

# Operations Bulletin



Bulletin 102

EI 1581 6<sup>th</sup> Edition Filter Water Separators

Apr 2017

## Introduction

EI 1581 6<sup>th</sup> edition, issued in December 2016 by the Energy Institute, includes new sizes and types of coalescer and separator elements within the scope as well as additional requalification requirements for the manufacturers, as part of management of change. The purpose of this Bulletin is to outline the key changes in the EI 1581 6<sup>th</sup> edition and to inform operating locations of any actions required.

## Key changes in EI 1581 6<sup>th</sup> edition

The key changes in the 6<sup>th</sup> edition of EI 1581 include:

- a new low dirt/low water type (type S-M) intended for mobile applications. The new S-M type is a combination of the former type S-LD and S-LW. All EI 1581 5<sup>th</sup> edition type S-LW systems are automatically qualified to 1581 6<sup>th</sup> edition type S-M, at the existing tested flowrate.
- 50 mm (2inch) and 100 mm (4 inch) nominal diameter coalescer and separator elements are now included within the scope. These are not intended to retrofit into vessels with existing 5<sup>th</sup> edition qualified 150mm (6 inch) filter elements.
- element lengths for 50 mm (2 inch) nominal diameter coalescer and separator elements are standardized.
- 50 mm (2 inch) nominal diameter elements shall have a defined threaded base design, to avoid their misuse as filter monitors and vice-versa. (See diagram below)
- options for manufacturers to use any kerosene-type jet fuel meeting national standards (instead of ASTM D1655 or Def Stan 91-091) as base fuel for testing, by agreement with the user.
- new requalification and management of change requirements for manufacturers introducing changes in the design or material (including change of source) and construction techniques for production of elements, following initial qualification.
- requirements for FWS vessels and vessel accessories have been removed and reference is given to EI 1596. New EI 1581 filter/water separators shall be housed in filter vessels meeting the requirements of the latest edition of EI 1596.
- Material compatibility test protocols have been removed and reference is given to EI 1589 for compatibility testing. New EI 1581 filter/water separators shall fully meet the requirements defined in EI 1589.

## 1581 5<sup>th</sup> edition qualified elements

All existing EI 1581 5<sup>th</sup> edition qualified elements automatically conform to EI 1581 6<sup>th</sup> edition, because the qualification testing requirements included in EI 1581 5<sup>th</sup> edition have not significantly altered, as stated in the attached letter by the Energy Institute.

FAUDI Aviation, ParkerVelcon and PECOFacet have confirmed to the Energy Institute that none of their 1581 5<sup>th</sup> edition qualified model numbers will be renumbered or rebranded to 6<sup>th</sup> edition. All elements are considered as meeting the performance requirements of EI 1581 6<sup>th</sup> edition.

**There is no time-line to have to switch over to 6th edition.** The above filter manufacturers can continue to make and supply 5th edition-numbered elements, provided that no changes are introduced in the design or material and construction techniques, that would require re-qualification of existing models and re-numbering of the elements accordingly.

## 1581 6<sup>th</sup> edition qualified elements

When the filter manufacturers introduce new models or changes in the design or material and construction techniques for production of filter/water separators, these shall be qualified to 6<sup>th</sup> edition and the elements numbered/branded to 6<sup>th</sup> edition. Future models of filter/water separators qualified to EI 1581 6<sup>th</sup> edition shall be supplied with EI 1582 Similarity Certificates and operational data plates stating compliance with EI 1581 6<sup>th</sup> edition.

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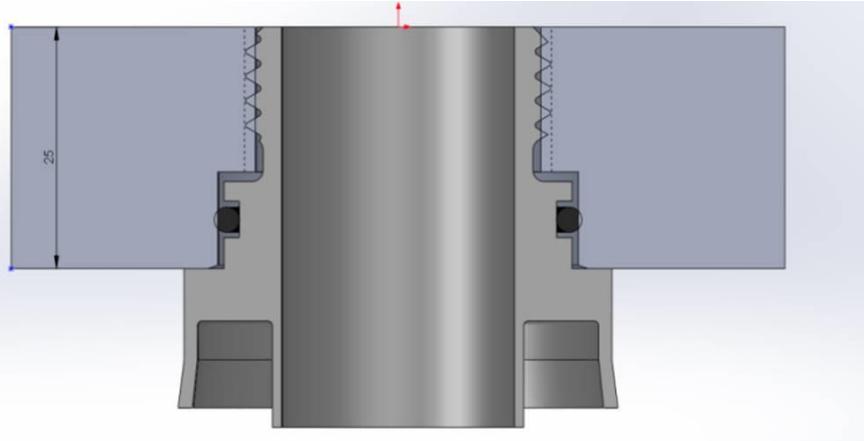
Filter/water separators qualified to EI 1581 6<sup>th</sup> edition shall not be mixed within a single filter/water separator vessel with any models qualified to EI 1581 5<sup>th</sup> edition.

## 2" diameter elements

An engineering solution, as shown below, has been developed to avoid any possible confusion with other 2" diameter filter elements, i.e. filter monitors and microfilters (see Diagram 1). The end cap fitting for the new 2" diameter filter/coalescer elements is 5 mm wider than that used for filter monitor end caps and also of threaded configuration, so they cannot be fitted into a filter monitor vessel.

*Diagram 1: screw fixing for 2" coalescers, illustrating how they differ from filter monitors*

(Reproduced from EI 1581 6<sup>th</sup> edition specification, with permission from Energy Institute)



**Attachment:** Letter from the Energy Institute. It is also available through the EI 1581 publishing website

 EI 1581 6<sup>th</sup> edition  
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## Actions to Implement this Bulletin (See Table 1 for Action Type Codes)

Action Description	Action Type	Target Completion Date
For installations requiring 2" or 4" filter/water separator systems, new elements qualified to EI 1581 6 <sup>th</sup> edition shall be used as soon as they become commercially available. The users shall obtain EI 1582 Similarity Certificates and operational data plates including a statement of compliance with EI 1581 6 <sup>th</sup> edition and shall install the elements in filter housings complying with EI 1596 latest edition. An evaluation including a field trial is recommended as part of the introduction process (see below).	JS	As required
Users of filter/water separator elements numbered/branded to EI 1581 5 <sup>th</sup> edition, are not required to take any further action. For 5 <sup>th</sup> edition elements in use, the attached letter from the Energy Institute may be printed and filed along with other product documentation, for reference purposes.	RP	As required

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Action Description	Action Type	Target Completion Date
Users of filter/water separators numbered/branded to EI 1581 6th edition, shall obtain EI 1582 Similarity Certificates and operational data plates including a statement of compliance with EI 1581 6th edition and shall install the elements in filter housings complying with EI 1596 latest edition.	JS	As required
Operators introducing new 6th edition cartridges are recommended to perform their own field trials to evaluate the field performance of the newly qualified elements, e.g. at selected locations, in accordance with guidance provided in EI 1550.	RP	As required
Models of filter/water separators qualified to EI 1581 6th edition shall not be mixed within a single filter/water separator vessel with any models qualified to EI 1581 5th edition.	JS	As required

**Table 1 Action Type Codes**

Action Types	JIG Bulletin Action Type Definition
JS	Change to JIG Standard – to be adopted by JV and/or Operator to continue to meet the JIG Standard(s) (JIG 1, 2, 4, EI/JIG 1530 and the JIG HSSE Management System).
RP	JIG Recommended Practice which the JV should consider adopting as its own practice (**).
I	Issued for information purposes only.
Note (**) - If the JV agreements require any of the JIG Standards and/or any of the JIG Common Processes as the governing operational standard then adoption of changes to applicable JIG Standards and/or Common Processes should not be considered optional by the JV Board.	

*Note: This document is intended for the guidance of Members of JIG and companies affiliated with Members of JIG, and does not preclude the use of any other operating procedures, equipment or inspection procedures.*

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