



MARITIME TACTICAL OPERATORS

SELECTION PHYSICAL FITNESS EVALUATION

AUGUST 22, 2022

CFMWS - SBMFC

**MARITIME TACTICAL OPERATORS
SELECTION PHYSICAL FITNESS EVALUATION
OPERATIONS MANUAL
1ST EDITION, 2021**

FOREWORD

1. The 1st Edition of this Operations Manual has been prepared to provide instructions and guidance for conducting the Royal Canadian Navy (RCN) Maritime Tactical Operators (MTO) Selection Physical Fitness Evaluation (PFE) for the purpose of Pre-Selection to the MTO Assessment Center (MTOAC). This evaluation is delivered at the base level as part of the application process.
2. RCN MTO Selection PFE was developed for the MTOAC, under the supervision of the Canadian Forces Morale and Welfare Services (CFMWS), Director of Programs (D Prog), Personnel Support Program (PSP).
3. As of 2022, this operations manual is the only reference for conducting the MTO Selection PFE for the Pre-Selection of candidates to the MTOAC.
4. Revisions to this operations manual may occur by D Prog when required. The updated operations manual will be distributed formally after any review.
5. It is essential that the evaluation protocol and instructions provided in this operations manual be strictly adhered to and administered with care and attention in order to ensure valid and reliable results.
6. Evaluators must familiarize themselves with the instructions and ensure that each evaluation is conducted in the safest manner and environment possible.
7. Should you have any questions with the protocols or descriptions found within this Operations Manual you are asked to contact your Manager, Fitness, Sports & Recreation (**or equivalent**) or the D office at dfit-cphysd@cfmws.com

Signature

Daryl Allard
Director Programs
Personnel Support Programs

This page is intentionally left blank

DRAFT

TABLE OF CONTENTS

1.	CHAPTER 1: INTRODUCTION	1
1.1.	BACKGROUND	1
1.2.	GENERAL.....	1
1.3.	MTO SELECTION PHYSICAL FITNESS EVALUATION	2
1.4.	AIM	23
1.5.	REFERENCES	23
1.6.	REQUIREMENTS AND RESPONSIBILITY	3
2.	CHAPTER 2: MTO SELECTION PHYSICAL FITNESS EVALUATION	5
2.1.	PART I: PRE-EVALUATION ADMINISTRATION.....	5
2.1.1.	EVALUATION SCHEDULE.....	5
2.1.2.	PRE-EVALUATION INSTRUCTIONS FOR CAF MEMBERS	5
2.1.3.	EVALUATOR RESPONSABILITIES	6
2.1.4.	ENVIRONMENTAL CONDITIONS FOR THE EVALUATION	6
2.1.5.	EMERGENCY PROCEDURES	6
2.2.	PART II: EVALUATION SET-UP	8
2.2.1.	EQUIPEMENT FOR THE MTO SELECTION PFE.....	8
2.2.2.	CALIBRATION OF EQUIPMENT	8
2.2.3.	EVALUATION SET-UP	9
2.3.	PART III: REGISTRATION	11
2.3.1.	INFORMATION SECURITY	11
2.3.2.	MTO SELECTION PFE REPORTING FORM – SECTION A: SERVICE PARTICULARS	11
2.3.3.	MTO SELECTION PFE REPORTING FORM – SECTION B: HEALTH APPRAISAL.....	11
2.4.	PART IV: MTO SELECTION PHYSICAL FITNESS EVALUATION	15
2.4.1.	MTO SELECTION PFE OVERVIEW.....	15
2.5.	PART V: MTO SELECTION PFE RESULTS AND COOL-DOWN	19
2.5.1.	MTO SELECTION PFE REPORTING FORM – SECTION C: TEST RESULTS.....	19
2.5.2.	COOL-DOWN	20

2.6.	PART VI: MTO SELECTION PFE DEBRIEF, CERTIFICATIONS OF EVALUATION & UNDERSTANDING.....	20
2.6.1.	MTO SELECTION PFE DEBRIEF.....	20
2.6.2.	MTO SELECTION PFE REPORTING FORM – SECTION D: CERTIFICATION FO EVALUATION.....	21
2.6.3.	MTO SELECTION PFE REPORTING FORM – SECTION E: CERTIFICATION OF UNDERSTANDING.....	21
2.7.	PART VII: PROCESSING MTO SELECTION PFE RESULTS	21
2.7.1.	MTO SELECTION PFE REPORTING FORM.....	22 21
	APPENDIX A: ACRONYMS AND ABBREVIATIONS.....	1
	APPENDIX B: TOOL 1 – MTO SELECTION PFE REPORTING FORM.....	1
	APPENDIX C: TOOL 3 – WARM-UP/EVALUATION PREPARATION	1
	APPENDIX D: TOOL 4 – BLOOD PRESSURE MEASUREMENT PROCEDURES	2
1.	GENERAL	2
2.	MANUAL BP PROCEDURES.....	2
3.	AUTOMATIC BP PROCEDURES	3
4.	BP RESULTS.....	3
	APPENDIX E: ADDITIONAL REFERENCES	4

1. CHAPTER 1: INTRODUCTION

1.1.BACKGROUND

1.1.1. The Director of Naval Personnel and Training (DNP) requested the research and development of a scientifically valid Selection Physical Fitness Evaluation (PFE) for the pre-selection for the Maritime Tactical Operators (MTO) Assessment Center (MTOAC). To this end, a Selection PFE was developed for applicants wanting to challenge the MTOAC. It is based on the physical demands required for the safe and effective completion of the MTO course and operational physical tasks. The MTO Selection PFE was approved by the DNP of the RCN on **DATES**.

1.2.GENERAL

1.2.1. The MTO Selection PFE contained within this Operations Manual is to be administered to CAF personnel (MTOAC applicants) by their local Personnel Support Programs (PSP) Fitness staff. Only local PSP Fitness staff who are qualified as evaluators may administer the MTO Selection PFE contained within this operations manual. Protocols in this operations manual must be followed to ensure the evaluation results are valid and reliable.

1.2.2. The MTO Selection PFE has two components: a pre-fatigue and a timed FORCE circuit. The pre-fatigue component must be completed right before the timed FORCE circuit and should take approximately 16 seconds to administer. The timed FORCE circuit component should take approximately 10 minutes to administer per applicant. These timings are only related to the test administration.

1.2.3. Each component of the evaluation represents an important aspect of the MTO occupation and course. The applicant must complete each component. There is no specific level of performance associated with a “passing or failing score”; however, objectives will be developed throughout the trial implementation year 2022 to guide applicants. Furthermore, the inability to complete the pre-fatigue component without resetting will be noted in the scoring sheet. Applicants are encouraged to perform their best in all components of the MTO Selection PFE.

1.2.4. The MTO Selection PFE must be completed no more than six (6) months prior to the MTOAC to be considered valid and acceptable for the MTOAC.

The MTOAC is typically held at the end of November/early December; therefore, the test should be completed from May through October. Regardless of the performance level achieved on the first attempt, MTO applicants can re-attempt the MTO Selection PFE a second time to improve their score. There must be a minimum of 30 days between evaluations to allow for considerable performance improvement through a comprehensive physical training program.

1.3.MTO SELECTION PHYSICAL FITNESS EVALUATION

- 1.3.1. The MTO Selection PFE is designed to capture the movement patterns, energy systems, and muscle groups recruited in the performance of MTO qualification training and occupational tasks. The MTO Selection PFE is comprised of two components; a pre-fatigue and a timed FORCE circuit. The MTO Selection PFE will be described in details in Chapter 2, Part IV.
- 1.3.2. The MTO Selection PFE components are as follows; note the candidate is wearing a 14 kg weight vest.
 - 1.3.2.1. **Pre-fatigue:** An eight-(8)-second flexed-arm hang followed immediately by an eight-(8)-second “dead hang”.
 - 1.3.2.2. **Timed FORCE circuit:** Consists of the same four (4) tasks as the FORCE Evaluation, with the addition of a second sandbag for the ILS.

1.4.AIM

- 1.4.1. This Operations Manual provides guidance and direction including how to administer MTO Selection PFE. This manual will be adhered to by all PSP Fitness staff involved in the overall administration of the evaluation.

1.5.REFERENCES

- 1.5.1. The following orders, directives, and publications are associated with the MTO Selection PFE and this Operations Manual. The following Defence Administrative Orders and Directives (DAODs) can be found on the Defence Wide Area Network (DWAN) at <http://www.forces.gc.ca/en/about-policies-standards-defence-admin-orders-directives/index.pag> :
 - A. DAOD 2007-1, General Safety Program;
 - B. DAOD 5023-2, Physical Fitness Program;

- C. DAOD 5045-0, Canadian Forces Personnel Support Programs;
- D. DAOD 7002-3, Investigative Matters and References;
- E. Director Medical Policy Instruction 4000-21, <http://cmpm.cpm.mil.ca/en/health/policies-direction/policies/4000-01.page>

1.6. REQUIREMENTS AND RESPONSIBILITY

- 1.6.1. Effective 2022, the MTO Selection PFE became a pre-selection requirement for candidates challenging the MTOAC.
- 1.6.2. CFMWS/DFIT acts as the primary advisor on all matters about MTO Selection PFE.
- 1.6.3. Additional requirement and responsibility fall to the following Offices of Primary Interest (OPI) and key stakeholders:
 - 1.6.3.1. **Directorate of Military Career Policy and Grievance (DMCPG):** The OPI for fitness policy covered under DAOD 5023-2, Physical Fitness Program;
 - 1.6.3.2. **Chief of Military Personnel Command (CMPC):** The OPI for CAF Physical Fitness Programs;
 - 1.6.3.3. **Canadian Forces Morale and Welfare Services (CFMWS) / Directorate of Programs:** On behalf of CMPC, acts as the primary advisor on all matters pertaining to CAF physical fitness;
 - 1.6.3.4. **Senior Manager PSP and Manager Fitness, Sports and Recreation (Mgr FS&R) (or equivalent):** Responsive to the needs of their respective Base/Wing Commanding Officer (CO). They are responsible to deliver future CAF Fitness Evaluation, maintain an up-to-date list of local PSP Fitness staff qualified as Evaluators to administer each respective Selection PFE, ensure protocols, as described in the MTO Selection PFE Operations Manual, are being followed accurately and that all Evaluators (local PSP Fitness staff) remain current on any protocol changes; and
 - 1.6.3.5. **Evaluators:** Local PSP Fitness staff are responsive to their Mgr FS&R to ensure the needs of their respective Base/Wing CO are met by planning, organizing, conducting, instructing, and evaluating CAF members on each respective CAF Fitness Evaluation. This operations manual provides guidance and direction on how to administer MTO Selection PFE. This manual will be adhered to by all PSP Fitness staff involved in the overall administration of the evaluation.

Commented [LJ1]: I believe we should add Personnel Support Programs? What is written in the CD PFE OPS manual – and is it correct?

DRAFT

2. CHAPTER 2: MTO SELECTION PHYSICAL FITNESS EVALUATION

2.1.PART I: PRE-EVALUATION ADMINISTRATION

2.1.1. EVALUATION SCHEDULE

- 2.1.1.1. The evaluation needs to be scheduled in advance via the PSP Fitness Coordinator or Fitness Instructor. For reserve units, find the supporting regular Force B/W and resources using [this link](#).
- 2.1.1.2. Given that the MTO Selection PFE performance results are valid for six (6) months and that MTOAC is typically held at the end of November/early December, the administration of the test may start in May. Evaluation schedules /booking procedures will vary by location.

2.1.2. PRE-EVALUATION INSTRUCTIONS FOR CAF MEMBERS

- 2.1.2.1. A minimum of 48 hrs prior to the MTO Selection PFE, the CAF member (MTO applicant) must be informed of the following dress, equipment and guidelines:
 - A. Exercise clothing (shorts & T-shirt);
 - B. Running shoes;
 - C. Water bottle;
 - D. Weight vest – evenly loaded between front and back (14 kg total)¹;
 - E. Avoid exercise six (6) hrs prior to the evaluation;
 - F. Avoid alcohol consumption for at least six (6) hrs prior to the evaluation; and
 - G. Avoid large meals, smoking/vaping, chew smokeless tobacco, or stimulants (tea, coffee, energy drinks, pharmaceuticals, etc.) at least two (2) hrs prior to the evaluation.
- 2.1.2.2. Non-compliance with the above instructions does not necessarily mean the MTO Selection PFE postponement. However, applicants must be informed that it may have a negative effect on their results. Not having the proper dress or equipment will lead to the test component postponement.

¹ Candidates will be able to borrow a weight vest from the gym if they do not have their own. Weight vest will need to be weighed by the PSP staff before the evaluation.

2.1.3. EVALUATOR RESPONSABILITIES

- 2.1.3.1. Local PSP Fitness staff may only administer the MTO Selection PFE after receiving the qualification training. Contact the Navy Strength and Conditioning Specialist in Esquimalt for support and additional information.
- 2.1.3.2. It is recommended that local PSP Fitness staff is organized in such a manner as to ensure that a ratio of one-to-one evaluator-participant is achieved.
- 2.1.3.3. Local PSP Fitness staff are responsible for the completion and accuracy of the evaluation.

2.1.4. ENVIRONMENTAL CONDITIONS FOR THE EVALUATION

- 2.1.4.1. The MTO Selection PFE should be performed in the same location as the FORCE Evaluation. Cold or heat can exacerbate the physiological strain of exercise and thus may influence performance. The ideal environmental conditions for the conduct of the MTO Selection PFE Evaluation are between 20-22 degrees Celsius with a relative humidity of less than 60 percent and adequate airflow (American College of Sports Medicine [ACSM], 2014).

2.1.5. EMERGENCY PROCEDURES

- 2.1.5.1. When the MTO Selection PFE is properly administered, there are minimal risks to the applicant. Nevertheless, the emergency protocol developed by each local PSP Fitness staff in conjunction with their respective locations Standard Operating Procedures will be reviewed. Also, the local PSP Fitness staff will ensure that:
 - A. All Evaluators are First Aid and Cardio-Pulmonary Resuscitation (CPR) qualified;
 - B. Evaluators have briefed all applicants on safety requirements and emergency procedures before the start of the MTO Selection PFE;

- C. The location of the closest Automated External Defibrillator has been identified, when available.

Note: In the event of a physical incident, implement the procedures of your local Occupational Health and Safety Committee. Refer to 2007-1 General Safety Program, for more information.

DRAFT

2.2.PART II: EVALUATION SET-UP

2.2.1. EQUIPMENT FOR THE MTO SELECTION PFE

2.2.1.1. The following lists equipment and resource requirements for the conduct of the pre-fatigue and timed FORCE circuit components of the MTO Selection PFE:

- A. FORCE Evaluation setup (FORCE Operations Manual, 3rd edition);
- B. 1 x chin-up bar (as close to the course layout as possible – preferably inside 5-10 m of the 20 m rushes starting line);
- C. 1 x 12-14 inches platform (e.g. plyo box) – the height of the platform should allow the candidate/participant to easily pull themselves up to the correct position on the chin-up bar;
- D. 1 x luggage scale – measurement of the weight vest;
- E. 1 x weight vest (14 kg) - Candidates can borrow a weight vest from the gym if they do not have their own;
- F. 1 x additional 20 kg sandbag for the Intermittent Loaded Shuttles;
- G. Additional weight for the sandbag drag (43.4 kgf). Sandbags or weight plates are examples of additional weight;
- H. 1 x **Tool 1 – MTO Selection PFE Reporting Form**;
- I. 1 x MTO Selection PFE Evaluation Operations Manual; and
- J. 1 x Local Incident Report Form.

2.2.2. CALIBRATION OF EQUIPMENT

2.2.2.1. Calibration of equipment (weights, distances, and friction resistance) is essential to ensure the accuracy and the validity of the evaluation results. The equipment used in the FORCE circuit must be calibrated using the directions in the FORCE Operations Manual.

2.2.2.2. The weight of most equipment is not expected to change from day to day.

2.2.2.3. Before the conduct of any evaluation, the evaluator will complete a facility, equipment, and floor surface inspection to eliminate any tripping/slipping hazards, equipment malfunctions, obstacles, inappropriate surfaces, and general safety risk.

2.2.3. EVALUATION SET-UP

- 2.2.3.1. Unique FORCE Evaluation lanes are established for the timed FORCE circuit. The applicant is assigned to a test lane consisting of a 20 m long straightaway used for the 20 m Rushes, Intermittent Loaded Shuttles, and Sandbag Drag. This lane should not be more than 20 m away from a Sandbag Lift set-up. The transit between the FORCE Evaluation lane and Sandbag Lift set-up should not be obstructed by any hazards or other test lanes (Figure 1).
- 2.2.3.2. Ensure that there is access to a chin-up bar close to the evaluation set-up (preferably close to the start line of the 20 m rushes). Place a 12-14-inch platform (e.g. plyo box) below the chin-up bar to allow the participant to easily pull themselves up to the bar, if necessary. On the chin-up bar, place two pieces of tape such that there is a 12-inch gap in between the inside edges of the tape.
- 2.2.3.3. The sandbags must be calibrated to 20 kg +/- 0.2 kg. The drag setup must be calibrated to 33.6 kgf.
- 2.2.3.4. The PSP Fitness evaluator will load a weight vest to 14 kg for the participant to wear during the entirety of the MTO Selection PFE.
- 2.2.3.5. Place 2 x 20 kg sandbags at the start line, in comparison to the regular FORCE evaluation that has only one. The applicant will be asked to carry two sandbags during the Intermittent Loaded Shuttles.
- 2.2.3.6. For more information on the FORCE circuit setup and calibration, please review the FORCE Operations manual (FORCE Operations Manual, 3rd edition).



Figure 1: The setup resembles a modified FORCE evaluation setup.

DRAFT

2.3.PART III: REGISTRATION

2.3.1. INFORMATION SECURITY

2.3.1.1. The MTO Selection PFE Reporting Form is ‘Protected A’ once completed and must be treated as such.

2.3.2. MTO SELECTION PFE REPORTING FORM – SECTION A: SERVICE PARTICULARS

2.3.2.1. Visibly and legibly, print all service particulars in the boxes located on the applicable Reporting Form. If a number has fewer digits than the allocated spaces on the form, use zeros, beginning at the left side (for example, record MOS ID of 00010 as 0001000000)

Section A: Service Particulars - Détails du service															
Surname - Nom										Init.		Rank - Grade		Military ID Pièce d'identité militaire	
														<input type="checkbox"/> Yes <input type="checkbox"/> No	
DOB / DN-YYAA		MM		DJ		Age		Sex - Sexe		SN - NM					
								<input type="checkbox"/> M <input type="checkbox"/> F							
Location - Lieu				Unit - Unité				UIC - CIU		MOS ID - ID SGPM					

Figure 2.1 Section A: Service Particulars

2.3.3. MTO SELECTION PFE REPORTING FORM – SECTION B: HEALTH APPRAISAL

2.3.3.1. Before attempting the MTO Selection PFE, all applicants must complete the **Section B: Health Appraisal**, of the reporting form (see the reference image below). The Health Appraisal consists of three (3) questions which the applicant must carefully read and answer honestly, and to the best of their knowledge. This procedure is necessary to identify potential health issues that require a medical consultation prior to an evaluation.

Section B: Health Appraisal - Évaluation de la santé

This questionnaire is a screening device to identify personnel for whom fitness evaluation and physical activity might be inappropriate at this time. / Ce questionnaire est un outil visant à identifier les personnes dont une évaluation de la condition physique et l'activité physique sont actuellement contre-indiqués

	Yes Oui	No Non
1. To the best of your knowledge do you have a medical condition or Medical Employment Limitation (MEL) which restricts you from participating in a maximal fitness evaluation or a progressive training program? / À votre connaissance souffrez-vous d'une trouble médical ou avez-vous une contrainte à l'emploi pour raisons médicales (CERM) qui vous empêchent de participer à une évaluation de la condition physique avec effort maximal ou à un programme de conditionnement physique progressif?	<input type="checkbox"/>	<input type="checkbox"/>
2. Is there any other reason you would need to talk to a physician prior to your fitness evaluation or training program? / Y a-t-il d'autres raisons pour lesquelles vous devriez consulter un médecin avant de participer à l'évaluation de la condition physique ou d'entreprendre un programme de conditionnement physique?	<input type="checkbox"/>	<input type="checkbox"/>
3. Do you have a valid Periodic Health Assessment (PHA), if no Proceed to Blood pressure. / Avez-vous un examen médical périodique (EMP) valide? Si non allez à la tension artérielle.	<input type="checkbox"/>	<input type="checkbox"/>
Blood pressure / Tension Artérielle		
Your pre-evaluation blood pressure is less than or equal to 150/100 mm Hg. / Votre tension artérielle avant l'évaluation est moins ou égale à 150/100 mm Hg.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Your pre-evaluation blood pressure lies between 141/91 mm HR and 150/100 mm Hr and is considered to be slightly above the normal range. It is recommended that you consult your MO / Votre tension artérielle avant l'évaluation se situe entre 141/91 et 150/100 mm Hr. Cette valeur étant légèrement supérieure à la normale, il vous est recommandé de consulter votre médecin.		
<input type="checkbox"/> Referred to Health Care Provider / Adressé à un fournisseur de soins de la santé		

Name (print) - Nom (lettre moulées) Signature Date - (YYAA) / (MM) / (DJ)

Figure 2.1 Section B: Health Appraisal

2.3.3.2. **Note:** Only applicants who answered “NO” to the first two (2) questions along with “YES” to the third or “NO” to all three (3) first questions but met the BP requirements, are cleared to attempt the MTO Selection PFE.

2.3.3.3. A Periodic Health Assessment (PHA) is valid for five (5) years for CAF personnel under 40, and two (2) years for CAF members over 40 for all Military Occupation Structure Identification unless otherwise specified. When a PHA is performed between the ages of 35 and 40, it will be valid for a maximum period of five (5) years, but not beyond age 42.

Age	PHA Validation Period
Less than 40 years of age	5 years
More than 40 years of age	2 years
Between 35 – 40 years of age	5 years, but not beyond age 42

Table 2.1 Periodic Health Assessment (PHA) Validation Period

2.3.3.4. If the applicant has a valid PHA, there is no need to measure blood pressure before the MTO Selection PFE. Proceed to the MTO Selection PFE (Chapter 2, Part IV).

2.3.3.5. If the applicant has an expired or invalid PHA, the PSP fitness evaluator will follow the guidelines outlined in **Tool 3: Blood Pressure Procedures**; and measure the applicant's BP using a stethoscope and sphygmomanometer or with a calibrated automated blood pressure monitor. The evaluator will check-off the appropriate BP box of Section B once they have verified the applicant's BP:

- A. **OK:** If the applicant's BP is less than or equal to (\leq) 150/100 mmHg or has met the criteria set out by their Medical Officer (MO), proceed to the MTO Selection PFE;
- B. **High:** If the applicant's BP is in the range of 141/91 to 150/100 mmHg, the applicant may benefit from seeing a qualified Health Care Provider. However, the applicant may still proceed with the MTO Selection PFE; or
- C. **Over:** If the applicant's BP is greater than or equal to (\geq) 151/101 mmHg or above the MO's recommended criteria, their pre-evaluation BP is over the normal range. Have the applicant rest quietly for five (5) minutes before repeating the measurement. If their BP is over the normal range or above the MO's recommended criteria again, the applicant is not fit for the MTO Selection PFE. Advise the applicant that their BP reading is slightly above the normal range and refer them to their Health Care Provider (see below). Verbally tell the applicant that there is no cause for alarm and that consulting a Health Care Provider serves as a simple safety precaution.

2.3.3.6. In a case of a referral to a Health Care provider, ask the member to reschedule at a later acceptable date. Refer the applicant to a Health Care Provider when:

- A. The applicant answers "YES" to one or both of the first two (2) questions of the Health Appraisal (Section B) on the applicable form (**Tool 1**); or
- B. The applicant answers "NO" to question three of the Health Appraisal (Section B) on the applicable form (**Tool 1**) AND their measured BP exceeds 150/100 mmHg or above the MO's recommended criteria after two attempts; or
- C. The applicant develops any symptoms, which in the experience of the evaluator or the applicant are outside of those normally encountered; or
- D. You, as the evaluator, are concerned for the applicant's well-being; or
- E. A referral is requested by the applicant.

2.3.3.7. **Referral Process:** Applicants referred to a Health Care Provider will be provided with the applicable reporting form (**Tool 1**), with the following information:

- A. Section A and B filled out;
- B. Ensure that the 'Referred to Health Care Provider' box is checked-off in Section B;
- C. Ensure that the applicant prints their name, signs, and dates Section B; and
- D. The Evaluator will cross out Sections C and E, and print and sign Section D.

2.3.3.8. **Note:** DO NOT ATTEMPT to diagnose or discuss in detail why the applicant had a "YES" response or why their BP is above the criteria for pre-screening.

2.4.PART IV: MTO SELECTION PHYSICAL FITNESS EVALUATION

2.4.1. MTO SELECTION PFE OVERVIEW

- 2.4.1.1. The MTO Selection PFE is designed to simulate the most physically demanding tasks performed by the MTO and during its qualification course.
- 2.4.1.2. The MTO Selection PFE consists of two (2) components: the pre-fatigue component, and the timed FORCE circuit.
- 2.4.1.3. As the MTOAC is a competitive process, applicants are encouraged to give their maximal effort for all components of the MTO Selection PFE.
- 2.4.1.4. The MTO Selection PFE components are as follows:
 - 2.4.1.4.1. **Pre-fatigue:** The pre-fatigue component consists of performing eight (8) seconds of flexed-arm hang followed immediately by eight (8) seconds of “dead hang”. Once the pre-fatigue is completed, the modified FORCE circuit is initiated.
 - 2.4.1.4.2. **Timed FORCE circuit:** The timed FORCE circuit is completed as quickly as possible, while ensuring safe handling and body mechanics. It consists of the same four (4) tasks as the FORCE Evaluation with minor modifications such as: performed as a continuous circuit and Intermittent Loaded Shuttles performed carrying two (2) sandbags – one (1) in each hand. The tasks are completed in the same order as the FORCE Evaluation: 20 m Rushes, Sandbag Lift, Intermittent Loaded Shuttles and Sandbag Drag.

2.4.2. MTO SELECTION PFE EXECUTION

- 2.4.2.1. Prior to starting the evaluation, PSP walks the applicant through the different components of the evaluation, to make sure they are aware of the order the components are performed.
- 2.4.2.2. WARM-UP

2.4.2.2.1. Before performing the MTO Selection PFE, applicants must undergo the standardized warm-up and evaluation preparation lead by the PSP Fitness evaluator (**Tool 2**). The standardized warm-up and evaluation preparation include the following:

2.4.2.2.1.1. Dynamic movements (5-8 min) that reflect the movement patterns used during the MTO Selection PFE. This preparation is to be performed in a smooth and controlled manner, going to the full range of motion and using the correct technique.

2.4.2.2.1.2. An additional 2-5 min warm-up period is recommended at the applicant's discretion.

2.4.2.3. EVALUATION

2.4.2.3.1. After completing the warm-up, the applicants will be asked to don the weight vest (14 kg) and prepare to start the evaluation. The evaluator may assist in donning and securing the vest. The MTO Selection PFE consists of two (2) components; a pre-fatigue and a timed FORCE circuit (completion time recorded). Both of the pre-fatigue components will be completed in quick succession before moving directly into the timed FORCE circuit.

2.4.2.3.2. **Pre-fatigue component:**

2.4.2.3.2.1. Once ready to start the pre-fatigue section, the applicant will stand under the chin-up bar (stand on a platform if required). When the evaluator says "GO", the applicant will grab the chin-up bar with their hands inside of the tape marks, pull themselves into the correct position, and begin the flexed-arm hang. The grip the applicant uses (overhand, underhand, or mixed grip) is at the applicant's discretion, and the bar must be between the chin and eye level for all 8 seconds. As soon as the bar reaches the required level, the evaluator counts aloud, eight (8) seconds, while the applicant maintains the bar at this level for all eight (8) seconds. The applicant is then instructed to extend their

arms straight and perform a “dead hang” using the same grip. The evaluator counts out another eight (8) seconds, while the applicant must maintain the “dead hang” for all eight (8) seconds. This completes the pre-fatigue.

2.4.2.3.2.2. If the applicant is unable to complete the 8-second flexed arm hang, or the 8-second dead hang, they will have to restart from where they stopped immediately, and complete the remaining time before they move on.

2.4.2.3.2.3. The inability to complete the eight seconds on the first try and the amount of rest required will be noted on the assessment sheet.

2.4.2.3.2.4. Following the pre-fatigue, the applicant moves directly into the timed FORCE circuit. Time starts as soon as the candidate receives the “go” signal and gets up from the prone position at the start line (Figure 1). There should be no time wasted moving from the pre-fatigue to the red starting line.

2.4.2.3.2.5. If the applicant takes more than five (5) seconds to start the timed FORCE circuit due to circuit layout or for another reason, the evaluator should take note of the time difference and mark it in the comment section of the scoring sheet.

2.4.2.3.2.6. The MTO Selection PFE will be scored based on total completion time so the applicant must move as quickly as possible between tasks. The evaluator will stop the timer once the sandbag drag is completed, which marks the completion of the MTO Selection PFE.

2.4.2.3.3. Timed FORCE circuit:

2.4.2.3.3.1. **20 m Rushes:** Performed as described in Chapter 2 Part 5, FORCE evaluation (20 m Rushes protocol of the FORCE Operation Manual). The only difference is that the applicant will be coming from the pre-fatigue component, and move directly into the 20 m Rushes. Time starts as soon

as the candidate receives the “go” signal and gets up from the prone position at the start line

2.4.2.3.3.2. **Transition:** After completion of the 20 m Rushes, the applicant will move directly to the Sandbag Lifts station.

2.4.2.3.3.3. **Sandbag lifts:** Performed as described in Chapter 2 Part 5 FORCE evaluation (Sandbag Lifts protocol of the FORCE Operation Manual).

2.4.2.3.3.4. **Transition:** After completion of the Sandbag Lifts, the applicant will move directly to the Intermittent Loaded Shuttles station.

2.4.2.3.3.5. **Intermittent Loaded Shuttles:** Performed as described in Chapter 2 Part 5 FORCE evaluation (Intermittent Loaded Shuttles protocol of the FORCE Operation Manual), except the applicant will be carrying two (2) sandbags (one (1) in each hand – farmers carry) for the loaded components.

2.4.2.3.3.6. **Transition:** After completion of the Intermittent Loaded Shuttles, the applicant will move directly to the Sandbag Drag station.

2.4.2.3.3.7. **20 m Sandbag Drag:** Performed as described in Chapter 2 Part 5 FORCE evaluation (Sandbag Drag protocol of the FORCE Operation Manual). Applicants are allowed to stop at any time during the SBD.

2.4.2.3.4. The evaluator will stop the timer and record the FORCE circuit completion time when the applicant crosses the finish line of the Sandbag Drag. This marks the end of the MTO Selection PFE.

2.4.3. EVALUATION TERMINATION

2.4.3.1. A MTO Selection PFE is terminated when one of the following scenarios occurs:

- A. The applicant completes all the specific events of the MTO Selection PFE;
- B. The applicant chooses not to continue. Reasons for this could be fatigue, pain, injury, etc.;
- C. The evaluator becomes concerned for the applicant's safety due to immediate signs of serious distress. In the event of a medical issue, activate Emergency Medical Services;
- D. A physical incident occurs, resulting in the applicant being physically unable to continue;
- E. An equipment failure (e.g. sandbag, facility issue) occurs and requires immediate actions by the evaluator.

2.4.3.2. When the MTO Selection PFE is terminated for reasons 2.4.3.1.B – D, the test attempt does not result in a performance score level and is reported as Incomplete, but still counts towards the maximum of two (2) trials per MTOAC attempt (year). Only when the MTO Selection PFE is terminated for reason 2.4.3.1.E, the applicant can re-attempt the MTO component after a mandatory 15 min rest.

2.4.3.3. **Note:** If it is evident that an applicant will not complete the MTO Selection PFE, the evaluator may allow them to continue until exhaustion. This is encouraged to provide specific fitness programming and training recommendations to the applicant, as part of their debrief.

2.5.PART V: MTO SELECTION PFE RESULTS AND COOL-DOWN

2.5.1. MTO SELECTION PFE REPORTING FORM – SECTION C: TEST RESULTS

2.5.1.1. Section C is divided into two (2) sub-sections, one for each of the MTO Selection PFE components. The sub-sections are designed to allow the PSP Fitness Evaluator to directly record the results as the MTO Selection PFE is administered.

2.5.1.2. Upon completion of each MTO Selection PFE component, the evaluator must record the result in the box designated for each respective MTO Selection PFE component:

Section C: Test Results / Résultat de l'évaluation	
Pre-Fatigue Component / Composante Pre-Fatigue	Date <input type="text"/> YYYA/MM/DJ
<input type="checkbox"/> Completed 00:08 mm:ss of flexed-arm hang / Complété les 00:08 mm:ss de flexion des bras suspendu.	
<input type="checkbox"/> Did NOT complete 00:08 mm:ss of flexed-arm hang / N'a PAS complété les 00:08 mm:ss de flexion des bras suspendu.	
<input type="checkbox"/> Completed 00:08 mm:ss of "dead hang" / Complété les 00:08 mm:ss d'extension des bras suspendu.	
<input type="checkbox"/> Did NOT complete 00:08 mm:ss of "dead hang" / N'a PAS complété les 00:08 mm:ss d'extension des bras suspendu.	
Comments / Commentaires	<input type="text"/>
Timed FORCE Circuit Component / Composante Circuit FORCE Chronométré	
<input type="checkbox"/> Completed the Timed FORCE Circuit / Complété le Circuit FORCE Chronométré.	
<input type="checkbox"/> Did NOT complete the Timed FORCE Circuit / N'a PAS complété le Circuit FORCE Chronométré.	
<input type="text"/> : Completion time (mm:ss) for the FORCE circuit / Temps de complétion (mm:ss) du circuit FORCE.	
Comments / Commentaires	<input type="text"/>

Figure 2.3 Section C: Test Results

2.5.1.3. Pre-fatigue component:

- A. Check-off the appropriate box for the completion (met) or not (did not meet) the pre-fatigue exercises.
- B. Write down any valuable comments such as: had to reset, setup far from the circuit, etc.

2.5.1.4. Timed FORCE circuit component:

- A. Write down the completion time (mm:ss) of the timed FORCE circuit.
- B. Write down any valuable comments related to the timed FORCE circuit such as: bad posture, hurt during this task, etc.

2.5.2. COOL-DOWN

- 2.5.2.1. A 5-minute supervised recovery walk within the evaluation area must take place upon completion of the MTO Selection PFE components, allowing applicants to recover. If requested by the applicant, guidance will be provided for an active recovery with stretching.

2.6. PART VI: MTO SELECTION PFE DEBRIEF, CERTIFICATIONS OF EVALUATION & UNDERSTANDING

2.6.1. MTO SELECTION PFE DEBRIEF

2.6.1.1. The PSP Fitness Evaluator must debrief all applicants upon completion of their respective MTO Selection PFE component. The applicants must be provided with their completion time and performance level (Tool 1). *Note Trial implementation year, 2022 does not have performance levels defined.*

2.6.1.2. Applicants can attempt the MTO Selection PFE twice per MTOAC application cycle (year) regardless of the performance level achieved on the first attempt, even if only to improve their score.

2.6.1.3. It is recommended that re-testing on the MTO Selection PFE should occur after a minimum of 30 days to ensure considerable improvement can be made.

2.6.2. MTO SELECTION PFE REPORTING FORM – SECTION D: CERTIFICATION OF EVALUATION

2.6.2.1. The Evaluator will print and sign their name in the space provided.

Section D: Certification of evaluation - Attestation d'évaluation	
_____ Evaluator name (print) - Nom de l'évaluateur (letres majuscules)	_____ Evaluator signature - Signature de l'évaluateur

Figure 2.4 Section D: Certification of evaluation

2.6.3. MTO SELECTION PFE REPORTING FORM – SECTION E: CERTIFICATION OF UNDERSTANDING

2.6.3.1. The applicant (CAF member) must sign and date their acknowledgment of the Evaluation results. In cases where the applicant refuses to sign, the Evaluator must note “member refused to sign” in this Section.

Section E: Certification of understanding - Attestation	
I acknowledge the above fitness evaluation results. - Je reconnais les résultats de l'évaluation de la condition physique.	
_____ Signature of member - Signature du militaire	<input type="text"/> / <input type="text"/> / <input type="text"/> Date - (YYAA) / (MM) / (DJ)

Figure 2.5 Section E: Certification of Understanding

2.7.PART VII: PROCESSING MTO SELECTION PFE RESULTS

2.7.1. MTO SELECTION PFE REPORTING FORM

- 2.7.1.1. Each respective MTO Selection PFE reporting Form will be the only form used to record the applicant's MTO Selection PFE results. Following the Privacy Act, once completed, the reporting form is a Protected A document and must be treated as such.
- 2.7.1.2. Completed MTO Selection PFE reporting forms will be distributed by the Local PSP evaluator following the following procedures:
- A. Copy 1: MTO Applicant
 - B. Copy 2: DNP Selection cell at the following email address - RCN-PSEL@forces.gc.ca
 - C. Copy 3: PSP HQ Human Performance Research & Development (for validation of the MTO Selection PFE with MTOAC) at the following email address – RCN-PSEL@cfmws.com

APPENDIX A: ACRONYMS AND ABBREVIATIONS

ACSM	American College of Sports Medicine
BP	Blood Pressure
CAF	Canadian Armed Forces
CFMWS	Canadian Forces Morale and Welfare Services
CO	Commanding Officer
CPR	Cardio-Pulmonary Resuscitation
CSEP	Canadian Society of Exercise Physiology
DNP	Director of Naval Personnel
DAOD(s)	Defence Administrative Orders and Directive(s)
DND	Department of National Defence
DOB	Date of Birth
DWAN	Defence Wide Area Network
D Prog	Directorate of Programs
EAP	Emergency Action Plan
hrs	Hours
kg	Kilogram(s)
km	Kilometres
m	Metre(s)
MO	Medical Officer
Mgr FS&R	Manager Fitness, Sports, and Recreation
MTOAC	Maritime Tactical Operator Assessment Center
MTO	Maritime Tactical Operator
min	Minute(s)
mmHg	Millimetres of Mercury
N	Newtons
OPI	Office(s) of Primary Interest
PFE	Physical Fitness Evaluation

PHA	Periodic Health Assessment
PSO	Personnel Selection Officer
PSP	Personnel Support Programs
RCN	Royal Canadian Navy

DRAFT

APPENDIX B: TOOL 1 – MTO SELECTION PFE REPORTING FORM

Section A: Service Particulars - Détails du service			
Surname - Nom		Init.	Rank - Grade
DOB / DN-YYAA MM DJ		Military ID / Pièce d'identité militaire <input type="checkbox"/> Yes <input type="checkbox"/> No	
Age		SN- NM	
Sex - Sexe <input type="checkbox"/> M <input type="checkbox"/> F		MOS ID - ID SGPM	
Location - Lieu		UIC - CIU	
Unit - Unité			
Section B: Health Appraisal - Évaluation de la santé			
This questionnaire is a screening device to identify personnel for whom fitness evaluation and physical activity might be inappropriate at this time. / Ce questionnaire est un outil visant à identifier les personnes dont une évaluation de la condition physique et l'activité physique sont actuellement contre-indiqués			
1. To the best of your knowledge do you have a medical condition or Medical Employment Limitation (MEL) which restricts you from participating in a maximal fitness evaluation or a progressive training program? / À votre connaissance souffrez-vous d'une trouble médical ou avez-vous une contrainte à l'emploi pour raisons médicales (CERM) qui vous empêchent de participer à une évaluation de la condition physique avec effort maximal ou à un programme de conditionnement physique progressif?		<input type="checkbox"/>	<input type="checkbox"/>
2. Is there any other reason you would need to talk to a physician prior to your fitness evaluation or training program? / Y a-t-il d'autres raisons pour lesquelles vous devriez consulter un médecin avant de participer à l'évaluation de la condition physique ou d'entreprendre un programme de conditionnement physique?		<input type="checkbox"/>	<input type="checkbox"/>
3. Do you have a valid Periodic Health Assessment (PHA), if no Proceed to Blood pressure. / Avez-vous un examen médical périodique (EMP) valide? Si non allez à la tension artérielle.		<input type="checkbox"/>	<input type="checkbox"/>
Blood pressure / Tension Artérielle			
Your pre-evaluation blood pressure is less than or equal to 150/100 mm Hg. / Votre tension artérielle avant l'évaluation est moins ou égale à 150/100 mm Hg.			
<input type="checkbox"/> Your pre-evaluation blood pressure lies between 141/91 mm HR and 150/100 mm Hr and is considered to be slightly above the normal range. It is recommended that you consult your MO / Votre tension artérielle avant l'évaluation se situe entre 141/91 et 150/100 mm Hr. Cette valeur étant légèrement supérieure à la normale, il vous est recommandé de consulter votre médecin.		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Referred to Health Care Provider / Adressé à un fournisseur de soins de la santé			
Name (print) - Nom (lettres moulées)		Signature	Date - (YYAA) (MM) (DJ)
Section C: Test Results / Résultat de l'évaluation			
Pre-Fatigue Component / Composante Pre-Fatigue		Date: YYAA/MM/DJ	
<input type="checkbox"/> Completed 00:08 mm:ss of flexed-arm hang / Complété les 00:08 mm:ss de flexion des bras suspendu.			
<input type="checkbox"/> Did NOT complete 00:08 mm:ss of flexed-arm hang / N'a PAS complété les 00:08 mm:ss de flexion des bras suspendu.			
<input type="checkbox"/> Completed 00:08 mm:ss of "dead hang" / Complété les 00:08 mm:ss d'extension des bras suspendu.			
<input type="checkbox"/> Did NOT complete 00:08 mm:ss of "dead hang" / N'a PAS complété les 00:08 mm:ss d'extension des bras suspendu.			
Comments / Commentaires			
Timed FORCE Circuit Component / Composante Circuit FORCE Chronométré			
<input type="checkbox"/> Completed the Timed FORCE Circuit / Complété le Circuit FORCE Chronométré.			
<input type="checkbox"/> Did NOT complete the Timed FORCE Circuit / N'a PAS complété le Circuit FORCE Chronométré.			
: Completion time (mm:ss) for the FORCE circuit / Temps de complétion (mm:ss) du circuit FORCE.			
Comments / Commentaires			
Section D: Certification of evaluation - Attestation d'évaluation			
Evaluator name (print) - Nom de l'évaluateur (lettres moulées)		Evaluator signature - Signature de l'évaluateur	
Section E: Certification of understanding / Attestion			
I acknowledge the above fitness evaluation results / Je reconnais les résultats de l'évaluation.			
Signature of member - Signature du militaire		Date - (YYAA) (MM) (DJ)	

DRAFT

APPENDIX C: TOOL 2 – WARM-UP/EVALUATION PREPARATION

Before the MTO Selection PFE, applicants must undergo a warm-up and evaluation preparation led by the PSP Fitness Evaluator. The PSP Fitness Evaluator will provide the applicant with the following specific warm-up/evaluation preparation exercises before the MTO Selection PFE:

- A. Mandatory dynamic movements (5-8 minutes) performed before the start of the **pre-fatigue component**:
- a. 2-3 min of light aerobic activity
 - b. 5 x Side reaching side bends (knees and hips unlocked)
 - c. 3 x Squats
 - d. 3 x Side lunges forward / backward complex
 - e. 3 x Side alternator side / lateral step lunges
 - f. 3 x Side spiderman steps
 - g. 5 x Hand release push-up to get up.
 - h. An additional 2-5 min warm-up period is recommended to be completed at the applicant's discretion.

APPENDIX D: TOOL 3 – BLOOD PRESSURE MEASUREMENT PROCEDURES

1. GENERAL

- 1.1. Have the applicant sit for five (5) min with their back against the chair rest, feet flat, legs and ankles uncrossed, and their left arm comfortably supported. Ensure that the applicant's clothing does not impede blood flow. Ask the applicant to change their shirt if required.
- 1.2. Choose an appropriately sized blood pressure (BP) cuff and apply it to the applicant's left arm. Place the cuff around the bare left upper arm with the lower margin two (2) or three (3) centimeters (cm) above the antecubital space (bend of the elbow), with the upper edge of the cuff level with the heart. Wrap the cuff evenly around the arm, tightly enough that you can slip two (2) fingertips under the cuff's top edge.

2. MANUAL BP PROCEDURES

- 2.1. It is recommended that Evaluators and Health Care Providers use the following procedure for manually measuring BP:
 - A. Locate and note the brachial artery and the antecubital space by palpation;
 - B. Position the stethoscope in your ears with the earpiece pointing forward;
 - C. Locate the radial artery;
 - D. Close the valve on the air pump by turning the thumbscrew in a clockwise direction until it is tight;
 - E. Inflate the cuff quickly until the radial artery pulse can no longer be felt. Continue to inflate the cuff to a level **20 to 30 mmHg** above the level of the radial pulse (normally not above 180 mmHg);
 - F. Quickly position the diaphragm of the stethoscope over the brachial artery. Apply a minimum amount of pressure on the diaphragm of the stethoscope so as not to distort the artery. The diaphragm should be in complete contact with the skin. The stethoscope should not touch the cuff or its tubing;
 - G. Release the cuff pressure at a rate of approximately **2 mmHg per sec**;
 - H. Establish the systolic BP by listening for the first perception of sound (Korotkoff sound);
 - I. Note the exact numerical line on the scale where you hear this sound;
 - J. Establish the diastolic BP when the sounds stop their tap-like quality and are fully muffled;
 - K. Deflate the cuff to zero pressure and remove it from the applicant's arm.

3. AUTOMATIC BP PROCEDURES

3.1. Instruct the applicant to sit very still and do not move their arm, hand, fingers, or body during the measurement of the BP. Any movement could produce a false measure of the BP or prevent the automatic BP machine from reading the BP

- A. Press the button to start the machine.
- B. Once the automatic BP machine has finished measuring the applicant's BP, remove the cuff from the applicant's arm.
- C. See Para 3.0 Blood Pressure Results for the interpretation of the results.

3.2. Note: Consult the automatic BP user manual for any error messages.

4. BP RESULTS

4.1. In the event that the pre-evaluation systolic BP is **higher than 150 mmHg** and/or the pre-evaluation diastolic BP is **higher than 100 mmHg**, have the applicant rest quietly for five (5) minutes before repeating the measurement. If, after two (2) readings the applicant's pre-evaluation systolic BP and/or pre-evaluation diastolic BP are still too elevated, do not allow the applicant to perform the MTO Selection PFE. Refer the applicant to their Health Care Provider.

4.2. An applicant who has a pre-evaluation BP between 141/91 mmHg and 150/100 mmHg is permitted to perform the MTO Selection PFE without restrictions. The Evaluator will advise the applicant that their BP reading is slightly above the normal range and will encourage them to consult with their Health Care Provider. The Evaluator will verbally tell the applicant that there is no cause for alarm and that consulting a Health Care Provider serves as a simple safety precaution.

APPENDIX E: ADDITIONAL REFERENCES

American College of Sports Medicine (ACSM) (2014). *ACSM's Guidelines for Exercise Testing and Prescription, 9th Edition*. Wolters Kluwer / Lippincott Williams & Wilkins;

Canadian Society for Exercise Physiology (CSEP) (2013). *CSEP-PATH: Physical Activity Training for Health*. CSEP, Ottawa, Canada;

Government of Canada (1985). *Bona Fide Occupational Requirement and Bona Fide Justification: Interim Policies and Explanatory Notes*. Ottawa, Ontario, Canada: Canadian Human Rights Commission;

Léger, L., Mercier, D., Gadoury, C. & Lambert, J. (1987). *The multistage 20 metre shuttle run test for aerobic fitness*. *Journal of Sports Sciences*, 6:93-101

Commented [LJ2]: Should we add anything specific to MTO?

Commented [THC3R2]: I don't think we have any used in this manual

DRAFT