

HIGH PRESSURE TYPE L PACKER TYPE CASING PATCHES

Overview

Logan High Pressure Type L Packer Type Casing Patches are designed to engage and seal off a properly prepared casing string. The Casing Patch design leaves the operator with a casing string that has a full-bore internal diameter. Logan High Pressure Type L Packer Type Casing Patches will not restrict the bore of the casing and are available in popular casing sizes from 4-1/2 to 13-5/8 inches OD. Larger size Casing Patches are available upon request.

The Logan High Pressure Type L Packer Type Casing Patches are available in 7,000, 10,000, and 12,000 psi working pressure ratings. All are designed to seal both internal and external pressure. Logan also manufactures a High Pressure Casing Patch that is rated at 15,000 psi working pressure. Lower and higher pressure Casing Patches of this design are available upon request.

Logan High Pressure Type L Packer Type Casing Patches are available with or without five-foot extension subs.

Construction

The tool is very similar in design and construction to the Logan Series 150 Overshot. A Top Sub, Bowl, and Guide make up the outer components of the assembly. A Basket Mill Control Packer, Basket Grapple, four Logan Type L Packers, Packer Protector, and Shear Pins are components inside the assembly. 4140 alloy steel is used in the manufacture of the major load bearing components. The Type L Packers are made of a blend of hydrogenated nitrile (HBNR) material that is compatible for service with most drilling and completion fluids, and is resistant to gas invasion and abrasion. They are rated at 275 °F (dry, with no circulation) and at 325 °F (with partial circulation).

Operation

Proper preparation of the casing to be patched is important to the success of the Logan High Pressure Type L Packer Type Casing Patch. The casing should be washed over to remove scale and splits and the pipe sized for a uniform sealing surface.

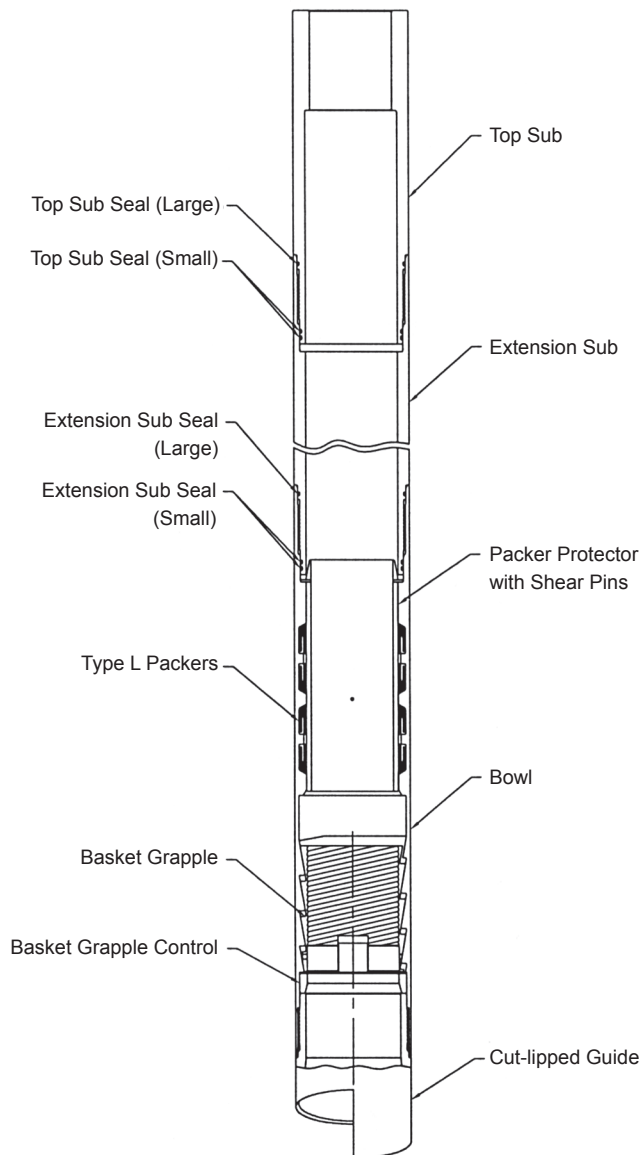
The properly assembled Casing Patch should be lowered to the top of the fish. Slow rotation combined with slow lowering is important to the operation of the assembly. Once the fish has entered the Casing Patch, slowly slack off the rotation until the Packer Protector bottoms

out against the shoulder in the Top Sub and the casing is fully engaged in the patch. Apply a tensile load to the Casing Patch to set the grapple. The slips should then be set on the running string.

To test the patch, slowly engage the mud pumps so as not to slug the packers with excessive pressure. Then bring the pressure up to the desired test pressure.

When ordering, please specify:

- (1) Complete assembly or part number
- (2) Size and type of connection
- (3) With or without five-foot extensions



Logan High Pressure Type L Packer Type Casing Patch for 7K, 10K, and 12K Assemblies

HIGH PRESSURE TYPE L PACKER TYPE CASING PATCHES — 7,000 PSI

O.D. CASING		4-1/2	5	5-1/2	7	7-5/8	9-5/8	9-7/8
O.D. PATCH		5-3/4	6-1/4	6-13/16	8-3/8	9	11-1/4	11-9/16
COMPLETE ASSEMBLY	Logan Part No.	509-709	509-710	509-700	509-711	509-714	*	509-703
TOP SUB	Logan Part No.	ZL1005	LP1010	LP1000	LP1011	LP1014	*	LP1003
TOP SUB SEAL (SMALL)	Logan Part No.	568-248	568-252	568-257	568-263	568-265	568-274	568-274
	No. Req'd	2	2	2	2	2	2	2
TOP SUB SEAL (LARGE)	Logan Part No.	568-251	568-254	568-257	568-265	568-266	568-274	568-275
	No. Req'd	1	1	1	1	1	1	1
BOWL	Logan Part No.	ZL2005	LP2010	LP2000	LP2011	LP2014	*	LP2003
GUIDE	Logan Part No.	Z7005	LP3010	LP3000	Z7011	Z7012	*	LP3003
SHEAR PINS	Logan Part No.	AC14002	AC14002	AC14002	AC14002	AC14002	AC14002	AC14002
	No. Req'd	2	2	2	2	2	2	2
TYPE L PACKER	Logan Part No.	AT6009	AT6010	AT6000	AT6001	AT6014	AT6002	AT6003
	No. Req'd	4	4	4	4	4	4	4
PACKER PROTECTOR	Logan Part No.	ZL3005	ZL3006	AT7000	ZL3011	AT7014	*	AT7003
GRAPPLE CONTROL	Logan Part No.	Z6005	ZL6006	AT10000	Z6011	Z6012	*	AT10003
GRAPPLE	Logan Part No.	Z5005	ZL5006	AT11000	Z5011	AT11014	*	AT11003

OPTIONAL

EXTENSION SUB (5 feet long)	Logan Part No.	LPE1009	LPE1010	LPE1000	LPE1011	LPE1014	*	LPE1003
EXTENSION SUB SEAL (SMALL)	Logan Part No.	568-248	*	568-257	568-263	*	568-274	568-274
	No. Req'd	2	...	2	2	...	2	2
EXTENSION SUB SEAL (LARGE)	Logan Part No.	568-251	*	568-257	568-265	*	568-274	568-275
	No. Req'd	1	...	1	1	...	1	1

Logan Oil Tools reserves the right to change or discontinue designs without notice.

Notes:

- (1) H₂S casing patches available upon request.
- (2) Higher pressure casing patches of this design are available upon request.
- (3) Type C tungsten carbide mill guide available upon request.
- (4) Larger size Casing Patches are available upon request.

When ordering, please specify:

- (1) Complete assembly or part number
- (2) Size and type of connection
- (3) With or without five-foot extensions

HIGH PRESSURE TYPE L PACKER TYPE CASING PATCHES — 7,000 PSI

O.D. CASING		10-3/4	13-3/8	13-5/8	20			
O.D. PATCH		12-5/16	15-1/2	15-3/4	23-1/2			
COMPLETE ASSEMBLY	Logan Part No.	509-704	509-707	509-708	514-520			
TOP SUB	Logan Part No.	LP1004	LP1007	LP1008	BP1025			
TOP SUB SEAL (SMALL)	Logan Part No.	568-275	568-279	568-280	568-390			
	No. Req'd	2	2	2	2			
TOP SUB SEAL (LARGE)	Logan Part No.	568-276	568-280	568-280	568-390			
	No. Req'd	1	1	1	1			
BOWL	Logan Part No.	LP2004	LP2007	LP2008	BP2020			
GUIDE	Logan Part No.	LP3004	LP3007	LP3008	BP3020			
SHEAR PINS	Logan Part No.	AC14002	AC14002	AC14008	AC14008			
	No. Req'd	2	2	2	2			
TYPE L PACKER	Logan Part No.	AT6004	AT6007	AT6008	AT6017			
	No. Req'd	4	4	4	4			
PACKER PROTECTOR	Logan Part No.	AY6004	AT7007	AT7008	BP4020			
GRAPPLE CONTROL	Logan Part No.	AY9004	AT10007	AT10008	BP5020			
GRAPPLE	Logan Part No.	AY10004	AT11007	AT11008	BP6020			

OPTIONAL

EXTENSION SUB (5 feet long)	Logan Part No.	LPE1004	LPE1007	LPE1008	BPE1020			
EXTENSION SUB SEAL (SMALL)	Logan Part No.	568-275	568-279	568-280	568-390			
	No. Req'd	2	2	2	2			
EXTENSION SUB SEAL (LARGE)	Logan Part No.	568-276	568-280	568-280	568-390			
	No. Req'd	1	1	1	1			

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Notes:

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- (2) Higher pressure casing patches of this design are available upon request.
- (3) Type C tungsten carbide mill guide available upon request.
- (4) Larger size Casing Patches are available upon request.

When ordering, please specify:

- (1) Complete assembly or part number
- (2) Size and type of connection
- (3) With or without five-foot extensions

HIGH PRESSURE TYPE L PACKER TYPE CASING PATCHES — 10,000 PSI

O.D. CASING		4-1/2	5-1/2	7	9-5/8	9-7/8	10-3/4	13-3/8
O.D. PATCH		5-7/8	7	8-5/8	11.43	11-3/4	12-3/4	15-5/8
PRESSURE RATING (PSI)		10,000	10,000	10,000	10,000	10,000	10,000	10,000
COMPLETE ASSEMBLY	Logan Part No.	510L-005	510L-007	510L-011	510-963-010	510-1175-010	510-1275-010	510-1338
TOP SUB	Logan Part No.	ZL1005-10	ZL1007-10	ZL1011-10	BT1002-010	BT1003-010	BT2004-010	BT2007-010
TOP SUB SEAL	Logan Part No.	568248-200	568257-200	568263-200	568274-200	568274-400	568275-200	568279-200
(SMALL)	No. Req'd	2	2	2	2	2	2	2
TOP SUB SEAL	Logan Part No.	568251-200	568257-200	568265-200	568274-200	568275-400	568276-200	568280-200
(LARGE)	No. Req'd	1	1	1	1	1	1	1
BOWL	Logan Part No.	ZL2005-10	ZL2007-10-001	ZL2011-10	BT12002-010	BT2003-010	BT11004-010	BT11007-010
GUIDE	Logan Part No.	Z7005-10	ZL3007-10	Z7011-10	BT13002-010	BT3003-010	BT12004-010	BT12007-010
SHEAR PINS	Logan Part No.	AC14002	AC14002	AC14002	AC14008	AC14002	AC14008	AC14000
	No. Req'd	2	2	2	2	2	2	2
TYPE L PACKER	Logan Part No.	AT6009	AT6000	AT6001	AT6002	AT6003	AT6004	AT6007
	No. Req'd	4	4	4	4	4	4	4
PACKER PROTECTOR	Logan Part No.	ZL3005	ZL3007-10	ZL3011	AT7002	AT7003	AY6004-500	AT7007
GRAPPLE CONTROL	Logan Part No.	Z6005 *	ZL6007	Z6011	AT10002	AT10003	AY9004	AT10007
GRAPPLE	Logan Part No.	Z5005	ZL5007	Z5011	AY11002	AT11003	AY10004	AT11007

OPTIONAL

EXTENSION SUB	Logan Part No.	ZLE1005-10	ZLE1007-10	ZLE1011-10	BT3002-010	BTE1003-010	BTE3004-010	BT3007-010
<i>(5 feet long)</i>								
EXTENSION SUB SEAL	Logan Part No.	568248-200	568257-200	568263-200	568274-200	568274-400	568275-200	568279-200
(SMALL)	No. Req'd	2	2	2	2	2	2	2
EXTENSION SUB SEAL	Logan Part No.	568251-200	568257-200	568265-200	568274-200	568275-400	568276-200	568280-200
(LARGE)	No. Req'd	1	1	1	1	1	1	1

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* Mill Control Packer instead of Grapple Control

Notes:

- (1) H₂S casing patches available upon request.
- (2) Higher pressure casing patches of this design are available upon request.
- (3) Other sizes of casing patches are available upon request.
- (4) Casing patches can be made from special materials. Prices and delivery information is available upon request.

When ordering, please specify:

- (1) Complete assembly or part number
- (2) Size and type of connection
- (3) With or without five-foot extensions

HIGH PRESSURE TYPE L PACKER TYPE CASING PATCHES — 12,000 PSI

O.D. CASING		5-1/2	9-5/8	9-7/8	10-3/4	11-3/4	13-3/8	13-5/8
O.D. PATCH		7-1/8	11-5/8	11-7/8	12-7/8	14-3/8	15-3/4	16-1/8
PRESSURE RATING (PSI)		12,000	12,000	12,000	12,000	12,000	12,000	12,000
COMPLETE ASSEMBLY	Logan Part No.	512-550-012	512-963-012	507-1188-12K	512-1288-012	507-1438-12K-500	507-1544-012-500	512-1363
TOP SUB	Logan Part No.	AT1000-12	AT1002-012	AY2003-12K	*	AY2006-12K-500	AY2007-012	AT1008-012
TOP SUB SEAL (SMALL)	Logan Part No.	568257-200	568273-200	568274-200	*	568278-200	568279-200	568279-200
	No. Req'd	2	2	2	2	2	2	2
TOP SUB SEAL (LARGE)	Logan Part No.	568257-200	568273-200	568275-200	*	568278-200	568280-200	568280-200
	No. Req'd	1	1	1	1	1	1	1
BOWL	Logan Part No.	AT12000-12	AT12002-012	AY11003-12K-500	*	AY11006-12K-500	AY11007-012-502	AT12008-012
GUIDE	Logan Part No.	AT13000-12	AT13002-012	AY12003-12K-500	*	AY12006-12K-500	AY12007-012-502	AT13008-012
SHEAR PINS	Logan Part No.	AC14002	AC14002	AC14002	*	AC14002	AC14008	AC14008
	No. Req'd	2	2	2	2	2	2	2
TYPE L PACKER	Logan Part No.	AT6000	AT6002	AT6003	AT6004	AT6006	AT6004	AT6008
	No. Req'd	4	4	4	4	4	4	4
PACKER PROTECTOR	Logan Part No.	ZL3007	AT7002	AY6003-500	*	AY6006-12K-500	AY6007-012-502	AT7008
GRAPPLE CONTROL	Logan Part No.	Z6007	AT10002	AY9003-500	*	AY9006-12K-500	AY9007-501	AT10008
GRAPPLE	Logan Part No.	Z5007	AT11002	AY10003	*	AY10006	AY10007-502	AT11008

OPTIONAL

EXTENSION SUB (5 feet long)	Logan Part No.	AT3000-12	AT3002-012	AY3003-12K-500	*	AY3006-12K-500	AY3007-012-502	AT3008-012
EXTENSION SUB SEAL (SMALL)	Logan Part No.	568257-200	568273-200	568274-200	*	568278-200	568279-200	568279-200
	No. Req'd	2	2	2	2	2	2	2
EXTENSION SUB SEAL (LARGE)	Logan Part No.	568257-200	568273-200	568275-200	*	568278-200	568280-200	568280-200
	No. Req'd	1	1	1	1	1	1	1

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* Part numbers available upon request

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When ordering, please specify:

- (1) Complete assembly or part number
- (2) Size and type of connection
- (3) With or without five-foot extensions