

JOB NAME:

Electric & Diesel Firepump

INSPECTED BY:

DATE: / /

Clause No.	Item Check List	Inspection Report			Compliance <input checked="" type="checkbox"/>	
2.4	Flooded Suction to pump intake port	Height Min Effective Water level to Centre line of Pump Suction				
		Port:	+/-	m		
2.5.1	Check $NPSH A \geq NPSHR + 1m$ Calculated at 130% Flow $NPSH A = 10.1m(ATM) +$ static height – friction loss	NPSH A	_____m			
		NPSH R	_____m			
2.5.2 & 3.7.2	Check No Prohibited devices (e.g - Check, Butterfly or Globe Valves & Flow switches) on Pump Suction Pipe manifold. If strainer fitted check - Free area > 4 times pump suction entry area & Individual strainer opening < 8mm x 8mm	Pump Suction Valve				
		Listed OS&Y gate valve Type?	YES <input type="checkbox"/>	NO <input type="checkbox"/>		
		If Butterfly type, located 15 pipe diameters of pump inlet?	YES <input type="checkbox"/>	NO <input type="checkbox"/>		
3.1	Check fire pump performance curve satisfies: Shut-off Pressure < 140% of duty head. Max Flow capability = 130% duty flow @ > 80% duty head.	Pump Duty	Flow	LPS @ Head	KPa	
		Shut-off Pressure/Duty Head	_____ < 1.40			
		Max Flow/Duty Flow	_____ > 1.3			
3.1 & 3.6.1	Check Pump Casing & System Component (pipe work, valves, flanges, roll groove couplings etc.) pressure rating greater than Pump Shut-off pressure + Suction pressure.	Casing Pressure Rating	_____KPa			
		System Component Pressure Rating	_____KPa			
		Shut-off + Max Suction Pressure	_____KPa			
3.6.1.2	Request Hydrostatic Pressure test certificate - Pump & Pipework (1.5 times working pressure)	Tested Pressure	_____KPa			
3.6.2	Check Suction & Discharge Pipe work sized for < 4m/s velocity (at Maximum flow)	Max flow (= Duty Flow x1.3)	_____LPM			
		Suction Pipe & Valves Diameter	_____mm			
		Discharge Pipe & Valve Diameter	_____mm			
3.6.7	Check pipe Flexible connections if fitted are metallic Braided type	Flexible connection is metallic braided?	YES <input type="checkbox"/>	NO <input type="checkbox"/>		
3.6.8	Check no pipe loads acting on pump casing – Supports provided	Piping supported?	YES <input type="checkbox"/>	NO <input type="checkbox"/>		
3.7.3	Check automatic air release valve fitted for horizontal split case & vertical turbine type pump sets (Not a screwed type plug)	Automatic air release valve fitted?	YES <input type="checkbox"/>	NO <input type="checkbox"/>		
3.7.4.1 & 3.7.4.2	Check Circulation Relief valve (CRV) fitted & sized as below Size = 19mm for pump flows to 9,500 LPM Size = 20mm for pump flows 9,501 to 19,000 LPM	Pump Minimum Flow	_____LPS			
		Circulation Relief Valve Size	_____mm			
3.7.4.3	Higher Flow/Pressure Pumps & Vertical Turbine type Pumps CRV Pressure Set point = < Shut-off + Min Suction Pressures	Pumps Manufacturer's recommend	_____mm			
		CRV Pressure Set point	_____KPa			
3.7.5.1 & 3.7.5.2 & 3.7.5.5	Pressure Relief Valve (PRV) if required per Table 3.1 shall be sized as per Figure 3.6 Pressure relief Valve operates within a ±5% set point. Multiple PRV installations shall not be manifolded.	Is PRV required per Table 3.1?	YES <input type="checkbox"/>	NO <input type="checkbox"/>		
		Is PRV Sizing Chart (Fig 3.6) provided?	YES <input type="checkbox"/>	NO <input type="checkbox"/>		
		PRV Pressures @ Open/Close	±_ _%			
		PRV's separate discharge points?	YES <input type="checkbox"/>	NO <input type="checkbox"/>		



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3.8	Check CRV & PRV discharge is visible at pump set	Discharge Visible @ CRV ?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Discharge Visible @ PRV ?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
3.9.2	Check Discharge Pressure gauge 100mm Dial face, kPa units; Scale 1000 Kpa or minimum 2xDuty head,; Located min 2 diameter straight pipes upstream & 1 diameter downstream of gauge point.	Face Diameter	_____mm		
		2xDuty Head	_____KPa		
		Scale:	0 to _____KPa		
		Gauge Pt Pipe Diameter	_____mm		
		Gauge Pt: 2D upstream & 2D downstream	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
3.9.3	Check Suction Pressure gauge 100mm Dial face, kPa units, Compound ± ve scale, Located min 2 Dia. straight pipe upstream & downstream of gauge point	Face Diameter	_____mm		
		Scale	_____to _____KPa		
		Gauge Pt Pipe Diameter	_____mm		
		Gauge Pt: 2D upstream & 2D downstream	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
3.10.1 3.10.2 3.10.3	Flow measuring means provided & separate for each pump. Flow Measuring capacity 110% of Maximum flow Flow device does not discharge into pump suction pipe work.	Flow measuring means installed to Fig 3.11?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Flow measure capacity ≥ 1.1x1.3xDuty Flow?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Outlet connected to:	Drain <input type="checkbox"/>	Tank <input type="checkbox"/>	
3.11.2	Fire Pump Automatic start via single or duplicate Pressures switches or Transducers.	Hydrant fire systems – Single Sensor?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Single sprinkler installation – Single sensor?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Multiple sprinkler installation – Duplicate sensors each pump set?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
3.11.3	Check warning sign affixed to pump set	“DANGER THIS PUMP STARTS AUTOMATICALLY” sighted?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
3.13.2 to 3.13.5 3.13.6	Check individual <b>identification plates</b> affixed to Pump set, Pump, Driver & Controller per clause 3.13.2 through to 3.13.5 Check Identification plate & Warning Label (fig 3.9) affix to Battery Enclosure/Cover as per clause 3.13.6	<i>Manufacturer's Identification Plates</i>			
		Pump Set	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Pump	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Driver	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Controller	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Battery	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Battery Warning Label Fitted	YES <input type="checkbox"/>	NO <input type="checkbox"/>			



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Fig 3.10 to Fig 3.13	Check following: Separate Flow Test pipe work supplied Separate PRV pipe work to drain or tank & flow visible Separate CRV pipe work to drain or tank & flow visible Suction OS&Y Valves monitored Class "A" or "B" Discharge & Test Valves monitored Class "A" or "B"	Flow Test Pipe Work Supplied?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		PRV Pipe work Separate & Visible?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		CRV Pipe work Separate & Visible?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Suction Monitored Valves Class ?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Monitored Valve Class	Discharge <input type="checkbox"/>	Test <input type="checkbox"/>	
4.1.8 (a)	Verify Pump Bearings rated > 5,000hrs @ Minimum Continuous Flow (MCF) or Maximum load. Request manufacturer's computation.	MCF	_____ LPS		
		Rated Bearing Life	_____ Hrs		
		Computation sighted?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
4.2.1 4.2.4	End Suction Pump to International Standard, Back Pull out Spacer coupled & 1600KPa Working Pressure rated.	Compliant Standard?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Spacer Coupling	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Working Pressure	_____ KPa		
4.3.1	Axially Split Case Pump fitted with renewable casing Ring and Plugged Tapping for Air Release & Drain	Check Casing Wear Ring Fitted	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Tappings for Air Release	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Tappings for Drain	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
4.4.2	Multi-stage Multi-outlet Pumps - Threaded hole in each individual casing section for air release	Threaded hole at each casing section	Quantity: _____		
4.5 4.5.10 4.6.3 4.6.4	Vertical Turbine Pump Automatic Air Release Valve fitted – Size 32mm and greater. Vertical Turbine Drivers - Non-Reverse Ratchet fitted to electric driver or Right Angled Gear Drive or Motor Stool assembly	Automatic Air Release valve size:	_____ mm		
		Non-Reverse Ratchet fitted	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Max Pump Power	_____ KW		
		Right Angled Gear Drive Rating	_____ KW		
		Pump max Flow	_____ LPM		
4.7 4.7.4 4.7.5.1 to 4.7.5.3 4.7.6 4.7.7 4.7.10 4.7.11 4.7.12 4.7.14	Positive Displacement Pumps or Foam Pumps Pressure Relief Valve (PRV) provided to relief whole pump flow & set at a pressure less than system component rating. Pressure Unloader Valve (PUV) if fitted shall be in addition to PRV and operate Automatically & Manually. Pressure relief & Unloader discharge shall not be return to suction of pump. Check NPSHA > NPSHR + 1m Suction Strainer fitted 10 pipe diameters from pump flange and mesh suit Pump & System requirements. Driver power sized for all design duties & Drive train loss. Controller shall comply to Section 8 Electric or Section 9 Diesel Elec Driver shall be Close, Flexible or Timing Gear coupled. Diesel driver shall be coupled via centrifugal clutch Flow Measuring Device shall be provided.	PRV Size	_____ mm		
		PRV Max Flow	_____ LPM		
		PUV Fitted?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Capable of operating:	Automatic <input type="checkbox"/>	Manual <input type="checkbox"/>	
		PRV & PUV Discharge back to Tank	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		NPSHA	_____ m		
		NPSHR	_____ m		
		Suction Strainer location	_____ m		
		Suction Pipe Diameter	_____ mm		
		Mesh Size	_____ mm x _____ mm		
		Pump Power Required	_____ W		
		Driver Power	_____ W		
		Controller Complies to Section 8 or 9?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Elec Coupling - Close/Flexible/Timing gear coupled?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Diesel driver coupled via centrifugal clutch?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Flow Measuring Device fitted	YES <input type="checkbox"/>	NO <input type="checkbox"/>	



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8.1.3	<b>Electric Motor</b> Power rating ≥ 115% power required for all flows from shut head to 130% of duty flow.	Min Motor KW = Pump Max Power Rqd. to 130% Flow X 1.15 =	KW X 1.15 = KW	
8.2	<b>Electric Fire Pump Controllers</b>	Lockable Isolator	YES <input type="checkbox"/> NO <input type="checkbox"/>	
8.2.1	Degree of Protection Minimum IP54 Location within sight of driver	Located within sight of driver	YES <input type="checkbox"/> NO <input type="checkbox"/>	
8.2.3	Control Cabinet minimum 500mm clearance from floor level and any current carrying parts. High impact resistance viewing panel if provided shall be < 40% of door area.	Floor to Cabinet clearance	mm	
8.2.4	Pump circuit fitted with lockable isolator and overcurrent protected by a circuit breaker on supply side to AS/NZS3000	Ratio Viewing Panel/Door Area	%	
8.2.5	Pump circuit fitted with lockable isolator and overcurrent protected by a circuit breaker on supply side to AS/NZS3000	Controller Protection	IP <input type="checkbox"/> NEMA <input type="checkbox"/>	
8.2.6	Fire pump motor shall attain full speed within 15s of start signal	Circuit Breaker Rating	Amps	
8.2.7	Check Variable speed controller, if fitted, limits discharge pressure Set Point to 110% duty pressure.	Time to full speed from signal	s	
8.2.8	Check Variable speed controller, if fitted, limits discharge pressure Set Point to 110% duty pressure.	Variable speed controller fitted	YES <input type="checkbox"/> NO <input type="checkbox"/>	
8.2.9	Touch screens shall not be used for primary operations – start, stop or reset	Ratio Set Point/Duty Pressure		
8.2.10	Touch screens shall not be used for primary operations – start, stop or reset	Touch screen not for primary functions Start, Stop or Reset - Via push buttons only	YES <input type="checkbox"/> NO <input type="checkbox"/>	
8.2.11	All indicator lights shall be accessible for replacement.	Access to indicator lights available	YES <input type="checkbox"/> NO <input type="checkbox"/>	
8.2.12	Check following indicator provided – Power On; Power Fail; Pump Run; Battery Charge Supply Fail; variable Speed Control Malfunction & Aural Alarm Silenced	Six Indicators listed provided	YES <input type="checkbox"/> NO <input type="checkbox"/>	
8.2.13	Individual Volt Free contacts for Power On, Pump Run & Common Fault provided.	Three Volt Free Contact provided	YES <input type="checkbox"/> NO <input type="checkbox"/>	
8.2.14	Aural alarm Integral or Remote to panel provided to operate simultaneously with lights indicating Power Fail, Phase Fail & Pump Run	Aural alarm operates simultaneously with indicator lights	YES <input type="checkbox"/> NO <input type="checkbox"/>	
8.2.15	Indicator & Aural Alarm power supply via monitor Battery	Monitor Battery Provided	YES <input type="checkbox"/> NO <input type="checkbox"/>	
8.2.16	Test facility provided for testing indicator lights & Aural Alarms	Test facility provided	YES <input type="checkbox"/> NO <input type="checkbox"/>	
8.2.17	Ammeter provided to indicate motor current for each phase.	Read Phase current - L1/L2/L3	Amps	
8.2.18	Conductors & Terminal Blocks shall be numbered.	Numbered Conductors & Blocks	YES <input type="checkbox"/> NO <input type="checkbox"/>	



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8.2.15	Monitor Battery - installed outside control panel on frame 150mm above floor, Terminals covered, 2 years' service life, 72h capacity	Battery Location			
		150mm High	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Terminal Covers	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Two Yrs. Life	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		72Hr Capacity	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
8.2.16	AGM sealed type & identification plate fixed.	AGM Type			
		Identification Plate affixed	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
8.2.17	Battery Charger – 3 stage type – Boost, Absorption & Float Charger complete with Ammeter & Voltmeter.	Three Stage Charger	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Read Battery Ammeter & Voltmeter	____Amps	____V	
9.1	<b>Compression Ignition Driver (Diesel Engine)</b> Starts without the use of wicks, cartridges, heater plugs or other starting devices. Engine Block Heater & Thermostat control fitted with 240V warning.	Check Cold Start C.I Driver – 1st Crank	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Warning Label 240V affixed	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.2.2	Engine Power = Fuel Stop rating ≥ 115% max power required at all flows - shut head to 130% duty flow at duty speed.  Engine "Fuel Stop" Power deduct: 3% for every 300m above 90m above sea level (ASL) 1% for every 5.6oC above 25oC	Engine "Fuel Stop" power	_____KW		
		Pump Max Power X 1.15	_KW @ rpm		
		Does Engine "Fuel Stop" Power require site Altitude or Temperature corrections?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Power Deration required	_____%		
		Certificate Service Life provided	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.2.3	Service Life minimum 2,000 h between overhauls or 5 years.  Diesel Engine shall attain full speed within 15s of start signal	Time to full speed from signal	_____s		
		Access to check, drain and replenish engine lubrication oil available	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.3.2.1	Engine cooling system shall be fitted with Multiple V-belts or single Multi-rib belt	Quantity of Belts			
		Type of Belt	"V" <input type="checkbox"/>	Multi-Rib <input type="checkbox"/>	



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<b>9.3.2.2</b>	Primary cooling loop flexible connection to be reinforced type.	<b>Reinforced primary flexible connection</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	Secondary cooling raw water outlet pipe from heat exchanger shall be at least one size larger than the inlet.	<b>Heat exchanger outlet one size larger</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	Heat Exchanger Main & By-Pass cooling lines shall each include a pressure reducing (regulating) valve & Indicating isolating valves as per figure 9.2	<b>Pressure Reducing valve – 2 Quantity</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
		<b>Lock Open Isolating valve - 2 Quantity</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
		<b>Lock Shut Isolating valve – 1 Quantity</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	Outlet pipe from Heat Exchanger shall have visible discharge.	<b>Heat Exchanger Discharge visible</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	Heat exchanger inlet Flexible Hose shall be rated for >1000KPa, withstand a temperature of -10oC to +60oC, fire resistant, have reinforced inner braid and resistant to oil, mildew and abrasion.	<b>Checked flexible hose certificate for compliance to pressure, temperature, fire rating, braided type and resistant to oil</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
<b>9.3.3.2</b>	Fuel system shall be provided with a sludge & sediment trap	<b>Fuel Sludge &amp; Sediment trap fitted</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	Fuel line flexible hose shall be suitable for temperature range of -10oC to +60oC, be fire resistant, have synthetic rubber inner tube, a reinforcing inner braid and be resistant to fuel, oils, mildew and abrasion.	<b>Checked flexible hose certificate for compliance to temperature, fire rating, inner rubber tube, inner braided type and resistant to oil, mildew &amp; abrasion</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	Fuel lines in trafficable areas shall be mechanically protected.	<b>Fuel lines in trafficable area protected</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
<b>9.3.3.3</b>	Fuel piping shall not be Galvanised steel or copper type.	<b>Fuel Piping material</b>		
	Fuel cooler shall be installed on return fuel line for all electronic engines.	<b>If Electronic engine is Fuel cooler fitted</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	Fuel Tank sized for 6 hour running	<b>Engine fuel consumption</b>	Tank size _____	
		<b>Fuel tank level indicator fitted</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	Level indicator and low level fuel alarm at 2/3 capacity fitted	<b>Low fuel level set at 2/3 capacity</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>



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9.3.3.4	Exhaust piping shall be fitted with a flexible connection, guarded, lagged or shielded.	Check Exhaust system includes flexible connection, guarding or lagging	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.3.5	Exhaust piping low point fitted with condensate drain valve/plug Starting system to include Automatic & manual start Batteries. Starting system to operate from either of two battery banks and capable of 3min cycle (10s intermittent cranking with 20s rest).	Condensate drain point provided	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Identical Auto/Manual start batteries	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Check 6 number 10s crank & 20s rest cycle on each battery bank	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.3.6.1	An auto start isolation switch with aural & visual alarm provided	Isolate auto start switch & check manual/auto start function/alarm operate	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.3.6.2	Automatic & Manual Batteries - installed on frames 150mm above floor, Terminals covered, 2 years' service life, 72h alarm and monitoring capacity, AGM sealed type & identification plate fixed.	Battery Location 150mm High	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Terminal Covers	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.3.6.3	Batteries shall not be installed in fire pump control panels, below fuel tanks or on base frame (unless fitted with vibration mounts).	Two yrs Life	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		72Hr Capacity	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		AGM Type	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.3.6.4	Engine alternator shall be regulated for charging batteries. Markings provided on manual start switches as Manual Start: Start Battery" & "Manual Start: Control Battery"	Identification Plate affixed	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Regulated alternator provided	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.3.6.6	Engine over-speed shut down mechanism set at approximately 20% duty speed shall be provide with test switch and indicating light. Engine cannot be restarted until manual reset of over-speed condition is returned to normal	Markings affixed on both manual start battery switches	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.3.7	Following Engine instruments shall be provided – Tachometer, Hour Meter, Oil Pressure, Engine Temp & Ammeter Engine governor shall maintain the engine speed to not more than 10% above the nominated speed when operating between maximum load condition and pump shut-off.	Operate over-speed test switch – check switch return to normal and engine cannot be started until manual reset button operated	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Instruments provided Tachometer, Hour Meter, Oil Pressure, Temp & Ammeter	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.3.8	Guards fitted to belt drives, couplings & fans are tight fitting & heavy duty.	From Factory test data check speed ratio at Shut head/Max Load = < 1.1	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.4	<b>Compression-Ignition Driver Controllers</b>	Check no access to fingers & heavy duty construction	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.4.1	Fire pump controller Minimum IP54 protection rating	Controller Protection type	IP <input type="checkbox"/>	NEMA <input type="checkbox"/>	
9.4.2	Controller Located within sight of driver	Located within sight of Driver	YES <input type="checkbox"/>	NO <input type="checkbox"/>	





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9.4.3	Control Cabinet minimum 300mm clearance from floor level and any current carrying parts.	Floor to Cabinet clearance	_____mm	
	High impact resistance viewing panel if provided shall be < 40% of door area.	Ratio Viewing Panel/Door Area		
9.4.4	Lockable power isolator, operable externally to control panel complete with protective cover, boot or warning label "LIVE".	Lockable Externally operable Isolator	YES <input type="checkbox"/>	NO <input type="checkbox"/>
		Protective Cover, boot or "LIVE" label	YES <input type="checkbox"/>	NO <input type="checkbox"/>
9.4.6	Control Function shall incorporate Automatic Starting (cyclic cranking),	Auto/Manual Start functions correct	YES <input type="checkbox"/>	NO <input type="checkbox"/>
		Speed sensor terminates starter motor crank on engine start-up	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	Manual Starting, Speed sensing, Auto rest to stand-by position on shutdown, Control-Circuit isolation, Battery low voltage indication & Alarm test facility.	Manual stop return to standby mode	YES <input type="checkbox"/>	NO <input type="checkbox"/>
		Start Isolate operates correctly	YES <input type="checkbox"/>	NO <input type="checkbox"/>
		Low battery volt test OK	YES <input type="checkbox"/>	NO <input type="checkbox"/>
		Indicator/Alarm test switch operates	YES <input type="checkbox"/>	NO <input type="checkbox"/>
		Touch screen not for primary functions Start, Stop or Reset - Via push buttons only	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Touch screens shall not be used for primary operations – start, stop or reset				
9.4.7	Filament lights shall be twin metal filament type or two individual lights.	Filament Lights – Twin Metal or Two lights?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	LCD, Plasma or other displays shall operate in temperature range of 0 to 55oC and life in excess of 50,000 hours.	<i>LCD, Plasma or other request certificate of compliance</i>		
		Temperature & Life Hr	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	LCD display shall use LED backlighting	LCD back lighting via LED	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	Indicators permanently displayed & Colour coded as below Power ON (green)  Power Fail, Engine Fail to Start, Pump Run, Charger 1&2 fail, Battery 1 &2 Low, Low Fuel, Variable speed malfunction, ECM fault, Alarm silenced, Over-speed shutdown, High Temp, Low pressure, Low Oil pressure & Jacket heater fail (Red).	Power ON indicator Green	YES <input type="checkbox"/>	NO <input type="checkbox"/>
All Faults listed Red		YES <input type="checkbox"/>	NO <input type="checkbox"/>	





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9.4.8	Remote individual Volt Free Contacts available for Power supply present, Common Fault & Pump Run	<b>Check wiring diagram - Individual VFC available minimum 3 status conditions</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
	Aural alarm Integral to panel or Remote provided	<b>Aural alarm On Panel or Remote Wired?</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.4.9	Aural Alarm operates simultaneously with indicators for Power Fail, Fail to start, Pump Run, Battery Volt Low, Auto start isolated & low fuel condition.	<b>Aural alarm operates simultaneously with indicators for all status listed</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
	Alarm & Indicator power supply shall be from the Manual battery bank of 72 hour capacity.	<b>Isolate power to check manual Battery is alarm/indicator power source</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.4.10	Conductors & Terminal Blocks shall be numbered.	<b>Numbered Conductors &amp; Blocks</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.4.11	Supply shall be from dedicated Main switchboard or distribution board and marked Fire Pump not to be switched OFF.	<b>Power Supply form _____ switchboard &amp; labelled not to be switched off</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.4.12	Dual Constant potential Battery Chargers – 3 stage type for Boost, Absorption & Float Cycle - complete with individual transformers, Ammeters & Voltmeters.	<b>Dual Chargers &amp; Transformers</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		<b>Three Stage Charger</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		<b>Manual Battery Amp &amp; Volt</b>	____A	____V	
		<b>Automatic Battery Amp &amp; Volt</b>	____A	____V	
9.4.14	External Automatic mode position switches shall be lockable	<b>Automatic selector switches lockable</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.4.16	Operation instruction & wiring diagram shall be mounted inside control panel	<b>Instruction &amp; Wiring diagram mounted</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.4.17 & 9.4.20	Access clearance for panel Front=1.0m, Sides=0.6m & Rear if required=0.6m	<b>Check controller access space OK</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
	Markings shall be "Fire Pump Controller", Manufacturer's name, Model, Serial No & Rating	<b>Check markings affixed</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
9.4.18	Test facility provided for testing indicator lights and aural alarms	<b>Check &amp; Test indicator/Alarm</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	



**JOB NAME:**

**Electric & Diesel Firepump**

**INSPECTED BY:**

**DATE:** / /

Clause No.	Item Check List	Inspection Report			Compliance <input checked="" type="checkbox"/>
10.1 10.2.1	Shop Testing Hydrostatically Test each Fire pump to 1.5 times maximum working pressure or 2,400KPa for minimum 5mins – Report per Figure F3.	Sighted Hydrostatic Test Certificate F3 – Y/N	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Hydro Test Pressure/Period	_____KPa	_____min	
10.2.2	Ancillary equipment (pipe work & Valves) tested to above.	Ancillary Equipment Hydro-test Certificate	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
10.3.1	Main Fire Pump sets with driver & Controller shall be performance tested to AS2417, Grade 2 as a complete assembly and certificate similar to Figure F1 & F2 provided.	Sighted Performance test F1 & F2	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
10.3.3	Electric Fire set tested 15mins & results Figure F4 provided	Sighted Electric additional test F4	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
10.3.4	Diesel Fire set tested 90mins & results Figure F5 provided	Sighted Diesel additional test F5	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
10.3.5 10.4	Controller Function test carried out. Results Figure F6 & F7 provided Certificate of conformance provided for each Fire pump set with its respective serial number.	Sighted Controller Function Tests Certificate of conformance for S/N provided	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
11.3	Clearance around pump sets > 1m Clearance between multiple pump sets > 0.6m	Check 1m or 0.6m clearance available	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
11.5	Adequate ventilation in pump room – Run pump sets for 30 mins with all doors shut - Refer Note 2 clause 12.3.3(h) If pump room temperature rises more than 10oC this could indicate inadequate ventilation.	Check pump room temperature rise after 30 mins of running < 10oC	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
11.6	Drainage provided in pump room - floor graded to drain	Check water drains towards drainage	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
11.7	Concrete Plinth to 150mm High Pump set baseplate mounted on concrete plinths with 150mm clearance all around baseplate.	Plinth Height	_____mm		
		Plinth to base frame clearance	_____mm		
12.1 to 12.4.3	Commissioning test report per section Electric Fire Pump set – Clause 12.2.3 & 12.2.4 Diesel Fire Pump set – Clause 12.3.3 & 12.3.4 Jockey fire Pump set – Clause 12.4.2 & 12.4.3	Sighted Electric Fire Pump Report	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Sighted Diesel Fire Pump Report	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Sighted Jockey Fire Pump Report	YES <input type="checkbox"/>	NO <input type="checkbox"/>	



**JOB NAME:**

**Jockey,Manual & Automatic Jacking Pumps**

**INSPECTED BY:**

**DATE:** / /

Clause No.	Item Check List	Inspection Report		Compliance <input checked="" type="checkbox"/>	
<b>5.2</b> <b>5.2 (b)</b> <b>5.2 (f)</b>  <b>5.2 (g)</b> <b>5.2 (h)</b> <b>5.2 (i)</b>	<b>Jockey Pump</b> Flow not to exceed 10LPM Fit Pressure Relief valve if shut off head (Max Suction pressure + Pump Shut Head Pressure) exceeds system pressure. Separate control panel that includes:- Lockable Isolation switch Selector switch – Auto/Manual (spring return) Indicators - Pump Run, Overload & Power “on” Non-resettable Start Counter Power supply independent of Main Fire Pump power supply Hydro-pneumatic accumulator marked Air Charge Pressure	<b>Check orifice or flow control fitted</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		<b>Max Suct. Press + Pump Shut Head</b>	_____KPa		
		<b>Pump Working Press Exceeds above</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		<b>System Pressure Exceeds above *</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		<b>Separate Control panel</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		<b>Lockable Isolation switch</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		<b>Selector switch (Spring Return)</b>	Automatic <input type="checkbox"/>	Manual <input type="checkbox"/>	
		<b>Pump Run, Overload &amp; Power “on”</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		<b>Non-resettable Start Counter</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		<b>Power supply Independent</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		<b>Air Charge Pressure</b>	_____KPa		
		<b>5.3</b> <b>5.3 (b)</b> <b>5.3</b> <b>5.3 (c)</b> <b>5.3 (d)</b> <b>5.3 (e)</b> <b>5.3 (f)</b> <b>5.3 (i)</b>	<b>Manual Jacking Pumps (Sprinkler Alarm Valve Jacking Pump)</b> Independent Power supply – maybe GPO Flow not to exceed 4 LPM <b>Automatic Jacking Pumps (Sprinkler Alarm Valve Jacking Pump)</b> Automatic Type Separate control panel that includes:- Lockable Isolation switch Selector switch – Auto/Manual (spring return) Indicators - Pump Run, Overload & Power “on” Non-resettable Start Counter Power supply independent of Main Fire Pump power supply Hydro-pneumatic accumulator marked Air Charge Pressure Fit Pressure Relief valve if shut off head (Max Suction pressure + Pump Shut Head Pressure) exceeds system pressure.	<b>Independent Power Supply</b>	YES <input type="checkbox"/>
<b>Check Orifice or Flow control fitted</b>	YES <input type="checkbox"/>			NO <input type="checkbox"/>	
<b>Separate Control panel</b>	YES <input type="checkbox"/>			NO <input type="checkbox"/>	
<b>Lockable Isolation switch</b>	YES <input type="checkbox"/>			NO <input type="checkbox"/>	
<b>Selector switch (Spring Return)</b>	YES <input type="checkbox"/>			NO <input type="checkbox"/>	
<b>Pump Run, Overload &amp; Power “on”</b>	YES <input type="checkbox"/>			NO <input type="checkbox"/>	
<b>Non-resettable Start Counter</b>	YES <input type="checkbox"/>			NO <input type="checkbox"/>	
<b>Power supply Independent</b>	YES <input type="checkbox"/>			NO <input type="checkbox"/>	
<b>Air Charge Pressure</b>	_____KPa				
<b>Max Suct. Press + Pump Shut Head</b>	_____KPa				
<b>Pump Working Press Exceeds above</b>	YES <input type="checkbox"/>			NO <input type="checkbox"/>	
<b>System Pressure Exceeds above</b>	YES <input type="checkbox"/>			NO <input type="checkbox"/>	

