



Wireline Set/Retrievable Firing Head

TC-014-3500-000

MAN-TC-014 (R06)

OWEN OIL TOOLS

5405 Blindman Crescent
Red Deer County Alberta Canada T4S 2M4
Phone: 1-403-340-1017
Fax: 1-403-340-1415
Toll Free: 1-888-345-1017
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.

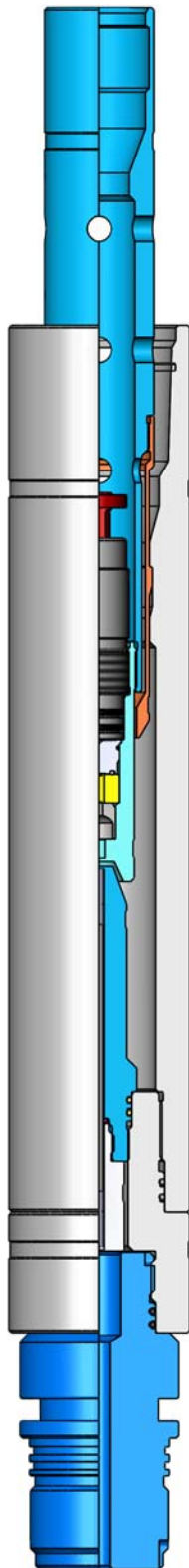
This technology is regulated by and, if exported, was exported from the United States in accordance with the Export Administration Regulations (EAR). Diversion contrary to U.S. law is prohibited. Export and/or re-export of this technology may require issuance of a license by the Bureau of Industry and Security (BIS), US 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 by Owen.

©2005, 2015 Owen Oil Tools All rights reserved.



Blank Page



Description

The Wireline Set/Retrievable Firing Head is designed to increase perforating safety by means of having the primary firing system removed from the TCP string while running Perforating Guns into a well. This is accomplished by utilizing a Landing Assembly that is fixed into the top of the Perforating Guns in the TCP string and a Firing Head that is set in place with Wireline or Slickline after the Perforating Guns are set on depth. The Firing Head houses the primary explosive required to detonate the Perforating Guns, making the TCP string protected from accidental detonation.

Features and Benefits

- This system is designed for use with the Mechanical Impact, Mechanical Safety Impact Firing Heads and Wide Nose Drop Bar. It is also designed for use with the Pressure Activated Firing Head.
- Provides an economical means of setting and retrieving a Firing Head within the TCP string.
- Ensures that accidental detonation cannot happen while running or removing the TCP string from a well.
- Provides a double check with Wireline that the Perforating Guns are on depth while setting the Firing Head, resulting in minimized possibility of shooting off depth.
- In case of a misrun, the Firing Head can be retrieved and inspected without pulling the entire TCP string.
- At least one full tubing joint filled with fluid on top of the Firing Head is recommended for optimum drop bar impact.

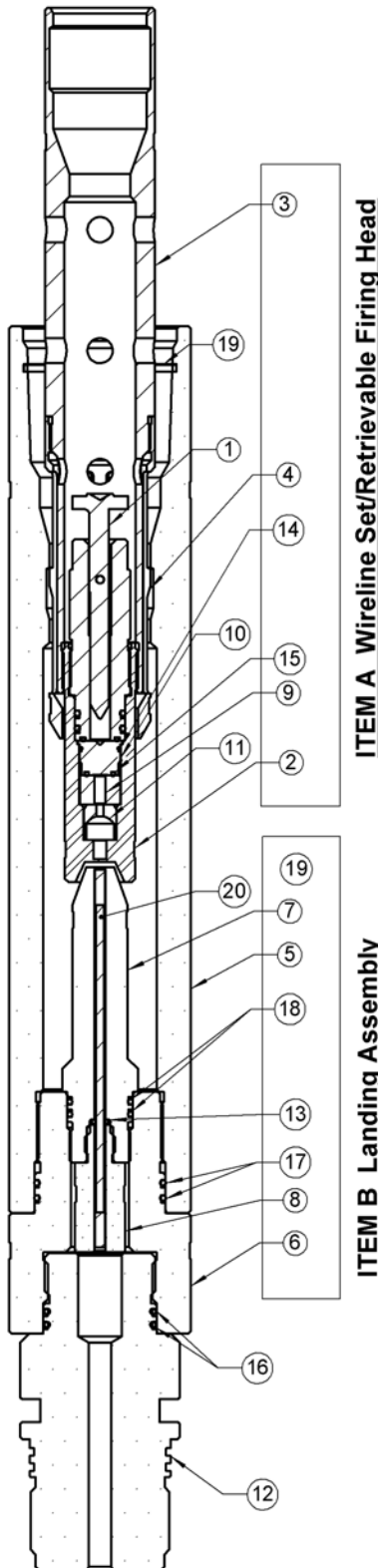
Specifications

	Wireline Set/Retrievable Firing Head		3-1/2 in Landing Assembly	
Maximum OD	2.729 in	69.3 mm	4.500 in	114.3 mm
Minimum ID	1.50 in	38.1 mm	2.510 in	63.8 mm
Overall Length	21.69 in	551 mm	25.000 in	635.0 mm
Max Tensile	N/A	N/A	163,200 lb	72 600 daN
Max Hydrostatic ² (Annulus)	N/A	N/A	21,140 psi	145,750 kPa
Max Hydrostatic ² (Inside Tubing)	16,750 psi	115,450 kPa	16,750 psi	115,450 kPa
Max Temp ¹	250°F (121°C)			
Top Connection	3.000 in Internal Fish Neck		3-1/2 in (88.9 mm) EU Box	
Bottom Connection	N/A		2.750 - 6 TPI Acme Box	
Product Number	TC-014-3500-000		TC-014-3500-300	
Redress Kit	TC-014-3500-099			

²The maximum temperature can be increased to 450°(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

³Maximum pressure is also determined by the Firing Head used



Item	Part Number	Qty	Description
A	TC-014-3500-000	--	Wireline Set / Retrievable Firing Head
2	TC-014-0000-000	1	Initiator Housing
3	TC-014-0001-000	1	Fish Neck
4	TC-014-0002-000	1	Collet
9	TC-014-0007-000	1	Spacer
14	OOO-N569-020	1	O-Ring 90 Durometer Nitrile
15	OOO-N569-113	1	O-Ring 90 Durometer Nitrile
--	TC-014-3500-099	--	Redress Kit
--	MAN-TC-014	--	Assembly Manual

Item	Part Number	Qty	Description
B	TC-014-3500-300	--	Landing Assembly
5	TC-014-0003-000	1	Landing Sub
6	TC-014-0004-000	1	Bottom Sub
7	TC-014-0005-000	1	Stinger
8	TC-014-0006-000	1	Retaining Nut
13	OOO-V568-202	1	O-Ring 70 Durometer Viton
17	OOO-N569-234	2	O-Ring 90 Durometer Nitrile
18	OOO-N569-220	2	O-Ring 90 Durometer Nitrile
19	MI-305-3500-000	1	Seal Ring 3-1/2" EU

Not Included in Assemblies

Item	Part Number	Qty	Description
1	TC-010-1500-000	1	Mech'l Impact FH (shown)
1	TC-012-1500-000	↓	Mech'l. Impact Safety FH (LP)
1	TC-012-1500-200		Mech'l. Impact Safety FH (HP)
1	TC-020-1500-000		Pressure Activated FH (LP)
1	TC-020-1500-200		Pressure Activated FH (HP)
10	Reference		1
11	RTG-1250-401	1	Owen Peanut Charge
12	Reference	1	Top Sub
16	OOO-N569-230	2	O-Ring 90 Durometer Nitrile
20	Reference		Primacord/Booster Assy.

Item	Part Number	Qty	Description
--	TC-014-3500-099	--	Redress Kit 3-1/2" Wireline Set/Retrievable Firing Head
2	TC-014-0000-000	1	Initiator Housing
7	TC-014-0005-000	1	Stinger
8	TC-014-0006-000	1	Retaining Nut
9	TC-014-0007-000	1	Spacer
13	OOO-V568-202	1	O-Ring 70 Durometer Viton
14	OOO-N568-020	1	O-Ring 90 Durometer Nitrile
15	OOO-N569-113	1	O-Ring 90 Durometer Nitrile
17	OOO-N569-234	2	O-Ring 90 Durometer Nitrile
18	OOO-N569-220	2	O-Ring 90 Durometer Nitrile
19	MI-305-3500-000	1	Seal Ring 3-1/2" EU



Assembly Instructions

Wireline Set/Retrievable Firing Head

Step 1

- Insert the peanut charge (item 11) into the Initiator Housing (Item 2). Ensure Peanut Charge is seated on the bottom and oriented correctly.
- Insert spacer (item 9) on top of the peanut charge.
- Lightly grease and install the O-rings (items 14 and 15) onto the Percussion Initiator (item 10). Do not use an excessive amount of grease as it may affect detonator.
- Insert the Percussion Initiator (item 10) on top spacer (Item 9)
- Assemble Firing Head (item 1) to be used as per the Technical Manual supplied with Selected Firing Head.
- Lightly grease and install the O-rings on the selected Firing Head (item 1) and thread the Firing Head into the Initiator Housing (item 2).

Step 2

Thread the Fish Neck (item 3) onto the Initiator Housing (item 2) and tighten securely.

Step 3

Now thread the Collet (item 4) on the Fish Neck (item 3). The Firing Head assembly is complete.

Landing Assembly

Step A

- Lightly grease and install O-rings (item 18) on the Stinger (item 7)
- Cut a piece of Detonator Cord 7.625" long and crimp Bi-Directional Boosters on both ends (item 20). The overall length should be **9.375"** from Booster to Booster
- Insert the the Detonator Cord assembly (item 20) into the Stinger (item 7) until it bottoms out
- Lightly grease and slide the small O-ring (item 13) over the Booster and onto the Detonating Cord (item 20).
- Slide the Retaining Nut (item 8) over the Detonator Cord/Booster assembly sticking out of Stinger and thread it into the Stinger (item 7). This will push the O-ring into the counter bore of the Stinger where it will be compressed to hold the Detonator Cord securely in place. Ensure that the end of the Booster is flush or recessed 1/16" from the face end of the Retaining Nut when tightened to the Stinger
- Lightly grease and install O-rings (item 17) on the Bottom Sub (item 6)
- Thread Bottom Sub (item 6) onto the Stinger assembly and tighten securely

Step B

- Install the Teflon Seal Ring (item 19) onto the Landing Sub (item 5)
- Thread the Stinger/Bottom Sub assembly into the bottom of the Landing Sub
- The Landing Assembly is complete

Step C

- Landing assembly can now be threaded onto the Top Sub (item 12) of the gun

