



HYDRANTS – FIVE YEARLY SERVICING

Fortifire is committed to helping our customers in being compliant, clean, green and sustainable. This fact sheet provides information to assist property owners and their representatives to better understand their responsibilities and comply with Queensland Building Fire Safety Regulation and QDC MP6.1.

View our website www.fortifire.com.au for videos and other information.



Queensland Fire and Emergency Services Fire Fighting

Our QFES Fire Fighters rely on Hydrant Systems more than any other equipment when fighting building fires. Hydrants are essentially large high-volume water taps and will typically be installed in larger commercial and public buildings. They are used by attending fire fighters to supply water for their firefighting operations. Hydrants are typically located in the ground, above ground on permanent standpipes or inside buildings typically in stairwells or fire service riser cupboards.



Many Hydrant Systems include a Booster Assembly which is used by the fire officers to provide additional water to a fire hydrant system in the event of an emergency. The location of the Hydrant Booster Assembly ensures it is readily accessible, provides protection to fire fighters and also displays important information including a Block Plan, Boost Pressure and Test Pressure signage. Attending officers will connect their fire hoses to Feed Hydrants, Attack Hydrants and Boosters to draw and supply water at appropriate levels of flow and pressure to safely extinguish fires.

On board the fire truck is a high-powered pump arrangement that is used to manage the water delivered to the Hydrant System and the Fire Hoses.

Legislative Obligations

In Queensland, the requirement to perform inspection and testing of Building Fire Safety equipment is mandated by the Queensland Development Code MP6.1 and the Queensland Building Fire Safety Regulation 2008. Building owners/occupiers have an obligation to ensure Hydrant Systems are inspected and tested by a QBCC Licensed Fire Contracting Company. This work is typically required to be performed in accordance with Australian Standard 1851-2012 which includes six monthly, annual and five yearly services. This work is required to be recorded by way of yellow test tags at each hydrant as well as test records and a Form 72 each year. These test records must be stored and made available upon the request of an authorized officer.

Purpose of the Five Yearly Hydrant Service

Five Yearly Service and Testing helps prove the Booster Assembly and any on-site pumps, non-return valves, isolation valves and pipes can sustain firefighting operations. The testing verifies there are no obstructions that may restrict water flow and that adequate pressure is available to the hydrants. Water is pumped through the Booster Assembly to the most hydraulically disadvantaged hydrant/s. This test is critical because over time, pipework and valves will corrode and deteriorate internally and can subsequently seize or become blocked. As a result, failure of the hydrant system may occur.



AS1851-2012 (Table 4.4.4) nominates two tests:

Item 4.2 HYDRANT BOOSTER FLOW TESTING

Simulates Firefighting operations when utilising the building’s designed water flows and pressures. This test verifies there are no obstructions or impediments between the booster assembly, the fire pump bypass and the most hydraulically disadvantaged hydrant. In our experience, we find this test is often NOT performed but is arguably the most critical. The flows/pressures required through the Boosters can be substantial – flows that only a fire appliance (or similar) can deliver.

Item 4.3 HYDROSTATIC PRESSURE TESTING

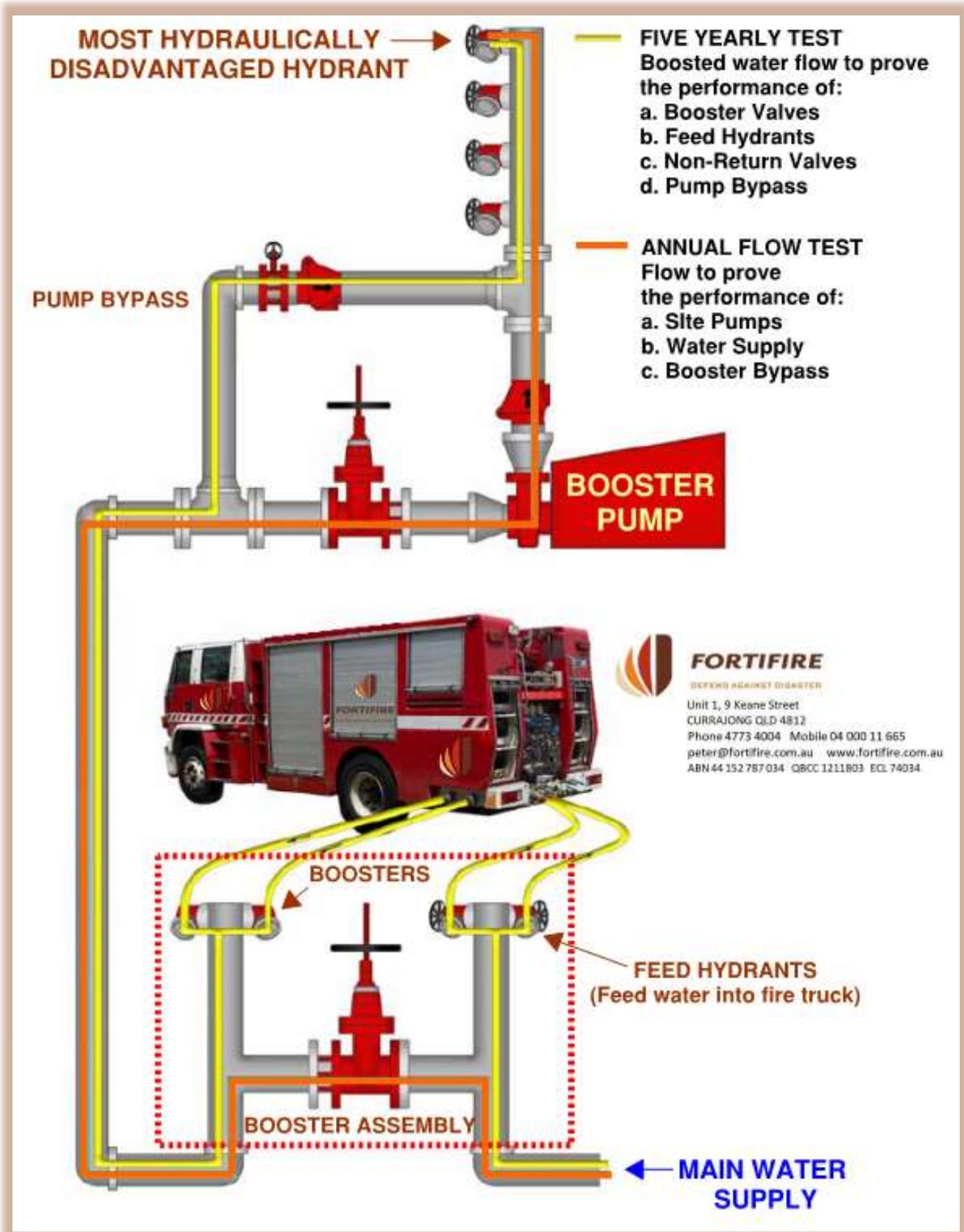
The Five Yearly service includes replacing all valve seatings, gaskets and washers within the hydrant system. The purpose of the hydrostatic pressure test is to prove the replaced parts and the existing piping system can sustain the elevated water pressures applied during firefighting operations. This is a static test and is performed under “zero flow” or no flow conditions and does NOT alone prove the condition of the hydrant system.

TABLE 4.4.4
FIVE-YEARLY SERVICE SCHEDULE
FIRE HYDRANT SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Records		
			Result	Pass/Fail	Comment
4.1	Six-monthly and yearly service	COMPLETE all monthly, six monthly and yearly service activities, as listed in Tables 4.4.1, 4.4.2 and 4.4.3.			
4.2	Booster connection flow test (where fitted)	CONDUCT a flow test through booster connection in accordance with AS 2419.1 or to approved design Standard. NOTE: Conduct the flow test after a satisfactory (pass) hydrostatic test.			
4.3	Hydrostatic test	Where a booster is fitted CONDUCT a hydrostatic pressure test on the entire system at 1.5 times the system working pressure of the required design Standard.			
4.4	Booster assembly	(a) CHANGE all washers on booster assembly connection inlets.			
		(b) LUBRICATE internal non-return spring check valves on a 10-yearly basis.			
4.5	Drain and test valve washers	For screw-down style valves, EXAMINE seating and fit new washers. For packed gland variants, FIT new gland packing.			
4.6	Stop valves	FIT new gland packing and lubricate spindle.			
4.7	Hydrant valves	FIT new seatings to all hydrant valves and lubricate spindles. (Perishable items only.) NOTE: This activity should be completed prior to conducting the hydrostatic pressure test.			
4.8	Water supply non-return valves	RENEW water supply non-return valve seatings and gaskets.			
4.9	Gauges	CHECK all pressure gauges against calibrated gauge.			
4.10	Water supply tanks—Atmospheric	Perform routine service in accordance with Section 5.			

Difference between Annual Flow Test and the Five Yearly Booster Flow Test

Annual water flow testing verifies each water supply (town's main, fire pumps, tanks etc.) provide the required flow and pressure at the most hydraulically disadvantaged hydrant/s. This test does not encompass the booster assembly (and the pump bypass if fitted) – the five yearly booster flow tests does. The diagram below illustrates the difference between the testing.



Why are these tests important?

QFES officers place themselves in harm's way when fighting fires and a reliable water supply is essential. Failure of the hydrant system during a fire emergency could have catastrophic consequences.

Over time, the hydrant system will deteriorate internally & restrictions can develop. Systems with badly corroded or obstructed piping and valving is not unusual on systems that have not been maintained correctly.

Some building owners have been unfortunate enough to experience water damage caused by hydrant system pipe failure.

What if I don't have my Hydrant System tested?

Under the *Building Fire Safety Regulation 2008*, penalties can be issued by the Queensland Fire and Rescue Service for failing to correctly maintain building fire safety equipment.

More information

For more information, feel free to contact Fortifire via email or phone or contact Fortifire to see how we can help.

Alternatively, contact your local Queensland Fire and Emergency Services representatives to seek their advice. They prefer building owners are proactive in these matters and will assist you to ensure your building is compliant.

<https://www.qfes.qld.gov.au/buildingsafety/Pages/default.aspx>

NOTE: Fortifire provides Six Monthly, Annual and Five Yearly Testing and Certification Services that is automatically scheduled each year and we will also arrange to provide the required Form 72 for your fire records.

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