Coil Tubing Cutters for 1.000-in - 1.500-in Coil Tubing

MAN-REC-CTC (R03)

Owen Oil Tools LP

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Overview

Description

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

Operation

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

Coil Tubing Cutters should be used when coil 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. Owen's Coil Tubing Cutters are to be shot in the tubular above the stuck point, but not at 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.

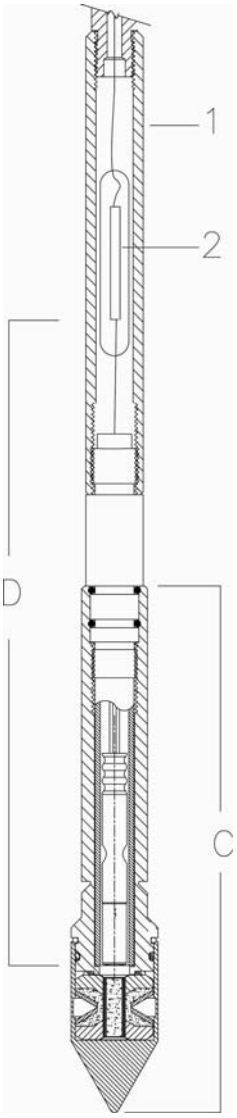
Coil Tubing Cutters utilize explosive technology and are designed to explosively sever tubular members when initiated by an Owen's Resistorized Bridge™ Detonator. Owen's electrical detonators adhere to API RP-67 specifications. All safety rules and regulations should be strictly followed when storing, 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).

Tubing Cutters come standard with HMX explosive powder rated to 400° F (204° C) for 1 hour. Cutters are also available with HNS [500° F (260° C) - 1 hour] by special order.

Specifications and Schematics

Item	Description	Part Number
1	Cable Head Adapter 5/8" OD, 1/2-20 THD	AES-3988
	Cable Head Adapter 7/8" OD, 5/8-28 THD	AES-3989
	Cable Head Adapter 1" OD, 13/16-16 THD	AES-4240
2	Splice Boot	PUR-0210-001
D	Coil Tubing Detonator	DET-3050-009A
C	.718" Coil Cutter	CUT-0718-402
	.800" Coil Cutter	CUT-0800-402
	.950" Coil Cutter	CUT-0950-402
	1.187" Coil Cutter	CUT-1187-402

- Items 1, 2 and detonator must be ordered separately from cutter assembly.
- HNS Cutters are available by special order. Parts should be ordered by replacing the 402 with 503, for example, CUT-XXXX-503.



Teardrop to connect to Cable Head Adapter:

5/8" Teardrop	AES-AS00001
3/4" Teardrop	AES-AS20002
1" Teardrop	AES-AS30001

Outer Dia. [in (mm)]	Temp [F (C)]	Pressure [psi (MPa)]	Explosive Weight [lb (kg)]	Recommended Application	Part Number
.718 (18.2)	400 (204)	10,000 (68.9)	.004 (.0018)	1", .85#	CUT-0718-402
.800 (20.3)	400 (204)	10,000 (68.9)	.004 (.0018)	1.25, 1.17#	CUT-0800-402
.950 (24.1)	400 (204)	10,000 (68.9)	.005 (.0024)	1.25, 1.17#	CUT-0950-402
1.187 (30.1)	400 (204)	10,000 (68.9)	.013 (.006)	1.50, 1.62#	CUT-1187-402

1.0 Assembly of Coil Tubing Cutter

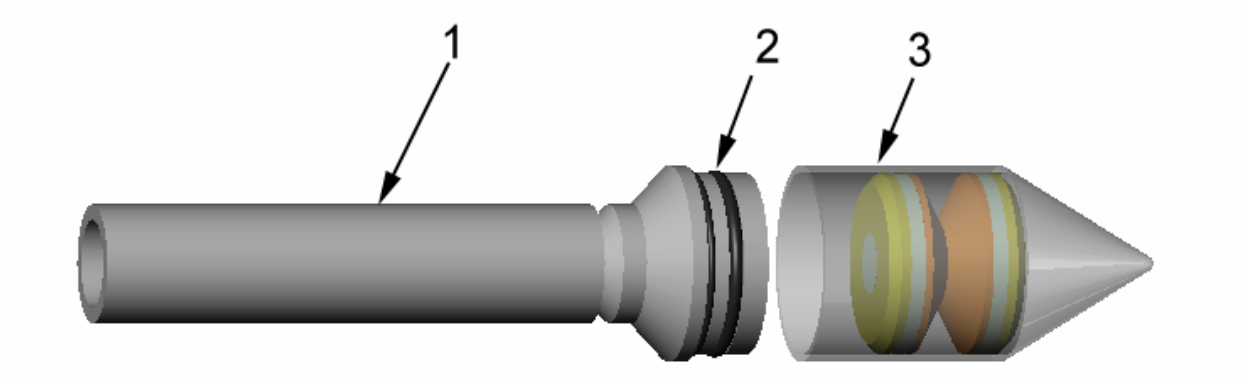


Figure 1: CUT-1156-402 - Exploded View

Note: The Coil Tubing Cutter should already be assembled; if not, follow the instructions for assembly.

1.1 Remove the O-ring (item #2) from its package and visually inspect it for cuts or cracks. Lightly lubricate it with grease and install the O-ring onto the Mandrel (item #1).

1.2 Unpack the two Cutter Cartridges. If the cartridges are already inside the cutter Cup skip steps 1.3 - 1.5.

1.3 Hold the Cup (item #3) on a flat, non-sparking surface with the open end up. Wood decking or a rubber mat is preferred.

1.4 Insert one Cutter Cartridge (item #4) into the Cup with the larger end of the cartridge directed downward as shown in Figure 1.

1.5 Stack the next Cutter Cartridge centered on top of the first cartridge. The second cartridge should be stacked with the smaller diameter downward as shown in Figure 1.

1.6 Insert the Mandrel (item #1) into the cutter Cup.

2.0 Arming Coil Tubing Cutters

Warning: ***Only use DET-3050-009A detonators!***

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

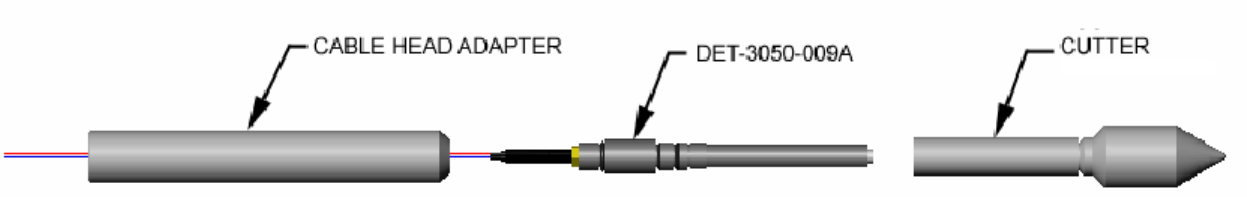


Figure 2: Arming Method for Coil Tubing Cutters - Exploded View

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. The detonator should read 51 Ohms ± 5 Ohms.

2.4 Insert the detonator leadwires through the hole in the Cable Head Adapter.

2.5 Electrically connect the detonator leadwires to the wireline or toolstring.

2.6 Mechanically connect the Cable Head Adapter to the Cable Head.

2.7 Insure the wireline is shunted through the shooting panel.

2.8 Remove the detonator from the safety shield.

2.9 Remove the O-rings from their package and visually inspect them for cuts or cracks. Lightly lubricate the O-rings with grease and install them onto the detonator.

2.10 Insert the detonator into the sleeve in the cutter Mandrel, and thread the Cutter onto the Extension Adapter and toolstring.

2.11 The tool is armed and ready to run in hole.