

**CIVIL SERVICE DEPARTMENT
PUBLIC SAFETY CIVIL SERVICE COMMISSION
2025 EXAMINATION BIBLIOGRAPHY FOR FIREBOAT ENGINEER**

FINAL: March 7, 2025

The written examination for Fireboat Engineer will be held on Monday, June 9, 2025 at location to be determined.

Candidates who pass the written examination will be scheduled for the practical examination, tentatively scheduled for September 8-12, 2025 (times and locations to be announced). Candidates are required to attend more than one day during this period. The practical examination exercises will be based on the 1) skills and abilities identified by the job analysis as critical for successful job performance as a Fireboat Engineer, 2) information from the Promotion Development Committee who serve as subject matter experts, and 3) reading materials in the bibliography. Therefore, the practical examination topics are not limited to materials on the bibliography.

Please view the Classification Specification for the Fireboat Engineer for the general scope of job duties and required knowledge, skills, and abilities.

GENERAL SCOPE: Pumps, motors, electricity/testing equipment, fuels and lubricants, the operation, maintenance and repair of diesel engines, generators, auxiliary machinery and equipment, and the systems and piping arrangements of Fire Boats #1, #2, #3 Chief Seattle and #4 Leschi (specific questions will deal with the machinery of the Seattle Fireboats). Verbal and written communication, supervision of fireboat crew, interaction with personnel and members of the public, and compliance with Citywide policies, and SFD POG. Vessel characteristics of the SFD fireboats.

Please contact the Seattle Department of Human Resources Fire & Police Exams Unit at yoshiko.gracematsui@seattle.gov if you have any questions on the bibliography or the exam process.

A bibliography of study material on which the written examination will be based includes the following:

SOURCE TITLE	CONTENTS
Allied Systems Tech Manual Telescopic Crane TC 20-55	Chapters 1 -5 (excluding schematics)
AutoNav Electro Hydraulic Steering Operations and Service Manual	Chapters 1, 2, 4, 5
Caterpillar C18 Operation and Maintenance Manual SEBU8245-04	All (excluding 42-52, 72, 81-96, 133-14)
Caterpillar C18 Marine Power Display Operators Guide	Pages 4-9
CBRNE Crew Protection System Operation and Maintenance Manual Doc. #104086-511-1	Pages 1-10 and 15 "Changing the filter"
Champion Air Compressor Model R15B Operation and Maintenance Manual	All
Detroit Diesel Filter 75/900MAX and 75/1000MAX	All
Detroit Diesel Installation Instructions 18SP541 – Installation of Sea Pro 600	All
Durst Hydraulic Pump Drive Service Manual	Pages 1-5, 8-12, 14, 19
Electro Guard Cathodic Protection System Installation and Operation Manual	All
Electro Guard Preliminary Consulting Report for Seattle Fire Department	Pages 1-16

Fire Fighting Systems Operations Manual Doc. # FFS003-41-070	All (excluding pages 21-23)
Foam Pro System 3012 Installation and Operation Manual	Chapters 1-7, 8 (pages 17, 18, 20 only), 9 (page 26 only), 11-14
Hamilton Jet Installation and Service Manual HJ364-3 Jet unit Manual R1A23	Chapters 2,3,4,7,8
Kaeser Screw Compressor Model SX Service Manual	Chapters 2-5, 8-10, and 11.0 to 11.5
Key Power KP 22/16 Hydraulic Thruster and Installation and Operation Manual	All
Leschi Switch Board Sequence of Operation 940748 Revision A 4/25/06	All
“Making US Fire Departments More Diverse and Inclusive” by Corinne Bendersky	All
MTU Series 10V 2000 Series M92, M93 Operating Instructions	All
MTU Series 8V 4000 M71 Operating Instructions M015412/02E	Pages 2-1 to 2-14, 4-1 to 4-2, 5-01 to 5-03, 6-28 to 6-29, 6-46, 6-48 to 6-51
Northern Lights Lugger OM2-2 Operators Manual for M1066T, M1064T	All (excluding pages 31-45)
PMC Omni Chief Series 8003-1000 Instruction Manual	All (excluding chapter 3)
<u>Policies and Operating Guidelines</u> , SFD Rev: Dec 2024	All Operating Guidelines listed below and all Policies that relate to them.
	P 1007 – Code of Conduct 3004 – Ethics 3008 - Social Media Policy (Pages 3008 46 -47) 3017 – RSJI (Pages 3017-1 – 3)
Sexual Harassment Prevention Training Manual for Managers and Supervisors, 3rd Edition, by Paul Gibson, J.D., S.P.H.R. and Marjorie A. Johnson, J.D	All
Vessel Characteristics, Seattle Fireboats	See new table on page 4
The Leader’s Guide to Unconscious Bias	Chapters 1- 8
Workboat Engineer, Revised Edition “D”/Marine Education Textbooks	Book #1, Ch 7 (excluding Parts 2, 3, 5, 6, 7, 9 and Question banks 2, 3, 5, 6, 7) Include Question bank 9 Book #2 Chapter 13 (excluding OSI 10-90)
ZF Marine Gear Operating Instructions 350, 500, 3000, BW 460	All
Form 9 – “Engineering Maintenance Record”	All vessels
Best Practices Binder	<ul style="list-style-type: none"> • Handlines from large platform boats • FB 4 Fuel Transfer • Fueling • Blackwater Pumpout • Small boat cold weather storage • Cold weather for station 5 float • Cold weather for all boats • Discharge of Oil Prohibited placards

	<ul style="list-style-type: none">• Tankage sheets from Leschi and Chief (Yellow laminated on clip board)• Purchasing Flowchart
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Please contact the Civil Service Department Public Safety Exams Unit at 615-0581 or yoshiko.gracematsui@seattle.gov if you have any questions on the bibliography or the exam process.

Vessel Characteristics of the Seattle Fireboats:

	LESCHI	CHIEF SEATTLE	FB1	FB2
Overall length	108'	96'-6"	50'	50'
Beam	27'	23'	16'-6"	16'-9"
Height (Air Draft, ft)	50' mast up / 39'-6" down	30'-4"	20'	21'-4 1/2"
Draft	10'	7'	30"	30"
Speed kts	14	22	30	42
Fuel gal	20,940	1508	486	600
Water gal	1200	2 @ 50	42	45
Foam gal	6000	950	204	200
Hull type	Displacement	Semi-displacement	Planing hull	Planing hull
Weight tons	303	208	23.8	23.8
Propulsion	Twin Screw	Twin Screw	2 - 364 Hamilton jet	2 - 364 Hamilton jet
Engine model	MTU 8V 4000, M71	MTU 10V 2000, M93	Cat C-18	Cat C-18
Engine HP	1556	1500	715	1001
RPM rating	2000	2450	2300	2300
Transmission	ZF 4610	ZF 3000	ZF 350	ZF 500
Prop Size	72", 4 blade	42", 5 blade		
Thruster type	Key Power Hydraulic	Key Power Hydraulic		
Thruster power	Bow – 200 hp, Stern – 100 hp	2 – 50 hp		
Alternator amps			2 – 270 A	2 – 105 A
Generator type	Northern Lights	Northern Lights	Northern Lights	Northern Lights
Generator	2 – 99 kw	2 – 65 kw	1 – 10kw	1 – 9kw
Generator power	480V AC 3 phase	480V AC 3 phase		
Pump Engine type	2 – MTU 8V 4000, M71	2 – Cat C18	Hale BG8 centrifugal. off front main engines	Hale BG8 centrifugal. off front main engines
Pump Engine HP	1556	715		
Pump Engine RPM	2000	2100		
Pump Capacity GPM	4 – 5000	4 – 2500	2 – 3000	2 - 3000
Monitors	8	6	2 – 2000	2 - 2000
4" Ports	12	10	4	4
2 ½" Ports	4		4	4
Foam Monitors	8	5	Bow/fwd dschrg	Bow/fwd dschrg
CBRNE	Yes	No	Yes	Yes
Deconn	Yes	Yes	Yes	No

Updated 3/7/2025