Table 9.32.: Fire Pump Testing, Inspection and Maintenance

ITEM	REQUIREMENTS
2. WEEKLY INSPECTION	**1. VISUAL OBSERVATION** i. Piping is free of leakage. ii. Pressure gauges reading are satisfactory. iii. The controller pilot light is illuminated to ensure power is on. iv. The transfer switch normal pilot light is illuminated. v. The pump suction and discharge and bypass valves are fully open vi. The suction line pressure gauge reading is within acceptable range. vii. The system line pressure gauge reading is within acceptable range. viii. The suction reservoir has the required water level. ix. The wet pit suction screens are unobstructed and in place. x. The waterflow test valves are in the closed position. xi. The ventilating louvers at the pump room are free to operate. xii. The reverse phase alarm pilot light is off/the normal phase rotation pilot light is on. xiii. The oil level in the vertical motor sight glass is within acceptable range. xiv. The power to pressure maintenance (jockey) pump is provided. xv. The diesel engine fuel tank is at least two-thirds full. xvi. The diesel engine controller selector switch is in auto position. xvii. The diesel engine batteries' voltage readings are within acceptable range. xviii. All alarm pilot lights are off. xix. The diesel Engine running time meter is reading. xx. The oil level in the right angle gear drive is within acceptable range. xxi. The crankcase oil level is within acceptable range. xxii. The cooling water level is within acceptable range. xxiii. The electrolyte level in batteries is within acceptable range. xxiv. Battery terminals are free from corrosion.
3. WEEKLY TESTS	**1. GENERAL** i. A non-flow test shall be conducted for electric motor-driven pump and diesel engine-driven fire pumps without recirculating water back to the pump suction. ii. The test shall be conducted by starting the pump automatically. iii. The electric pump shall run a minimum of 10 minutes. iv. The diesel pump shall run a minimum of 30 minutes **2. FOLLOWING OBSERVATION RECORDS AND MAINTENANCE ADJUSTMENTS SHALL BE CARRIED OUT WHILE PUMP IS RUNNING** i. Record the pump starting pressure from the pressure switch /pressure transducer. ii. Record the system suction and discharge pressure gauge readings. iii. Inspect the pump packing glands for slight discharge, adjust gland nuts if necessary iv. Inspect for unusual noise or vibration. v. Inspect packing boxes, bearings, or pump casing for overheating vi. Record pressure switch or pressure transducer reading and compare to the pump discharge gauge. vii. For pumps that use electronic pressure sensors to control the fire pump operation, record the current pressure and the highest and the lowest pressure shown on the fire pump controller event log. viii. For electric motor and radiator cooled diesel pumps, check the circulation relief valve for operation to discharge water. ix. Observe the time for motor to accelerate to full speed. x. Record the time controller is on first step (for reduced voltage or reduced current starting) xi. Record the time pump runs after starting (for automatic stop controllers) xii. Observe the time for diesel engine to crank. xiii. Observe the time for diesel engine to reach running speed xiv. Observe the engine oil pressure gauge, speed indicator, water and oil temperature indicators periodically while the engine is running xv. Record any abnormalities and initiate repair or maintenance or parts replacement through Civil Defence approved fire contractor.