



Overshot Overview

Overview

The Overshot is the most versatile and widely used fishing tool in the industry. Designed to engage, pack-off, retrieve, and release various types of fish, its rugged construction, simplicity, and strength make the Overshot the standard choice of all external catch fishing tools. Logan Oil Tools offers four of the most commonly used Overshots:

- Series 10 Sucker Rod Overshot
- Series 20 Short Catch Sucker Rod Overshot
- Series 70 Short Catch Releasing Overshot
- Series 150 Releasing and Circulating Overshot

Each of the above series of Overshots are coded with one of the following strength designations:

- A = Full Strength (FS)
For all torsional pulling and jarring strain
- B = Extra Full Strength (XFS)
For extreme abuse
- C = Semi Full Strength (SFS)
Maximum strength for special hole conditions
- D = Slim Hole (SH)
For heavy pulling strains only
- E = Extra Slim Hole (XSH)
For pick up jobs only

Type A (full strength) Overshots are recommended when casing, hole size, and fish size will permit.

Overshot Components

Top Sub

The Top Sub is the uppermost component of the Overshot assembly. It is equipped with a customer specified box connection to assure proper make-up with the fishing string.

Bowl

The Bowl, the major working component of the Overshot, is located between the Top Sub and the Guide.

The inside diameter features a threaded section that conforms to the exterior threads of the Grapple. This design permits any expansion or compression strain to be evenly distributed over the entire working surface of the Bowl, Grapple, and the fish. Any possible damage to the fish or Overshot is minimized.

Guide

The lowermost component of the Overshot assembly is the Guide. As its name implies, it guides the fish into the internal gripping mechanism (Grapple) of the Overshot. The Guide also minimizes possible damage to the Overshot by blocking the entry of a fish that exceeds the maximum catch size of the Overshot.

Grapples

The Grapple fits into the Bowl and is the gripping mechanism of the Overshot. There are two basic types of Grapples: Spiral and Basket.

Spiral Grapple

The left-handed, helix shape of the Spiral Grapple conforms to the tapered interior wickers of the Bowl. The specially hardened interior wickers of the Grapple assure positive engagement with the fish.

Basket Grapple

The Basket Grapple is a slotted, expandable cylinder with a wickered interior to engage the fish. Its tapered exterior conforms to the interior of the Bowl.

To meet the needs of various fishing operations, three types of Basket Grapples are available: Plain (standard), Short Catch Stop, and Long Catch Stop.

Plain Basket Grapple

This type of Basket Grapple is used to retrieve fish with a uniform outside diameter. During fishing operations, the fish passes completely through the Grapple. Wickers running the entire interior length of the Grapple securely grip the fish. The Plain Basket Grapple is standard equipment on all Overshots and will always be furnished unless another type is specified.

Basket Grapple with Short Catch Stop

This Grapple is used to retrieve couplings that are attached to a ruptured section of pipe that protrudes above the coupling. Two sets of wickers, each with a different inside diameter, are utilized. The smaller diameter threads catch the pipe above the collar and provide a stop so that the coupling can be engaged by the larger set of threads before being packed-off by a Control Packer.

Basket Grapple with Long Catch Stop

This type of Basket Grapple is designed to retrieve tool joints and collars with sufficient length remaining below the Grapple to allow pack-off with a Plain or Mill Control Packer. The internal shoulder at the upper end of the Grapple prevents the fish from completely passing through it. This shoulder also positions the Basket Control Packer around the fish for optimum pack-off.

Grapple Controls

A Grapple Control acts as a key that transmits torque from the Overshot Bowl to the Grapple while allowing the Grapple to move vertically inside the Bowl during operation. There are two types of Grapple Controls: Spiral and Basket. Spiral Grapple Controls are used with Spiral Grapples and are always plain — that is, without milling teeth or pack-off mechanism. Basket Grapple Controls are used with Basket Grapples. These may be plain, include a pack-off mechanism, and/or milling teeth.

Pack-off Mechanism

If circulation is required during the fishing operation, a Pack-off Mechanism is required to assure circulation goes through rather than around the fish. The type of Grapple (Spiral or Basket) being used will determine which type of Pack-off Mechanism is used.

Type A Packer

The Type A Packer is used on Overshots equipped with Spiral Grapples. The Type A Packer seals its outer diameter against the inside of the Bowl. It has an internal lip that seals around the fish. Each Type A Packer is designed to pack-off the specific catch size of each Spiral Grapple and one should be ordered for each size Grapple.

Control Packers

A Control Packer is used in conjunction with Overshots equipped with a Basket Grapple. Control Packers are available in two styles: Plain and Mill. The Plain Control Packer is used when the milling operation has preceded the fishing operation. The Mill Control Packer should be used when the fish requires light dressing prior to engagement. Only one Control Packer can be installed in the Overshot assembly at one time.

Control Packers are manufactured to match a specific Basket Grapple size. One Control Packer should be ordered for each size of Basket Grapple that has been ordered.

Overshot Accessories

Logan Series 150 Overshots can be equipped with a wide range of accessories, including Extension Subs, Oversized Guides, Wallhook Guides, Mill Guides, Inner and Outer Seals for Mill Control Packers, and Type E Mill Control Packers.