

JIG Standard 4 Issue 3

INSPECTION OF SMALLER AIRPORTS (JIG 4) **DEPOT AND INTO-PLANE (HYDRANT) FACILITIES**

Location	
Facility (Airport Depot, Hydrant or Into-Plane Service)	
Managing/Operating Company	
Name of inspector and company	
Date of visit	
Recommendations reviewed with	
Date of issue of this report	
Overall Assessment (see page 2 for definitions) Note if the assessment is Less than Satisfactory, the report shall be issued within 3 weeks of the inspection and a follow-up inspection shall be scheduled within the next 6 months or preferably sooner.	
Last aviation inspection/visit (name of company and date visited)	
Has a Tier 3 non-disclosure agreement been signed by all inspecting parties (where applicable)?	
Have any items of a serious nature been communicated to all participants and the local manager without delay?	
Last external HSSE Management System Audit (by participant or consultant) (name of company and date visited)	
Date of last revision to local/site operating procedures.	

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Neither the JIG, its Members, nor the companies affiliated with its Members accept responsibility for the adoption of this document or for compliance with this document. Any party using this document in any way shall do so at its own risk.

This document shall be used for locations registered to JIG's Inspection Tracking System, known as "JITS". This document shall be deemed a sampling review to determine the overall rating of the operation and identify areas for improvement. It is not a compliance audit.

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Notes for Inspectors

Notification to Site Management and Recommended inspection time

Prior to the inspection, the inspector shall send details of the inspection programme to the location management, outlining the main tasks to be witnessed and checks to be made during the inspection. The time required for the inspection will vary, depending on the type and size of operations and other location-specific factors. The recommended time shown on the following table (# days per inspection type) can be used as a guidance for inspectors, but the actual time shall be subject to agreement with the site management prior to the inspection visit.

Airport	
AD or IP	1-1.5
ADIP or ADH	2
ADHIP	2-2.5

Questions and Abbreviations

Each question in this report is identified by a reference number. These reference numbers should be inserted next to any Recommendations made. Inspectors should use the following abbreviations:

C	Comment	R	Recommendation (Normal/High)	NA	Not applicable
Y/N	Yes/No	RO	Recommendation Overdue	NW	Applicable but Not Witnessed

High Priority Recommendations

These are Recommendations concerning quality control, technical, operational or HSSE issues that may lead to a major incident or major disruption in airport operations, if they are not effectively addressed at the earliest possible opportunity.

Recommendations Open/Overdue

These are Recommendations from previous JIG Inspection Reports which remain open, have not been closed out by the due date or in the opinion of the Inspector have not been satisfactorily addressed. They should be identified on page A-2 with a comment on the status of implementation.

Close-out Meeting

The inspector shall discuss the inspection findings and agree close-out dates for all Recommendations at the conclusion of the inspection visit.

The Summary Page

Page A-1 should be used to give an overall assessment of the facility, highlight any significant areas of concern and areas for improvement and state how many Overdue and High Priority Recommendations there are. The Overall Assessment shall be given in accordance with the below criteria. Any deviations from the below criteria shall be justified and adequately explained in the Summary by the inspector.

Good:

Used when the following criteria are met:

- There are no open/overdue recommendations from the previous international inspection reports that are within the control of the facility management; and
- There are no High Priority Recommendations in the current report; and
- Recommendations in the current report are of minor nature and do not reflect systemic issues; and
- There is evidence of good HSSE performance for the inspection period

Satisfactory:

There are no systemic quality control, technical, operational or HSSE issues. The previous recommendations have been satisfactorily addressed with clear gap closure plans in place to close out any remaining open/overdue recommendations.

Less than Satisfactory (LTS):

This operation is showing signs of systemic failure to meet quality control, technical, operational or HSSE requirements. Recommendations from the previous international inspection reports have not been satisfactorily addressed or staff attitudes suggest that the operation is more likely to deteriorate than to improve.

Note for the term "Systemic issues":

In the context of the above definitions, systemic issues are widespread issues, affecting or relating to a wider group of people or wider parts of the operation, with unaddressed underlying causes.

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A1: SUMMARY

OVERALL ASSESSMENT:

(The Overall Assessment criteria shown on p.2 shall be applied)

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A2: OPEN/OVERDUE RECOMMENDATIONS FROM PREVIOUS INSPECTION

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A3: RECOMMENDATIONS FROM CURRENT INSPECTION

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A4: COMMENTS FROM CURRENT INSPECTION

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A5 GENERAL INFORMATION - OWNERSHIP AND USAGE

Facility Owner / Operator	
Other Participants / Users	

ORGANISATION AND PERSONNEL

Facility Contact:		Title / Position	
Telephone number:		Mobile/out of hours no:	
Email address 1:		Email address 2:	

Aviation Grades handled at Facility

Jet A		Jet A-1		Avgas		Other E.g. JP-8	
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(Tick as appropriate)

		A5.1: QC, OPERATING MANUALS, INSPECTION REPORTS AND NEW EQUIPMENT AND FACILITIES	
Inspector shall check that Standards and Procedures are available and up to date.			
		QC and Operating Procedures	Reference
	A1-1	Is a current copy of the JIG 4 Standards available for the organization/aviation fuel supplying company responsible for the quality control and operating manual in use?	1.1
	A1-2	Are current applicable JIG Bulletins available? Inspector shall sample check a Bulletin closed out within the period from the last inspection and verify effective implementation.	
	A1-3	Is a quality control and operating manual in use?	
	A1-4	Where compliance with any of the JIG4 requirements cannot be achieved, is a process in place for Variances to be documented and reviewed by a competent technical authority? (Inspector to review variance(s))	
	A1-5	Is there a designated person at the airport for the day to day operation of the fuel facilities?	1.4
	A1-6	Does the facility management continuously update and close out recommendations directly in the JIG Inspection Tracking System if relevant?	1.4
	A1-7	Are inspection report recommendations and their status reviewed by the organization/fuel supplying company responsible for the operation?	1.4
	A1-8	Is there a document retention policy consistent with JIG 4 requirements?	11.3
		New Plant and Equipment	
	A1-9	Where there are new installations/alterations to existing facilities are they: - Designed to current standards? - Made from materials compatible with Aviation fuels? - Commissioned according to JIG and industry requirements including pre-conditioning (flushing and soak testing) with samples taken and tested before being released into service?	4.1.1 4.1.1 A11
	A1-10	In case of tank repairs covering greater than 5% of tank surface area, is a soak test carried out?	A11
		New filtration/Electronic Water Sensor (EWS) technology	
	A1-11	Where new filtration/sensing technology is introduced, have risk-based Management of Change plans been established and implemented? Do these plans include provisions for training of personnel as required?	Bulletin 130

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	A1-12	Where fitted, is the EWS system installed and commissioned by trained and competent technicians?	Bulletin 130
	A1-13	Has an assessment been made to confirm the EWS system components conform to the latest EN ISO 13849-1 with a min PL(b)? Does this assessment include the solenoid valve that the EWS system is connected to confirm it is fit for purpose?	Bulletin 130
	A1-14	Where DDF or combined DDF+EWS technology is used at fixed facilities for Jet fuel loading, has a suitable operating protocol been developed and implemented?	Bulletin 130
		Other Comments or Recommendations	
	A1-15	Other comments or recommendations QC and Operating Procedures (Limit to C, R or NA)	

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B1 (ROAD RAIL): RECEIPT BY ROAD OR RAIL TANK CAR - FACILITIES AND PROCEDURES			
Inspector shall inspect facilities and shall witness discharge procedures including observation of filter dP and draining & sampling procedures			
		Receipt Facilities (Road and Rail)	Reference
	B1	Are off-loading points grade marked and colour coded to EI 1542 and marked with flow direction arrows?	4.3.3
	B2	Are discharge hoses in good condition, of a suitable type for the grade and fitted with caps to prevent entry of dirt and or water?	8.6, 8.1
	B3	Do discharge connections ensure a satisfactory degree of grade security?	4.3.4
	B4	Is Avgas received via a 5 micron or finer microfilter qualified to EI 1590, a filter water separator qualified to EI 1581 or a dirt defence filter qualified to EI1599 (latest edition)? For gravity receipts, is a 100 mesh strainer used? Where Avgas is received via Filter Monitors, is there a phase-out plan in place?	4.4.1 Bulletin 130
	B5	Is jet fuel received via a filter water separator qualified to EI 1581 5 th edition? Where jet fuel is received via Filter Monitors, is there a phase-out plan in place?	4.4.1
	B6	Are pump start/stop switches safely accessible, near to the receipt area, fully effective and clearly identified?	4.1.4
	B7	Are bonding wires in good condition? Inspector to check electrical continuity. (not required for permissive bonding systems which are self-checking)	8.2.3
	B8	Are road tank/rail car receipt areas constructed of a low permeability material and do the areas have a positive slope and drainage to an oil water separator?	4.1.5
		Delivery equipment (Road and Rail)	
	B9	Are road vehicles/rail tank cars dedicated?	5.3
	B10	If road vehicles/rail tank cars are not dedicated: - Does delivery documentation state previous grade carried? - Does documentation show that satisfactory change of grade procedures have been observed?	5.3
	B11	Are loading documents checked before receipt of product, and do they correctly identify the transportation equipment and grade and quantity loaded?	5.2 5.3.1
	B12	Is grade identification clearly displayed on equipment?	5.3.1
		Discharge Procedures (Road and Rail)	
	B13	Where fitted or required, are seals on all filling orifices, manlids and outlets checked prior to discharge?	5.3.1
	B14	Is bonding carried out correctly?	8.2.1
	B15	Is sampling conducted to required standards using suitable equipment? (traces of dirt/free settled water shall be removed prior to discharge)	3.1, 3.2, 3.3
	B16	Are fuel samples drawn for Control Check and density results compared (at standard temperature) with the batch density shown on the Release Certificate?	5.3.3
	B17	If a large amount of water or solid contaminants or abnormal density is found, is action taken in line with 5.3.2-3?	5.3.2 5.3.3
	B18	Is filter dP gauge functioning correctly? Inspector should observe dP reading during receipt	A1.2.2
	B19	After discharge, is a check made (preferable via drain points) to ensure that all compartments are empty?	5.3.5
	B20	If approved by the participants, are additional procedures in place for Driver Controlled Deliveries (DCD), in accordance with the requirements of Bulletin 95? - are road tank cars dedicated? - are road tank cars bottom loaded? - are road tank cars loaded and discharged using a grade selective system (such as grade selective mechanical couplings or grade selective permissive bonding)? - Is the offloading facility equipped with an intermittent type deadman?	5.3.7 Bulletin 95
		Other Comments or Recommendations	

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	B21	Other comments or recommendations Receipts by Road and Rail (Limit to C, R or NA)	
Inspector shall check the receipt procedure and storage of aviation fuel in drums (if relevant)			
		QC and Storage Procedures	
	B22	Are the drums stored correctly?	6.3, A12
	B23	Where product is transferred from drums is a suitable filter used?	6.3
		Other comments or recommendations	A12
	B24	Other comments or recommendations Drum QC and Storage Procedures (Limit to C, R or NA)	

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B2: STORAGE FACILITIES AND PROCEDURES			
Inspector shall inspect facilities, including a selection of storage tanks, and witness draining and sampling procedures.			
		Segregated Facilities	Reference
	B2-1	Are facilities fully grade-segregated?	4.1.2
		Non-dedicated Supply Systems (see JIG 2 for further information if relevant)	
	B2-2	If product is received via a non-dedicated supply system, are storage tank equipped with positive segregation (double block and bleed valves, spades, blind flanges etc)?	3.3.1 (JIG2)
	B2-3	If positive segregation is achieved by double block and bleed valves, are routine checks performed to confirm integrity of the block valves?	5.1.1 (JIG 2) 6.1.8 (JIG 2)
		Tankage	
	B2-4	Is general appearance (paintwork, signs of rust or leakage) satisfactory?	8.1
	B2-5	Do storage and product recovery (PRT) tanks meet the minimum design requirements of JIG (e.g. fully lined, floating suction, etc.) and is the following clearly displayed on the tank or adjacent sign board? - EI Grade Marking? - Dates of internal inspection and cleaning?	4.2.2, 4.2.3
	B2-6	Is there a system to indicate Storage Tank Status? (Receiving, Settling, Delivering)? Are controls in place for changing the status of inlet and outlet lines and the status of the tank from 'settling' to 'released', on tank release?	5.4.1
	B2-7	Are handrails, ladders, pipe bridges and steps adequate and in good condition?	8.1
	B2-8	Are P&V vents and free vents free from damage and have a coarse mesh of approximately 5mm opening size? Are flame arrestors (if fitted) in good condition??	4.2.3(a) 6.1.4
	B2-9	Is there a procedure / process to confirm correct operation of floating suctions? Inspector to check operation/procedure	6.1.3
	B2-10	Are valves in good condition and free of leaks?	8.1
	B2-11	Are tanks fitted with high level alarm systems as a minimum? Where required are storage tanks equipped with a separate (high-high) level shut off system that stops the fuel flow at a predetermined level?	4.2.3(i)
		Bunded Area	
	B2-12	Is bund capacity sufficient? (at least 110% of the storage capacity of the largest tank) For "catchpot" or horizontal double skinned tanks, do they meet the overfill and containment requirements of 4.1.6?	4.1.6
	B2-13	Are bunds maintained in good condition?	8.1
	B2-14	Is bottom of bunded area free of vegetation?	8.1
	B2-15	Are bund drain valves closed and secured?	8.1
		Fire Extinguishers	
	B2-16	Are the annual servicing dates shown on fire extinguishers?	8.8
		Draining and Sampling Procedures	
	B2-17	Is there an effective water draining / flush system on all storage tanks? Are quick flush tanks (where fitted) and sample receiving vessels of appropriate design and fitted with self-closing valves? Are open drain and sampling lines protected by suitable caps when not in use?	4.2.3(b) 4.2.3 (j)
	B2-18	Where fitted, are tank-side fast flush tanks kept clean and empty when not in use?	6.2.6
	B2-19	Is flushing carried out at full flow and line sample taken correctly? Is sampling conducted to required standards using suitable equipment? Is Visual Appearance Check and, for tanks in service a CWD test, on a line sample carried out correctly?	3.2, 6.1.1
	B2-20	Are suitable thermometers and density measurement equipment available? Is equipment stored correctly?	8.7.1 8.7.2

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	B2-21	Where fitted, are 'visijars' kept free of accessories that can disrupt the vortex formation and kept in a clean condition by routine cleaning and appropriate maintenance?	Bulletin 123
	B2-22	Where long pipework and dead-legs are present, are suitable low points incorporated to facilitate water removal?	4.3.2
	B2-23	Are all hose and pipework couplings/connections, including tank and filter drain lines, protected by suitable caps or covers when not in use?	8.1
		Hose Pressure Test	
	B2-24	Is suitable hydrostatic pressure test equipment available?	A3.2
	B2-25	Where possible to witness a pressure test, is it performed correctly and are results satisfactory?	A3.2
		Other Comments or Recommendations	
	B2-26	Other comments or recommendations Storage Facilities and Procedures (Limit to C, R or NA)	

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B3: LOADING FACILITIES & PROCEDURES			
Inspector shall inspect facilities and witness a fueller loading operation, if relevant (including use of high level pre-check, observation of filter dP and draining & sampling after filling)			
Loading Fuellers			
B3-1	Where more than one product or grade of product is handled, are fueller loading connections / arrangements grade selective? Is pipework separated between grades?		4.3.1
B3-2	Are loading points grade-marked and colour coded to EI 1542 and marked with flow direction arrows?		4.3.3
B3-3	Is Avgas loaded via a 5 micron (nominal) or finer microfilter qualified to EI 1590, a filter water separator qualified to EI 1581 or a dirt defence filter qualified to EI1599 (latest edition)? Where Avgas is loaded via Filter Monitors, is there a phase-out plan in place?		4.4.1 Bulletin 130
B3-4	Is jet fuel loaded via a filter water separator qualified to EI 1581 or an accepted combination of dirt defence filters (DDF) and electronic water sensor (EWS)? Where jet fuel is loaded via Filter Monitors, is there a phase-out plan in place?		4.4.1 Bulletin 130
B3-5	Are pump start/stop switches and system emergency shut-down buttons safely accessible, near to the loading point, fully effective and clearly identified?		4.1.4
B3-6	Is fueller loading area constructed of a low permeability material and is there a positive slope and drainage to an oil water separator?		4.1.5
B3-7	Are hoses and nozzles in good condition and are they fitted with caps to prevent entry of dirt, etc? Do the hoses comply with the required standards?		8.1, 8.6
B3-8	Is bonding carried out correctly? Are bonding wires in good condition? Inspector to check electrical continuity (not required for permissive bonding systems)		9.1.1 8.2.3
B3-9	Does the operator remain in attendance throughout the loading and is there direct access to a means of stopping the flow quickly? A deadman should be used to control the loading operation. (Fueller engines shall not be running during loading)		9.1.1
B3-10	Are procedures and equipment available to prevent over-filling/spillage?		9.1.1
B3-11	Is high level pre-check device tested shortly after the commencement of loading?		9.1.2
B3-12	Where fuellers are fitted with one internal cut-off device, is loading stopped before the high level device is activated?		9.1.2
B3-13	Where fuellers are filled on the ramp from a hydrant system are additional precautions in place?		9.1.2
B3-14	After loading, and following at least 10 minutes settling time, is a sample drawn from the fueller tank sump and are Visual Appearance check + CWD Check conducted correctly using appropriate equipment?		9.1.3
Other Comments or Recommendations			
B3-15	Other comments or recommendations Loading facilities and procedures (Limit to C, R or NA)		

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C1: SMALL LOW PRESSURE HYDRANT SYSTEM (see Appendix 7)			
Inspector shall inspect facilities including low points (valve chambers) and witness procedures including flushing low points. (For larger high pressure hydrant systems see JIG 2)			
		Hydrant System	Reference
	C1	Are hydrant pumps suitably monitored and protected against overheating? Are suitable fire detection and protection measures in place?	3.6 (JIG 2)
	C2	Is jet fuel transferred via FWS qualified to EI 1581 latest edition?	4.4.1
	C3	Do hydrant pit valves meet the latest edition of EI 1584? Do hydrant systems/extensions built since June 2008 have pit valves equipped with dual air/lanyard pilot valves?	3.5.1 (JIG 2) 3.5.2 (JIG 2)
	C4	Are hydrant pits and low point drains clearly identified and, where more than one grade is handled, grade marked and colour coded to EI 1542 and selective couplings fitted?	A7.10
	C5	Are pit lids secured/ tethered to pit body? Have all non-lay-flat hinged pit lids been modified or replaced in accordance with Bulletin 90?	A7.10 Bulletin 90
	C6	Is operation of the lanyard and hydrant valve closure ("Dynamic Testing") checked correctly?	A7.6
	C7	Is the monthly test of hydrant valves carried out correctly?	A7.10
	C8	Is the adaptor checked for wear using an appropriate gauge approved by the pit valve manufacturer?	A7.3
	C9	Are Hydrant Emergency Stop Buttons (ESB's): - Clearly visible and readily accessible from aircraft fuelling bays? (Within 80m) - Clearly identified with a suitable high visibility sign? - Does activation of the ESB shut down the hydrant pumps and close the inlet control valves automatically where pressure head results in continued fuel flow after pump shutdown? Where operations permit the Inspector should validate the operation by activation of an ESB.	A7.7
	C10	Is suitable equipment of a satisfactory design available for: - Flushing low points? - Flushing unused hydrant pits? - Cleaning pit box internals and valve chambers? - Are pit flushing vehicles fitted with interlock systems? (Inspector to check functionality).	A7.5.4
	C11	Is flushing achieved by drawing 50-200 litres of product plus the capacity of sampling pipework at full flush when the system is under pressure? - Is flushing carried out at full flow and a sample drawn near the end of the flush (line sample) for Visual Appearance Check and CWD test? - After use, is the low point of the flushing equipment checked for the presence of water and sediment? - Is product settled and checked prior to return to storage? Flushing equipment shall not be bonded to Low Point or Hydrant Pits.	A7.5.1 A7.5.4
	C12	Are hydrant valve pit boxes and valves clean and free of accumulated water and fuel?	A7
	C13	Are safety precautions applicable for entry into deep pits strictly enforced? Are valve chambers clean and free of accumulated water? Warning notices forbidding unauthorised entry shall be clearly displayed.	2.1, 2.7 A7
		Other Comments or Recommendations	
	C14	Other comments or recommendations Small Low Pressure Hydrant Systems (Limit to C, R or NA)	

D1: INTO-PLANE SERVICE - FUELLING EQUIPMENT			
Inspector shall examine a selection of fuelling equipment to confirm design, construction and operation to acceptable safety standards			
		Fuelling Vehicles, Trailers and Fixed Fuelling cabinets - Condition	Reference
	D1-1	Does fuelling equipment appear to be maintained in sound condition?	8.10
	D1-2	Are "No Smoking" signs or symbols clearly displayed on both sides?	7.2.1
	D1-3	Is equipment grade dedicated with EI 1542 product identification (both sides, control panel and fill points)?	7.2.2 7.3
	D1-4	Is the condition of tyres, lights and trafficators acceptable?	8.10
	D1-5	Is the condition of meters, meter seals and gauges acceptable?	7.1.10
	D1-6	Are delivery nozzles and hydrant pit couplers in good condition and suitably protected from the ingress of dirt / water when not in use?	8.16
	D1-7	Do hoses comply with EI 1529 or ISO 1825? Do pressure fuelling nozzles comply with SAE AS 5877? Are hoses/nozzles in good condition?	7.1.3 7.1.5
	D1-8	Are overwing nozzles grade marked and colour coded?	7.1.6
	D1-9	Do jet fuel overwing nozzles have oval section spouts with major axis of min 67 mm diameter? Where required are additional precautions in place to control the use of smaller non-selective spouts?	7.1.6
	D1-10	For jet fuel overwing nozzles is the stowage device designed so that only the jet fuel selective spout is able to disengage the interlock? If the non-selective spout is stowed on the vehicle, is it held in a designated interlocked stowage point?	7.1.6
	D1-11	Have "hold open" ratchets been removed from overwing nozzles?	7.1.6
	D1-12	Are externally mounted emergency engine stop controls (red coloured and one on each side of the vehicle) clearly identified and easily accessible? Is there an emergency engine stop control on the elevating platform? Are engine/pump stop controls on trailers and at fixed fuelling cabinets easily accessible and clearly identified? Inspector to check function of at least one emergency engine stop control	7.2.4 7.2.14
	D1-13	Are there at least two 9kg fire extinguishers (Powder/suitable foam) with servicing dates shown?	7.1.8
	D1-14	Are bonding wire and reels in good condition? Inspector to check chassis/clip electrical continuity (25 ohms max).	7.1.9 8.2.3
	D1-15	Is elevating platform fitted with: - at least two correctly located sensors? Inspector to check function. - safe access and exit ladders/steps? - non-slip flooring? - system to ensure the platform gate closes securely? - an emergency exit or lowering device? Inspector to witness function check - required warning signs?	7.2.14
	D1-16	Where required is a spill containment kit available?	7.1.11
		Interlock System	
	D1-17	Are vehicles equipped with brake interlocks on: - delivery hose coupling stowage? - hydrant inlet coupling stowage? - moveable fuelling platform? - fuelling cabinet door? - fueller tank top handrails? - overwing nozzle stowage? - fueller loading point?	7.2.3 7.1.6
	D1-18	Are interlocks and override functioning OK? Inspector to check.	8.12
	D1-19	Are brake interlock override switches sealed?	7.2.3
	D1-20	Is an interlock status warning light system (on/off/overridden) fitted and working? Inspector to check function.	7.2.3 8.12

		(Emitted light shall be clearly visible to the driver when seated in the normal driving position)	
	D1-21	Are steps and towable platforms used for fuelling aircraft designated for fuelling purposes? Do they meet the requirements of JIG 4 - 7.4? Are they in good condition and serviceable?	7.4
		Deadman & Pressure Control System	
	D1-22	Are pressure control systems as specified in JIG Standards?	7.1.7
	D1-23	Is deadman control of Intermittent type?	7.2.5 (7.3)
	D1-24	If fitted, is deadman control override switch: - Push button type? (preferred) - Sealed, if not push button type?	7.2.5
		For fuelling equipment fitted with EWS systems (conforming to EI 1598):	
	D1-25	Has the EWS been installed at a suitable position downstream of filtration, in accordance with the installation requirements provided by the equipment manufacturer?	Bulletin 110 Bulletin 130
	D1-26	Is the EWS warning light fitted at a suitable position on the fuelling vehicle to allow clear & unobstructed view by the operator during fuelling and in all-weather/light conditions? Is the colour of the warning light the same on all equipment fitted with EWS?	Bulletin 110 Bulletin 130
	D1-27	Is the EWS system connected to a compatible PLC and configured as required by Bulletin 130 (Check and Alarm level set points)?	Bulletin 110 Bulletin 130
	D1-28	Is the EWS reset mechanism in place and strictly controlled by authorised personnel only? Inspector to verify.	Bulletin 110 Bulletin 130
	D1-29	Has an assessment been made to confirm that there are no unauthorised bypass routes to the EWS shutdown capability e.g. by the deadman override? Inspector to verify.	Bulletin 130
		Other Comments or Recommendations	
	D1-30	Other comments or recommendations fuelling equipment design (Limit to C, R or NA)	

D2: INTO-PLANE SERVICE - FUELLING EQUIPMENT		
Inspector shall witness fueller tank sampling, hose-end strainer checks, deadman performance check and EWS function test.		
	Are Fuellers equipped with:	Reference
D2-1	Bottom loading self-sealing connections?	7.2.10
D2-2	High level shut-off systems?	7.2.10
D2-3	Selective couplings (where more than one grade is bottom loaded)?	7.2.11
D2-4	Tank low point sumps with drain lines to valves? (self-closing type)	7.2.8
D2-5	Fuelling system designed so that all fuel which passes through the delivery meter and filter is only delivered to aircraft and cannot be diverted elsewhere?	7.2.6
	Are Hydrant Servicers equipped with:	
D2-6	Suitable lanyards, of a highly visible colour, with a minimum length of 5m (16 feet)? Where lanyards are attached to the vehicle they shall be electrically isolated from the chassis.	A7.4
D2-7	Hydrant pit high visibility hazard marker/flag (or alternative design providing similar degree of all round visibility) available and is it in good condition?	A7.3
D2-8	Are red or orange lamps or vehicle-mounted searchlights fitted? Inspector to determine how the hydrant pit valve and inlet hose is illuminated at night?	A7.3
D2-9	Hydrant pit couplers meeting EI 1584 latest edition? Does the hose/pipework system comply with manufacturer recommendations related to the use of break-away couplers? (Use of CLADs should be in accordance with coupler manufacturer's advice)	3.5.1 (JIG 2)
D2-10	Is the hydrant pit coupler checked for wear using an appropriate gauge approved by the pit valve manufacturer?	A7.3
	Draining and Sampling	
D2-11	Are valves accessible, clearly identified and fitted with dust caps?	7.2.8, 7.2.12
D2-12	Are suitable and clean sampling and flushing containers available? (Buckets shall only be used for flushing)	3.2
D2-13	Is draining carried out correctly and is Visual Appearance Check and CWD Check (where required) OK? (at full flow from vehicle tank low point and under pressure from filter vessels) Are filter sampling connections consistent with the type of filter fitted on each vehicle and correctly labelled indicating the origin of the sample? Inspector to check chemical detector is within expiry date	9.2.1 Bulletin 107
D2-14	Are 'visijars' kept free of accessories that can disrupt the vortex formation and kept in a clean condition by routine cleaning and appropriate maintenance?	Bulletin 123
D2-15	Is product from draining correctly handled, grade segregated (where required) and returned to service/downgraded as appropriate?	9.2.4
	Hose End Strainers (overwing nozzles)	
D2-16	Is 60 mesh (or finer) strainer fitted and, on fuelling equipment fitted with filter monitors, is 100 mesh strainer fitted?	7.1.4 Bulletin 105
D2-17	Is hose-end strainer in good condition and free of particulate matter and cleaned as required? Note: Strainers on equipment fitted with filter monitors shall be inspected and cleaned in accordance with JIG Bulletin 105	8.18 Bulletin 105
	Pressure Control Systems and Deadman function testing	
D2-18	Is a suitable test rig available at the location or on hire that can simulate both gradual and rapid termination of fuel flow into aircraft? Do all personnel remain at ground level while fuel is flowing?	8.14
D2-19	Are pressure control system tests performed correctly and are results satisfactory?	8.14
D2-20	Is deadman system checked for opening time and closing time requirements, as per the limits in 7.2.5? (Can be checked during fuelling operations)	7.2.5, 8.14
	Routine Testing of EWS (conforming to EI 1598)	
D2-21	Is suitable equipment available to test the EWS system functionality in accordance with the manufacturer's instructions?	Bulletin 130

	D2-22	Is testing performed correctly and are results satisfactory? Inspector to witness function test	Bulletin 130
	D2-23	Is a procedure in place for periodic recertification of EWS? Note: Inspector should check if the manufacturer's instructions and defined controls to prevent equipment damage when the sensor is removed for recertification are known to the relevant staff and being followed.	Bulletin 130
		Other Comments or Recommendations	
	D2-24	Other comments or recommendations fuelling equipment checks (Limit to C, R or NA)	

D3: INTO-PLANE SERVICE - AIRCRAFT FUELLING OPERATIONS		
Inspector should witness one complete Underwing aircraft fuelling operation and should witness an Overwing fuelling where possible.		
	Attendance at aircraft fuelling	Reference
D3-0	Aircraft type Fuelling equipment used Number of fuelling personnel Grade delivered (Jet fuel or Avgas only)	10.1
D3-1	Does fuelling operator observe vehicle speed limit on apron?	10.3.1
D3-2	Does fuelling vehicle approach aircraft in a safe manner and are brakes safely tested on approach to the aircraft parking stand?	10.3.1,10.3.2
D3-3	If fueller has to be reversed into position for fuelling, is the manoeuvre performed with the assistance of a competent guide person?	10.3.2
D3-4	Is vehicle positioned safely for fuelling and, if parked underwing, is there sufficient clearance between the vehicle and aircraft?	10.3.2
Fuelling Procedures		
D3-5	For fuellers is a clear exit route from aircraft maintained throughout the fuelling.	10.3.2
D3-6	Does fuelling stop/not start when aircraft de-icing is in progress? Inspector to check procedure with operator.	10.3.3
D3-7	Does fuelling stop/not start when severe electrical storms are local to the airport? Inspector to check procedure with operator.	10.3.3 10.5.1(a)
D3-8	Is bonding cable connected to the aircraft before fuelling commences and is bonding maintained throughout the fuelling operation? For overwing fuelling are the additional bonding requirements followed? (ref 10.4)	10.4
D3-9	Is a single sequence of connection/ disconnection defined and followed?	A7.2
D3-10	Are hoses positioned to avoid being run over by other aircraft servicing vehicles?	10.5.1(e)
D3-11	Does fuelling operator check the condition of the aircraft adaptor before connecting and after disconnecting the delivery hose?	10.5.3
D3-12	Does the operator check the hydrant pit coupler for leakage shortly after delivery commences and regularly during fuelling?	10.5.2 (a)
D3-13	Does the operator have a clear view of the vehicle control panels, EWS warning light (where EWS systems are fitted) and aircraft fuelling points during fuel delivery? Inspector to check that if the vehicle platform is used, it is not raised or lowered while fuel is flowing.	10.5.2 (b) Bulletin 130
D3-14	For overwing fuelling are procedures followed to prevent misfuelling? (Fuel request, minimum 2 out of 3 controls, post fuelling grade confirmation, Unattended Fuellings, Self-service cabinets?)	10.5.1(c) 10.5.4
D3-15	Are fire extinguishers readily available?	10.5.1(d)
D3-16	Is the fuelling equipment free from product leaks?	10.5.2(a)
D3-17	Is sampling procedure and disposal in accordance with procedures?	9.2.2, 9.2.4
D3-18	Where required, is chemical water detector check performed? Inspector to check the CWD test kit is within date and correctly used?	9.2.1 (b)
D3-19	For equipment fitted with EWS systems, does the operator <ul style="list-style-type: none"> - verify that the EWS system is in standby mode (light flashing intermittently) at the beginning of fuelling, - verify that the system is functional (light constantly illuminated) on commencement of fuel flow, and - occasionally check system functionality throughout the fuelling? 	Bulletin 110 Bulletin 130
D3-20	Does operator observe and record the differential pressure (dP) shortly after start of fuelling at maximum delivery flow rate to ensure it remains below the maximum changeout dP for the filtration technology being used? Is this dP reading compared with that of previous fuellings and are unexpected dP variations investigated?	10.5.2(a)

	D3-21	Where the fuelling operator performs additional services are these in accordance with the IATA Guidance material?	10.5.2 (e)
	D3-22	Does the fuelling operator perform a "360 degree" walk around the vehicle and look up at the fuelling connection at the completion of the fuelling operation?	10.5.2(g)
		Pressure Control and Deadman Control	
	D3-23	If fitted, (and not push-button type) is override switch sealed?	7.2.5
	D3-24	Does the fuelling operator check the fuelling equipment control panel during fuelling?	10.5.2 (b)
		Interlock System	
	D3-25	Is emergency override sealed?	7.2.3
	D3-26	Is there a warning light system that identifies the status of the interlock system and is it functioning? (Emitted light shall be clearly visible to the driver)	7.2.3
		Fuelling from Drums	
	D3-27	Correct grade segregation (confirmation) and quality control before fuelling?	10.5.5
	D3-28	Check fuelling equipment and filtration used for drum fuelling operations?	10.5.5
	D3-29	After fuelling, are empty and partly used drums marked and stored correctly?	10.5.5
		Hydrant Fuelling – identification & protection measures	
	D3-30	Is dirt prevented from entering the pit valve adapter and service couplings when stowed?	A7.2
	D3-31	Is a high visibility four-winged flag (or alternative design providing similar degree of all round visibility) used to identify the hydrant pit? Inspector to witness or determine how visibility is achieved during hours of darkness.	A7.3
	D3-32	Are fuel hydrant ESBs located within 80 metres of each fuelling bay, accessible and clearly identified with high visibility signs?	A7.7
	D3-33	Is lanyard extended such that it is free of obstruction and readily accessible for use in an emergency?	A7.2
		Other Comments or Recommendations	
	D3-34	Other comments or recommendations aircraft fuelling operations (Limit to C, R or NA)	

E1: FILTRATION AND SENSING EQUIPMENT			
At least one filter vessel shall be drained under pressure. An external filter inspection shall be carried out before at least one filter is opened for internal inspection.			
		General/external filter inspection	Reference
E1		Do filter vessels manufactured after 2013 have a plate indicating they meet the requirements of EI 1596? For older vessels, has the design been reviewed against the requirements of EI 1596 and found suitable for its intended service?	7.1.2 A1.1
E2		Are filter vessels in good condition with no excessive corrosion and paint satisfactory?	
E3		Do filter water separator vessels and elements meet the requirements of EI 1581, latest edition?	7.1.2
E4		Do filter monitors meet the requirements of EI 1583, latest edition?	7.1.2
E5		Do microfilters meet the requirements of EI 1590, latest edition?	7.1.2
E6		Do dirt defence filters meet the requirements of EI 1599 latest edition? Are DDF used in conjunction with a suitable EWS fitted downstream of the filter on jet fuel equipment?	Bulletin 130
E7		Do EWS conform to the requirements of EI 1598 latest edition and accepted in JIG standards? Do they utilise the latest firmware version required by the sensor manufacturer?	Bulletin 110 Bulletin 130
E8		Are plates attached to each vessel stating that they meet the above standards and giving the correct designation, type and number of the elements installed?	A1.1
E9		Is the maximum achievable flow rate marked on the body of each vessel or suitable area close to the vessel, and is it less than the rated flow for the vessel?	A1.1
E10		Are dates of inspection and element changes displayed on the body of the vessels (or suitable area close to the vessel)?	A1.1
E11		Does the filter operate within the required flowrate range with controls in place to prevent excessive flow through the filter?	
E12		Are filter elements stored and used in accordance with manufacturers requirements?	A1.1
E13		Are controls in place to ensure effective segregation of stocks of DDF elements from existing filter monitor element stocks (where filter monitors are still in use)? Are appropriate controls in place to ensure DDF elements are not inadvertently mixed with FM elements or not mixed within a single filter vessel with FM elements? Note: Inspector should check that locations that have transitioned away from filter monitors, do not maintain on site stocks of filter monitor elements	Bulletin 130
E14		Are pressure differential gauges of direct reading design and in good condition? Inspector to check for zeroing and free movement. (Not applicable to low flow single element filter vessels)	A1.1
E15		Are pressure differential switches fitted to fuelling equipment fitted with filter monitors and procedures in place for actions to be taken in the event of dP switch activation? Is the reset mechanism for dP switches controlled by authorised personnel and installed such that it cannot be reset by deadman override or a vehicle restart?	A7.1, 10.5.2 Bulletin 105 Bulletin 111
E16		Do DDF+EWS combinations fitted to fuelling equipment provide check and alarm level indications and are procedures in place for actions to be taken in the event of activation? Is the reset mechanism controlled by authorised personnel and installed such that it cannot be reset by unauthorised personnel or other means	Bulletin 130
E17		Is a working and tested air eliminator and pressure relief valve fitted and in good condition? Is a soft seated non-return (check) valve fitted on the air-eliminator where the vessel could self-drain by gravity? Are the discharge lines routed to suitable containment? Are any isolation/ maintenance valves sealed in the normal operating position? (Not applicable to low flow single element filter vessels)	A1.1
E18		Is pressure relief valve testing carried out correctly?	A1.1

		Inspector to witness a pressure relief valve testing procedure where possible	
E19		Are drain points readily accessible with sufficient clearance to accommodate a wide neck glass jar? Are drain lines protected by suitable caps or covers when not in use?	A1.1
E20		Is filter sump draining carried out correctly under pressure? Inspector to witness filter sump drain being performed.	6.1.2
		Internal Inspection - Inspector to examine at least one vessel	
E21		Vessel reference/identity number:	
E22		Is there an adequate work platform for safe filter vessel access?	A1.2.4
E23		Is filter inspection performed by trained personnel, using appropriate tools and equipment, taking all necessary safety precautions?	A1.2.4
E24		Are elements in good condition? All elements (coalescers and separators) from the same manufacturer? Inspector to comment on any visible damage or signs of possible surfactant contamination or microbiological growth and action taken Inspector shall witness a water test of the Separator element(s)	A1.2.4
E25		Are elements tightened to the torque recommended by manufacturer using a click-stop type torque wrench calibrated for the appropriate torque range?	A1.2.4
E26		For elements longer than 18" (45cm), is a spider fitted and bonded to the shell of the vessel? (No stacked elements)	A1.2.4
E27		Is the vessel cover seal in good condition? Seals shall be replaced after a maximum of three compressions.	A1.2.4
E28		Is lining in sound condition?	A1.2.4
E29		After inspection, is the vessel filled slowly and the slow fill rate documented in the procedures and understood? Inspector to witness or, where not possible, to discuss procedure for filling slowly and procedure for checking that the air eliminator is functioning correctly.	A1.2.4
		Other Comments or Recommendations	
E30		Other comments or recommendations filtration equipment (Limit to C, R or NA)	

F1: HEALTH, SAFETY, SECURITY & ENVIRONMENT		
This inspection is not an HSSE audit. However, the inspector should check that the HSSE requirements outlined in Chapter 2 (JIG 4) are in place.		
	HSSE Management	Reference
F1-1	Is there a HSSE policy statement available and displayed?	
F1-2	Is a drawing of the installation available on site?	
F1-3	Is there an operating and HSSE training and induction programme implemented for all personnel?	2.1 2.2
F1-4	Is there a policy on the use of cell phones (mobile phones)?	2.1
F1-5	Is there an appropriate PPE policy in use (including management and visitors)?	2.1, A5
	Work Control Procedures	
F1-6	Is there evidence that a permit to work system is being used with appropriate safeguards for confined space entry, hazardous entry (pressure etc.), hot work, isolation, electrical work, work at height and other activities requiring control?	2.1, 2.7
F1-7	Does the permit to work system include the assignment of competent persons to authorise permits?	2.7
	Management of Change	
F1-8	Is a procedure in place for management of change to be applied?	2.8
	Security	
F1-9	Is the location adequately secured to prevent the access of unauthorised people? Inspector to check that there are no obvious security issues during visit	2.5
	Training, Product Handling and PPE	
F2-1	Is there a current training plan for new and existing personnel with defined refresher frequencies?	2.2
F2-2	Do training records include: - HSSE awareness and skills training? - Regular Operating and QC training? - Fire-fighting training? - Fire drills and emergency procedure exercises? - Where additional services are provided, details by aircraft type? - Follow up on-the-job observation training?	2.1 2.2
F2-3	Can medical aid/ambulance service be obtained at short notice? Procedures in place?	2.1
F2-4	Are stocked first aid kits and eye wash equipment available including responsibility for maintaining them assigned?	2.1
F2-5	Are adequate washing facilities provided?	2.1
	Incident Reporting and Investigation	
F2-6	Is there an accident and incident statistics reporting system available?	2.3
F2-7	Is there a written procedure for incident reporting?	2.3
F2-8	Are reports of accidents and incidents and actions taken shared with personnel and participant companies (lessons learnt)?	2.3
	Emergency Response Procedures	
F2-9	Are written pre-planned response procedures in place for: · Equipment breakdown, affecting ability to operate? · Power failure? · Product spillage? · Serious injury to staff, contractors or third parties and large scale health risks? · Terrorist actions, bomb warning, civil disturbance etc.? · Fuel quality problems? · An aircraft accident/incident where fuel could be a contributory factor? · fire? Evidence that personnel have been made aware of the contents relevant to them?	2.4
F2-10	Are emergency telephone numbers immediately available and up to date?	2.1, 2.3
	Other Comments or Recommendations	
F2-11	Other comments or recommendations HSSE (Limit to C, R or NA)	

G1: AIRPORT DEPOT - QUALITY CONTROL DOCUMENTATION		
Inspector shall check documentation for compliance with JIG 4 requirements.		
	Product Documents from Supplying Locations	Reference
G1-1	Are Release Certificates (RC) confirming compliance with governing fuel specification and, if applicable, latest issue of AFQRJOS ("Aviation Fuel Quality Requirements for Jointly Operated Systems for Jet A-1") available and do they contain the following information: - Grade and quantity? - Date and time of release/loading or transfer? - Batch number relating to the origin of product or other unique identifier/test report number? - Certified Batch density at 15 degrees C? - "Water/Sediment Free" certification by means of a Visual Appearance Check? - Signature of releasing authority?	3.4 (e) 5.2
G1-2	Are Refinery Certificates of Quality (RCQ), Certificates of Analysis (CoA) or Recertification and Periodic Test Certificates, if relevant, available, signed/dated and do they confirm compliance with a recognised fuel specification and the latest issue of AFQRJOS if applicable?	3.4
G1-3	Are release certificates (loading documents) for drums with all the relevant information from the filling depot available?	6.3
Product Receipt Records		
G1-4	Do product receipt records include: - Date, time of receipt and volume? - Product receipt Release Certificate details? - Tank dips and daily volume reconciliation – stock control?	5.2 5.2 1.5
Driver Controlled Deliveries - Documentation		
G1-5	Are records available of the additional checks performed by the drivers during discharge? (incl. depot receipt filter dP unless re-settable maximum reading indicators on dP gauges are fitted which are may be acceptable as an alternative).	Bulletin 95
G1-6	Are all tasks performed by the drivers clearly identified with written procedures available and training/ authorisation documented?	Bulletin 95
Settling, Testing & Release – Dedicated and segregated supply		
G1-7	Do records show that product settled for at least the minimum required time?	5.4.2
G1-8	Are bottom samples taken for a Control Check and a Visual Appearance Check and CWD test?	5.5
G1-9	Do tank records include: - Water free certification - Release documentation including local batch number, date, time and authority to release product?	5.5
Other Comments or Recommendations		
G1-10	Other comments or recommendations Depot QC documentation (Limit to C, R or NA)	

G2: AIRPORT DEPOT – RECORDS OF ROUTINE CHECKS AND MAINTENANCE		
Inspector shall check that records of routine checks are readily available and up to date		
	Equipment	Reference
Storage Tanks		
G2-1	Daily low point draining and Visual Appearance Checks	6.1.1
G2-2	Daily low point draining and Visual Appearance Checks with CWD test- jet fuel tanks in service	6.1.1
G2-3	Periodic Test Certificates (6-month static stock – for drums 12-month)	6.1.6, 6.3
G2-4	Monthly floating suction buoyancy checks	6.1.3
G2-5	Condition of vents and coarse mesh screens (at least quarterly) (or PV valves and flame arrestors where fitted)	6.1.4
G2-6	High level alarm systems checks (at least annually)	6.1.5
G2-7	Internal inspection and cleaning (annually visible inspection without entry is only a recommendation). Are detailed tank records maintained for the internal condition and other observations?	6.2.1 6.2.3 A2
G2-8	If chemicals had to be used for the cleaning, records of additional steps taken to ensure no contamination of the fuel	6.2.2
G2-9	Quarterly product recovery tank (PRT) internal inspections (without entry) (or microbiological test results)	6.2.5
Buried Pipelines		
G2-10	Annual buried pipeline pressure testing (recommended)	8.1
G2-11	Monthly draining of piping low points	8.1
Bonding (Road tank receipt/Fueller loading)		
G2-12	Daily visual check of bonding wires and clips (including fuelling steps with integral hoses and buckets)	8.2.3
G2-13	Weekly electrical continuity check (not required for permissive bonding systems)	8.2.3
Hoses		
G2-14	Dates of manufacture & put into-service, and monthly visual inspection under operating conditions	8.6.3 A3.1
G2-15	6-monthly pressure test of fueller loading hoses	A3.2
Meters and Gauges		
G2-16	Annual meter calibration test results accurate to required standard - For meters in service? - For new/repared meters prior to use? - Test performed at correct flow rates? Erratic/un-adjustable meters shall be withdrawn from service	8.3
G2-17	6-monthly critical pressure gauge accuracy check with master gauge or dead weight tester	8.4.1
Thermometers and Hydrometers		
G2-18	6-monthly accuracy check of temperature/density measuring devices	8.7.3
Fire extinguishers		
G2-19	Monthly visual condition check	8.8
G2-20	Annual maintenance by manufacturer/ competent employee/ contractor	8.8
Electrical Equipment		
G2-21	Is all electrical equipment, both fixed and portable (including equipment in hazardous classified areas), checked and maintained by a trained and competent person?	8.9
G2-22	Annual earthing straps/rods electrical resistance checks	8.9
G2-23	Are emergency shut-down switch/systems tested monthly?	8.9, 8.23
G2-24	Monthly deadman control checks where installed for road tank receipt or fueller loading?	8.9
Other Comments or Recommendations		

	G2-25	Other comments or recommendations depot records of routine checks and maintenance (Limit to C, R or NA)	
		Small Low Pressure Hydrant System	
	G2-26	Weekly low point flushing and Visual Appearance Check with CWD test	A7.5.1
	G2-27	Hydrant pit usage and flushing spur lines with unused pits quarterly	A7.5.3
	G2-28	6-monthly pressure test of hoses used for low point & pit flushing	A7.5.4
	G2-29	Hydrant flushing vehicle records	A7.5.4
	G2-30	Additional flushing & QC checks on re-commissioning after hydrant maintenance/engineering work	A7.5.2
	G2-31	Is there a written procedure for an investigation following filter monitor dP switch activation or discovery of water/contamination by an ITP agent?	
	G2-32	Weekly inspection and cleaning of hydrant pits	A7.6, A7.10
	G2-33	Pit valve performance checks - Static test (integrity check) - Monthly - Dynamic test - Annual - After repair/overhaul and prior to use - Annual wear check shall be carried out using the manufacturer's approved gauge	A7.10 A7.6
	G2-34	Procedure for checking hydrant emergency shut-down system and monthly test results	A7.7
	G2-35	Cathodic Protection - Quarterly check - Annual system check by a qualified person	A7.8
	G2-36	Monthly hydrant system integrity testing procedure and results - Tightness Control Systems, or - Pressure Testing (if no TCS)	A7.9
	G2-37	Valve chamber internal inspections (and water removal) - Without entry (visual inspection quarterly) - Confined space entry (if relevant); Approved contractors maintenance personnel only covered by a permit to work system	2.1
	G2-38	Hydrant Pumps and alarms/detection systems maintenance (if relevant)	
		Other Comments or Recommendations	
	G2-39	Other comments or recommendations records of hydrant system (Limit to C, R or NA)	

G3: FILTRATION EQUIPMENT – RECORDS			
Inspector shall check that records of routine checks are readily available and up to date			
		Filtration Equipment	Reference
	G3-1	Daily draining filter vessel sumps under pressure and Visual Appearance with CWD test where required? CWD test is required for loading filters and fuel delivery filters (into-plane).	A1.2.1
	G3-2	Observe differential pressure and record daily when in use (dP and flow rate) to ensure that maximum dP does not exceed the limits.	A1.2.2
	G3-3	Weekly graphs of differential pressure (dP) readings following the recommendations in JIG Bulletin 113? Record of action taken when unusual dP result is found	A1.2.2 Bulletin 113
	G3-4	Monthly dP gauge checks for zeroing & free movement?	A1.2.3
	G3-5	Monthly dP switch checks where fitted	A7.1
	G3-6	QC strainer drained weekly and inspected monthly	A1.5
	G3-7	Microfilter element replacement with cause (eg max dP or time limit)	A1.3.1
	G3-8	Coalescer element replacement with cause (eg max dP or time limit) For fuelling vehicles, 4,500 litre flush of new elements prior to use	A1.3.2 A1.3.5
	G3-9	Dirt defence element replacement with cause (e.g. max dP of 22psi or time limit). For fuelling vehicles, flush of new elements prior to use for 5 minutes at max achievable flow followed by a nozzle strainer cleaning?	Bulletin 130
	G3-10	Monitor element replacement with cause (eg max dP of 15psi or time limit) For fuelling vehicles, flush of new elements prior to use for 5 minutes at max achievable flow, with 4 deadman stop/starts, followed by a nozzle strainer cleaning (in accordance with JIG Bulletin 105)	A1.3.4 A1.3.5 Bulletin 105
	G3-11	Annual internal inspections of filter vessel: - cleanliness - element appearance - element (and blanking plates where fitted) torque check - internal lining condition - cover seal condition and number of compressions	A1.2.4
	G3-12	Separator elements (Teflon/synthetic) testing (annually or when coalescer elements are changed).	A1.3.3
	G3-13	Inspection and testing of air eliminators and pressure relief valves annually.	A1.1
	G3-14	EI 1582 similarity certificates for all FWS confirming compliance of the installed elements and vessel to EI 1581?	A1.1 7.1.2
		Other Comments or Recommendations	
	G3-15	Other comments or recommendations filtration records (Limit to C, R or NA)	

G4: INTO-PLANE SERVICE - RECORDS OF ROUTINE CHECKS AND MAINTENANCE			
Inspector shall check that records of routine checks are readily available and up to date			
		Quality Control and Maintenance	Reference
	G4-1	Is a preventative maintenance programme in place?	8.10
	G4-2	Defect reporting system	8.10
	G4-3	Vehicle/fuelling equipment serviceability and maintenance checks	8.11
	G4-4	Fuel circulation procedure followed for vehicles fitted with EWS that have been out of service for one week or more? Inspector to check there is a procedure in place for authorised personnel to temporarily override the EWS system in accordance with the manufacturer's recommendations, following DDF commissioning and when required as part of the fuel circulation procedure.	Bulletin 130
	G4-5	Routine tests and checks if fuelling equipment has been out of service for more than 1 month	8.10
	G4-6	Draining and low point sampling fuelling vehicles/equipment off ramp	9.2.1
	G4-7	Sampling procedures during Fuelling Operations (ex-hydrant) as required?	9.2.2 A7
	G4-8	Fueller tank inspection & cleaning: - annual visual inspection from top hatch (Jet fuelling vehicles only) - internal cleaning (not routinely required)	8.19 (a) 8.19 (b)
	G4-9	Product recovery tanks (vehicle sample tanks/stand-alone trailers) quarterly visual inspection	8.20
	G4-10	Fueller tank top drains monthly check for blockage	8.19 (a)
	G4-11	Fueller overfill protection devices (high/high-high level cut-off checks) (High level function check 6-monthly & high-high annual)	8.22
	G4-12	Overwing fuelling: - procedures for grade confirmation - use of a Fuel Grade Confirmation Form	10.5.4 A6
	G4-13	Weekly functional check of interlock system, including warning lights and check of override system	8.12
	G4-14	Daily check of seals on interlock override switch and function check of a single interlock	8.12
	G4-15	Monthly function of the platform emergency lowering system and wand sensor checks	8.21
	G4-16	Daily visual checks and 6-monthly serviceability checks of fuelling steps and platforms?	8.24
	G4-17	Monthly functional check of emergency engine stops	8.23
		Bonding Cables & Reels	
	G4-18	Daily visual check of bonding wires and clips (including fuelling steps with integral hoses and buckets)	8.2
	G4-19	Weekly electrical continuity check	8.2
		Hoses	
	G4-20	Dates of manufacture & in-service, and monthly visual inspection (hose fully extended) at working pressure and after release of pressure?	8.15 A3.1
	G4-21	Hydrostatic pressure test - routine (6-monthly) - after fitting new hose or shortening (after repair)	8.15 A3.2
	G4-22	New hose commissioning	8.15.3
	G4-23	Hose end strainers inspection and cleaning. (Monthly for overwing nozzles and 6-monthly for pressure fuelling nozzles and in accordance with JIG Bulletin 105 for Filter Monitors)? Hose-end strainer inspection and cleaning during commissioning of new filter monitors (in accordance with JIG Bulletin 105)	8.18 Bulletin 105

G4-24	Dates of manufacture & in-service for flexible joints? 6-monthly condition checks.	A3.4
	Hydrant Pit Couplers	
G4-25	Annual hydrant pit coupler wear checks?	A7.3
	Meters and Gauges	
G4-26	Annual meter calibration test results accurate to required standard - For meters in service - For new/repared meters prior to use - Test performed at correct flow rates? (erratic/unadjustable meters shall be withdrawn from service)	8.3
G4-27	6-monthly critical pressure gauge accuracy check with master gauge or dead weight tester	8.4
	Pressure Control Valve Systems	
G4-28	Monthly deadman performance check	8.14, 7.2.5
G4-29	6-monthly pressure control system check	8.14
	Thermometers and Hydrometers	
G4-30	6-monthly accuracy check of temperature/density measuring devices	8.7.3
	Fire extinguishers	
G4-31	Monthly visual condition check	8.8
G4-32	Annual maintenance by manufacturer/competent employee/contractor	8.8
	Electronic Water Sensors and Slug Detection Devices/Bulk Water Detectors	
G4-33	Is there a written procedure in place for actions to be taken and an appropriate investigation to be conducted in the event of EWS Alarm activation during fuelling operations? Note: Inspector to note in the Comments the number of EWS system activations (at Check or Alarm Level) that occurred since the last inspection and comment on investigation results of EWS alarms.	Bulletin 130
G4-34	For fuelling equipment fitted with EWS systems: -Confirmation that each into-plane delivery was conducted with water below 30ppm throughout the fuelling or reason for fuelling interruption reported? -Visual Appearance Check and CWD Check results following EWS Check or Alarm Level indications and of subsequent investigation as required? -Monthly site management reviews validating all alarms or interruptions are appropriately addressed?	Bulletin 130
G4-35	Where EWS are fitted, are records maintained of: - quarterly function test results of EWS system? - additional (non-routinely) function tests of EWS system when required (e.g. as part of EWS commissioning)? - Valid EWS Certification by the manufacturer or certified agent, no later than 2 years from installation and yearly thereafter Inspector to note in the Comments if any tests failures have occurred/been reported since the last inspection.	Bulletin 110 Bulletin 130
G4-36	If fitted, is the function of bulk water detectors or water slug detection devices checked at least quarterly in accordance with the manufacturer's recommendations? Inspector to check records	A1.2.6
	Other Comments or Recommendations	
G4-37	Other comments or recommendations Into-plane routine check and maintenance records (Limit to C, R or NA)	

H1: NON-ROUTINE/INFREQUENT TASKS			
Inspector shall review the following activities if they have taken place within the last inspection period.			
		Tank Sampling for Certification (laboratory tests)	Reference
	H1-1	Tank upper, middle and lower sample points available?	3.1, 3.3
	H1-2	Tank Composite samples available and clearly labelled?	3.3
	H1-3	Laboratory test samples taken in accordance with procedures?	3.1, 3.2
		Flushing infrequently used hoses	
	H1-4	Are infrequently used hoses flushed at required intervals?	8.15.3
		Change of Grade Procedures	
	H1-5	Adequate change of grade procedures where required?	9.2.5
		Fuelling with fuel containing FSII	
	H1-6	Where FSII is required are satisfactory procedures in place and do they ensure that fuel shall not pass through EI 1583 filter monitors?	7.1.2
		Other Comments or Recommendations	
	H1-7	Other comments or recommendations Non-routine tasks (Limit to C, R or NA)	