



**Fixed Blade and
Variable Blade
Non-Rotating Stabilizers**



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Logan Fixed Blade and Variable Blade

Non-Rotating Stabilizers

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OVERVIEW

Logan manufactures two types of Non-Rotating Stabilizers: Fixed Blade and Variable Blade. Both types utilize upper and lower bearings that allow the stabilizer body to rotate through the stabilizer sleeve. Because of this design and construction, the stabilizer sleeve or body are not subjected to rotation — therefore, it is "non-rotating."

The blades of a Fixed Blade Non-Rotating Stabilizer form an integral part of the stabilizer sleeve and are casing I.D. specific. Depending on the size of the tool, the blades may be welded on the sleeve or machined.

The blades of a Variable Blade Non-Rotating Stabilizer can be easily removed from the stabilizer body. This allows the interchange of different sizes of blades, depending on the casing I.D. size that is required.

USES

Logan Fixed Blade and Variable Blade Non-Rotating Stabilizers are used to centralize the cutter inside the casing to ensure fast, smooth, even-sided cuts of large cemented casing strings. Variable Blade Non-Rotating Stabilizers are primarily used in conjunction with multi-string cutters, such as Logan's Internal Pressure Pipe Cutter. Fixed Blade Non-Rotating Stabilizers are used on single, smaller diameter casing cuts.

CONSTRUCTION

The Logan Fixed Blade Non-Rotating Stabilizer is composed of a body, stabilizer sleeve, bottom sub, and bearings. The Variable Blade Non-Rotating Stabilizer is composed of a top sub, mandrel, stabilizer body, stabilizer blades, retainer ring with retainer nut and set screw, and bearings. The body is manufactured from 4140 alloy steel. The stabilizer sleeve and body are manufactured from 1020 steel to reduce wear on the casing. The one-piece stabilizer sleeve on the fixed blade design is available in various sizes and may be changed by removing the bottom sub. Variable blade stabilizers can be adjusted without removing the tool from the string by loosening the retainer ring and replacing the blades individually.

OPERATION

Make sure all parts have been thoroughly cleaned and inspected prior to use. Check to make sure all of the components are in good working order. Make sure the O.D. of the blades on the stabilizer sleeve are the correct size for the I.D. of the casing. Be sure the I.D. of the stabilizer sleeve has been thoroughly greased to reduce friction.

MAINTENANCE

Good maintenance will ensure the best performance and maximum life of the Logan Non-Rotating Stabilizer. The tool should be thoroughly cleaned, inspected, and lubricated after each use and prior to storage. Worn or damaged parts should be replaced. No special tools are required.

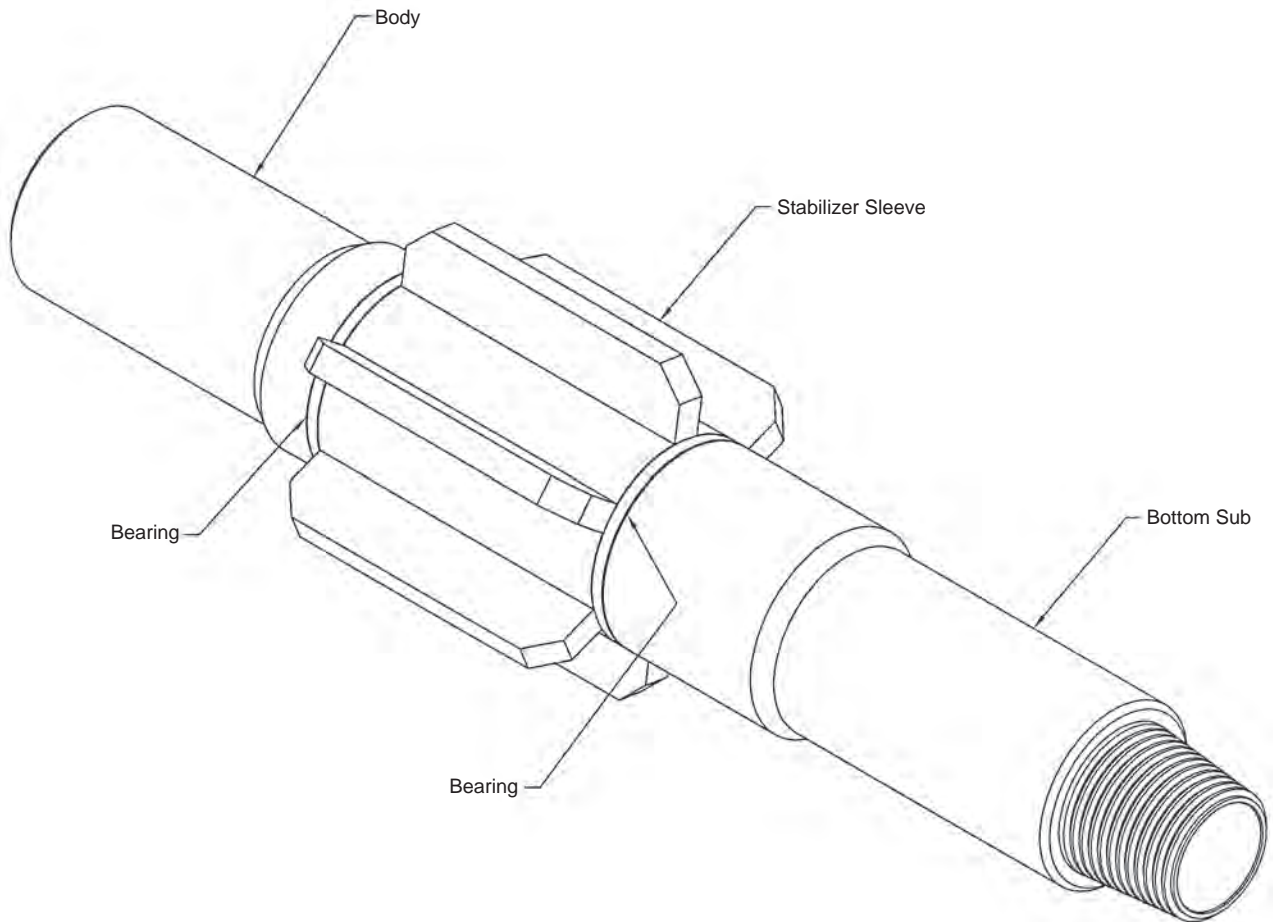
1. Inspect all parts for wear. Replace any worn bearings or damaged parts.
2. Replace any blades that are chipped or severely worn.
3. Perform a magnetic particle inspection to monitor the condition of the tool.
4. Thoroughly grease the inside diameter of the stabilizer sleeve to reduce friction.
5. Paint or grease the exterior of the stabilizer to prevent rust or corrosion.

Recommended Spares:

- (1) 2 Bearings, Upper and Lower
- (2) 1 Stabilizer for Fixed Blade Type (for different sizes of casing)
- (3) Replacement Stabilizer Blades for Variable Type Stabilizer (*See parts list on page 4 for required quantity.*)

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FIXED BLADE NON-ROTATING STABILIZERS

TOOL JOINT CONNECTION	2-3/8 API Reg	3-1/2 API IF	4-1/2 API IF	6-5/8 API Reg				
FISHING NECK DIAMETER — INCHES	3-1/8	4-3/4	6-1/2	8				
INSIDE DIAMETER — INCHES	1	2-11/16	3-3/4	3-1/2				
COMPLETE ASSEMBLY Logan Part No.	903-313	903-475	903-650	903-800				

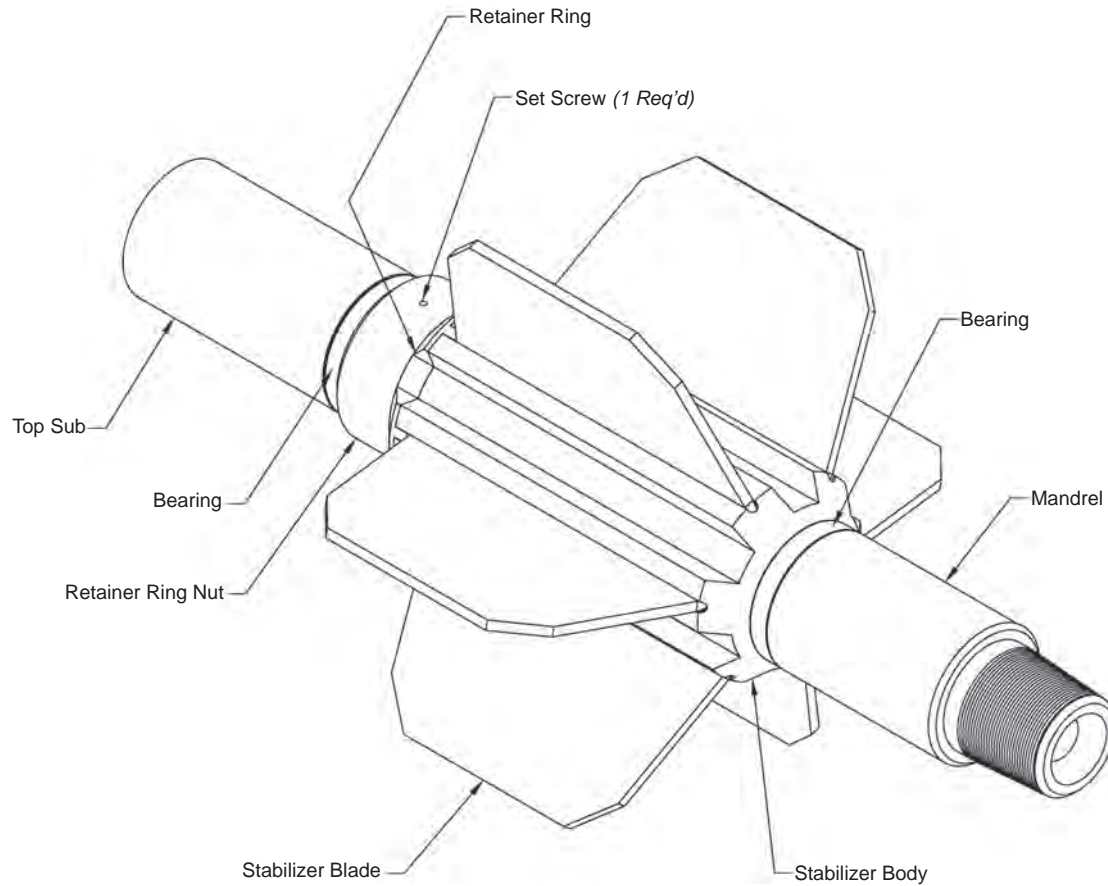
COMPONENTS

BODY	Logan Part No.	BW100	BW101	BW102	BW103			
BEARING	Logan Part No.	BW200	BW201	BW202	BW203			
	No. Req'd	2	2	2	2			
STABILIZER SLEEVE	Logan Part No.	BW300	BW301	BW302	BW303			
BOTTOM SUB	Logan Part No.	BW400	BW401	BW402	BW403			

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VARIABLE BLADE NON-ROTATING STABILIZERS

TOOL JOINT CONNECTION	2-3/8 API Reg	3-1/2 API IF	4-1/2 API IF	6-5/8 API Reg			
OUTSIDE DIAMETER — INCHES	3-1/8	4-3/4	6-5/8	8			
INSIDE DIAMETER — INCHES	**	**	2	3-3/4			
COMPLETE ASSEMBLY Logan Part No.	904-313	904-475	904-663	904-800			

COMPONENTS

TOP SUB	Logan Part No.	NRS100	NRS101	NRS102	NRS103			
MANDREL	Logan Part No.	NRS200	NRS201	NRS202	NRS203			
STABILIZER BODY	Logan Part No.	NRS300	NRS301	NRS302	NRS303			
STABILIZER BLADE	Logan Part No.	NRS400	NRS401	NRS402	NRS403			
	No. Req'd	**	**	**	**			
BEARING	Logan Part No.	NRS500	NRS501	NRS502	NRS503			
	No. Req'd	2	2	2	2			
RETAINER RING	Logan Part No.	NRS600	NRS601	NRS602	NRS603			
RETAINER RING NUT	Logan Part No.	NRS700	NRS701	NRS702	NRS703			
SET SCREW	Logan Part No.	**	**	AX10002	AX10002			

** To be advised by engineering

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