

Split Shot Cutters®

0.875 inch

1.000 inch

MAN-REC-SS (R06)

OWEN OIL TOOLS

12001 Cr 1000

Godley, Texas, 76044, USA

Phone: +1 (817) 551-0540

Fax: +1 (817) 551-1674

www.corelab.com/owen

Warning: use of owen equipment contrary to manufacturer's specifications or operating instructions may result in property damage, serious injury or fatality. If you are not trained in the handling and use of explosive devices, do not attempt to use or assemble any owen perforating systems or owen firing devices.

This technology is regulated by and, if exported, was exported from the united states in accordance with the export administration regulations (EAR). Diversion contrary to U.S. Law is prohibited. Export and/or re-export of this technology may require issuance of a license by the bureau of industry and security (BIS), U.S. Department of Commerce. Consult the BIS, the EAR, and/or Owen Compliance Services, Inc. To determine licensing requirements for export or re-export of this technology.

This document contains confidential information of Owen Oil Tools LP (Owen) and is furnished to the customer for information purposes only. This document must not be reproduced in any way whatsoever, in part or in whole, or distributed outside the customer organization, without first obtaining the express written authorization of owen. This document is the property of owen and returnable upon request of Owen.

Description:

Owen's New Split Shot® Cutter has been redesigned with the customer in mind and allows for easy electrical arming before loading the explosive segments. Split Shot® Cutters are designed for use where traditional jet cutters were not effective or could not be used. The Split Shot® Cutter's linear configuration allows it to be positioned adjacent to the collar or connection and secured by inline magnets. After detonation, the collar or connection is split allowing the pipe to be freed for easy removal.

Benefits / Capabilities:

In addition to the benefits of its predecessor, the New Split Shot® Cutter incorporates a number of improvements to enhance performance and improve operator safety.

- One-piece, precision cut, segment holder.
- Uses Owen's DET-3050-009LS or 2-300750-1 Split Shot® Detonator.
- Magnetic Top Sub is reusable with the available redress kit (sold separately).
- HMX Split Shot Cutters are available by special order. Parts should be ordered by replacing the 3 with a 4, ie. SSC-XXXX-4XX
- If shooting in a connection with a premium thread (i.e. VAM, Hydril, etc.), please contact your local Owen representative for recommendations.

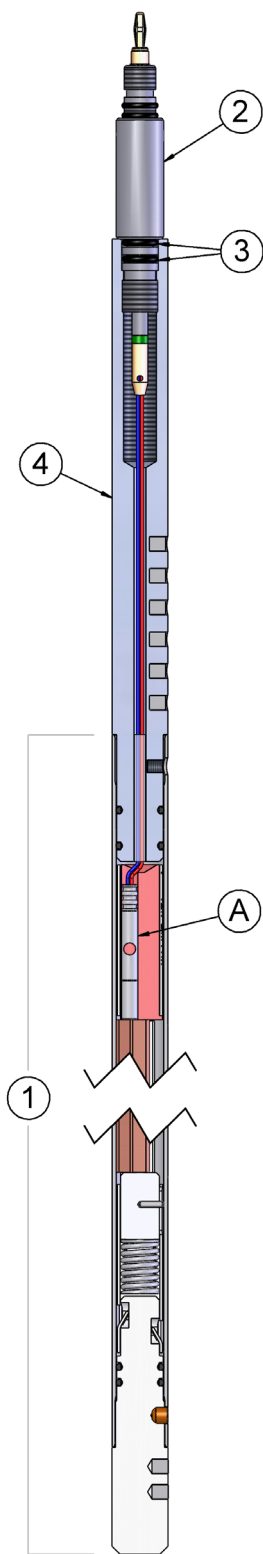


Note: Owen Split Shot Cutters can be run with Owen's RF-Safe Green DET™ as a replacement to the DET-3050-009LS

Specifications:

TOOL DIAMETER	0.875 IN.	22.2 MM	1.000 IN.	25.4 MM
Housing Material	Steel		Aluminum	
Explosive Length	18 in.		18 in.	
	45.7 cm		45.7 cm	
Explosive Load	500 grain/ft		500 grain/ft	
Minimum Running Restriction	1.000 in.	25.4 mm	1.290 in.	32.8 mm
Recommended Tubing Applications	1.315 - 2.375 in.		1.660 to 2.375 in.	
	33.4 - 60.3 mm		42.2 to 60.3 mm	
Maximum Pressure	psi	MPa	psi	MPa
Up to 200°F (93°C)	10,000	68.9	11,000	75.8
200°F to 325°F (93°C to 163°C)	9,500	65.5	10,500	72.4
325°F to 400°F (163°C to 200°C)	9,000	62.0	9,500	65.5

*Pressure Ratings are based on 1 hour exposure. For durations exceeding 1 hour, please contact Owen Engineering. Refer to the "Time vs Temperature Chart for Explosives" for allowable operating temperatures.



ITEM	QTY	PART NUMBER	DESCRIPTION
1	-	SSC-0875-361	Split Shot® 0.875 in., 500 gr/ft, 18 in. long
2	1	AES-AS3347	Contact Sub
3	2	OOO-V569-110	O-Ring, Viton -110
4	1	SSC-0875-010	Magnetic Top Sub
A	1	DET-3050-009LS or 2-300750-1	Detonator

ITEM	QTY	PART NUMBER	DESCRIPTION
1	-	SSC-1000-361	Split Shot® 1.000 in., 500gr/ft, 18 in. long
2	1	AES-AS30042	Contact Sub
3	2	OOO-V569-115	O-Ring, Viton -115
4	1	SSC-1000-010	Magnetic Top Sub
A	1	DET-3050-009LS or 2-300750-1	Detonator

1.0 Pre-Assembly



Warning: *Explosives are destructive by nature! Do not attempt to disassemble or alter the explosive in any manner! Do not crush, hammer, pinch, impact, pull wires or abuse any explosive!*



Warning: *Be sure to follow safe operating practices as found in API RP-67 in accordance with governmental regulations, company policies and manufacturer's recommendations!*

- 1.1 Unpack the hardware and explosive Segment s (item B). The Se gments are lettered in alphabetical order for assembly.
- 1.2 Remove the Brass Shear Screw (item #4) securing the Housing (item #1 1) to the Bottom Sub (item #10). Remove the Bottom Sub and Segment Holder (item #8) from the Housing.
- 1.3 Pull the Segment Holder and Bottom Sub apart.



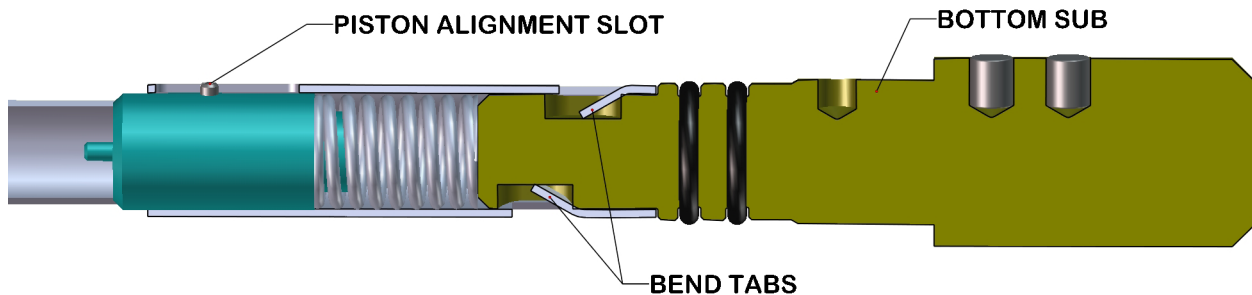
Note: *Make sure that the Spring (item #5) remains inside the Segment Holder.*

- 1.4 Remove the O-rings (items #3) from their package and visually inspect them for cuts or cracks.



Caution: *The O-rings should never be rolled or twisted into their grooves, as “spiral failure” could occur, through no fault of the producer! Care must also be taken not to pinch or cut the O-ring during installation!*

- 1.5 Install two O-rings onto the Bottom Sub and lubricate.
- 1.6 Insert the Bottom Sub into the Segment Holder and align the magnets with the piston alignment slot. Using a small, flat-blade screwdriver, bend over the two Segment Holder tabs into the slots in the Bottom Sub.

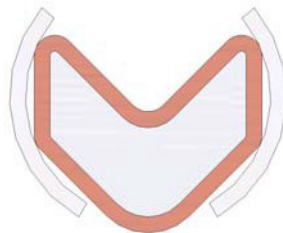


2.0 Loading Segments into the Holder



Note: *Loading may require slightly spreading the sides of the Segment Holder.*

- 2.1 Both the 0.875 and 1.000 in. tools use three 6 in. long Segments. Insert Segment 'AB' into the Segment Holder and shoulder the end labeled 'A' up against the Detonator Holder (item #7) and under its alignment pin. The Segment should seat firmly into the Segment Holder with its inner angle facing outward (refer to the graphic below).



- 2.2 Install Segment 'CD', by shouldering the end labeled 'D' up against the Piston (item #9) and under its alignment pin making sure its inner angle is also facing outward. Lastly, install Segment 'BC' while depressing the Piston to allow insertion between the previous two Segments. All of the Segments should fit tightly in the Segment Holder without gaps.
- 2.3 Check alignment of Segments from one to another, making sure their profiles line up as closely as possible.
- 2.4 Slide the Segment Holder/Bottom Sub assembly into the Housing. Push the assembly into the Housing until the O-rings seat onto their lands and the Bottom Sub threaded hole aligns with the through hole in the Housing.

- 2.5 Install the Brass Shear Screw (item #4) in to the Bottom Sub so that the Segment Holder/ Bottom Sub assembly is secured to the Housing.
- 2.6 Now set the Housing aside while the detonator is armed electrically.

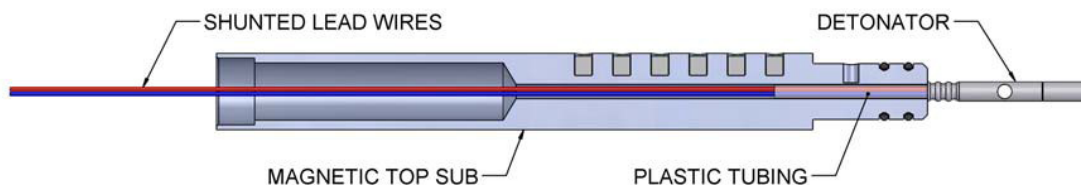
3.0 Arming, Electrically

- 3.1 Install the two remaining O-rings (item #3) onto the Magnetic Top Sub (item #6) and lubricate.
- 3.2 Remove the Detonator (item A) from its package. Twist the ends of the lead wires together to electrically shunt the detonator.



Note: Refer to the User Manual specific to the detonator being used.

- 3.3 Slide the Plastic Tubing (item #12) over the shunted wires and down to the detonator body where the wires are joined. The Plastic Tubing will help protect the wires from being damaged, which could cause a misrun, during assembly.
- 3.4 Place the detonator in to an RP-67 approved detonator safety shield with the lead wires hanging out for access.
- 3.5 Make sure the wires stay shunted together while the wires are run through the Magnetic Top Sub, from bottom to top.



- 3.6 Keeping the wires run through the Magnetic Top Sub, electrically arm the detonator while keeping the detonator contained within the RP-67 approved detonator safety shield.

4.0 Arming, Ballistically

- 4.1 Remove the detonator from the RP-67 approved detonator safety shield and slide it into the Detonator Holder that sits just inside the Housing.
- 4.2 Push the Magnetic Top Sub in to the Housing until the O-rings seat onto their lands and the Magnetic Top Sub threaded hole aligns with the through hole in the Housing.



Caution: *Be sure not to pinch the detonator wires between the Magnetic Top Sub and Detonator Holder when pushing the Magnetic Top Sub into the Housing!*

- 4.3 Install the Screw (item#4) into the Magnetic Top Sub so that the Magnetic Top Sub is secured to the Housing.
- 4.4 The tool is now armed and ready to run in hole.