



Type A Packer Type Casing Patches

TYPE A PACKER TYPE CASING PATCHES

Overview

This Type A Packer Type Casing Patch is used to repair a section of damaged casing without having to remove the entire string from the hole to replace it. This external catch tool is designed to engage a previously prepared fish, pack it off, and become a permanent part of the casing string. Positive engagement and seal-off in either direction provides a permanent, rigid connection that will remain leakproof for years, yet is easily removable if the need arises.

The Type A 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 O.D.

Construction

The simple design of the Type A Packer Type Casing Patch matches its simple operation and is composed of a top sub, bowl, type A packer, packer protector, grapple, grapple control, and a guide.

Type A Packer Type Casing Patches are constructed of the highest quality alloy steels to provide many years of service in harsh well environments. The grapple is manufactured of high quality hardened alloy steel that is able to bite into the casing to provide a secure attachment to the existing casing in the well.

Assembly

The Type A Packer Type Casing Patch can easily be assembled on the rig site where it will be used. Install the Type A Packer in the bowl slot, making sure it is properly seated in the slot. With counter-clockwise rotation, screw the grapple into the bowl. Continue to screw the grapple into the bowl until it is at least 1/4 inch past the counter bore provided for the grapple control. Align the tang slot in the bowl and grapple. Install the grapple control making sure the tang aligns with the slot in the bowl and grapple. Screw the guide into the bottom of the assembly. Install the packer protector and screw the top sub onto the top of the bowl to complete the assembly. Tighten all connections to the recommended torque before running the Type A Packer Casing Patch in the hole.

Operation

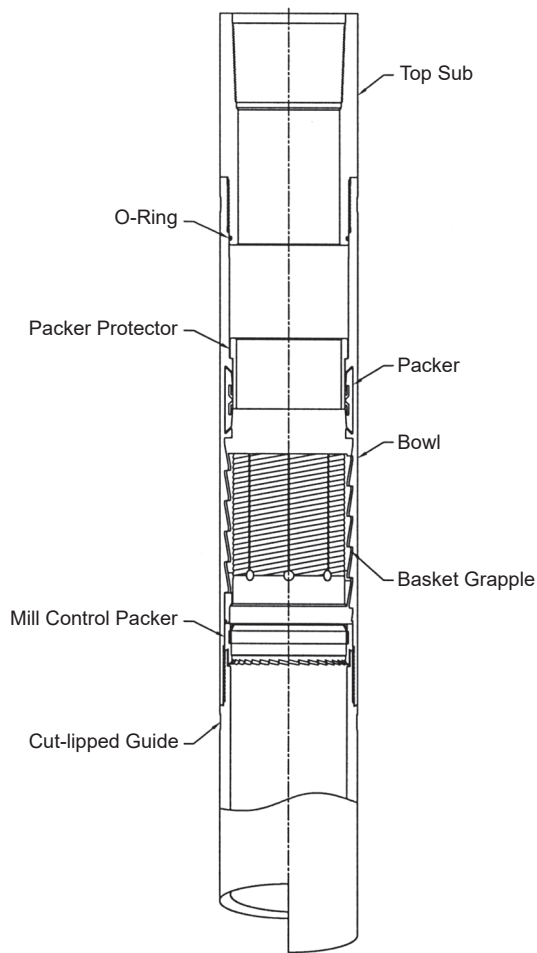
Prepare the upper end of the fish prior to running the Casing Patch. Lower the tool into the hole until the depth of the fish is reached. Rotate the running string slowly to the right as it is slowly lowered. Combined slow rotation and lowering is important to the proper operation of the tool and should be continued until the fish has entered the tool. Watch the rig weight indicator to determine when the tool has reached the lower end of the top sub. Complete engagement can be assured by allowing the Casing Patch to support 15,000 to 20,000 pounds of weight. Pick up the running string to remove the weight from the Casing Patch while letting the torque slacken from the running string.

If it becomes necessary to remove the casing patch, bump down to release the grapple and slowly raise the string while rotating to the right. Continue rotation until the patch has cleared the casing and lift from hole.

Ordinary corrosion does not affect the Casing Patch and it may be released years after its initial setting. However, if the Casing Patch has been cemented in place and cement has invaded the internal working parts, the patch may not release. In such cases, the patch can be milled away or by cutting the string below the patch for removal.

When ordering, please specify:

- (1) Name and number of assembly or part
- (2) Size and weight of casing
- (3) Size and type of connection





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O.D. CASING	4-1/2 Csg	5	5-1/2	5-3/4	6	6-5/8	7
O.D. PATCH	5-3/4	6-1/4	6-13/16	7-1/16	7-5/16	7-15/16	8-3/8
COMPLETE ASSEMBLY	503-005	503-006	503-007	503-008	503-009	503-010	503-011
Bowen No.	11215	11220	11225	...	11230	11235	11240
TOP SUB	Z1005	Z1006	Z1007	Z1008	Z1009	Z1010	Z1011
Bowen No.	5186	4866	4886	...	4966	4986	5026
TOP SUB SEAL	568-247	568-251	568-255	568-257	568-259	568-261	568-262
Bowen No.	568247	568251	568255	568257	568259	568261	568262
No. Req'd	1	1	1	1	1	1	1
BOWL	Z2005	Z2006	Z2007	Z2008	Z2009	Z2010	Z2011
Bowen No.	11217	11222	11227	...	11232	11237	11242
PACKER PROTECTOR	Z3005	Z3006	Z3007	Z3008	Z3009	Z3010	Z3011
Bowen No.	5188	4868	4888	...	4968	4988	5028
PACKER	Z4005	Z4006	Z4007	Z4008	Z4009	Z4010	Z4011
Bowen No.	11216	11221	11226	...	11231	11236	11241
BASKET GRAPPLE	Z5005	Z5006	Z5007	Z5008	Z5009	Z5010	Z5011
Bowen No.	11218	11223	11228	...	11233	11238	11243
GRAPPLE CONTROL	Z6005	Z6006	Z6007	Z6008	Z6009	Z6010	Z6011
Bowen No.	11459	11461	11463	...	11465	11467	11469
GUIDE	Z7005	Z7006	Z7007	Z7008	Z7009	Z7010	Z7011
Bowen No.	11219	11224	11229	...	11234	11239	11244

O.D. CASING	7-5/8	8-5/8	9-5/8	10-3/4	11-3/4	13-3/8	13-5/8
O.D. PATCH	9	10-1/16	11-1/8	12-5/16	13-3/8	15-1/8	16
COMPLETE ASSEMBLY	503-012	503-013	503-014	503-015	503-016	503-017	503-018
Bowen No.	11245	11250	11255	11260	39136	41042	80669
TOP SUB	Z1012	Z1013	Z1014	Z1015	Z1016	Z1017	Z1018
Bowen No.	5046	5151	5206	5162	...	40399	...
TOP SUB SEAL	568-265	568-269	568-273	568-274	...	568-456	...
Bowen No.	568265	568269	568273	568274	...	568456	...
No. Req'd	1	1	1	1	...	1	...
BOWL	Z2012	Z2013	Z2014	Z2015	Z2016	Z2017	Z2018
Bowen No.	11247	...	11257	11262	...	41045	...
PACKER PROTECTOR	Z3012	Z3013	Z3014	Z3015	Z3016	Z3017	Z3018
Bowen No.	5048	5153	5208	5164	...	41045	...
PACKER	Z4012	Z4013	Z4014	Z4015	Z4016	Z4017	Z4018
Bowen No.	11246	11251	11256	11261
BASKET GRAPPLE	Z5012	Z5013	Z5014	Z5015	Z5016	Z5017	Z5018
Bowen No.	11248	11253	11258	11263	39142	41037	...
GRAPPLE CONTROL	Z6012	Z6013	Z6014	Z6015	Z6016	Z6017	Z6018
Bowen No.	11471	11473	11475	11477	39141	41039	...
GUIDE	Z7012	Z7013	Z7014	Z7015	Z7016	Z7017	Z7018
Bowen No.	11249	...	11259	11264	39144	41040	...

Note:

(1) H₂S casing patches available upon request.

(2) Type C Tungsten Carbide Mill Guides available upon request.

When ordering, please specify:

- (1) Complete assembly or part number
- (2) Size and type of connection