Annex 4a - Oil Appliance installation (Domestic)

Annex 4a – Common Minimum Technical Competency Requirements for Oil Appliance Installation Work (Domestic)

Routes to	demonstrating	required coi	mpetence
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Route			Inspection / A	ssessment
Route	Qualifications/Certification	Experience / Evidence	On –Site	Off-Site
1	Level 3 NVQ Diploma in Domestic Heating (QCF); or Level 3 NVQ Diploma in Domestic Plumbing and Heating (QCF); or SVQ in Plumbing including the optional unit F9HA 04 Install and Commission Fuel Systems: Oil	Must have evidence of work carried out to be able to demonstrate their practical competence for the scope for which they have applied in accordance with the competence requirements stated in this annex.**	Yes	No
2	OFT10- 101 Domestic/light commercial oil firing servicing & commissioning course for pressure jet appliances			
	OFT10- 102 Servicing and Commissioning of oil and bio-liquid fuelled Vaporising burner fired domestic fixed combustion appliances < 45kW		Yes	No
	OFT10-105E Installation of oil & bio-liquid fuelled fixed combustion appliances & systems < 100Kw			
	OFT10-201 Servicing and Commissioning of oil and bio- liquid fuelled pressure jet burner fired commercial combustion appliances < 2Mw			
3	Alternative certification that has been mapped to the competence requirements within this Annex and agreed by SummitSkills as aligning with the competence requirements within this annex and aligning with the related requirements for acceptance as alternative certification		Yes	No
4	Qualifications/certification other than above or no formal qualification (The inclusion of this route in this annex is subject to final agreement)	Minimum of 3 years verifiable relevant experience covering the competence requirements stated in this annex and successful completion of the Experienced Worker Assessment Must have evidence of work carried out to be able to demonstrate their practical competence for the scope for which they have applied in accordance with the competence requirements stated in this annex.**	Yes	Yes

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Route 4: Experienced Worker Assessments will be conducted by the registering Scheme Operator or Certification Body who shall assess the Enterprise's evidence of meeting the underpinning knowledge and practical competence requirements as stated in this annex. Note: Experienced worker assessment enables the competences within this annex to be assessed demonstrated but do not lead to the award of a qualification.

^{**}Enterprises must demonstrate compliance with the overall business requirements identified in this document and each individual must hold the relevant technical qualification for the scope for which they have applied. Technical qualifications are those identified in this annex and shall be renewed on a 5 year cycle.

Area	of Competence	Oil Appliances an	d Heating Systems Installation Work (Domestic)		Annex 4a
	petence requirement installer must:		Context/Scope	NOS Ref.	Further Guidance
1	Know the health and sa systems of work associa and heating systems ins	ated with oil appliances	 Know the health hazards relating to petroleum products and bio-fuels: hygiene precautions inhalation skin contact eye contact ingestion and aspiration Know the dangers and the safety precautions to be taken when working with petroleum products:		
			 fire and explosion electrical equipment product storage (plastic and steel tanks) fabrication product handling product delivery combustion of fuels combustion products combustion air supply and product discharge indications of danger and poisoning 		
			Know the safe working procedures regarding boiler and furnace maintenance removal of combustion products residual oil deposits pressurised oil lines combustion of used lubricating oil		
			 Know the environmental aspects of petroleum products environmental hazards product disposal Know the types and descriptions of safety signs, notices, and signals 		

Area	of Competence	Oil Appliances and Heating Systems Installation Work (Domestic)		А	Annex 4a
	petence requirement installer must:	Context/Scope	NOS Ref.	Further Guidance	
2	Know the types of cold water system and their layout requirements	Know the cold water system pipework features between the water undertaker's main and the main internal stop valve in premises: connection methods to the main communication pipe service pipe main external stop valve and meter housing including surface mounted meter boxes (Groundbreaker) depth of external service pipework below ground level correct methods of entry of the service pipework to a property Identify types of cold water system from layout diagrams direct cold water systems indirect cold water systems Know the factors which affect the selection of cold water systems for dwellings direct cold water system supplying a storage cistern supplying a combination boiler indirect cold water system Know the typical pipe sizes used in cold water systems in premises: supply pipe distributing pipe service pipe			

Area	of Competence	Oil Appliances and Heating Systems Installation Work (Domestic)		Annex 4a
	petence requirement installer must:	Context/Scope	NOS Ref.	Further Guidance
3	Be able to select oil fired appliances to meet customer needs	Select suitable appliances meeting installation/standard requirements: customer needs/preference provision of suitable flueing arrangements suitable room/property location proximity of combustible materials to the appliance building layout and features - suitable appliance space suitability of heating system loadings placed on the oil fired appliance energy efficient legislation requirements environmental impact	DPJ02 & DVA02 1.1	
		Calculate the size of oil fired appliances required for given situations using the whole house boiler sizing method	DPJ02 & DVA02 1.2	
4	Be able to install oil fired appliances	Carry out a pre-installation inspection to determine that oil fired appliances can be correctly installed: • Appliance location/ position • Hearth provision • Flueing arrangements and termination • Appliance ventilation provision • Fuel supply arrangements • Condensate disposal arrangements • Heating/ hot water system provision • Electrical connection arrangements	DPJ02 & DVA02 2.1	
		Position, fix and connect oil fired appliances to manufacturer requirements: • Assemble and position the appliance • Make connections to, or assemble the appliance flue system/connection • Make connections to the heating/ hot water system • Make connections to the condensate disposal pipework • Make final connections to the oil supply pipework • Make final electrical connections to the central heating control system Take precautions to ensure that the appliance cannot be brought into operation before the installation work is fully completed	DPJ02 & DVA02 2.2 DPJ02 & DVA02 2.3	

Area	of Competence	Oil Appliances and Heating Systems Installation Work (Domestic)			Annex 4a
	petence requirement installer must:	Context/Scope	NOS Ref.	Further Guidance	
5	Be able to commission oil fired appliances	Use information sources to identify the range of commissioning work required on oil fired appliances	DPJ02 & DVA02 3.1		
		Carry out a visual inspection of oil fired appliances and their associated supplies to confirm that they are ready to be commissioned:			
		 Oil storage tank Oil supply system – checked, filled and ready for operation Air supply – combustion and ventilation Flue system including hearth, proximity of combustible materials, flue termination and provision of flue draught stabiliser Oil fired appliance – correct positioning and assembly of components such as flue baffles Water connections to the appliance – provision of suitable heating/ hot water system controls, checked filled and ready for operation Electrical connection to the appliance – electrical testing has taken place and the appliance is ready for operation Appliance burner and controls – setting, positioning etc. 	DPJ02 & DVA02 3.2		
		Carry out operational tests prior to appliance light up: • Flue flow test (where required)	DPJ02 & DVA02 3.3		
		Carry out operational tests on initial appliance light up: Determination of cold oil depth and/or oil flow rate (vaporising appliances) Initial function of appliance burner Oil pressure readings - set and adjust oil pump (pressure jetappliances) Correct operation of burner safety controls Appliance flame picture (where required) Initial readings to determine the cleanliness of combustion and adjust accordingly - smoke reading and flue draught Flue operational tests - flue spillage (where required), flue draught interference test (where required)	DPJ02 & DVA02 3.4		

Area	of Competence	Oil Appliances and Heating Systems Installation Work (Domestic)		Annex 4a
	petence requirement installer must:	Context/Scope	NOS Ref.	Further Guidance
5	Be able to commission oil fired appliances (continued)	Carry out appliance combustion efficiency tests and adjust/ fine tune burner controls accordingly	DPJ02 & DVA02 3.5	
		Carry out checks to ensure that the appliance oil flow rate/ temperature controls are operating correctly	DPJ02 & DVA02 3.6	
		Carry out checks to ensure that connected water heating systems are functioning correctly Hot water systems Central heating systems	DPJ02 & DVA02 3.7	
		Complete the details contained in a commissioning record for oil fired appliances	DPJ02 & DVA02 3.8	
6	Be able to decommission oil fired appliances	Liaise with other persons to determine the decommissioning work to be carried out	DPJ02 & DVA02 4.1	
		Arrange for temporary heating to be available (if required) for the duration of decommissioning work	DPJ02 & DVA02 4.2	
		 Isolate the appliance from the supply source Turn off the electricity and fuel supply to the appliance and make safe Turn off the water supply to the system 	DPJ02 & DVA02 4.3	
		 Drain and safely dispose of the system contents Central heating/ hot water system Fuel supply system 	DPJ02 & DVA02 4.4	
		Take precautions to ensure that the appliance cannot be brought back into operation before the decommissioning work is complete	DPJ02 & DVA02 4.5	
		Advise other persons that the appliance has been successfully decommissioned	DPJ02 & DVA02 4.6	

Annex 4b - Oil Appliance installation (Non-domestic)

Annex 4b - Common Minimum Technical Competency Requirements for Oil Appliance Installation Work (Non Domestic)

Route			Inspection / A	Inspection / Assessment	
Noute	Qualifications/Certification	Experience / Evidence	On –Site	Off-Site	
1	Qualifications/qualification units to be identified or this route removed	Must have evidence of work carried out to be able to demonstrate their practical competence for the scope for which they have applied in accordance with the competence requirements stated in this annex.**	Yes	No	
2	OFT10- 101 Domestic/light commercial oil firing servicing & commissioning course for pressure jet appliances OFT10- 102 Servicing and Commissioning of oil and bio-liquid fuelled Vaporising burner fired domestic fixed combustion appliances < 45kW OFT10-105E Installation of oil & bio-liquid fuelled fixed combustion appliances & systems < 100Kw OFT10-201 Servicing and Commissioning of oil and bio-liquid fuelled pressure jet burner fired commercial combustion appliances < 2Mw		Yes	No	
3	Alternative certification that has been mapped to the competence requirements within this Annex agreed by SummitSkills as aligning with the competence requirements within this annex and aligning with the related requirements for acceptance as alternative certification.		Yes	No	
4	Qualifications/certification other than above or no formal qualification (The inclusion of this route in this annex is subject to final agreement)	Minimum of 3 years verifiable relevant experience covering the competence requirements stated in this annex and successful completion of the Experienced Worker Assessment Must have evidence of work carried out to be able to demonstrate their practical competence for the scope for which they have applied in accordance with the competence requirements stated in this annex.**	Yes	Yes	

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Route 4: Experienced Worker Assessments will be conducted by the registering Scheme Operator or Certification Body who shall assess the Enterprise's evidence of meeting the underpinning knowledge and practical competence requirements as stated in this annex. Note: Experienced worker assessment enables the competences within this annex to be assessed demonstrated but do not lead to the award of a qualification.

^{**}Enterprises must demonstrate compliance with the overall business requirements identified in this document and each individual must hold the relevant technical qualification for the scope for which they have applied. Technical qualifications are those identified in this annex and shall be renewed on a 5 year cycle.

Area of Competence	Oil Appliances and	Heating Systems Installation Work (Non-Domestic)		Annex 4b
Competence requirement The installer must:		Context/Scope	NOS Ref.	Further Guidance
1 Know the health and safety of work associated with oil a systems installation work		Know the health hazards relating to petroleum products and bio-fuels: hygiene precautions inhalation skin contact eye contact ingestion and aspiration Know the dangers and the safety precautions to be taken when working with petroleum products: fire and explosion electrical equipment product storage (plastic and steel tanks) fabrication product handling product delivery combustion of fuels combustion products combustion air supply and product discharge indications of danger and poisoning Know the safe working procedures regarding boiler and furnace maintenance removal of combustion products residual oil deposits pressurised oil lines combustion of used lubricating oil Know the environmental aspects of petroleum products environmental hazards product disposal Know the types and descriptions of safety signs, notices, and signals		

Area	of Competence	Oil Appliances and Heating Systems Installation Work (Non-Domestic)		Annex 4b
	petence requirement installer must:	Context/Scope	NOS Ref.	Further Guidance
The i	Know the types of cold water system and their layout requirements	Know the cold water system pipework features between the water undertaker's main and the main internal stop valve in premises: connection methods to the main communication pipe service pipe main external stop valve and meter housing including surface mounted meter boxes (Groundbreaker) depth of external service pipework below ground level correct methods of entry of the service pipework to a property Identify types of cold water system from layout diagrams direct cold water systems indirect cold water systems Know the factors which affect the selection of cold water systems for premises direct cold water system supplying a storage cistern supplying a combination boiler indirect cold water system Know the typical pipe sizes used in cold water systems in premises: supply pipe distributing pipe service pipe		

Area	of Competence	Oil Appliances and Heating Systems Installation Work (Non-Domestic)		Annex 4b
	petence requirement installer must:	Context/Scope	NOS Ref.	Further Guidance
3	Be able to select oil fired appliances to meet customer needs	Select suitable appliances meeting installation/standard requirements: customer needs/preference provision of suitable flueing arrangements suitable room/property location proximity of combustible materials to the appliance building layout and features - suitable appliance space suitability of heating system loadings placed on the oil fired appliance energy efficient legislation requirements environmental impact	DPJ02 & DVA02 1.1	
		Calculate the size of oil fired appliances required for given situations	DPJ02 & DVA02 1.2	
4	Be able to install oil fired appliances	Carry out a pre-installation inspection to determine that oil fired appliances can be correctly installed: • Appliance location/ position • Hearth provision • Flueing arrangements and termination • Appliance ventilation provision • Fuel supply arrangements • Condensate disposal arrangements • Heating/ hot water system provision • Electrical connection arrangements	DPJ02 & DVA02 2.1	
		Position, fix and connect oil fired appliances to manufacturer requirements: Assemble and position the appliance Make connections to, or assemble the appliance flue system/connection Make connections to the heating/ hot water system Make connections to the condensate disposal pipework Make final connections to the oil supply pipework Make final electrical connections to the central heating control system	DPJ02 & DVA02 2.2	
		Take precautions to ensure that the appliance cannot be brought into operation before the installation work is fully completed	DPJ02 & DVA02 2.3	

Area	of Competence	Oil Appliances and Heating Systems Installation Work (Non-Domestic)		Annex 4b
	petence requirement installer must:	Context/Scope	NOS Ref.	Further Guidance
5	Be able to commission oil fired appliances	Use information sources to identify the range of commissioning work required on oil fired appliances	DPJ02 & DVA02 3.1	
		 Carry out a visual inspection of oil fired appliances and their associated supplies to confirm that they are ready to be commissioned: Oil storage tank Oil supply system – checked, filled and ready for operation Air supply – combustion and ventilation Flue system including hearth, proximity of combustible materials, flue termination and provision of flue draught stabiliser Oil fired appliance – correct positioning and assembly of components such as flue baffles Water connections to the appliance – provision of suitable heating/ hot water system controls, checked filled and ready for operation Electrical connection to the appliance – electrical testing has taken place and the appliance is ready for operation Appliance burner and controls – setting, positioning etc. 	DPJ02 & DVA02 3.2	
		Carry out operational tests prior to appliance light up: • Flue flow test (where required)	DPJ02 & DVA02 3.3	
		 Carry out operational tests on initial appliance light up: Initial function of appliance burner Correct operation of burner safety controls Oil pressure readings - set and adjust oil pump Initial readings to determine the cleanliness of combustion and adjust accordingly - smoke reading and flue draught Flue operational tests - flue spillage (where required), flue draught interference test (where required) 	DPJ02 & DVA02 3.4	

Area	of Competence	Oil Appliances and Heating Systems Installation Work (Non-Domestic)	Annex 4b	
	petence requirement installer must:	Context/Scope	NOS Ref.	Further Guidance
5	Be able to commission oil fired appliances (continued)	Carry out appliance combustion efficiency tests and adjust/ fine tune burner controls accordingly	DPJ02 & DVA02 3.5	
		Carry out checks to ensure that the appliance temperature controls are operating correctly Appliance control thermostat Appliance energy cut-out device	DPJ02 & DVA02 3.6	
		Carry out checks to ensure that connected water heating systems are functioning correctly Hot water systems Central heating systems	DPJ02 & DVA02 3.7	
		Complete the details contained in a commissioning record for oil fired appliances	DPJ02 & DVA02 3.8	
6	Be able to decommission oil fired appliances	Liaise with other persons to determine the decommissioning work to be carried out	DPJ02 & DVA02 4.1	
		Arrange for temporary heating to be available (if required) for the duration of decommissioning work	DPJ02 & DVA02 4.2	
		 Isolate the appliance from the supply source Turn off the electricity and fuel supply to the appliance and make safe Turn off the water supply to the system 	DPJ02 & DVA02 4.3	
		 Drain and safely dispose of the system contents Central heating/ hot water system Fuel supply system 	DPJ02 & DVA02 4.4	
		Take precautions to ensure that the appliance cannot be brought back into operation before the decommissioning work is complete	DPJ02 & DVA02 4.5	
		Advise other persons that the appliance has been successfully decommissioned	DPJ02 & DVA02 4.6	

Annex 4c - Oil Storage and Tank Systems

Annex 4c - Common Minimum Technical Competency Requirements Oil Storage and Tank Systems Installation Work

Route			Inspection / Assessment		
Noute	Qualifications/Certification	Experience / Evidence	On –Site	Off-Site	
1	Level 3 NVQ Diploma in Domestic Heating (QCF); or Level 3 NVQ Diploma in Domestic Plumbing and Heating (QCF); or SVQ in Plumbing including the optional unit F9HA 04 Install and Commission Fuel Systems: Oil	in Domestic Plumbing and accordance with the competence requirements stated in this annex.** uding the optional unit F9HA 04		No	
2	OFT10-600a Installation of oil fuel storage and supply systems connected to fixed combustion appliances		Yes	No	
3	Alternative certification that has been mapped to the competence requirements within this Annex and agreed by SummitSkills as aligning with the competence requirements within this annex and aligning with the related requirements for acceptance as alternative certification.		Yes	No	
4	Qualifications/certification other than above or no formal qualification (The inclusion of this route in this annex is subject to final agreement)	Minimum of 3 years verifiable relevant experience covering the competence requirements stated in this annex and successful completion of the Experienced Worker Assessment Must have evidence of work carried out to be able to demonstrate their practical competence for the scope for which they have applied in accordance with the competence requirements stated in this annex.**	Yes	No	

NOTES

Route 4: Experienced Worker Assessments will be conducted by the registering Scheme Operator or Certification Body who shall assess the Enterprise's evidence of meeting the underpinning knowledge and practical competence requirements as stated in this annex. Note: Experienced worker assessment enables the competences within this annex to be assessed demonstrated but do not lead to the award of a qualification.

^{**}Enterprises must demonstrate compliance with the overall business requirements identified in this document and each individual must hold the relevant technical qualification for the scope for which they have applied. Technical qualifications are those identified in this annex and shall be renewed on a 5 year cycle.

Area	of Competence	Oil Storage an	d Tank Systems Installation Work			Annex 4c
	Competence requirement The installer must:		Context/Scope	NOS Ref.	Further Guidance	
	Know the health and safe systems of work associate and tank systems installated	ed with oil storage	Know the health hazards relating to petroleum products and bio-fuels: • hygiene precautions • inhalation • skin contact • eye contact • ingestion and aspiration Know the dangers and the safety precautions to be taken when working with petroleum products: • fire and explosion • electrical equipment • product storage (plastic and steel tanks) • fabrication • product handling • product delivery • combustion of fuels • combustion products • combustion air supply and product discharge • indications of danger and poisoning Know the safe working procedures regarding boiler and furnace maintenance • removal of combustion products • residual oil deposits • pressurised oil lines • combustion of used lubricating oil			
			 Know the environmental aspects of petroleum products environmental hazards product disposal 			
			Know the types and descriptions of safety signs, notices, and signals			

Area	of Competence	Oil Storage and Tank Systems Installation Work		Annex 4c
	petence requirement installer must:	Context/Scope	NOS Ref.	Further Guidance
2	Know the correct procedures to select, locate and install fire valves	 know the requirements for fire valve positioning: standard external fire valve positioning external (internal) fire valve positioning fire valve positioning for an external boiler fire valve positioning for a vaporising range cooker fire valve positioning for a vaporising room heater (stove) fire valve positioning for an oil lifter Know the correct fitment of fire valves for different supply systems: single appliance gravity supply systems multiple appliance oil supply systems Know the correct operation and testing methods for different types of fire valve dead weight/fusible link type fire valve remote acting phial and capillary fire valve 		
3	Know the requirements of relevant regulations/standards relating to practical installation, testing and commissioning activities for oil storage and tank systems installation work	 Know the legislation and guidance information for the industry building regulations industry standards manufacturers installation and service/maintenance instructions competent persons work notification 		
4	Know the procedure for the safe isolation of electricity and be able to demonstrate this procedure	Know the nine steps for the safe isolation of electrical supplies Be able to demonstrate safe isolation of electrical supplies		

Area	a of Competence	Oil Storage and Tank Systems Installation Work		Annex 4c	
	npetence requirement installer must:	Context/Scope	NOS Ref.	Further Guidance	
5	Know the procedure to be followed in the case of oil spill	Know and be able to follow the correct course of action in the event of an oil spill prevent further release of oil clean up any oil present Know the possible implications of an oil spill structural damage health effects legislation			
6	Be able to identify actual and potential risks	Know and be able to identify potential safety risks I location of oil tank size and structure of oil tank base location of fire valve Know and be able to identify potential environmental risks capacity of single skin oil storage tank location of oil storage tank condition of oil storage tank Know and be able to identify immediate risks location of flue terminal oil storage tank support leakages inadequate oil storage tank fill point			

Area	of Competence	Oil Storage and Tank Systems Installation Work		Annex 4c	
	etence requirement staller must:	Context/Scope	NOS Ref.	Further Guidance	
7	Know the preparatory work required and be able to install oil storage and supply facilities	Know and be able to demonstrate correct methods of oil storage tank installation steel oil storage tank plastic oil storage tank underground oil storage tank underground tank chamber height considerations oil storage tank bases ground types for oil storage tanks general site layout of an oil storage tank base Know and be able to demonstrate correct oil storage tank base Know and be able to demonstrate correct oil storage tank base onstruction for different types of oil tank plastic oil storage tank on a concrete base plastic oil storage tank on pre-cast lintels plastic oil storage tank on platform with concrete base plastic oil storage tank on platform with lintel base steel oil storage tank with integral base supports steel oil storage tank on piers with concrete base steel oil storage tank on piers with lintel base Know the correct methods of installing and testing extended fill pipes above ground extended fill pipe installation extended fill pipe installation multiple installations			

Area of Competence	Oil Storage and Tank Systems Installation Work		Annex 4c
Competence requirement The installer must:	Context/Scope	NOS Ref.	Further Guidance
7 Know the preparatory work required and be able to install oil storage and supply facilities (continued)	Be able to correctly and safely install oil supply systems oil supply pipes earth bonding external/exposed oil supply pipes internal oil supply underground oil supply other services ducts trenching sleeving record keeping oil line entry into buildings oil supply connections Be able to correctly fit and test oil supply connections and fittings compression fittings with internal support flared fittings oil filter/water trap external de-aerator devices internal de-aerator devices de-aerator devices in proximity to a flue terminal oil lifter		
	 oil leakage/pressure testing Be able to identify correct oil supply pipe sizing (sub-gravity) top outlet tanks mechanical fuel supply methods suction oil supply system with de-aerator suction oil supply system with oil lifter multiple de-aerator installations anti-syphon valves Be able to identify correct oil supply pipe sizing (sub-gravity) bottom outlet tanks gravity fuel supply methods maximum/minimum head pressure multiple appliance and/or multiple storage tank installations 		

Area of Competence	Oil Storage and Tank Systems Installation Work		Annex 4c	
Competence requirement The installer must:	Context/Scope	NOS Ref.	Further Guidance	
8 Know how to safely decommission oil storage tanks	Know the correct procedures for the decommissioning of oil storage tanks removal of residual liquid disposal of residues isolation of oil storage tank vapour dispersion gas freeing/cleaning/inerting			