Overview
Logan Releasing Spears provide a positive means to engage and retrieve an internal fish from the well. The design of this rugged, dependable, and inexpensive internal catch fishing tool ensures positive engagement, easy release and re-engagement. It may be used with other equipment such as pack-off assemblies and internal cutters.

Construction
The Logan Releasing Spear consists of a mandrel, grapple, releasing ring, and a bullnose nut. The size and type of the upper box connection is furnished according to customer specification.

Mandrel
The mandrel type may be specified as either flush or shoulder. Flush-type mandrels are designed to completely enter the fish. Shoulder type mandrels provide a positive landing position on top of the fish. The mandrel is made of high strength, specially heat treated alloy steel. The lower end is threaded to accept a bull nose nut, or the mill, sub, or side hill type nuts.

Standard Spear Grapple
One-piece spear grapples are designed and manufactured to engage a specific size and weight of pipe, tubing, or casing to ensure maximum surface engagement and minimum fish distortion.

Segment-Type Spear Grapple
The segment-type spear grapple enhances the spear’s usefulness by providing an extended catching range beyond the maximum range of the standard one-piece grapple. The Logan Segment-Type Spear Grapple consists of a grapple body, eight grapple segments, two retainer rings, four retainer ring screws, six retainer ring spacers, and sixteen grapple segment screws.

Release Ring
The cammed release ring matches the cammed nut ensuring a positive locking device that will not freeze or jam. It is a standard component of the releasing spear.

Nut
The standard bottom nut is a bullnose nut. Optional nut types, sub, mill, and side hill, are available.

Spear Pack-off Assembly
Pack-off assemblies are available for all Logan Spear Assemblies and are designed to efficiently pack off all sizes of drill pipe, tubing and casing. Circulation through the fish is enabled by attaching the Spear Pack-off Assembly to the bottom of the spear with a sub type nut.

Assembly
With left-hand rotation, screw the grapple onto the mandrel from the lower pin end. Slip the release ring onto the mandrel and make up the nut to the mandrel aligning the cams. Screw the grapple down the mandrel against the release ring until hand tight. The Spear Assembly is now in its run-in position.

Engaging a Fish
The Logan Releasing Spear is made up to the bottom of the fishing string and lowered to the desired depth into the fish. Rotate the mandrel one full turn to the left to turn the mandrel through the grapple and move the grapple into engaging position. Pulling straight up will cause the tapers on the mandrel to expand the grapple and allow it to positively engage the fish.

Releasing a Fish
To release the fish, bump down and then make two to three rotations to the right. This right-hand rotation allows the mandrel to move up through the grapple thereby placing the grapple against the release ring and putting the spear in release position. A straight upward pull will release the spear from the fish. Continue with slow, right-hand rotation when coming out of the fish.

When ordering, please specify:
- Name and part number of assembly or part
- Size and type of top connection
- Size and weight(s) of fish to be caught
- Flush or Shoulder type (specify OD of shoulder, “A”)
- Mandrel length desired, “C”
- Thread size and type of nut, if wanted
Product Line
Fishing Tools – Internal Catch

Product
STANDARD RELEASING SPEARS

For more information
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Domestic and international patents and trademarks granted and/or applied for where applicable
Standard Releasing Spears Principal Dimensions

<table>
<thead>
<tr>
<th>Spear Mandrel Part No.</th>
<th>Spear Size</th>
<th>Class</th>
<th>ID</th>
<th>A</th>
<th>B</th>
<th>Shoulder Type Only C</th>
<th>Flush Type Only D</th>
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Notes:
- For flush or shoulder type, specify OD of shoulder, "A"
- Mandrel length desired, "C"
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Notes:
- For flush or shoulder type, specify OD of shoulder, "A"
- Mandrel length desired, "C"

### STANDARD RELEASING SPEARS

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| Optional Parts        | Logan Part No. | Bowen No. | F1000-A | F1001-A | F1002-A | ...     | ...     | ...     |
| Mandrel (Shoulder Type)|                |           | F1000   | 19351   | 11196   | ...     | ...     | ...     |
| Mandrel Extra Length  |                |           | F5000   | 19352   | 11197   | 9917    | 9646    | 1345    |
| Per Inch (C&D)        |                |           | F5000   | 19353   | 11198   | 9918    | 9649    | 1347    |

| Mill Type Nut         |                |           | 16456   | 19351   | 11195   | 9916    | 9646    | 1345    |
| Sub Type Nut          |                |           | 16457   | 19352   | 11196   | 9917    | 9647    | 1348    |
| Side Hill Nut         |                |           | 16459   | 19353   | 11197   | 9918    | 9649    | 1347    |

When ordering, please specify:
- Name and part number of assembly or part
- Size and type of top connection
- Size and weight(s) of pipe to catch
- Flush or shoulder type (specify OD of shoulder "A")
- Mandrel length desired "C"
- Thread size and type of nut, if wanted

Recommended Spare Parts:
- 2 x grapples for each catch size
### Product Line
**Fishing Tools – Internal Catch**

**STANDARD RELEASING SPEARS**

| Nominal Catch Size OD | 2-7/8 | 2-7/8 | 2-7/8 | 3-1/2 | 3-1/2 | 4 | 4 |
| Spear OD | 2-5/16 | 2-5/16 | 2-13/16 | 2-1/2 | 2-1/2 | 3-1/2 | 3-1/4 |
| Spear ID | 3/8 | 3/8 | 1/2 | 1/2 | 3/4 | 3/4 |
| Duty Class | STD | STD LH | HD | HD | LD | STD |

| Replacement Parts | | | 1227 | 62198 | 17231 | 9410 | 9945 | 530 | 9485 |

- **Top Sub**
  - Logan Part No.: ...
  - Bowen No.: ...

- **Mandrel (Flush Type)**
  - Logan Part No.: F1009
  - Bowen No.: 1231
  - Logan Part No.: F10095
  - Bowen No.: 62199

- **Grapple**
  - Logan Part No.: F3009
  - Bowen No.: 1230
  - Logan Part No.: F30095
  - Bowen No.: 49888

- **Release Ring**
  - Logan Part No.: F4009
  - Bowen No.: 1229
  - Logan Part No.: F40095
  - Bowen No.: 1228

- **Bull Nose Nut**
  - Logan Part No.: F5009
  - Bowen No.: 1228
  - Logan Part No.: F50095
  - Bowen No.: 62200

**Optional Parts**

- **Mandrel (Shoulder Type)**
  - Logan Part No.: F1009
  - Bowen No.: 1231
  - Logan Part No.: F10095
  - Bowen No.: 62199

- **Mandrel Extra Length Per Inch (C&D)**
  - Logan Part No.: F5009-A
  - Bowen No.: 1288-A
  - Logan Part No.: F50095-A
  - Bowen No.: 1228-A
  - Logan Part No.: F5013-A
  - Bowen No.: 9413-A

**Accessories**

- **Mill Type Nut**
  - Logan Part No.: F5009
  - Bowen No.: 1238-A
  - Logan Part No.: F5009-B
  - Bowen No.: 1228-B
  - Logan Part No.: F5009-C
  - Bowen No.: 1228-C

- **Sub Type Nut**
  - Logan Part No.: F5009-A
  - Bowen No.: 1288-A
  - Logan Part No.: F5009-B
  - Bowen No.: 1228-B
  - Logan Part No.: F5009-C
  - Bowen No.: 1228-C

- **Side Hill Nut**
  - Logan Part No.: F5009
  - Bowen No.: 1238-A
  - Logan Part No.: F5009-B
  - Bowen No.: 1228-B
  - Logan Part No.: F5009-C
  - Bowen No.: 1228-C

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**When ordering, please specify:**
- Name and part number of assembly or part
- Size and type of top connection
- Size and weight(s) of pipe to catch
- Flush or shoulder type (specify OD of shoulder “A”)
- Mandrel length desired “C”
- Thread size and type of nut, if wanted

**Recommended Spare Parts:**
- 2 x grapples for each catch size

---

STANDARD RELEASING SPEARS

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**Nominal Catch Size OD** | **4-1/2** | **4-1/2** | **5** | **5** | **6** | **6** | **7** | **5-3/4**  
Spear OD | 3-5/8 | 3-5/8 | 4-1/32 | 4-1/32 | 1 | 1 | 2  
Spear ID | ¾ | ¾ | 7/8 | 1 | 1 | 2  
Duty Class | LD | STD | LD | STD | LD | STD | STD  
| **Complete Assembly** | **Logan Part No.** | 202-017 | 202-012 | 202-035 | 202-013 | 202-023 | 202-014 | 202-015  
| **Bowen No.** | 13200 | 17475 | 1332 | 9680 | 9715 | 17234 | 9266  
| **Replacement Parts** | | | | | | | |  
| **Top Sub** | **Logan Part No.** | ... | ... | ... | ... | ... | ... | ...  
| **Bowen No.** | ... | ... | ... | ... | ... | ... | ... | ...  
| **Mandrel (Flush Type)** | **Logan Part No.** | F1016 | F1017 | F1018 | F1019 | F1022 | F1023 | F1024  
| **Bowen No.** | 13201 | 17476 | 1333 | 9681 | 9716 | 17235 | 9267  
| **Grapple** | **Logan Part No.** | F316 | F3017 | F3018 | F3019 | F3022 | F3023 | F3024  
| **Bowen No.** | 13202 | 17477 | 1334 | 9682 | 9717 | 17236 | 9268  
| **Release Ring** | **Logan Part No.** | F4017 | F4018 | F4019 | F4019 | F4022 | F4023 | F4024  
| **Bowen No.** | 13183 | 13183 | 1336 | 1336 | 9718 | 9718 | 9279  
| **Bull Nose Nut** | **Logan Part No.** | F5017 | F5017 | F5019 | F5019 | F5023 | F5023 | F5024  
| **Bowen No.** | 13184 | 13184 | 1335 | 1335 | 9719 | 9719 | 9269  
| **Optional Parts** | | | | | | | |  
| **Mandrel (Shoulder Type)** | **Logan Part No.** | F1016 | F1017 | F1018 | F1019 | F1022 | F1023 | F1024  
| **Bowen No.** | 13201 | 17476 | 1333 | 9681 | 9716 | 17235 | 9267  
| **Mandrel Extra Length Per Inch (C&D)** | | ... | ... | ... | ... | ... | ... | ...  
| **Bowen No.** | ... | ... | ... | ... | ... | ... | ... | ...  
| **Accessories** | | | | | | | |  
| **Mill Type Nut** | **Logan Part No.** | F5017-A | F5017-A | F5019-A | F5019-A | F5023-A | F5023-A | F5024-A  
| **Bowen No.** | 13184-A | 13184-A | 1335-A | 1335-A | 9719-A | 9719-A | 9269-A  
| **Sub Type Nut** | **Logan Part No.** | F5017-B | F5017-B | F5019-B | F5019-B | F5023-B | F5023-B | F5024-B  
| **Bowen No.** | 13184-B | 13184-B | 1335-B | 1335-B | 9719-B | 9719-B | 9269-B  
| **Side Hill Nut** | **Logan Part No.** | F5017-C | F5017-C | F5019-C | F5019-C | F5023-C | F5023-C | F5024-C  
| **Bowen No.** | 13184-C | 13184-C | 1335-C | 1335-C | 9719-C | 9719-C | 9269-C  

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- Flush or shoulder type (specify OD of shoulder ‘A’)
- Mandrel length desired ‘C’
- Thread size and type of nut, if wanted

**Recommended Spare Parts:**
2 x grapples for each catch size
Product Line
Fishing Tools – Internal Catch

STANDARD RELEASING SPEARS

Nominal Catch Size OD
Spear OD
Spear ID
Duty Class

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Complete Assembly
Bowen No. 17237 | 9380 | 17243 | 9281 | 17246 | 27780

Replacement Parts

Top Sub
Logan Part No. ...
Bowen No. ...

Mandrel (Flush Type)
Logan Part No. F1026 | F1029 | F1030 | F1032 | F1034 | F1035
Bowen No. 17238 | 9381 | 17244 | 9282 | 17247 | 27781

Grapple
Logan Part No. F3026 | F3029 | F3030 | F3032 | F3034 | F3035
Bowen No. 17239 | 9382 | 17245 | 9283 | 17248 | 27782

Release Ring
Logan Part No. F4024 | F4029 | F4030 | FD4032 | F4032 | F4033
Bowen No. 9279 | 9383 | 9286 | 9286 | 27783 |

Bull Nose Nut
Logan Part No. F5024 | F5029 | F5030 | FSD5032 | F5032 | F5033
Bowen No. 9269 | 9384 | 9284 | 9284 | 27784 |

Optional Parts

Mandrel (Shoulder Type)
Logan Part No. F1026 | F1029 | F1030 | F1032 | F1034 | F1035
Bowen No. 17238 | 9381 | 17244 | 9282 | 17247 | 27781

Mandrel Extra Length
Per Inch (C&D)
Logan Part No. ...
Bowen No. ...

Accessories

Mill Type Nut
Logan Part No. F5024-A | F5029-A | FD5029-A | F5032-A | F5035-A
Bowen No. 9269-A | 9384-A | 9384-A | 9284-A | 27784-A

Sub Type Nut
Logan Part No. F5024-B | F5029-B | F5032-B | F5035-B
Bowen No. 9269B | 9384-B | 9284-B | 27784-B

Side Hill Nut
Logan Part No. F5024-C | F5029-C | F5032-C | F5035-C
Bowen No. 9269-C | 9384-C | 9284-C | 27784-C

Logan Oil Tools (a Rubicon Product Brand) reserves the right to change or discontinue designs without prior notice.

When ordering, please specify:

- Name and part number of assembly or part
- Size and type of top connection
- Size and weight(s) of pipe to catch
- Flush or shoulder type (specify OD of shoulder “A”)
- Mandrel length desired “C”
- Thread size and type of nut, if wanted

Recommended Spare Parts:

2 x grapples for each catch size