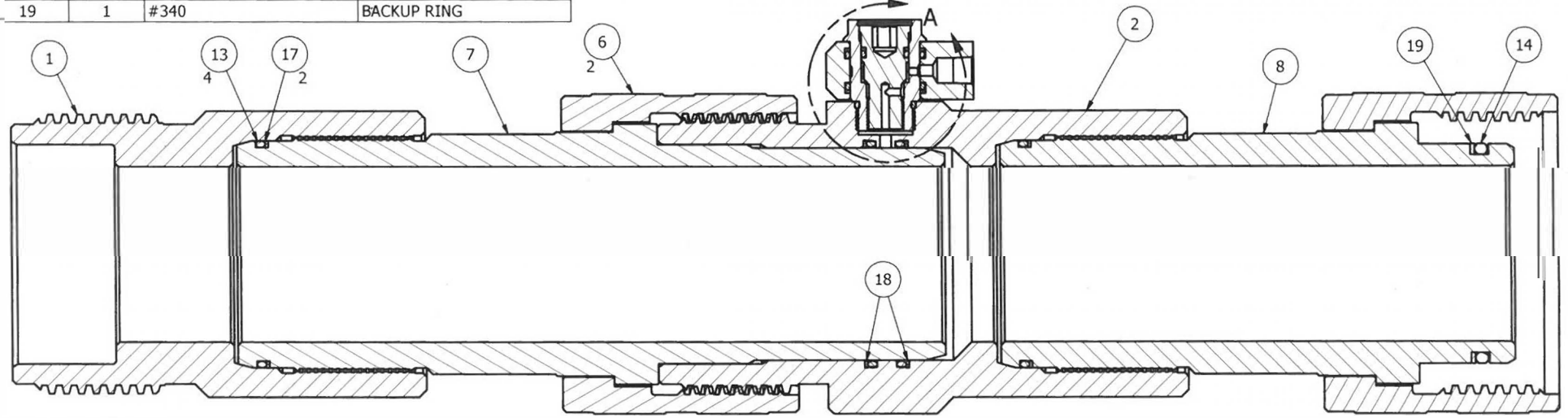
NO.	DATE	REVISION		MATERIAL / HEAT TREATMENT / COATING	TOLERANCES UNLESS OTHERWISE STATED 0.0 = +/- .030 0.00 = +/- .015 0.000 = +/- .005 ∠ = +/- 1° ⌀ = .010 TIR DO NOT SCALE DRAWING REMOVE SHARP EDGES SURFACE FINISH 125	FRANK HENRY C A N A D A DRAWN R.A.S. DATE 14 NOV 2013 APPR APP.	RISER ASSY OPERATING INSTRUCTIONS PART NUMBER

PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	QTS29910KTOPSUB	TOP SUB
2	1	QTS29910KFEMALE	QT FEMALE UNION
3	1	QTS29910KEQBODY	EQ BODY
4	1	QTS29910KEQHOUSE	EQ HOUSING
5	1	QTS29910KEQSCREW	EQ SCREW
6	2	UNS475BNUT	NUT
7	1	QTS29910KMALE	QT MALE UNION
8	1	BLD29910KF06	MALE UNION
9	1	.875	SNAP RING INT
10	1	#114	O-RING
11	1	#118	O-RING
12	2	#123	O-RING
13	4	#239	O-RING
14	1	#340	O-RING
15	1	#114	BACKUP RING
16	2	#123	BACKUP RING
17	2	#239	BACKUP RING
18	2	#239	BACKUP RING - TEFLON
19	1	#340	BACKUP RING

DETAIL A





WEIGHT APPROX 80 lbs

NO	DATE	REVISION

MATERIAL
HEAT TREATMENT
COATING

TOLERANCES UNLESS OTHERWISE STATED
0.0 = +/- .030
0.00 = +/- .015
0.000 = +/- .005
∠ = +/- 1°
⌀ = .010 TIR
DO NOT SCALE DRAWING
REMOVE SHARP EDGES
SURFACE FINISH 125

FRANK HENRY
C A N A D A

DRAWN R.A.S. | DATE 1 OCT 2014 | APPR APP.

QUICK TEST SUB - 10K

MAIN ASSEMBLY

PART NUMBER QTSA29910F06