



# Mechanical Impact Firing Head

**TC-010-1500-000**

**MAN-TC-010 (R03)**

## Owen Oil Tools

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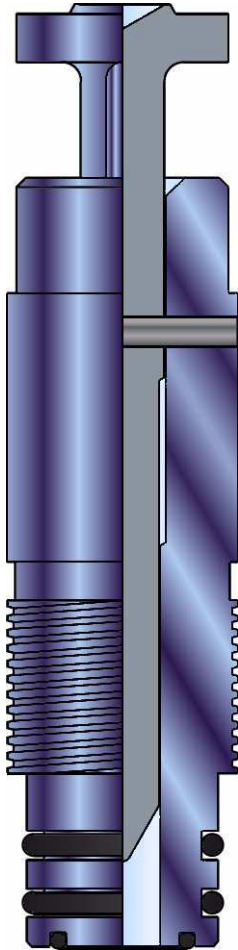
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# Mechanical Impact Firing Head

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## Mechanical Impact Firing Head



### Description

**Note:** This tool should be used with Wide Nose Drop Bars.

The Mechanical Impact Firing Head is designed for applications where there is insufficient hydrostatic well pressure to utilize the safety impact firing systems. However, this Firing Head will operate in hydrostatic pressures up to 20,000 psi. For safety considerations, the Mechanical Safety Impact Firing Head is the primary recommended Firing Head for Wide Nose Drop Bar applications. This Firing Head must be run in conjunction with an Impact Firing Head No-Go or a Tubular Collar No-Go to meet safety requirements. Refer to catalog page TC-170-0.3 for details.

### Features and Benefits

- Electrical current, natural or man-made cannot detonate the mechanical impact system.
- Completely pressure balanced.
- Can survive API-RP67 drop test.
- Operates with a Wide Nose Drop Bar.
- At least one tubing joint filled with fluid on top of the Firing Head is recommended for optimum drop bar speed.

### Specifications

O.D.	1.50"	38 mm
Make-up Length	3.75"	95 mm
Max. Temperature <sup>1</sup>	250°F (121°C)	
Max. Hydrostatic <sup>2</sup>	20,000 psi	137.9 MPa
Min. Hydrostatic	0 psi	0 MPa

<sup>1</sup>The maximum temperature can be increased to 450°F (230°C) by substituting the 90 durometer Nitrile o-rings with 90 durometer Viton O-rings. Refer to the Time vs Temperature chart for Explosives to confirm any explosives requirements. <sup>2</sup>The maximum pressure is determined by the maximum allowable pressure differential of initiator after detonation.

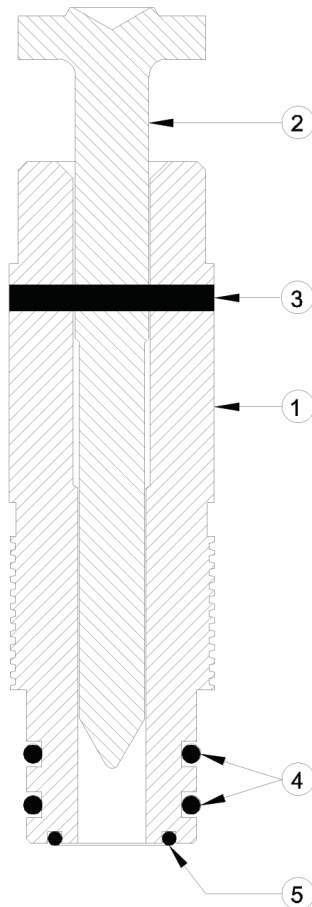
Note: This Mechanical Firing Head does not comply with API RP-67 section 6.4.2. This tool should only be used when no other tool will satisfy job requirements and a procedure has been established to prevent accidental detonation.

# Mechanical Impact Firing Head

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## TC-010-1500-000 BOM and Schematic



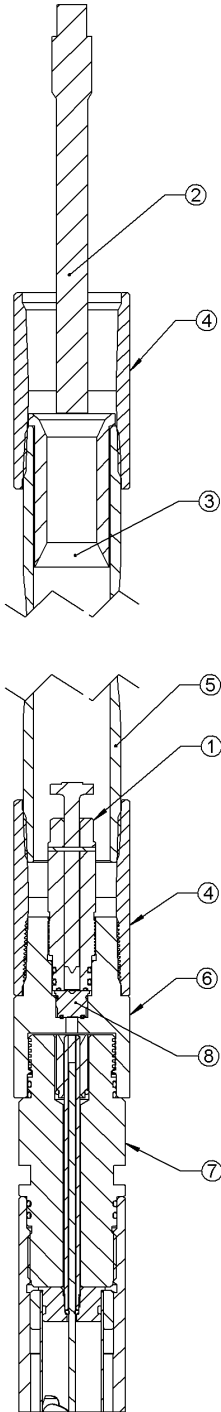
Item	Part Number	Qty.	Description
--	TC-010-1500-000	--	Mechanical Impact Firing Head
1	TC-010-0000-110	1	Body, Mechanical Impact
2	TC-010-0001-110	1	Firing Pin, Mechanical Impact
3	PF-120-0188-150H	1	Spirol®, Coiled Pin
4	OOO-N569-214	2	O-ring, N-90
5	OOO-N569-116	1	O-ring, N-90
--	TC-010-1500-099	--	Redress Kit, Mechanical Impact
--	MAN-TC-010	--	Assembly Manual

Item	Part Number	Qty.	Description
--	TC-010-1500-099	--	Redress Kit, Mechanical Impact
3	PF-120-0188-150H	1	Spirol®, Coiled Pin
4	OOO-N569-214	2	O-ring, N-90
5	OOO-N569-116	1	O-ring, N-90

Detonator bodies that can be used with this impact firing head		
TC-005-0002-000	Detonator body w/ an Owen top sub thread, 3-1/8" OD	TCP-0500-100
TC-005-0001-000	Detonator body w/ 2-3/8 EUE pin, 3-1/8" OD	TCP-0500-238
TC-005-0003-000	Detonator body w/ 2-7/8 EUE pin, 3-11/16" OD	TCP-0500-278
TC-005-0004-000	Detonator body w/ 3-1/2 EUE pin, 4-1/2" OD	TCP-0500-350

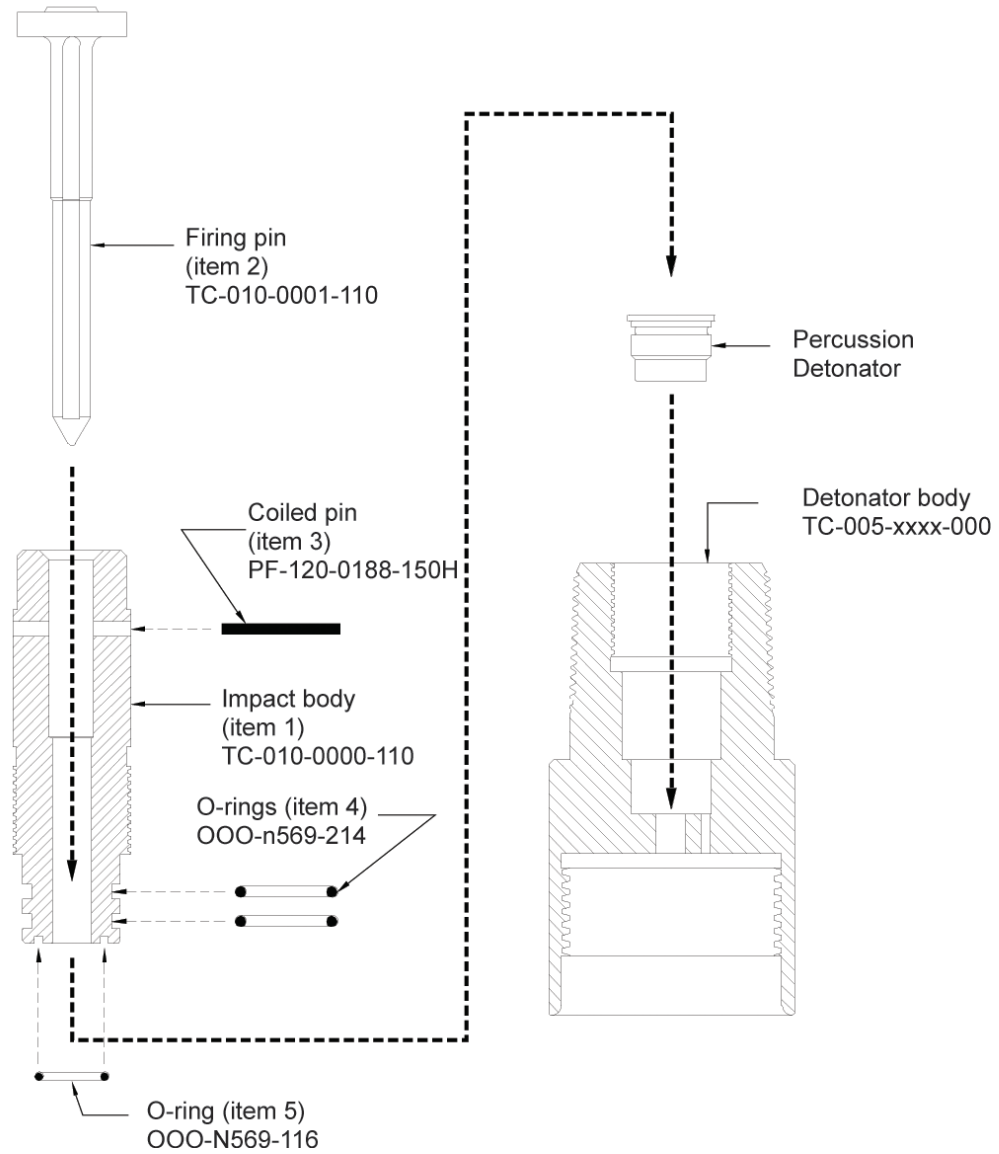
# Mechanical Impact Firing Head

## Typical Hookup BOM and Schematic



Item	Part No.	Description
1	TC-010-1500-000	Mechanical Impact Firing Head
	TC-136-1250-006	Drop Bar Assy. 6' (Sectional)
2	TC-136-1250-010	Drop Bar Assy. 10' (Sectional)
	TC-138-1250-008	Drop Bar 8' (Solid)
	TC-138-1250-010	Drop Bar 10' (Solid)
	TC-170-2375-000	Tubular No-Go for 2-3/8
3	TC-170-2875-000	Tubular No-Go for 2-7/8
	TC-170-3500-000	Tubular No-Go for 3-1/2
	CC-001-2375-000	Collar for 2-3/8 EUE
4	CC-001-2875-000	Collar for 2-7/8 EUE
	CC-001-3500-000	Collar for 3-1/2 EUE
	CC-101-2347-002	Pup Joint 2-3/8 EUE (2' length)
5	CC-101-2865-002	Pup Joint 2-7/8 EUE (2' length)
	CC-101-3593-002	Pup Joint 3-1/2 EUE (2' length)
	TC-005-0001-000	Detonator Body with 2-3/8 EUE Pin, 3-1/8" OD
6	TC-005-0003-000	Detonator Body with 2-7/8 EUE Pin, 3-11/16" OD
	TC-005-0004-000	Detonator Body with 3-1/2 EUE Pin, 4-1/2" OD
7	--	Owen Top Gun Sub
8	Reference	Percussion Detonator

## Exploded View



# Mechanical Impact Firing Head

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**Warning:** *The assembly of this tool requires the handling of an Explosive Device and all safety precautions must be adhered to and observed!*



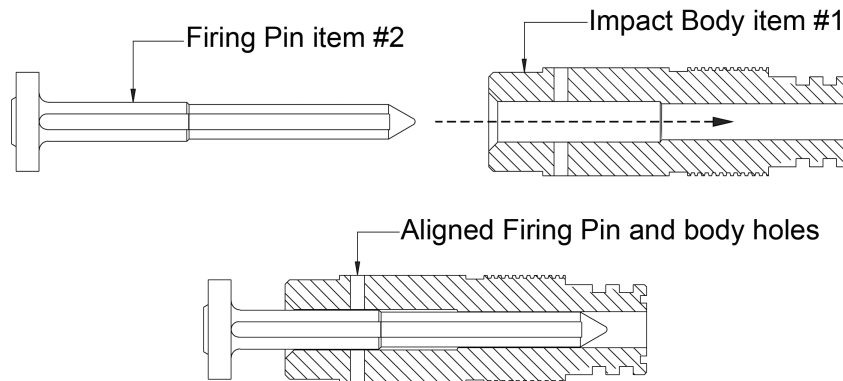
**Note:** *Check all items against the parts list to be sure of having the correct parts and quantities.*



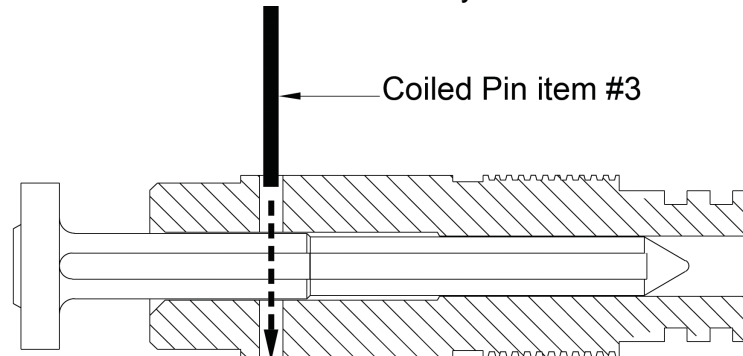
**Note:** *Check for any damage to the parts which would prevent the part from being assembled correctly, easily and safely.*

## 1.0 Assembly

1.1 Insert the Firing Pin (item #2) into the Impact Body (item #1) until the hole in the Firing Pin is in alignment with the hole in the body.



1.2 With the holes in alignment, insert the Coiled Pin (item #3) through the holes. The installed pin should be flush with the OD of the body.

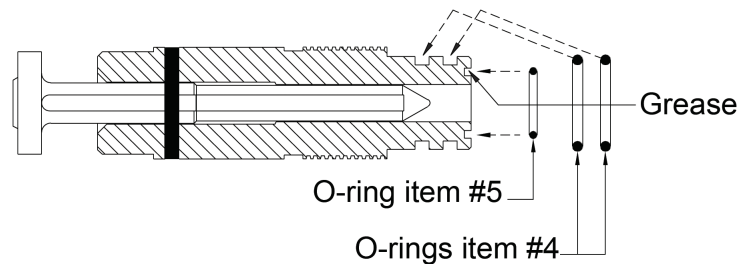


# Mechanical Impact Firing Head



**Warning:** *This pin is not a roll pin. It was specifically designed for this Firing Impact Head! No substitute pin can be used!*

1.3 Install the O-rings (item 4) and the O-ring (item 5) onto the impact body.



**Note:** *A small amount of grease in the o-ring groove, will help retain item #5. After installing the O-ring in the groove, make sure that it will stay in the place during the final assembly of the firing head.*

1.4 The Mechanical Firing Impact (TC-010-1500-000) is now complete and ready to be coupled with a percussion detonator and the selected detonator body. Apply grease to the threads and O-rings of the impact body before mating components, then assemble verically.

