

# **Tubing Cutters for 1.660 in. - 2.875 in. Tubing**

**MAN-REC-CUT (R07)**

## **OWEN OIL TOOLS**

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## Description

Tubing Cutters are designed to cut tubing during Pipe Recovery Operations.

## Benefits/Capabilities

- Reduces fishing costs and uncertainty due to reduced flare over conventional jet cutters
- Reduces inventory costs by offering one cutter for multiple weights and grades of tubulars
- Cutter safety requirements are satisfied with compliance to API RP 67
- Air shippable as 1.4D

## Operation

Tubing Cutters provide a quick and effective solution to sever tubing in the removal of stuck pipe. These cutters utilize manufacturing and packaging processes to allow easy shipment and fast delivery to the customer.

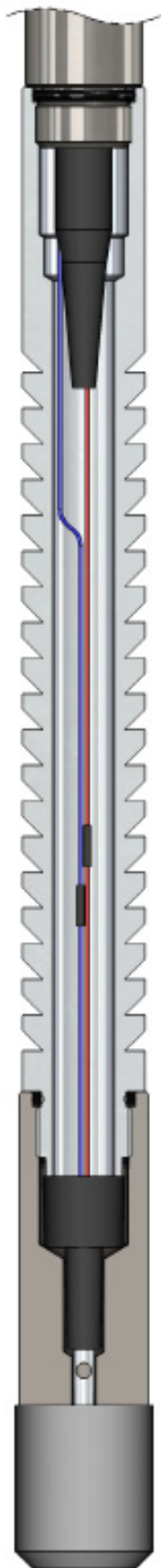
Tubing Cutters should be used when tubing becomes stuck in the well. The cutter with the largest possible diameter capable of running in the well should be chosen to achieve maximum performance. A gauge run is recommended prior to running the tool to prevent any safety concerns like sticking a live cutter in the well or “spudding” with explosive tools. The Tubing Cutters are designed to be shot in the tubular above the stuck point, but not in the collar. To maintain the maximum allowable performance from the cutter, it should be centralized. A de-centralized cutter may result in a partial cut and/or damage to the casing. It is also recommended that tension be applied to the tubing prior to detonation of the Tubing Cutter to assist in the removal of stuck tubulars.

Owen Oil Tools’ Tubing Cutters utilize explosive technology and are designed to explosively sever tubular members when initiated by an Owen’s Resistorized Bridge™ Detonator or RF-Safe “Green DET™” Detonator. Owen’s electrical detonators adhere to API RP-67 specifications. All safety rules and regulations should be strictly followed when storing, handling, assembling, and using these cutters and/or detonators. Safety precautions should be taken in accordance with your company’s safety policies, governmental regulations, and the American Petroleum Institute Recommended Practice 67 (API RP-67).

Owen’s Tubing Cutters come standard with HMX explosive powder rated to 400° F (204° C) for 1 hour.

## Recommended Practices

A minimum of two bowspring centralizers should be run as a part of the tool string to insure adequate centralization of the cutter at depth. One of the bowspring centralizers should be placed as close to the tubing cutter as possible while the second should be as close to the CCL as possible. Owen recommends the 1 11/16” Bowspring Centralizer, Owen part number AES-AS60066-6.



## Specifications

OUTER DIA IN (MM)	TEMP. °F (°C)	PRESSURE PSI (MPA)	EXPLOSIVE WEIGHT LB (KG) (G)	RECOMMENDED APPLICATION	PART NUMBER
2.500 (63.5)	400 (204)	15,000 (103.4)	.067 (.031)(30.5)	3.500" 9.3# - 12.95#	CUT-2500-409
2.062 (52.4)	400 (204)	15,000 (103.4)	.040 (.018) (18.3)	2.875" 6.5# - 8.7#	CUT-2062-409
1.687 (42.9)	400 (204)	15,000 (103.4)	.026 (.012) (12)	2.375" 4.7# - 5.95#	CUT-1687-409

ITEM	DESCRIPTION	2.375"	2.875"	3.500"
1	Aluminum Shock Sub - Open Bore	CUT-0100-079	CUT-0100-079	CUT-0100-079
	Steel Extension Adapter	CUT-0100-087	CUT-0100-087	CUT-0100-087
2	O-ring for Adapter	OOO-V569-214	OOO-V569-214	OOO-V569-214
3	Splice Boot	PUR-0210-001	PUR-0210-001	PUR-0210-001
C	Tubing Cutter	1.687" / CUT-1687-409	2.062" / CUT-2062-409	2.500" / CUT-2500-409
D	Detonator	DET-3050-009L or DET-3050-409	DET-3050-009L or DET-3050-409	DET-3050-009L or DET-3050-409
-	RP-67 Arming Shield (not shown)	CUT-1687-046	CUT-2062-047	CUT-2500-047
-	Shunt Plug (Not Shown)	CUT-0100-016		
-	1.687" Bowspring Centralizer (Not Shown)	AES-AS60066-6		

- Items 1 - 3 and detonator must be ordered separately from cutter assembly.
- Alternate arming assembly available, using JRC style extension adapter with button contacts, CUT-0100-078 and detonator with spring contacts, DET-3050-009E for 1.56" and larger cutters.
- Owen recommends running a minimum of two bowsprings centralizers with these tubing cutters. The recommended part number for this 1.687" Bowspring Centralizer is AES-AS60066-6.

### WARNING

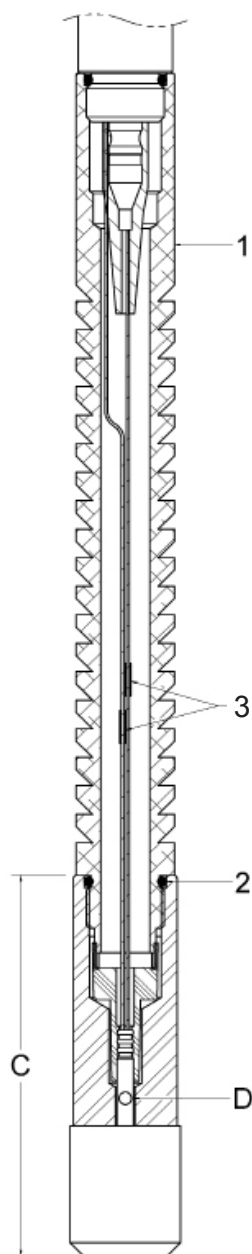
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For Technical Assistance, Please Contact:

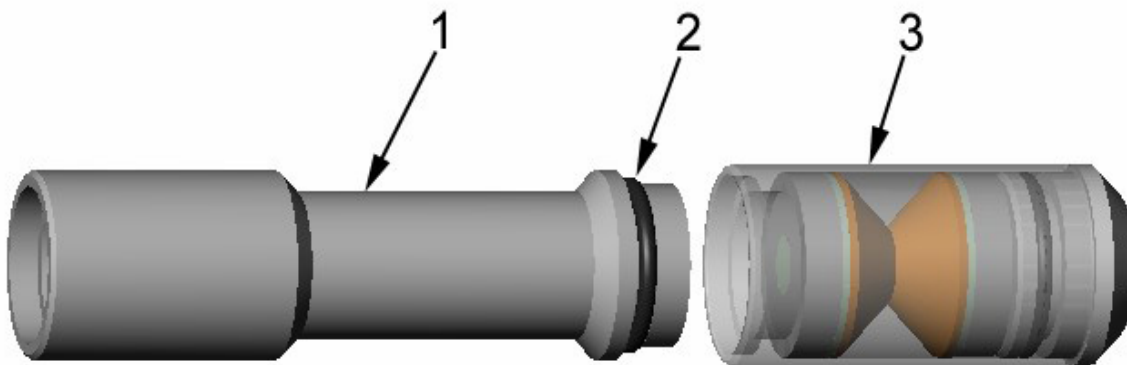
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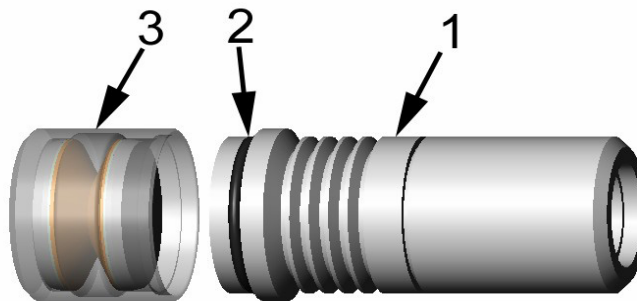
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## 1.0 Assembly of Tubing Cutter



**Figure 1:** Exploded View, sizes 1.156-in - 1.460-in



**Figure 2:** Exploded View, sizes 1.560-in - 2.250-in



**Note:** *The Tubing Cutter will normally be shipped assembled, but must be disassembled to install the O-ring and to arm the tool.*

**1.1** Visually inspect the O-ring for cuts or cracks and lightly lubricate it with grease.

**1.2** Thread the Mandrel (item #1) onto the cutter Cup.



**Note:** *The Tubing Cutter Cartridges and Booster are pre-assembled and inside the cutter Cup.*

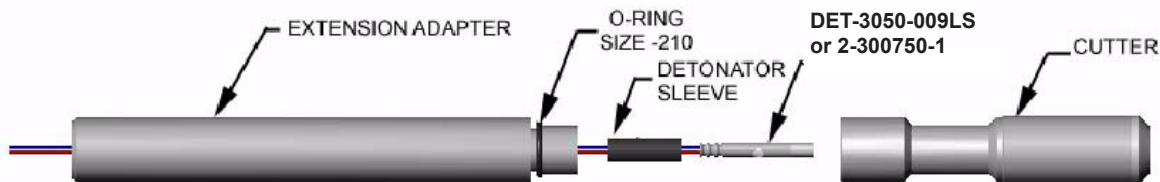
## 2.0 Arming Method for 1.156-in - 1.460-in Tubing Cutters



**Warning:** Always follow API RP-67 guidelines when arming electrical detonators!



**Warning:** Only use DET-3050-009LS or 2-300750-1!

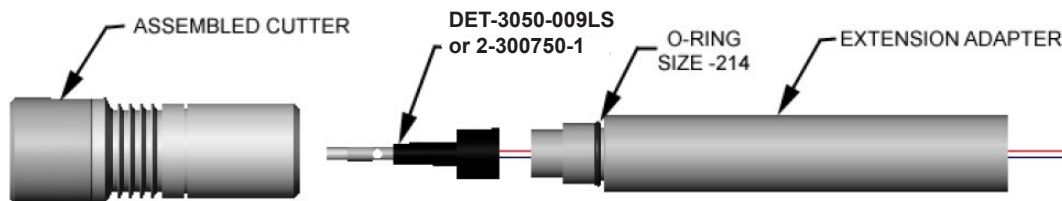


- 2.1 Remove the detonator from its package.
- 2.2 Insert the detonator into a safety shield.
- 2.3 Measure the resistance of the detonator between the two lead wires with a blaster's multimeter. Please refer to the User Manual specific to the detonator being used to determine what the resistance value should read..
- 2.4 Remove the O-ring from its package and visually inspect it for cuts or cracks. Lightly lubricate the O-ring with grease and install it onto the Extension Adapter.
- 2.5 Insert the detonator lead wires through the hole in the Extension Adapter.
- 2.6 Electrically connect the detonator lead wires to the wireline or toolstring.
- 2.7 Mechanically connect the Top Sub to the wireline toolstring.
- 2.8 Insure the wireline is shunted through the shooting panel.
- 2.9 Remove the detonator from the safety shield.
- 2.10 Insert a rubber sleeve into the cutter Mandrel.
- 2.11 Insert the detonator into the sleeve in the cutter Mandrel, and thread the cutter onto the Extension Adapter and toolstring.
- 2.12 The tool is armed and ready to run in hole.

## 3.0 Arming Method for 1.560 in. - 2.875 in. Tubing Cutters



**Warning:** *Always follow API RP-67 guidelines when arming electrical detonators!*



- 3.1 Remove the detonator from its package.
- 3.2 Insert the detonator into a safety shield.
- 3.3 Measure the resistance of the detonator between the two lead wires with a blaster's multimeter. Please refer to the User Manual specific to the detonator being used to determine what the resistance value should read..
- 3.4 Remove the O-ring from package. Inspect it visually for cuts or cracks. Lightly lubricate the O-ring with grease.
- 3.5 Install the O-ring onto the Extension Adapter.
- 3.6 Insert the detonator lead wires through the hole in the adapter.
- 3.7 Electrically connect the detonator lead wires to the wireline or toolstring.
- 3.8 Mechanically connect the Top Sub to the wireline toolstring.
- 3.9 Insure the wireline is shunted through the shooting panel.
- 3.10 Remove the detonator from the safety shield and install the booted portion of the detonator over the end of the Extension Adapter.
- 3.11 Insert the detonator into the Cutter Mandrel and thread the cutter onto the Extension adapter and toolstring.
- 3.12 The tool is armed and ready to run in hole.