1.710-3.120 MODEL “A” LOCATOR SEAL NIPPLE

Alpha Model “A” Seal Locator Nipple is used in cementing operations and is designed to provide precise positioning into Alpha Model “A” Ball Check and Poppet Valve Cement Retainers. The Locator Seal Nipple features a polished bore profile that allows a stinger equipped with seal elements to accurately slide into the bore of the Cement Retainer and establish a pressure tight seal.

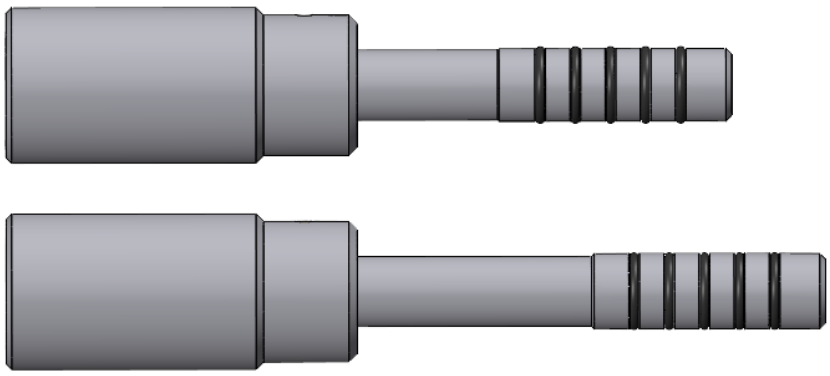
This configuration facilitates cement being pumped through the tubing, passing through the cement retainer, and being placed below the retainer while maintaining hydraulic isolation. The seal locator nipple ensures accurate stinger positioning, reliable sealing, and consistent engagement during multiple sting-in operations if needed.

This component is engineered to withstand the differential pressures typically encountered during cementing operations and is compatible with all Alpha Model “A” Ball Check Cement Retainers. See table on page 3 for Alpha Model A Cement Retainer Compatibility.

Redress requirement.

The O-rings must remain in tolerance and *not* be cut or worn after trips. Disassembly is not required between runs on the same location, but is recommended upon returning to the shop and for redressing and installing new O-rings. Compatibility is available from 2-3/8 to 4-1/2” tubing size Cement Retainers. No moving parts and ease of operation make this tool a good addition to your line. O-rings can be upgraded to withstand temperature of 400 °F.

Part Number “LOCATOR SEAL NIPPLE”	Pressure Rating	Flow Area	Top Connection
016-1710-070	10,000 *psi*	.110 in^2	1.050 API 10 RD EUE BOX
016-2100-070	10,000 *psi*	.196 in^2	1.050 API 10 RD EUE BOX



1.710-2100 Model “A” Locator Seal Nipple illustration

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GENERAL INFORMATION

1. Pre-Run Inspection
   - Verify the seal locator nipple internal bore and seal area are clean, free of debris, scale, or mechanical damage.
   - Inspect the polished sealing surface for scratches, corrosion, or galling that could compromise seal integrity.
2. Connection Make-Up
   - Apply appropriate thread compound to all threaded connections.
   - Torque connections according to API tubing recommended values.
3. Running in Hole
   - Run the assembly slowly through restrictions and casing collars to prevent damage to the external sealing surface.
   - Avoid excessive impact loads while running in hole.
   - Maintain proper centralization, to reduce wear on the stinger.
4. Stinging Into the Cement Retainer
   - Lower the tubing string slowly when approaching the expected landing depth.
   - Apply controlled weight to allow the stinger seals to enter the Retainer bore smoothly.
   - Avoid excessive set-down force that could damage the sliding valve inside the Retainer.
5. Pressure Testing
   - Once the stinger is landed, before opening sliding valve, conduct pressure test to verify hydraulic isolation before pumping cement.
   - Monitor pressure response to confirm sealing integrity.
6. Cementing Operation
   - Ensure differential pressure ratings for both the Cement Retainer and Locator Seal Nipple are not exceeded.
   - Once cementing begins, monitor tubing weight and pressure to prevent inadvertently closing the sliding valve prematurely.
7. Pulling Out of Hole
   - Slowly pull the stinger out of the cement retainer to avoid tearing or rolling the O-rings.
   - Circulate clean fluid if necessary to remove cement residue before retrieving the stinger.

MAINTENANCE AND REDRESSING

1. Post-Job Cleaning
   - Thoroughly clean the stinger assembly with fresh water or an appropriate solvent to remove cement, scale, or debris. Apply Clean Oil on all surfaces after cleaning.
   - Ensure all sealing surfaces and grooves are free from hardened cement.
2. Seal Replacement
   - Replace O-rings showing any sign of damage or excessive wear.
   - Only install O-rings provided by **Alpha Oil Tools.**
3. Stinger Inspection
   - Inspect the stinger for burrs, corrosion, or sharp edges that could damage or compromise the pressure test during sting in operation.
4. Lubrication
   - Apply compatible seal lubricant or assembly grease prior to installing new molded seals.
   - Anti-galling compound should be used on all threads. Downhole grease should be used on all O-rings. To avoid damage to parts, use a soft jaw vise and strap wrenches when tightening connections. Wrench on knurled areas or utilize spanner holes. File away wrench marks.
   - Ensure lubricant is compatible with the elastomer material and anticipated well fluids.

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5. Dimensional Verification
    - Verify the stinger OD and seal stack dimensions remain within design tolerances to ensure proper sealing engagement with the Cement Retainer.
6. Storage
    - Store redressed stingers in a clean, dry environment.
    - Protect O-rings from direct sunlight, ozone exposure, and extreme temperatures.
7. Documentation
    - Record the number of runs, seal replacements, and inspection findings as part of maintenance tracking.

CEMENT RETAINERS COMPATIBILITY

016-1710-070 LOCATOR SEAL NIPPLE	1710 BALL CHECK CEMENT RETAINER (GO & #5) 1710 POPPET VALVE CEMENT RETAINER
016-2100-070 LOCATOR SEAL NIPPLE	2100 BALL CHECK CEMENT RETAINER (GO & #5) 2100 POPPET VALVE CEMENT RETAINER 2500 BALL CHECK CEMENT RETAINER (GO & #5) 2500 POPPET VALVE CEMENT RETAINER 2750 BALL CHECK CEMENT RETAINER (GO, #5 & #10) 2750 POPPET VALVE CEMENT RETAINER 3120 BALL CHECK CEMENT RETAINER (GO, #10)

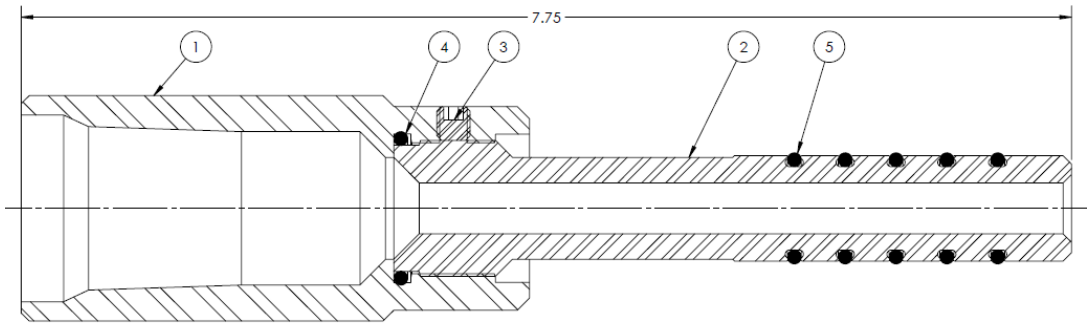
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ASSEMBLY INSTRUCTIONS FOR LOCATOR SEAL NIPPLE

Anti-galling compound should be used on all threads. Downhole grease should be used on all O-rings. To avoid damage to parts, use a soft jaw vise and strap wrenches when tightening connections. Wrench on knurled areas or utilize spanner holes. File away wrench marks.

NOTE: Wrench tight means using no larger than 24" pipe wrench without cheater or extension handle. Screwdriver tight means hand tight with a medium blade 6" long screwdriver.

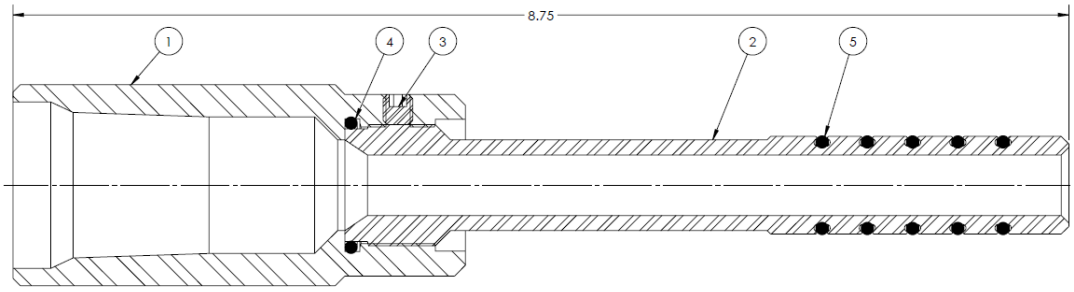
1.710 MODEL "A" LOCATOR SEAL NIPPLE ILLUSTRATION



SECTION A-A

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	016-2100-076	TOP COUPLING	1
2	016-1710-077	SEAL NIPPLE BODY	1
3	250S20X250	1/4 -20 X .25 SET SCREW	1
4	000-119N-090	119 O-RING	1
5	000-114N-090	114 O-RING	5

2.100 MODEL "A" LOCATOR SEAL NIPPLE ILLUSTRATION



SECTION A-A

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	016-2100-076	TOP COUPLING	1
2	016-2100-077	SEAL NIPPLE BODY	1
3	250S20X250	1/4 -20 X .25 SET SCREW	1
4	000-119N-090	119 O-RING	1
5	000-114N-090	114 O-RING	5

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ASSEMBLY STEPS

1. Grease all threads and O-ring surfaces.
2. Place and secure Top Coupling (item 1) on Vise and grip it by the knurled area.
3. Place O-ring (item 4) inside Top Coupling, in groove.
4. Locate the lower ID on the Top Coupling (item 1) and screw in the Seal Nipple Body (item 2) by the end with the thread. (Wrench tight)
5. Install Set Screw (item 3) thru Top Coupling.
6. Place O-rings (item 5) on the Seal Nipple Body (item 2).

DISASSEMBLY STEPS

1. Follow the assembly steps in reverse order.

REDRESSING STEPS

1. Place the assembly on the Vise and grip it by the Knurled area of the Top Coupling (item 1).
2. Remove Set screw and save for later.
3. Remove Seal Nipple Body from Top Coupling.
4. Remove O-Rings from Top Coupling and Seal Nipple Body.
5. Follow Assembly steps with new O-rings set.

1.710 – 2.100 LOCATOR SEAL NIPPLE DIMENSIONAL DATA

Part Number "LOCATOR SEAL NIPPLE"	LENGTH (*in*)	TOP COUPLING DIAMETER (*in*)
016-1710-070	7.75	1.66
016-2100-070	8.75	1.66

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Molded Seal/O-ring Compatibility Guideline Table:

Elastomer Type	Nitrile (NBR)	Hydrogenated Nitrile (HNBR / HSN)	Viton / Fluoroelastomer (FKM)	Aflas (TFE/P)
Low Temp Resistance, °F	-4	-4	5	100
Maximum Heat Resistance, °F	250	300	350	400
H_2S	Very Poor (<0.5%)	Poor (<1%)	Fair (<2%)	Very Good (<20%)
CO_2	Poor (<1%)	Fair (<2%)	Very Good (Unrestricted)	Very Good (Unrestricted)
Amine Inhibitors	Very Poor (Not Recommended)	Very Poor (Not Recommended)	Very Poor (Not Recommended)	Very Good (Unrestricted)
Zn & Ca Bromides	Very Poor (Not Recommended)	Very Poor (Not Recommended)	Very Good (Unrestricted)	Good
Xylene	Very Poor (Not Recommended)	Very Poor (Not Recommended)	Fair	Very Poor (Not Recommended)
HCl & HF Acid	Very Poor (Not Recommended)	Very Poor (Not Recommended)	Fair	Good
Toluene	Very Poor (Not Recommended)	Poor	Fair	Very Poor (Not Recommended)
Sulfuric Acid	Very Poor (Not Recommended)	Poor	Good	Good
Steam	Very Poor (Not Recommended)	Poor	Poor	Poor
Crude Oil	Very Good (Unrestricted)	Very Good (Unrestricted)	Very Good (Unrestricted)	Very Good (Unrestricted)
Methane	Very Good (Unrestricted)	Very Good (Unrestricted)	Very Good (Unrestricted)	Very Good (Unrestricted)
KCl & Salt Water	Very Good (Unrestricted)	Very Good (Unrestricted)	Very Good (Unrestricted)	Very Good (Unrestricted)

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