

**JIG Bulletin 56 - Attachment – Aug 2012**
**JIG 1: Table of changes made to Issue 10**

Section	Page number	Description	Change from JIG version 10
<b>JIG 1</b>			
Summary of changes	2	Replace reference "6.5.5(v)" by "6.5.5(a)(v)" Replace reference "A4" by "A10" (Fuel Grade Confirmation Form)	Corrections
0	6-9	New glossary of terms	New
0	10	New table of acronyms	New
0	11	New list of useful publications	New
0	12	New acknowledgements	New
Chapter 1	13-16	Throughout (detail below): changes to reflect change from Guidelines to Standards and the application to aviation operations in general. References to JIG inspection tracking system and a revised variance approval process	General changes throughout the chapter
1.1 para 1	13	Definition of JIG Joint Venture	New text
1.1	13	Mandatory and optional requirements defined ('shall' and 'may')	New text
1.2	13	Now 'Standards', not 'Guidelines'	Changed status
1.2	14	Application to joint ventures defined	Changed
1.4.1	14	Staff responsibilities: now includes requirement for facility design to conform to industry standards and government regulations	New
1.4.2	14-15	'International inspections' changed to 'JIG inspections'	Changed terminology
1.4.2 para 1	14	Inspection frequency now 'at least' once/year	Changed requirement
1.4.2 para 2	14	'deviations' changed to 'variances'	Changed terminology
1.4.2 para 2	15	Issues of a serious nature now to be communicated to all participants	Changed requirement
1.4.2para3-4	15	Reference to JIG Inspection Tracking System	New requirement
1.4.3	15-16	New Standards Variance Approval process	New
1.4.3	15	Insert following text above final paragraph: "Approved Variance Certificates shall be reviewed annually by local management and at least every three years by the international participant companies."	Correction – new text
2.2	17	Sampling equipment fabricated from copper or its alloys shall not be used for sampling Jet fuels. Refer to ASTM D4306 for suitable materials.	New requirement
2.2.1 (b)	17	Now mandatory to use sample containers as described in 2.2.3	Change to mandatory requirement
2.2.3 (b)	18	Capacity of glass jars at least 1 litre, not 2 litre	Changed requirement
2.3.3 (b)	18	'Appearance Check' defined	New requirement
2.3.2	19	New note on blends using synthetic components	New text
2.3.3 (c)	21	New Visual Check definition	Changed requirement
2.3.3 (d)	21	Control Check now described as Appearance Check plus fuel density determination	Changed terminology
2.3.3 (d)	21	Now mandatory to investigate if contamination is suspected	Changed requirement
2.3.3 (e)-(g)	21	Sections renumbered; changed Appendix reference	Renumbering
2.3.3 (h)	22	Principle of application of Chemical Water Detectors (CWDs) described and a table of mandatory use.	New requirement
3.1	23	New introductory paragraph	New text
3.1.1 para 1	23	Guidance and requirements for all new fuelling vehicles, equipment and components	Changed text
3.1.1 para 3	23	New requirement for equipment to meet most stringent requirements of this Standard and legislation. Where there is a difference between this Standard and applicable legislation these differences shall be documented.	New requirement
3.1.2	23	Updated reference to standard E1542	Changed/updated
3.1.3	23	Mandatory requirement for lining of mild steel	New requirement
3.1.4 (a)	24	Qualification to standards now mandatory	New requirement
3.1.4 (c)	24	Now mandatory to have prior agreement of participants for filtration specified for new build fuelling equipment	Changed requirement

3.1.4 (c)	24	(Para 3) EI 1581 Category M (delete "class")	Correction
3.1.5	24	New standards for hoses	New requirement
3.1.7 (c)	26	Warning lights visible from driving position	New requirement
3.1.9	26	Requirement for compliance in pressure control systems, approved by participants and tested according to Appendix A15	New requirement
3.1.10	27	Changed guidance on alternative types of fire extinguisher	Changed text
3.1.13	28	Cordless deadman range increased to 20 metres and checked to confirm range operation.	Changed requirement
3.1.14	28	Delivery pipework requirements to ensure all fuel that passes through filter and meter is delivered to aircraft. No bypass lines permitted.	New requirement
3.1.16	29	Elevating platforms – new requirements for sensing device systems	New requirement
3.2.4	30	New requirements for vents and overfill protection devices	New requirement
3.3.3	30	New requirements for inlet coupler stowage to be protected from contamination	New requirement
4.4	31	Daily check of interlock system now mandatory	Changed requirement
4.7.1	32	Quarterly test of cordless deadman systems introduced	New requirement
4.7.1	32	Annual check of intermittent timer device introduced	New requirement
4.8.2	32	Hose life limited to 10 years. Any extension shall be in compliance with the hose standards and require a Variance Approval Certificate	New requirement
4.8.3	32-33	New requirement for flushing static fuel in hoses.	New requirement
4.8.5	33	Fitting of re-attachable couplings requires agreement of participants and competent trained personnel.	New requirement
4.8.6	33	Any delivery hose used for fuelling (e.g steps with integral hoses etc) shall also be subjected to required flushing and testing procedures.	New requirement
4.9.1	33	Master meters shall be dedicated to one grade of aviation fuel.	New requirement
4.9.1	34	Clarification of 'erratic performance'	Changed text
4.9.1	34	Minimum requirement for meters to comply with calibration criteria	New requirement
4.10.2	35	The site master pressure gauge shall only be used for accuracy checks of other gauges	New requirement
4.11	35	The correct function of emergency platform lowering systems and wand sensors fitted to platform high points shall be checked monthly.	New requirement
4.12	35	Nozzles and coupling checks defined. Wear checks annually.	New requirement
4.14	35-36	New requirements for inspection and cleaning defined. Any extension beyond the maximum 5 year frequency shall require a variance certificate.	New requirements
4.15	36	New requirements for vehicle product recovery systems	New requirement
4.17	36	Testing requirements for vehicle overfill protection devices defined.	New requirement
4.19	36-37	Testing requirements for density and temperature measuring equipment defined.	New requirement
4.20	37	New requirements for fire extinguisher maintenance.	New requirements
4.21	37-38	New section on electrical equipment maintenance	New requirements
4.21	37-38	Delete "Fixed facility earthing straps/rods..... ....etc." and insert "Emergency engine stops fitted to fuelling equipment shall be tested at least monthly."	Correction – new text
4.22	38	New section on testing requirements for other measuring equipment	New requirement

5.2.3	40	Clarification on return of recovered aviation fuel to service.	Clarification
5.3.2 (b)	41	Requirement for Visual Check of fuel sampled from hydrant servicers	Clarification
5.7.1-5.7.2	42	Now mandatory to follow grade-change procedures	Changed requirement
5.8	42-43	New requirements for fueller loading defined	New requirement
5.9	43-44	Now mandatory to follow test kit guidance on cleanliness and to repeat tests if contamination tests are positive	Changed requirement
5.9	44	(Third para) Delete "maintenance" from first line	Correction
6.2.2	45-46	Stand plans introduced and requirements detailed.	New requirements
6.2.3	46-47	Clarification on fuelling position and reversing requirements and fuelling operations with aircraft slats and flaps extended.	Clarification
6.2.4	47	New mandatory requirement - fuelling to be stopped during aircraft de-icing operations.	New requirement
6.5.1 (f)	49	Requirement to monitor and record differential pressure during fuelling	New requirement
6.5.2	50-51	Requirement for single sequence of connection and disconnection introduced. Clarification on preferred sequences. (See Appendix A9)	New requirement
6.5.3	51	Improved definition of hydrant servicer disconnection sequence	Clarification
6.5.4 (a)	51-52	Requirement to check condition of aircraft adapter detailed	Clarification
6.5.4 (c)	52	Fuelling not to be carried out where adaptors are not connected securely or leak	New requirement
6.5.5 (a) (ii)	52	Fuel Grade Order Form now known as Fuel Grade Confirmation Form	Changed terminology
6.5.5 (a) (v)	53	New advice confirming that motor gasoline shall not be supplied to light aircraft with a dual fuel use decal.	New requirement
6.6	54-55	New defuelling requirements defined	New requirements
6.7.3	55	Situations where fuelling shall be stopped clarified.	Clarification
6.11	57	New exceptional circumstance when fuelling may be started while passengers are still on aircraft	Clarification
7	61	All mandatory checks in this standard to be recorded	New requirement
7.5	62	New requirements for document retention defined	New requirements
Chapter 8	63-72	Throughout (detail below): Health, Safety and Environment requirements detailed in line with JIG HSSEMS Guidelines.	New requirements
8.1-8.5	63-66	New sections on risk assessment and control, asset design and construction, documentation and records, and personnel and training	New requirements
8.6.2	67	Now mandatory for all locations to have PPE policy that includes management and visitors	Changed requirement
8.6.2	67	(anti-static) should replace (non-static) in two places: bullet 5 and bullet 7	Correction
8.6.3	67	8.6.4 (Medical assessments and colour blindness) to be renumbered as 8.6.3	Correction
8.6.4	67	New requirement for personnel to undergo medical assessments for fitness before starting employment	New requirement
8.6.4	67	Now mandatory for personnel to be tested for colour blindness at the time of starting employment and subsequently	Changed requirements
8.6.4	67	8.6.5 (Medical services – washing facilities) to be renumbered as 8.6.4	Correction
8.6.5 (a)	67	Now mandatory to make facilities for first aid available	Changed requirements
8.6.5 (b)	67	Now mandatory to provide adequate washing facilities and instructions on care to be taken when handling aviation products	Changed requirements

8.10.1	68	Time period for notification of incidents changed from "immediately" to within 24 hours.	Changed requirement
8.10.1	68	Requirement to use JIG web-based HSSE reporting system for monthly HSSE statistics	New requirement
8.10.2	69	Consequence (incident) categories defined	Clarification
8.10.3	69	New reporting requirements defined for incident investigation	New requirements
8.10.4	70	Requirement to use JIG web-based HSSE reporting system for monthly spill statistics	New requirement
8.10.5	70	New requirements for notifying participant companies and fuel supply organisation of aircraft incidents/accidents	New requirements
8.10.6	71	New requirements to communicate lessons learned	New requirements
8.11.1	72	Requirement to prepare procedures to cover "all possible emergencies" changed to "all reasonably foreseeable emergencies"	Clarification
8.11.2	72	Managers now required to take the needs of other interested parties into account when preparing emergency procedures	New requirement
8.11.4	72	New requirement to display an emergency drawing of the location	New requirement
8.12	72	New requirement for periodic review of HSSE management system	New requirement
Appendix A1	74	Appendix renumbered (was Appendix A12). Revised summary of routine test frequencies	New requirements and changed requirements
Appendix A1	74	Delete reference to dip tapes (should be added to JIG 2)	Correction
Appendix A1	74	Electrical Equipment – reference should be 4.21 (not 4.16)	Correction
Appendix A2	75	Appendix renumbered (was A9). New Variance Approval Certificate	Changed
Appendix A3	76	New PPE requirements	Changed
Appendix A4	77	Appendix renumbered (was A5-1). Now mandatory to record details of injury to personnel while on duty	Changed numbering
Appendix A4	77	Definition of LTI is not correct – replace first sentence by: "A lost time incident (LTI) is defined as a work related incident resulting in a member of the workforce not being available for work on the next calendar day, whether they were due to work it or not."	Correction
Appendix A5	78-81	New soak test procedures (reference JIG Bulletin 35)	New requirements
Appendix A6	82-87	Appendix renumbered (was A1)	Changed numbering
A6.1	82	General requirements for filter use clarified. Stacked elements not acceptable	Clarification
A6.2.2	82-83	Clarification on differential pressure correction requirements	Clarification
A6.2.3	83	Delete "HydrantsHH" at end of second paragraph	Correction
A6.2.4	83-84	Requirement to replace cover seal at least every three compressions. Reference to calibrated torque wrenches and checking blanking plates and elements	New requirements
A6.3.3	85	Separators should be wet with fuel when tested	Clarification
A6.5	85	Requirements for gauze strainer maintenance defined	New requirement
Appendix A8	89-92	Appendix renumbered (was A6)	Changed numbering
Appendix A9	93	Preferred hydrant servicer connection / disconnection sequences	New
Appendix A10	94	Appendix renumbered (was A4). New Fuel Grade Confirmation Form	Changed
Appendix A11	95-96	Appendix renumbered (was A10)	Changed numbering
Appendix A13	98-100	Appendix renumbered (was A3) and substantially revised (details below)	Changed numbering
A13.1.2	98	Warning about hose kinking detailed. No need to remove some hose fittings for testing.	Clarification

A13.1.2	98	Revised note with additional text: "It is not necessary to remove wheel fittings and hose protection beads. However, where high visibility spiral wraps significantly obscure the observation of hoses they should be removed before testing."	Correction - new text
A13.2.2	99	Revised note from A13.1.2 to be added: "It is not necessary to remove wheel fittings and hose protection beads. However, where high visibility spiral wraps significantly obscure the observation of hoses they should be removed before testing."	Correction - new text
A13.2	98	Clarification on hose test pressure requirements	Clarification
A13.3	99	New section on damaged hose actions	New requirements
AppendixA14	101	Example of a stand plan	New
AppendixA15	102-112	Appendix renumbered (was A2) and completely revised with new test protocol for pressure control systems.	New requirements
A15.6	107	Paras 6, 7 & 8 show some incorrect pressure figures. Text should be: The ILPCV shall control the pressure such that it does not exceed 3.8 bar (55 psi) except at very low flow rates (just before shut down) where pressures between 3.8 and 4.2 bar (55 to 60 psi) are possible. At zero flow the pressure shall not exceed 4.2 bar (60 psi)..... In para 8, 0.35 bar (5 psi)	Correction

**JIG 2: Table of changes made to Issue 10**

Section	Page number	Description	Change from JIG version 10
<b>JIG 2</b>			
Summary of changes	1	2.3.4 (i) should be (j)	Correction
Summary of changes	2	8.9 should read 8.10 8.10 should read 8.11 10.1.2 should refer to draining (not sampling) Add A14.3 – Annual hydrant pit valve wear check	Corrections
Contents	4	Add 7.2 - FUELLER LOADING Page 49	Correction
Contents	5	Add APPENDIX A5 - SOAK TESTING PROCEDURES Page 78	Correction
0	6-9	New glossary of terms	New
0	10	New table of acronyms	New
0	11	New list of useful publications	New
0	12	New acknowledgements	New
Chapter 1	14-17	Throughout (detail below): changes to reflect change from Guidelines to Standards and the application to aviation operations in general. Reference to JIG inspection tracking system and a revised variance approval process	General changes throughout the chapter
1.1 para 1	14	Definition of JIG Joint Venture	New text
1.1	14	Mandatory and optional requirements defined ('shall' and 'may')	New text
1.2	14	Now 'Standards', not 'Guidelines'	Changed status
1.3	15	Application to joint ventures defined	Changed
1.4	15	Delete "Venture" from heading "Staff Responsibilities"	Correction
1.4.1	15	Reference at bottom of page 15 should be 11.11.5	Correction
1.4.2	16	'International inspections' changed to 'JIG inspections'	Changed terminology
1.4.2 para 1	16	Inspection frequency now 'at least' once per year	Changed requirement
1.4.2 para 3	16	Use of JIG Tracking System introduced	New requirement
1.4.3	16-17	New Standards Variance Approval process	New
1.4.3	17	Insert following text above final paragraph:	Correction – new text

		"Approved Variance Certificates shall be reviewed annually by local management and at least every three years by the international participant companies."	
2.2	18	Sampling equipment fabricated from copper or its alloys shall not be used for sampling Jet fuels. Refer to ASTM D4306 for suitable materials.	New requirement
2.2.2	19	Definition of Multiple Tank Composite defined for ships and barges. Maximum number of compartments per composite specified.	
2.2.3 (b)	20	Capacity of glass jars at least 1 litre, not 2 litre	Changed requirement
2.2.3 (b)	20	'Appearance Check' referenced	New requirement
2.3.2 (b)	21	New note on blends using synthetic components	New text
2.3.4 (a)	22	Requirement for FAME testing introduced and defined for certificate of analysis testing.	New requirement
2.3.4 (b)	23	Test requirements table for recertification test updated, including FAME	Clarification and new requirement
2.3.4 (b)	23	Recertification Test table – "Thermal Stability (JFTOT)" instead of "Thermal Stability (IP323/D3241)"	Correction
2.3.4 (b)	24	Requirement for FAME testing introduced and defined for recertification testing. The inclusion of this test assumed that approval for up to 100 ppm of FAME in jet fuel would be achieved before publication. The current limit is still 5 ppm and test methods for FAME content are not yet applicable for recertification testing.	New requirement but not yet applicable
2.3.4 (b)	24	Note (4) second paragraph – FAME (not Fame)	Correction
2.3.4 (c)	24	Test requirements table for periodic test updated	Clarification
2.3.4 (d-f)	25-26	Clear definition of Appearance Check (C&B), Visual Check and Control Check.	Changed requirement
2.3.3 (i)	26-27	Principle of application of Chemical Water Detectors (CWDs) described and a table of mandatory use.	New requirement
3.1.1	28	Now mandatory for commissioning procedures for changes to existing depot facilities to be in accordance with industry standards	Changed requirement
3.1.7	28	New information on double skinned tanks and requirements	New requirement
3.2.3 (a)	29	Clarification on requirements for free vent devices fitted to buried Avgas tanks	Clarification
3.2.3 (h)	30	New standard for numbering and marking tanks	Changed requirement
3.2.3 (i)	30	Use of low-level alarm systems clarified	Clarification
3.3.7	31	Requirements for cathodic protection specified for buried pipelines	New requirement
3.5.1	32	All hydrant pit valves to meet EI1584 third edition. Additional requirements relating to rigid pipe sections and pit protection	New requirement
3.5.2	32	Use of dual air lanyard preferred for all existing hydrant systems.	New requirement
3.5.7	32	Cathodic protection mandatory for all new hydrant systems	New requirement
3.6	32-33	New section on hydrant pump and transfer pump systems	New requirements
3.7	33	Digital pressure gauges preferred on test rigs, but oil filled bourdon gauges are acceptable as an alternative.	Changed advice
3.8	33	New section on electromagnetic radiation hazards.	New requirement
4.2.1	34	Fuel to be received into fixed storage in line with design requirements in Chapter 3	New requirement
4.2.2 (a)	35	FAME issues referenced	Advisory note
4.2.2 (b)	35	'Suitably buffered' water explained	Clarification
4.2.2 (d)	35	Now mandatory for discharge sequence to minimise contamination	Changed requirement
4.2.3 (i)	35	Reference should be to A6.7.2 (not A2.7.2)	Correction
4.2.3 (ii)	35	Reference should be to A6.7.3 (not A2.7.3)	Correction

4.3.3	36	Alternative continuous line monitoring systems described	Advisory note
4.4.3	36	Preference order of product receipt from multi-product pipeline changed	Changed advice
4.5	37	No interconnecting lines between receipt pipelines handling different products permitted.	New requirement
4.5.1 (c)	37	If ullage in a compartment of a barge/inland waterway vessel differs by more than 0.2% from the loading figure the ship's master shall be consulted.	Changed requirement
4.5.1 (e)	37	Permissible for inland waterway vessels to combine samples from up to 3 compartments for Control Check	Clarification
4.5.2	38	Alternative continuous line monitoring during receipt	Clarification
4.6	38-39	Switching of road or rail tank cars between gas oil/ diesel and Jet fuel strongly discouraged. New requirements for FAME testing introduced.	New requirement
4.7	39-40	Text on driver controlled deliveries consolidated into a single section in JIG 2. (Text moved from 5.3.1 in JIG 2 issue 10)	Consolidated guidance
4.8.3 (d)	41	Clarification of procedure for monitoring addition rate of SDA	Clarification
6.1.1	45	Use of Appearance Check and Visual Check clarified for product in storage	Clarification
6.1.3	45	Condition of tank vents/mesh screens to be checked quarterly. PV vents and flame arrestors to be serviced annually.	Changed requirements
6.2	46-47	New requirements for tank inspection and cleaning defined. Any extension beyond the new maximum 5 year frequency shall require a variance certificate.	New requirements
6.2.2	47	New details on use of cleaning materials for tank cleaning and necessary actions defined.	New requirements
6.2.5	47	Product Recovery Tanks shall be inspected without entry quarterly for cleanliness and condition.	New requirement
6.2.6	47	Tank-side fast flush tanks shall be kept clean and empty when not in use for draining and sampling.	New requirement
6.3	47	Change of grade procedures to be established locally and agreed by participants	Changed requirement
7.2.1	49-50	Requirement for spill protection for fueller loading. Some clarification of bonding requirements and fueller loading hoses.	New requirement and clarification
7.2.1	50	Seventh paragraph - ...ISO 1825/EN 1361...(not EI 1361)	Correction
8.1.1	51	Potential to extend weekly flushing of hydrant low points through a Variance Approval Certificate. Some conditions mandated.	New requirements
8.1.3	51	Relaxation on frequency of flushing of unused hydrant pits where the riser is directly above the main feeder line	Changed requirement
8.3	52	Improved definition of the requirements for hydrant pit and low point servicing vehicles	Clarification
8.6	53	Clarification of the required monitoring and maintenance of hydrant cathodic protection systems	Clarification
8.7.1	53	Need for investigation where unexplained pressure drops occur during leak detection monitoring.	New requirement
8.8	53	Surge absorbers, where installed, shall be checked at least once per year for correct operating pressure in line with manufacturer's recommendations.	Clarification
8.9	54	High point vents and removal of air from hydrant	Changed requirement
8.10	54	Requirement for quarterly visual inspection and annual internal inspection of hydrant valve chambers defined.	New requirement

8.11	54	New section on hydrant pump, PLC, Alarm and detection system maintenance requirements.	New requirements
9	55	All mandatory checks in this standard to be recorded	New requirement
9.4	55	Requirement to maintain detailed record of accidents/incidents for 5 years	New requirement
9.5	55-56	New requirements for document retention defined	New requirements
10.1.3	57	Paragraph added to define required maintenance for permissive bonding systems.	New requirement
10.3.1	58	Master meters shall be dedicated to one grade of aviation fuel and only used for accuracy checks of other meters.	New requirement
10.3.1	58	"Erratic performance" clarified	Clarification
10.3.1	58	Minimum requirements for proving electronic display meters defined.	Changed requirement
10.4.2	59	Master gauges shall be calibrated every three years. Master gauges shall only be used for accuracy checks of other gauges.	New requirement
10.5.1	59	Fueller loading hose requirements clarified. Pantograph systems are also acceptable.	Clarification
10.6	59	Testing requirements for density and temperature measuring equipment defined.	New requirements
10.7	60	New requirements for fire extinguisher maintenance	New requirements
10.8	60-61	New section on electrical equipment maintenance	New requirements
10.8	61	Insert new final paragraph: "Emergency shut-down switches should be tested monthly."	Correction – new text
10.12	62	New section on testing requirements for other measuring equipment.	New requirements
10.12	62	Third paragraph – EN ISO 6789 should replace BS EN 26789	Correction
Chapter 11	63-72	Throughout (detail below): Health, Safety and Environment requirements detailed in line with JIG HSSEMS Guidelines.	New requirements
11.1-11.5	63-66	New sections on risk assessment and control, asset design and construction, documentation and records, and personnel and training	New requirements
11.5.1	65	The manager of the location is...(delete into-plane fuelling operation"	Correction
11.5.3	65	In line 7, replace "should" by "shall"	Correction
11.6.2	67	Now mandatory for all locations to have PPE policy that includes management and visitors	Changed requirement
11.6.2	67	(anti-static) should replace (non-static) in two places: bullet 5 and bullet 7	Correction
11.6.3	67	11.6.4 to be renumbered as 11.6.3	Correction
11.6.4	67	New requirement for personnel to undergo medical assessments for fitness before starting employment	New requirement
11.6.4	67	Now mandatory for personnel to be tested for colour blindness at the time of starting employment and subsequently	Changed requirements
11.6.4	67	11.6.5 to be renumbered as 11.6.4	Correction
11.6.5 (a)	67	Now mandatory to make facilities for first aid available	Changed requirements
11.6.5 (b)	67	Now mandatory to provide adequate washing facilities and instructions on care to be taken when handling aviation products	Changed requirements
11.10.1	69	Time period for notification of incidents changed from "immediately" to within 24 hours.	Changed requirement
11.10.1	69	Requirement to use JIG web-based HSSE reporting system for monthly HSSE statistics	New requirement
11.10.2	69	Consequence (incident) categories defined	Clarification
11.10.3	69	New reporting requirements defined for incident investigation	New requirements
11.10.4	70	Requirement to use JIG web-based HSSE reporting system for monthly spill statistics	New requirement

11.10.5	70	New requirements for notifying participant companies and fuel supply organisation of aircraft incidents/accidents	New requirements
11.10.6	70	New requirements to communicate lessons learned	New requirements
11.11.1	71	Requirement to prepare procedures to cover "all possible emergencies" changed to "all reasonably foreseeable emergencies"	Clarification
11.11.2	71	Managers now required to take the needs of other interested parties into account when preparing emergency procedures	New requirement
11.11.4	71	11.11.3 Emergency Drawing to be renumbered as 11.11.4	Correction
11.11.4	71	New requirement to display an emergency drawing of the location	New requirement
11.11.5	72	11.11.4 Fuel Supply Contingency Plan to be renumbered as 11.11.5	Correction
11.12	72	New requirement for periodic review of HSSE management system	New requirement
Appendix A1	74	Appendix renumbered (was Appendix A12). Revised summary of routine test frequencies	New requirements and changed requirements
Appendix A1	74	Add to table Dip Tapes - annual check – ref 10.12 Hydrant valve chamber check – add quarterly check to existing annual check Hydrant pit valve wear check – amend to yearly check – ref is A14.3 Delete the row showing "Quick return valves (QRV) operation" as a six-monthly check	Correction
Appendix A2	75	Appendix renumbered (was A9). New Variance Approval Certificate	Changed
Appendix A3	76	New PPE requirements	Changed
Appendix A4	77	Appendix renumbered (was A6-1).	Changed numbering
Appendix A4	77	Definition of LTI is not correct – replace first sentence by: "A lost time incident (LTI) is defined as a work related incident resulting in a member of the workforce not being available for work on the next calendar day, whether they were due to work it or not."	Correction
Appendix A5	78-82	New soak test procedures (reference JIG Bulletin 35)	New requirements
A5.3	79	<u>Hoses</u> New aircraft fuelling hoses (meeting EI 1529 or ISO 1825/EN 1361)...	Correction
A5.3	80	<u>Storage Tanks</u> Paragraphs four and five (partially lined tanks/unlined tanks) can be deleted	Correction
Appendix A6	83-87	Appendix renumbered (was A1)	Changed numbering
A6.1	83	General requirements for filter use clarified. Stacked elements not acceptable	Clarification
A6.2.2	83-84	Clarification on differential pressure correction requirements	Clarification
A6.2.4	84	Requirement to replace cover seal at least every three compressions. Reference to calibrated torque wrenches and checking blanking plates and elements	New requirements
A6.3.3	85	Separators should be wet with fuel when tested	Clarification
A6.5	86	Requirements for gauze strainer maintenance	New requirement
Appendix A9	90-91	Appendix renumbered (was A3)	Changed numbering
Appendix A10	92	Appendix renumbered (was A11)	Changed numbering
Appendix A11	93	Appendix renumbered (was A2), Avgas recertification form revised in line with chapter 2 requirements and corrected. Remove the variability limit of 8 deg C for Initial Boiling Point	Changed
Appendix A12	94	Appendix renumbered (was A2.2), Jet-1 recertification form revised in line with chapter 2 requirements and corrected. Remove the variability limit of 8 deg C for Initial Boiling Point	Changed

AppendixA13	95-96	Appendix renumbered (was A5) and substantially revised (details below)	Changed
A13.1.2	95	Warning about hose kinking detailed. No need to remove some hose fittings for testing.	Clarification
A13.2	95	Clarification on hose test pressure requirements	Clarification
A13.2.2	96	New requirement to test hose in straight position without bends or kinks	New requirement
A13.3	96	New section on damaged hose actions	New requirements
AppendixA14	97-100	Appendix renumbered (was A4); Annual Dynamic Testing: new section on testing dual air lanyard pit valves added and diagrams	New requirements
A14.1.2.2	98	Ref in A14.1.2.2 Pilot Operating Valves should be to A14.1.2.1 (1)	Correction
A14.2	99	Procedures A) and B) assume that a hydrant servicer is used for the dynamic test. If a pit servicing vehicle is used then the references to "bonding" in A) 1. & B) 1. are not applicable B) 7 should read "The total time from operation of the lanyard/disconnection of the air until flow stops should not exceed 5 seconds."	Correction
A14.3	99	Insert new: <u>A14.3 Annual Wear Check</u> The outlet adaptor of each pit valve shall be checked for wear annually using an appropriate gauge provided or approved by the pit valve manufacturer.	Correction
A14.4-A14.6	99	Renumber existing A14.3, A14.4 and A14.5 as A14.4, A14.5 and A14.6 Reference in A14.4 Testing after repair or overhaul should be to A14.2	Correction
AppendixA15	101-102	New appendix – diagrams of pressure control test rig	New

### JIG 3: Table of changes made to Issue 10

Section	Page number	Description	Change from JIG version 10
<b>JIG 3</b>			
Summary of changes	2	Reference should be A6.2.3 and not A6.2.2	Correction
0	6-9	New glossary of terms	New
0	10	New table of acronyms	New
0	11	New list of useful publications	New
0	12	New acknowledgements	New
Chapter 1	13-15	Throughout (detail below): changes to reflect change from Guidelines to Standards and the application to aviation operations in general. Reference to JIG inspection tracking system and a revised variance approval process	General changes throughout the chapter
1.1 para 1	13	Definition of JIG Joint Venture	New text
1.1	13	Mandatory and optional requirements defined ('shall' and 'may')	New text
1.2	13	Now 'Standards', not 'Guidelines'	Changed status
1.3	14	Application to joint ventures defined	Changed
1.4.2	14	'International inspections' changed to 'JIG inspections'	Changed terminology
1.4.2 para 1	14	Inspection frequency now 'at least' once per year	Changed requirement
1.4.2 para 3	14-15	Use of JIG Tracking System introduced	New requirement
1.4.3	15	New Standards Variance Approval process	New
1.4.3	15	Insert following text above final paragraph: "Approved Variance Certificates shall be reviewed annually by local management and at least every three years by the international participant companies."	Correction – new text
2.2	16	Sampling equipment fabricated from copper or its alloys shall not be used for sampling Jet fuels. Refer to ASTM D4306 for suitable materials.	New requirement

2.2.2	17	Definition of Multiple Tank Composite defined for ships and barges. Maximum number of compartments per composite specified.	Clarification
2.2.3 (b)	18	Capacity of glass jars at least 1 litre, not 2 litre	Changed requirement
2.2.3 (b)	18	'Appearance Check' referenced	New requirement
2.2.3 (b)	18	Figure in brackets should be 0.08"	Correction
2.3.1	18	Now mandatory for approved laboratory to participate in recognised aviation fuel cross-check programme	Changed requirement
2.3.2 (b)	19	New note on blends using synthetic components	New text
2.3.4 (a)	20	Requirement for FAME testing introduced and defined for certificate of analysis testing.	New requirement
2.3.4 (b)	21	Test requirements table for recertification test updated, including FAME	Clarification and new requirement
2.3.4 (b)	22	Requirement for FAME testing introduced and defined for recertification testing. The inclusion of this test assumed that approval for up to 100 ppm of FAME in jet fuel would be achieved before publication. The current limit is still 5 ppm and test methods for FAME content are not yet applicable for recertification testing.	New requirement but not yet applicable
2.3.4 (c)	22	Test requirements table for periodic test updated	Clarification
2.3.4 (d-f)	23-24	Definition of Appearance Check (C&B), Visual Check and Control Check.	Changed requirement
2.3.4 (g)	24	Only movements direct to airport require colorimetric monitoring of export filtration	Clarification
2.3.34(i)	24	Principle of application of Chemical Water Detectors (CWDs) described	New requirement
3.1.1	25	New soak test procedures referenced (new appendix)	New requirement
3.2.3 (f)	26	Floating suction arms mandatory for new tanks supplying direct to airport	New requirement
3.2.3 (h)	27	New standard for numbering and marking tanks	Changed requirement
3.2.3 (i)	27	Use of low-level alarm systems clarified	Clarification
3.3.2	27	Designated low point defined and associated flushing requirements	Clarification
3.4.2	28	Filtration requirements for supply and distribution terminals defined with respect to both indirect and direct to airport transfers.	New requirements
4.2.2	29	FAME issues referenced	Advisory note
4.2.3	29	'Suitably buffered' water explained	Clarification
4.3.3	30	Alternative monitoring systems described	Advisory note
4.4.3	30	Preference order of product receipt from multi-product pipeline changed	Changed advice
4.5	30-31	Requirements for receipt from ocean tankers, jetty receipt lines and mixed cargoes	Clarification
4.6	32-33	Switching of road or rail tank cars between gas oil/ diesel and Jet fuel strongly discouraged. New requirements for FAME testing introduced.	New requirement
6.1.1	37	Use of Appearance Check and Visual Check clarified for product in storage	Clarification
6.2	38-39	New requirements for tank inspection and cleaning defined. Any extension beyond the new maximum 5 year frequency shall require a variance certificate.	New requirements
6.2.2	39	New details on use of cleaning materials for tank cleaning and necessary actions defined.	New requirements
6.2.5	39	Product Recovery Tanks shall be inspected without entry quarterly for cleanliness and condition.	New requirement
6.2.6	39	Tank-side fast flush tanks shall be kept clean and empty when not in use for draining and sampling.	New requirement
7.3	41	Product transfer responsibilities defined	New requirement
7.4.2	41	Responsibilities defined on completion of loading road and rail car tanks	New requirements
7.4.3	42	Before dispatch, all tank compartment openings shall be secured. Where supply is direct to	New requirement

		airport, all compartment openings should be sealed.	
7.4.4	42	Driver controlled delivery requirements consolidated and expanded in a single section	Clarification
7.5.2	42	New note describing source of more detailed guidance from Energy Institute on cleaning tanks and lines (HM 50)	Advisory note
8	44	All mandatory checks in this standard to be recorded	New requirement
8.4	44	Requirement to maintain detailed record of accidents/incidents for 5 years	New requirement
8.5	44-45	New requirements for document retention defined	New requirements
9.1.2	46	Grade changing of transport equipment strongly discouraged	Clarification
9.3.1	46	Criteria for materials used in construction or lining of cargo tanks mandated	New requirement
9.4	46	Design of rail tank cars to protect fuel from ingress of dirt and water during transit	New requirement
9.5.1	47	Requirements for materials used in construction or lining of road bridging vehicles	New requirement
9.5.1	47	Each tank truck compartment to have drain line and suitable valves for drawing samples and draining water	New requirement
9.5.4	47	Requirements for identification and grade marking of road bridging vehicles clarified	Clarification
9.6	47-48	New change of grade requirements for gas oil/diesel and black oils etc.	New requirements
10.1	49	Paragraph added to define required maintenance for permissive bonding systems.	New requirement
10.3	49-50	Testing requirements for density and temperature measuring equipment defined.	New requirement
10.4	50	New section on electrical equipment maintenance	New requirement
10.4	50	Insert new final paragraph: "Emergency shut-down switches should be tested monthly."	Correction – new text
10.5	50	New section on testing requirements for other measuring equipment.	New requirement
Chapter 11	51-59	Throughout (detail below): Health, Safety and Environment requirements detailed in line with JIG HSSEMS Guidelines.	New requirements
11.1-11.5	51-54	New sections on risk assessment and control, asset design and construction, documentation and records, and personnel and training	New requirements
11.6.2	54-55	New section on PPE	New requirement
11.6.3	55	11.6.4 to be renumbered as 11.6.3 (medical assessments and colour blindness)	Correction
11.6.4	55	New section on medical assessments and colour blindness	New requirement
11.6.5	55	11.6.5 to be renumbered as 11.6.4 (medical service – washing facilities)	Correction
11.6.5 (a)	55	Now mandatory to make facilities for first aid available	Changed requirements
11.6.5 (b)	55	Now mandatory to provide adequate washing facilities and instructions on care to be taken when handling aviation products	Changed requirements
11.7	55-56	New sections on operation and maintenance, management of change, contractors and suppliers	New requirements
11.9	56	Delete "Incident investigation and analysis" from the last line	Correction
11.10	56-58	New section on incident investigation and analysis (details below)	New requirements
11.10.1	56	Requirement for manager to notify all participants within 24 hours of any major incident	New requirement
11.10.2	57	Consequence (incident) categories defined	Clarification
11.10.3	57-58	New reporting requirements defined for incident investigation	New requirements

11.10.5	58	New requirements to communicate lessons learned	New requirements
11.11.1	58	Requirement to prepare procedures to cover "all possible emergencies" changed to "all reasonably foreseeable emergencies"	Clarification
11.11.2	58	Managers now required to take the needs of other interested parties into account when preparing emergency procedures	New requirement
11.11.3	59	New type of emergency to be considered, where fuel could be a contributory factor	Clarification
11.11.3	59	New requirement to display a drawing of the location	New requirement
11.11.4	59	New requirement for fuel supply contingency plan	New requirement
11.12	59	New requirement for periodic review of HSSE management system	New requirement
11.13	59	Requirements for airport security clarified	Clarification
Appendix A1	61	New appendix. Revised summary of routine test frequencies	Changed requirements
Appendix A2	62	New appendix. New Variance Approval Certificate	New
Appendix A3	63	New appendix. New PPE assessment matrix	New
Appendix A4	64	New appendix. Lost time incident report form	New
Appendix A4	64	Definition of LTI is not correct – replace first sentence by: "A lost time incident (LTI) is defined as a work related incident resulting in a member of the workforce not being available for work on the next calendar day, whether they were due to work it or not."	Correction
Appendix A5	65-69	New soak test procedures (reference JIG Bulletin 35)	New
Appendix A6	70-73	Appendix renumbered (was A1)	Changed numbering
A6.1	70	General requirements for filter use clarified. Stacked elements not acceptable	Clarification
A6.2.3	70-71	Clarification on differential pressure correction requirements	Clarification
A6.2.4	71	Requirement to replace cover seal at least every three compressions. Reference to calibrated torque wrenches and checking blanking plates and elements	New requirements
A6.3.3	72	Mandatory requirements for FS separator elements for direct movements to airport service tanks.	New requirement
A6.3.3	72	Separators should be wet with fuel when tested	Clarification
A6.5	72-73	Requirements for gauze strainer maintenance and low points defined	New requirement
Appendix A7	74	New appendix. Filtration details record	New
Appendix A8	75	New appendix. Storage tank details record	New
Appendix A9	76-77	Appendix renumbered (was A3)	Changed numbering
Appendix A10	78	Appendix renumbered (was A4) and diagram updated	Changed
Appendix A11	79	Appendix renumbered (was A2.1), Avgas recertification form revised in line with chapter 2 requirements and corrected. Remove the variability limit of 8 deg C for Initial Boiling Point	Changed
Appendix A12	80	Appendix renumbered (was A2.2), Jet-1 recertification form revised in line with chapter 2 requirements and corrected. Remove the variability limit of 8 deg C for Initial Boiling Point	Changed