



National Defence

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Quartier général de la Défense nationale  
Ottawa (Ontario)  
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**SOLICITATION AMENDMENT  
MODIFICATION DE  
L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

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<b>Title - Sujet</b>		<b>Amendment No. - N° modif.</b>
BOAT TRAILERS MIXED-REMORQUES À BATEAUX MIXTES		001
<b>Solicitation No. N° de l'invitation</b>	<b>Date of Amendment Date de modification</b>	
W8476-236612/B	12-05-2022	
<b>Address enquiries to: - Adresser toute demande de renseignements à :</b> Kyle Grundy <b>E-Mail Address - Courriel</b> Kyle.grundy@forces.gc.ca		
<b>Destination</b> See herein - Voir aux présentes		

**Instructions:** Municipal taxes are not applicable. Unless otherwise specified herein all prices quoted must include all applicable Canadian customs duties, GST/HST, excise taxes and are to be delivered Delivery Duty Paid including all delivery charges to destination(s) as indicated. The amount of the Goods and Services Tax/Harmonized Sales Tax is to be shown as a separate item.

**Instructions :** Les taxes municipales ne s'appliquent pas. Sauf indication contraire, les prix indiqués doivent comprendre les droits de douane canadiens, la TPS/TVH et la taxe d'accise. Les biens doivent être livrés « rendu droits acquittés », tous frais de livraison compris, à la ou aux destinations indiquées. Le montant de la taxe sur les produits et services/taxe de vente harmonisée doit être indiqué séparément.

<b>Delivery required Livraison exigée</b> See herein - Voir aux présentes	<b>Delivery offered Livraison proposée</b>
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<b>Name - Nom</b>	<b>Title - Titre</b>
<b>Signature</b>	<b>Date</b>

**Solicitation Closes - L'invitation prend fin**

At - à :  
2:00 PM - 14:00

On - le :  
01-05-2023

Time Zone - Fuseau Horaire :  
Eastern Standard Time (EST)  
Heure normale de l'Est (HNE)

**THIS SOLICITATION AMENDMENT IS RAISED TO:**

1. Include Annex A and Annex C which was not included in the original RFP.

**ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME**



Annex C  
W8476-236612  
Oct 2021



**NOTICE**

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

**AVIS**

Cette documentation a été révisée par l'Autorité technique et ne contient pas de marchandises contrôlées.

**TECHNICAL EVALUATION MATRIX**  
**MIXED BOAT TRAILERS**

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**OPI: DSVPM 4 – BPR: DAPVS 4**

Issued on Authority of the Chief of the Defence Staff  
Publiée avec l'autorisation du chef d'état-major de la Défense

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This questionnaire covers technical information, which **must** be provided for evaluation of the configuration(s) of the vehicle(s) offered.

Bidder should indicate the document name/title and page number where the **Substantial Information** can be found.

Definition for **Equivalent** is found in the DEFINITION section at the end of this document.

**BIDDER INFORMATION**

**Bidder Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Proposal Date:** \_\_\_\_\_

**Proposed Make**                      **- Model**                      .

**Substitutes/Alternatives**

Are any equipment substitutes/alternatives offered as **Equivalent**?                      YES  NO

If yes, please identify all equipment substitutes/alternatives offered as **Equivalents** below:

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**DEFINITIONS**

***The following definitions apply to the interpretation of this Technical Information Questionnaire:***

- a.        "Equivalent" - A standard, means, or component type, which has been accepted by the Technical Authority as meeting the specified requirements for form, fit, function and performance.

PD Reference	Requirement	Location of Substantial Information in Bid Proposal	Comment
3.1.1	The trailer must be the latest model from a manufacturer who has demonstrated acceptability by selling, in North America, this type and size class of trailer for at least three (3) years.		
3.6.1 a	The 540 trailer must be compatible with the following hull: 540: Zodiac 540		
3.6.1 b	The 472 trailer must be compatible with the following hull: 472: Zodiac 472 hull		
3.6.1 c	The MK5 trailer must be compatible with the following hull: MK5: Zodiac MK5 hull		
3.6.1 d	The MK3 trailer must be compatible with the following hull: MK3: Zodiac MK3 hull		
3.6.1 e	The MK2 trailer must be compatible with the following hull: MK2: Zodiac MK2 hull		
3.7.1	The trailer frame must be constructed from galvanized steel or aluminium.		
3.8.2	The jack must be rated for a minimum load of 453.6 kg (1000 lb).		
3.9.1	The trailer must be provided with a 7.6 cm (3") inner diameter lunette ring suitable for the GVWR.		
3.11.2	The trailer must be provided with a 12 volt electrical system.		
3.13.1	The trailer must feature external 12 volt lights and reflectors in accordance with CMVSS.		

3.16.1	The trailer must be provided with an electric brake system powered from the towing vehicle through the 7-pin trailer harness.		
3.17.1 a	The trailer identified below must be provided with a breakaway brake system, to halt brakes in the event of trailer harness disconnection:  540: Required		
3.17.1 b	The trailer identified below must be provided with a breakaway brake system, to halt brakes in the event of trailer harness disconnection:  472: Required		
3.17.1 c	The trailer identified below must be provided with a breakaway brake system, to halt brakes in the event of trailer harness disconnection:  MK5: Required		
3.18.1	Trailer axle(s) must have a capacity of no less than the GVWR.		
3.18.2	The suspension must have a capacity of no less than the GVWR.		
3.20.3 a	The trailer payload capacity must not be less than the following:  540    1315 kg (2900 lb)		
3.20.3 b	The trailer payload capacity must not be less than the following:  472    1089 kg (2400 lb)		
3.20.3 c	The trailer payload capacity must not be less than the following:  MK 5   862 kg (1900 lb)		
3.20.3 d	The trailer payload capacity must not be less than the following:  MK 3   680 kg (1500 lb)		

3.20.3 e	<p>The trailer payload capacity must not be less than the following:</p> <p>MK 2 590 kg (1300 lb)</p>		
3.21.1	<p>The trailer must be provided with a system of bunks to guide the boat when mounted or removed from the trailer and to support the boat while it is being stored or transported.</p>		
3.21.6	<p>The bunks must allow for adjustment in height.</p>		
3.21.7	<p>The bunks must allow for adjustment in the lateral direction.</p>		
3.21.11 a	<p>The 540 trailer must have the bunks configured as below:</p> <ul style="list-style-type: none"> <li>• Hull support bunks: Pair of two bunks at keel, extending to transom</li> <li>• Inner support bunks: No</li> <li>• Appendix 2 Bunk Layout: Layout 1</li> </ul>		
3.21.11 b	<p>The 472 trailer must have the bunks configured as below:</p> <ul style="list-style-type: none"> <li>• Hull support bunks: Pair of two bunks at keel, extending to transom</li> <li>• Inner support bunks: No</li> <li>• Appendix 2 Bunk Layout: Layout 1</li> </ul>		
3.21.11 c	<p>The MK5 trailer must have the bunks configured as below:</p> <ul style="list-style-type: none"> <li>• Hull support bunks: Inward-facing bunks at outside of tubes, located above fenders</li> <li>• Inner support bunks: Yes; two bunks supporting transom sides descend inward, meeting at lowest point of fabric keel</li> <li>• Appendix 2 Bunk Layout: Layout 2</li> </ul>		

3.21.11 d	<p>The MK3 trailer must have the bunks configured as below:</p> <ul style="list-style-type: none"> <li>• Hull support bunks: V-shaped coupling of two bunks for each tube (4 outer bunks total), located above fenders</li> <li>• Inner support bunks: Yes; two bunks supporting transom sides descend inward, meeting at lowest point of fabric keel</li> <li>• Appendix 2 Bunk Layout: Layout 3</li> </ul>		
3.21.11 e	<p>The MK2 trailer must have the bunks configured as below:</p> <ul style="list-style-type: none"> <li>• Hull support bunks: V-shaped coupling of two bunks for each tube (4 outer bunks total), located above fenders</li> <li>• Inner support bunks: Yes; two bunks supporting transom sides descend inward, meeting at lowest point of fabric keel</li> <li>• Appendix 2 Bunk Layout: Layout 3</li> </ul>		
3.25.1	<p>The trailer must feature two (2) tie-down securing points at the stern.</p>		
3.28.2	<p>The winch must be rated with a minimum capacity of 816.5 kg (1800 lb).</p>		



Annex A

W8476-236612/001/SV

30 November 2022

**NOTICE**



This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

**AVIS**

Cette documentation a été révisée par l'Autorité technique et ne contient pas de marchandises contrôlées.

**PURCHASE DESCRIPTION**

**FOR**

**MIXED BOAT TRAILERS**

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**OPI: DSVPM 4 – BPR: DAPVS 4**

Issued on Authority of the Chief of the Defence Staff

Publiée avec l'autorisation du chef d'état-major de la Défense



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## 1.0 SCOPE

### 1.1 Purpose

This document describes the requirements for five (5) similar boat trailers, hereafter referred to as *MK2*, *MK3*, *MK5*, *472*, and *540*, each transporting a distinct inflatable boat.

### 1.2 Instructions

1.2.1 Requirements, which are identified by the word “**must**”, are mandatory. Deviations will not be permitted;

1.2.2 Requirements identified by “**must**” ..... or “**equivalent**” are mandatory. The Technical Authority will consider substitutes/alternatives for acceptance as a Technical Authority approved equivalent;

1.2.3 Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part;

1.2.4 Where “**must**”, “**must**” ..... or “**equivalent**”, or “will” are not used, the information provided is for guidance only.

1.2.5 In this document “provided” means “provided and installed”;

1.2.6 Where a standard is specified and the Contractor has offered an equivalent, that equivalent standard **must** be supplied by the Contractor, at no cost to Canada, when requested by the Technical Authority;

1.2.7 Where a technical certification is referred to in this Purchase Description, a copy of the certification or an acceptable proof of compliance **must** be provided for the trailer when requested by the Technical Authority up until the date of the expiration of the warranty period.

1.2.8 While the SI system is used as the primary system of measurement to define requirements in this Purchase Description, both the SI system and the Standard system of measurements may be indicated. Conversions from one system of measurement to the other may not be exact; and

1.2.9 Dimensions stated as nominal are treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but which differ from the actual dimensions.

### 1.3 Definitions

1.3.1 “***Technical Authority***” means the official responsible for the technical content of this Purchase Description.



- 1.3.2 “**Equivalent**” means a standard, means, or component type, which the Technical Authority has approved for this requirement as meeting the specified requirements for fit.
- 1.3.3 “**Commercially Equipped**” means that the trailer is provided in its standard commercial configuration with no additional government-specific requirements;
- 1.3.4 “**Road Legal**” means the trailer can be legally operated on all Canadian highways and secondary roads, without restrictions or special permits.
- 1.3.5 “**Curb Weight**” means the weight of the fully equipped trailer. The curb weight includes trailer, all attached accessories, equipment, and lubricant. The Curb Weight does not include the Payload.
- 1.3.6 “**Payload**” means the maximum cargo load carrying capacity of the trailer. The payload is the calculated difference between the Curb Weight and the Gross Vehicle Weight Rating.
- 1.3.7 “**Gross Vehicle Weight**” (GVW) means the sum of the Curb Weight and the Payload. The GVW cannot exceed the Gross Vehicle Weight Rating (GVWR);
- 1.3.8 “**Gross Vehicle Weight Rating**” (GVWR) means the maximum operating weight of the trailer as stated by the manufacturer.
- 1.3.9 “**Gross Combined Weight Rating**” (GCWR) means the maximum allowable combined weight of the trailer, with equipment in the trailer and the Payload plus the weight rating of the trailer and the payload in the trailer;
- 1.3.10 “**Beam**” means the maximum outer width of the boat used on the trailer.

## 2.0 APPLICABLE DOCUMENTS

### 2.1 Reference Documents

2.1.1 The following documents form part of this Purchase Description. Canada will not be supplying any reference documents. Sources are as shown:

- a. Canadian Motor Vehicle Safety Standards (CMVSS)  
Transport Canada,  
Road Vehicle and Motor Vehicle Regulation,  
330 Sparks Street,  
Ottawa, Ontario K1A 0N5  
<https://www.tc.gc.ca/eng/acts-regulations/regulations-crc-c1038.htm>
- b. Hazardous Products Act  
Government of Canada / Department of Justice  
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>
- c. International Organization for Standardization (ISO)  
ISO Central Secretariat<sup>1</sup>, ch. de la Voie-Creuse  
CP 56, CH-1211 Geneva 20  
Switzerland  
<http://www.iso.org/iso/home.htm>
- d. SAE Standards  
SAE World Headquarters  
400 Commonwealth Dr.,  
Warrendale, PA, 15096-0001  
<http://www.sae.org>
- e. National Floor Safety Institute  
  
200, 2815 Exchange Blvd  
Southlake, TX 76092,  
United States  
<https://nfsi.org/certifications/certified-products/>

### 3.0 REQUIREMENTS

#### 3.1 Standard Design

3.1.1 The trailer **must** be the latest model from a manufacturer who has demonstrated acceptability by selling, in North America, this type and size class of trailer for at least three (3) years.

3.1.2 The trailer **must** include all components, equipment and accessories normally supplied for this application, although they may not specifically be described in this Purchase Description.

3.1.3 The trailer **must** have engineering certification available, upon request, for this application from the original manufacturers of major equipment, systems and assemblies.

3.1.4 The trailer **must** conform to all applicable laws, regulations and industrial standards in effect in Canada at the time of manufacture. The regulatory areas may include but are not necessarily limited to manufacturing, health and safety, noise levels, environment and emissions.

3.1.5 The trailer and accessories **must** operate in accordance with all original equipment manufacturers' (OEM) rated capacities and performance specifications.

3.1.6 The trailer **must** be a commercially available trailer model that is actively in production, available in the manufacturer's catalogue and configured to meet the requirements listed in this Purchase Description.

3.1.7 The trailer **must** be based off the models listed below or **equivalent**.

	<b>Trailer</b>	<b>Industry Model</b>
a.	540	Venture VB-2450
b.	472	Highliner CL17-17
c.	MK 5	Highliner CL23-19
d.	MK 3	Highliner CL17-17
e.	MK 2	Highliner CL13-15

#### 3.2 Operating Conditions

3.2.1 **Weather**: The trailer **must** operate under the extremes of weather conditions found in Canada in temperatures ranging from -40°C to 40°C.

3.2.2 **Terrain:** The trailer ***must*** operate on highways, secondary roads, gravel and dirt roads in year round operations on snow, mud, sand, ice, and submersed in salt water.

### 3.3 **Safety Standards**

3.3.1 **Vehicle Safety Regulations:** The trailer ***must*** meet the provisions of the Canada Motor Vehicle Safety Act in effect on the date of manufacture of the trailer.

3.3.2 **Hazardous Materials:** The trailer ***must*** comply with the Hazardous Products Act of Canada concerning the use of hazardous materials, ozone-depleting substances, polychlorinated biphenyls, asbestos and heavy metals used in the manufacture and assembly.

### 3.4 **Speed**

3.4.1 The trailer ***must*** be towed with a full payload on highways and secondary roads at speeds of no less than 110 km/h.

### 3.5 **Towing Ability**

3.5.1 The trailer ***must*** follow the towing vehicle without weaving or side sway.

3.5.2 The trailer ***must*** provide horizontal articulation up to 60 degrees (30° either side of the direction of travel) without interference with the towing vehicle.

### 3.6 **Hull Compatibility**

3.6.1 The trailers ***must*** be compatible with each hull as per the table below, with keel profiles as shown in Appendix 1.

	<b>Trailer</b>	<b>Hull Compatibility</b>
a.	540	Zodiac 540
b.	472	Zodiac 472
c.	MK 5	Zodiac MK5
d.	MK 3	Zodiac MK3
e.	MK 2	Zodiac MK2

### 3.7 **Overall Construction**

3.7.1 The trailer frame **must** be constructed from galvanized steel or aluminium.

3.7.2 The trailer **must** feature a welded uniframe construction.

3.7.3 All fasteners **must** be hot dipped galvanized.

3.7.4 The trailer **must** allow for all water to drain while in its typical use position, after being submerged.

### 3.8 **Jack**

3.8.1 The trailer **must** feature a wheeled swivel jack.

3.8.2 The jack **must** be rated for a minimum load of 453.6 kg (1000 lb).

3.8.3 The jack **must** feature a handle-equipped swivel-mount mechanism, for ease of efficient stowing during towing.

3.8.4 The jack **must** be bolted to the tongue's frame.

3.8.5 The jack **must** feature a corrosion-resistant finish.

### 3.9 **Hitch**

3.9.1 The trailer **must** be provided with a 7.6 cm (3 inch) inner diameter lunette ring suitable for the GVWR.

3.9.2 The trailer hitch **must** feature a channel with incremental adjustments in height, with at least five (5) positions.

3.9.3 The trailer hitch **must** feature a black powder coat finish to minimize corrosion.

3.9.4 The trailer **must** be provided with two (2) safety chains with snap hooks.

3.9.5 The safety chains **must** be in accordance with SAE Recommended Practice J697.

### 3.10 **Wiring**

3.10.1 The trailer wiring **must** be securely attached to the frame at intervals of 30.5 cm (12 inch) or less, to minimize loose cables.

3.10.2 All trailer wiring connections **must** be heat shrunk and loomed where exposed.

3.10.3 All trailer wiring **must** feature an additional protective sleeve.

3.10.4 The trailer **must** have secure EPDM grommets installed on all holes where trailer wiring enters or exits through the frame.

### 3.11 **12 Volt Electrical System**

3.11.1 The trailer **must** be provided with a negative ground electrical system.

3.11.2 The trailer **must** be provided with a 12 volt electrical system.

3.11.3 The trailer's harness **must** be provided with a 7-prong, primary cable connector, in accordance with SAE J560.

### 3.12 **Harness Connector Plug**

3.12.1 The trailer **must** be equipped with a harness connector plug for protecting and securing the trailer's wire harness connector for periods of disconnected storage.

3.12.2 The harness connector plug **must** be a "Connect-to-Protect" by Hanington Innovations or **equivalent**.

3.12.3 The harness connector plug **must** be mounted on the trailer tongue at a location which prevents the electrical connection from making contact with the ground when used.

### 3.13 **12 Volt Lighting**

3.13.1 The trailer **must** feature external 12 volt lights and reflectors in accordance with CMVSS.

3.13.2 All lighting assemblies **must** be LED.

3.13.3 All lighting assemblies **must** be waterproof.

3.13.4 The rear lights **must** not be obstructed by the supported boat.

### 3.14 **Light Guards**

3.14.1 All lighting **must** be protected by guards or mounted in a location to prevent damage.

### 3.15 **License Plate Holder**

3.15.1 The trailer **must** be provided with a rear mounted license plate holder.

3.15.2 The license plate holder **must** be composed of aluminium or steel.

3.15.3 The license plate holder **must** be water submersible and corrosion-resistant.

### 3.16 **Brake System**

3.16.1 The trailer **must** be provided with an electric brake system powered from the towing vehicle through the 7-pin trailer harness.

3.16.2 The brake system **must** operate with all towing vehicles compliant to CMVSS.

3.16.3 The brake system **must** feature zinc-plated integral hub and rotors, with zinc-plated mounting brackets.

3.16.4 If the brake lines require clamps with tapping screws to be routed along the galvanized frame, then the screw and the clamp **must** be corrosion-resistant.

3.16.5 If the brake lines require clamps with tapping screws to be routed along the galvanized frame, then the tapping hole in the frame **must** be covered.

3.16.6 The brake components **must** be water submersible and corrosion resistant, on all axles.

### 3.17 **Breakaway Brake System**

3.17.1 The trailers identified below **must** be provided with a breakaway brake system, to halt brakes in the event of trailer harness disconnection.

	<b>Trailer</b>	<b>Breakaway Brake System</b>
a.	540	Required
b.	472	Required
c.	MK 5	Required
d.	MK 3	Not required
e.	MK 2	Not required

3.17.2 The breakaway system **must** feature a coiled breakaway cable.

3.17.3 The breakaway system **must** feature a breakaway switch directly mounted to the trailer's A-frame.

3.17.4 The breakaway system **must** include a securely mounted, backup 12V battery system with robust electrical contacts.

3.17.5 The breakaway system electronics (including the actuator and backup battery) **must** be raised at least 30.5 cm (12 inch) above the top of the trailer frame, to avoid submersion during operation

3.17.6 The breakaway brake components **must** be water submersible and corrosion resistant, on all axles.

### 3.18 **Axle(s)**

3.18.1 Trailer axle(s) **must** have a capacity of no less than the GVWR.

3.18.2 The suspension **must** have a capacity of no less than the GVWR.

3.18.3 The suspension **must** be a leaf spring design.

### 3.19 **Wheels, Rims and Tires**

3.19.1 Tire pressure **must** be marked near the tire location.

3.19.2 The tires **must** be tubeless tires with all-weather treads.

3.19.3 The rims **must** be single-piece galvanized steel rims.

3.19.4 All wheel ends **must** be provided with stainless steel Bearing Buddy® wheel bearing protectors or **equivalent**.

3.19.5 The trailer **must** be provided with a spare wheel assembly that is identical to the wheels provided on the trailer.

3.19.6 The spare wheel assembly **must** be mounted on a bracket mechanically attached to the trailer, on the passenger side, as forward as possible, to not interfere with winch operations.

3.19.7 The Contractor **must** obtain approval of the spare tire mounting location from the Technical Authority.

### 3.20 **Payload**

3.20.1 The trailer **must** load, transport, store and unload the payload, the boats described in Appendix 1.

3.20.2 In the case of the 540 and 472 trailers, there **must** be no contact between supporting elements and the strakes along the bottom of the hull.

3.20.3 The trailer payload capacity **must** not be less than the following:

	<b>Trailer</b>	<b>Payload</b>
a.	540	1315 kg (2900 lb)
b.	472	1089 kg (2400 lb)
c.	MK 5	862 kg (1900 lb)
d.	MK 3	680 kg (1500 lb)
e.	MK 2	590 kg (1300 lb)

### 3.21 **Bunks**

3.21.1 The trailer **must** be provided with a system of bunks to guide the boat when mounted or removed from the trailer and to support the boat while it is being stored or transported.

3.21.2 The bunks **must** be covered with a carpeted surface, resistant to salt water and UV.

3.21.3 The bunks **must** be configured and manufactured to ensure they do not mar the hull of the boat.

3.21.4 The bunks **must** allow for adjustment along the length of the trailer's frame, with increments of maximum 15.2 cm (6 inch).

3.21.5 The hull-supporting bunks **must** allow for support along the entire length of the local hull segments.

3.21.6 The bunks **must** allow for adjustment in height.

3.21.7 The bunks **must** allow for adjustment in the lateral direction.

3.21.8 Trailers featuring inner support bunks **must** provide primary support at the transom (where the engine is mounted) with secondary support at the outer tubes.

3.21.9 Bunks **must** support the hull without contacting the hull's strakes, where strakes are specified in Appendix 1.

3.21.10 Bunks **must** fully support the payload under dynamic loading conditions found in normal transportation, including off-road travel.

3.21.11 The trailer **must** have the bunk configuration as identified below:

	Trailer	Hull Support Bunks	Inner Support Bunks	Appendix 2 Bunk Layout
a.	540	Pair of two bunks at keel, extending to transom	No	Layout 1
b.	472			
c.	MK 5	Inward-facing bunks at outside of tubes, located above fenders	Yes; two bunks supporting transom sides descend inward, meeting at lowest point of fabric keel	Layout 2
d.	MK 3	V-shaped coupling of two bunks for each tube (4 outer bunks total), located above fenders		Layout 3
e.	MK 2			

### 3.22 Bunk Dimensions

3.22.1 The bunks for the 540 and 472 trailers ***must*** be provided according to the following geometries (with labelled sketches in Appendix 2):

	Trailer	Length from Bow Eye to Transom	Minimum Length, Hull Support Bunks	Lateral Distance between Hull Support Bunk Centres	Height of Bow Eye above Hull Support Bunks
		$L_t$	$L_b$	$D_b$	$h_b$
a.	540	416.7 cm (164 in)	312.4 cm (123 in)	86.4 cm (34 in)	12.7 cm (5.0 in)
b.	472	368.6 cm (145.1 in)	276.9 cm (109 in)	61.0 cm (24 in)	36.1 cm (14.2 in)

3.22.2 The bunks for the 540 and 472 trailers ***must*** be provided at angled position along the length of the trailer per the scaled drawings provided in Appendix 1.

3.22.3 The hull support bunks for the MK5, MK3, and MK2 trailers **must** support the tubes according to the following geometries (with labelled sketches in Appendix 2):

	Trailer	Length from Bow Eye to Tube Stern Cone $L_h$	Minimum Length, Tube Support Bunks $L_b$	Lateral Distance between Tube Centres $D_h$	Height of Bow Eye above Tube Bottom $h_b$
a.	MK 5	585.0 cm (230.3 in)	442.0 cm (174 in)	186.0 cm (73.2 in)	39.6 cm (15.6 in)
b.	MK 3	469.5 cm (184.8 in)	330.2 cm (130 in)	140.0 cm (55.1 in)	30.0 cm (11.8 in)
c.	MK 2	419.9 cm (165.3 in)	294.6 cm (116 in)	129.5 cm (51.0 in)	32.0 cm (12.6 in)

3.22.4 The inner support bunks for the MK5, MK3, and MK2 trailers **must** be provided according to the following geometries (with labelled sketches in Appendix 2):

	Trailer	Length from Bow Eye to Transom $L_t$	Lateral Distance Between Transom Support Centres $D_t$	Height of Bow Eye above Transom Bottom $h_t$	Length from Bow Eye to Keel Bottom $L_k$	Height of Bow Eye above Keel Bottom $h_k$
a.	MK 5	465.4 cm (183.2 in)	60.0 cm (23.6 in)	35.8 cm (14.1 in)	178.0 cm (70.1 in)	58.3 cm (23.0 in)
b.	MK 3	382.4 cm (150.6 in)	51.7 cm (20.3 in)	25.0 cm (9.8 in)	141.7 cm (55.8 in)	42.7 cm (16.8 in)
c.	MK 2	325.7 cm (128.2 in)	45.7 cm (18.0 in)	32.0 cm (12.6 in)	149.3 cm (58.8 in)	50.0 cm (19.7 in)

### 3.23 **Guide Posts**

3.23.1 The trailers **must** be provided with pair of vertical guide posts at the rear.

3.23.2 The guide posts **must** be removable from the trailer frame.

3.23.3 The guide posts **must** be adjustable in the lateral direction.

3.23.4 The guide posts **must** be a height of 152.4 cm (60 inch) from the trailer mounting.

3.23.5 The guide posts **must** be initially adjusted to provide a centred inner clearance of 15.2 cm (6 inch) to the boat's beam (found in Appendix 1).

3.23.6 The guide posts (and all associated hardware) **must** be corrosion-resistant.

### 3.24 **Fenders**

3.24.1 The trailer **must** feature full-length fenders above the wheels.

3.24.2 The fenders **must** feature a front step.

3.24.3 The fenders **must** withstand a 150 kg load, applied on a 30 cm x 15 cm area anywhere on an upper surface of the fender, without noticeable deformation of either the fender or the fender supports, to support repeated personnel loading.

3.24.4 The fenders **must** be enclosed on the boat-facing internal side, in order to prevent rocks and debris from contacting the hull.

3.24.5 The fenders **must** be constructed from a UV-resistant material.

3.24.6 The fenders **must** be corrosion-resistant.

### 3.25 **Securing Points**

3.25.1 The trailer **must** feature two (2) tie-down securing points at the stern.

3.25.2 The trailer **must** feature a securing point directly below the winch stand to provide additional securing below the boat's bow eye.

3.25.3 All securing points **must** feature D-rings.

3.25.4 All securing points **must** be compatible with wire hooks of 5.1 cm (2 inch) width.

3.25.5 All securing points and adjacent structures **must** support a tensile load of 26.7 kN (6000 lb) without noticeable deformation.

3.25.6 Each securing point **must** also feature an adjacent frame-mounted retractable ratcheting tie-down strap mechanism of *CargoBuckle* model G3 F18800 or **equivalent**.

### 3.26 **Slip and Fall Prevention**

3.26.1 All top surfaces of the trailer's frame between the hitch and the winch **must** be covered with a non-skid finish to allow for safe traversal atop the frame.

3.26.2 The fenders **must** feature non-skid surfaces along the tops and on the steps of the fenders.

3.26.3 Non-skid material **must** be certified by the National Floor Safety Institute and rated for outdoor use.

### 3.27 **Bow Stop**

3.27.1 A V-shaped bow stop **must** be provided with the trailer to provide a soft, centring support at the bow.

3.27.2 The bow stop **must** be located before the winch.

3.27.3 The bow stop **must** be adjustable along the frame and in the vertical direction.

3.27.4 The bow stop **must** feature an obtuse angle of 135 degrees.

3.27.5 The bow stop **must** feature an overall outer width of 609.6 mm (24 inch).

3.27.6 The bow stop **must** feature a contact surface composed of carpeted wood.

### 3.28 **Boat Winch System**

3.28.1 A boat retrieval winch system **must** be provided with the trailer.

3.28.2 The winch **must** be rated with a minimum capacity of 816.5 kg (1800 lb).

3.28.3 The winch system **must** be located at the front of the trailer frame, behind the tongue.

3.28.4 The winch system **must** allow for independent adjustment along the length of the trailer's frame.

3.28.5 The winch system **must** allow for independent adjustment in the vertical direction.

3.28.6 The strap for the winch system **must** have a loop hook with a spring closure.

3.28.7 The winch system **must** have a secondary safety chain (or turnbuckle) equipped with a snap hook to further secure the boat at the bow eye.

3.28.8 The winch system **must** be comprised of corrosion-resistant materials.

### 3.29 **Lubricants**

3.29.1 The trailer **must** be provided with and be serviceable with non-proprietary lubricants.

3.29.2 Lubrication fittings **must** conform to SAE J534.

### 3.30 **Identification**

3.30.1 The following information **must** be permanently marked in a conspicuous and protected location:

- a. Manufacturer's name, model and serial number;
- b. Manufacturer's Vehicle Identification Number (VIN); and
- c. Trailer Capacity (Payload and GVWR) rating marked on the drawbar.

### 3.31 **Labels**

3.31.1 All warning and instruction labels **must** be in a bilingual format or ISO symbol format.

## 4.0 INTEGRATED LOGISTICS SUPPORT

### 4.1 Documentation and Support Items

Item	Provided to Technical Authority	Provided with Each Delivered Trailer
Operator's Manuals	X	X
Data Summary	X	
Warranty Letter	X	X
Material Safety Data Sheets	X	

#### a. Operator's Manuals

- (i) An operator's manual for the safe trailer operation including all supplied attachments **must** be provided with each trailer shipped;
- (ii) The operator's manual **must** be provided in a bilingual format as a package;
- (iii) A digital copy of the operator's manual **must** be provided, in addition to the paper copy, with each trailer shipped;
- (iv) The digital copy **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection; and
- (v) Digital copies **must** be provided on a portable USB drive. It is preferred that the digital copy be provided in a searchable PDF format.

#### b. Data Summary

- (i) A bilingual data summary with data and photographs **must** be provided for each configuration for the trailer ordered from an Bidder in the Technical Authority provided format;

#### c. Warranty Letter

- (i) A paper copy of the completed bilingual warranty letter in the approved format (provided by the Technical Authority) **must** be provided with each trailer shipped;
- (ii) The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and

d. **Material Safety Data Sheets**

- (i) The Bidder **must** provide a listing of all hazardous materials used on the trailer;
- (ii) If there are no hazardous materials used, this **must** be stated on the listing; and
- (iii) The Bidder **must** provide material safety data sheets of all hazardous materials in the list.

Appendix 1

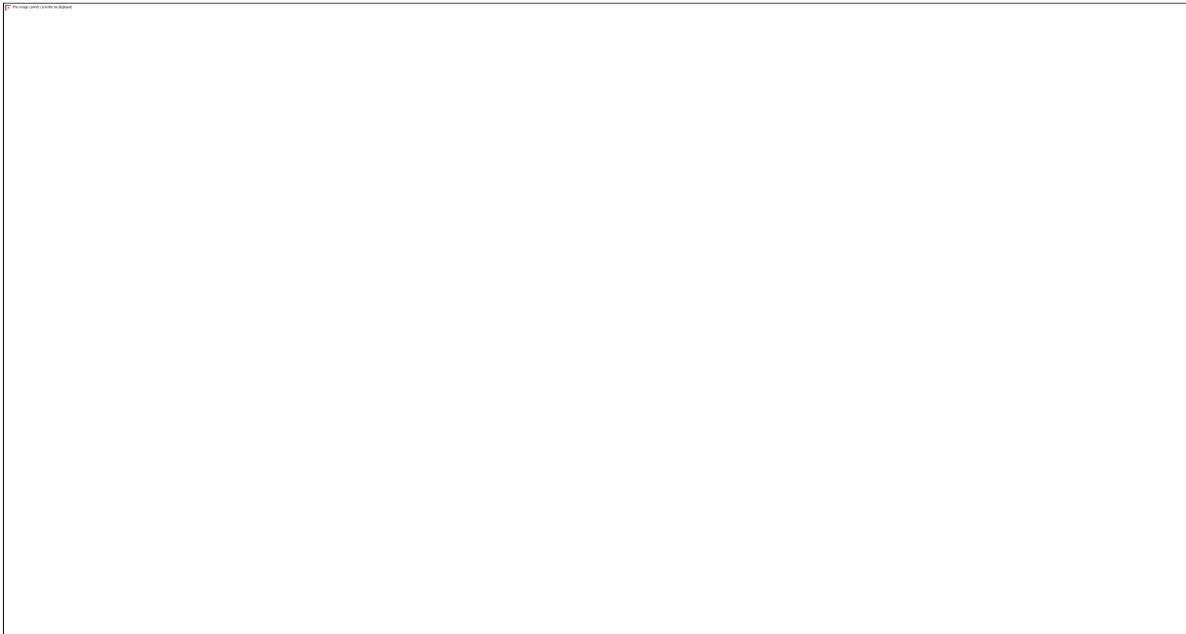
Annex A:

W8476-216413/001/SV

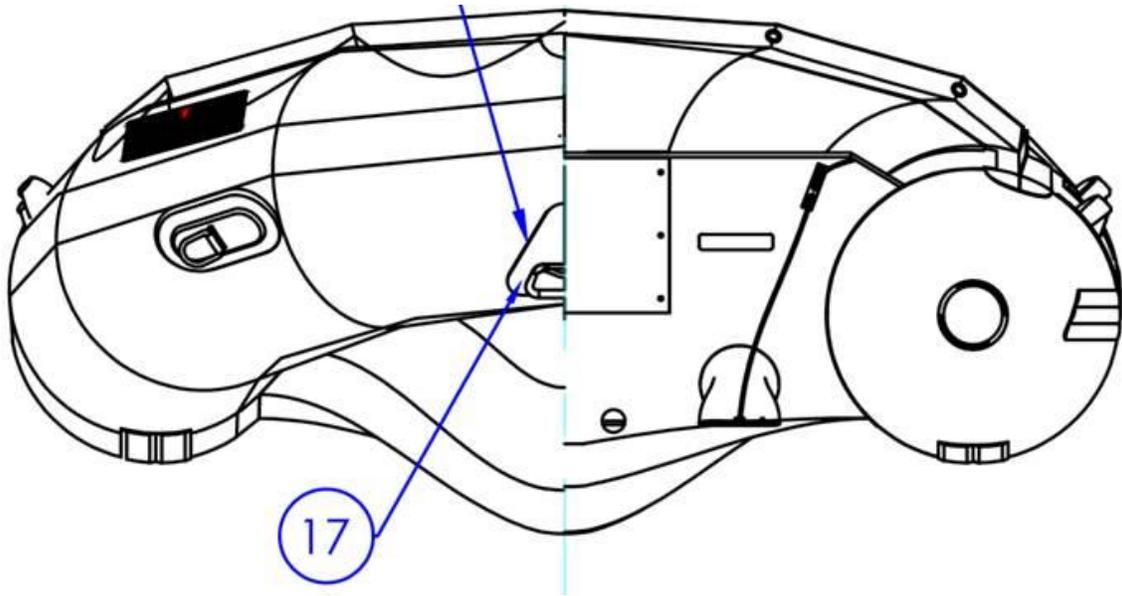
July 2021

## DIMENSIONAL PROFILES OF BOATS

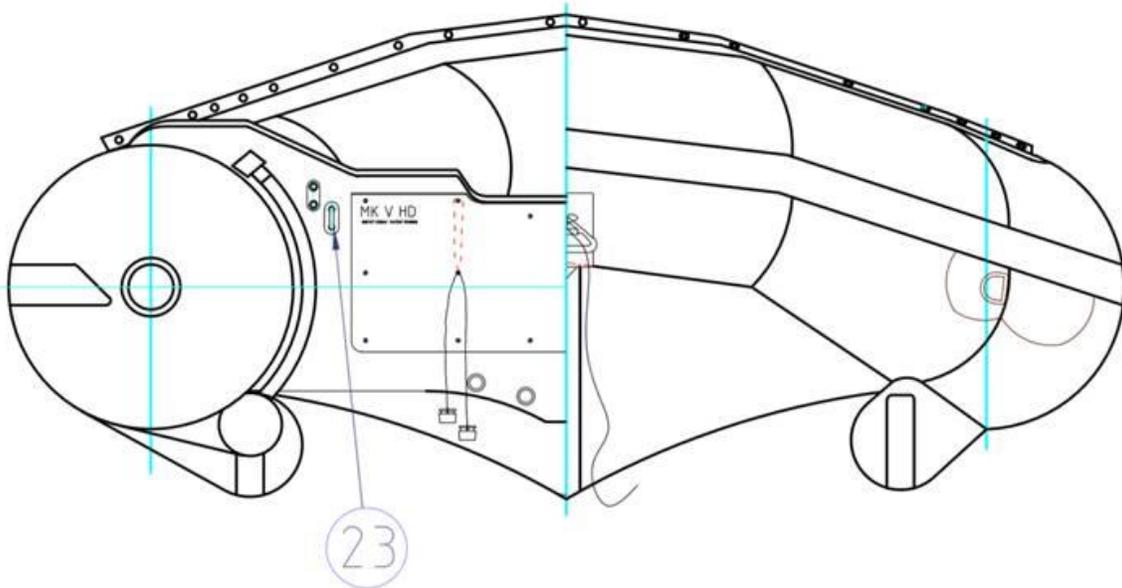
Hull: MK2  
Beam: 175 cm  
Tube Diameter: 45.5 cm



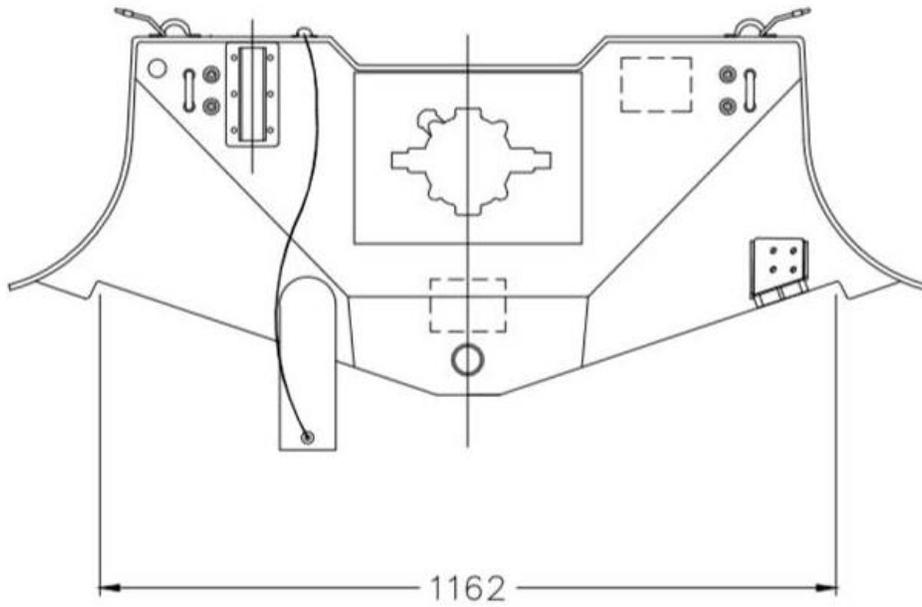
Hull: MK3  
Beam: 190 cm  
Tube diameter: 50 cm



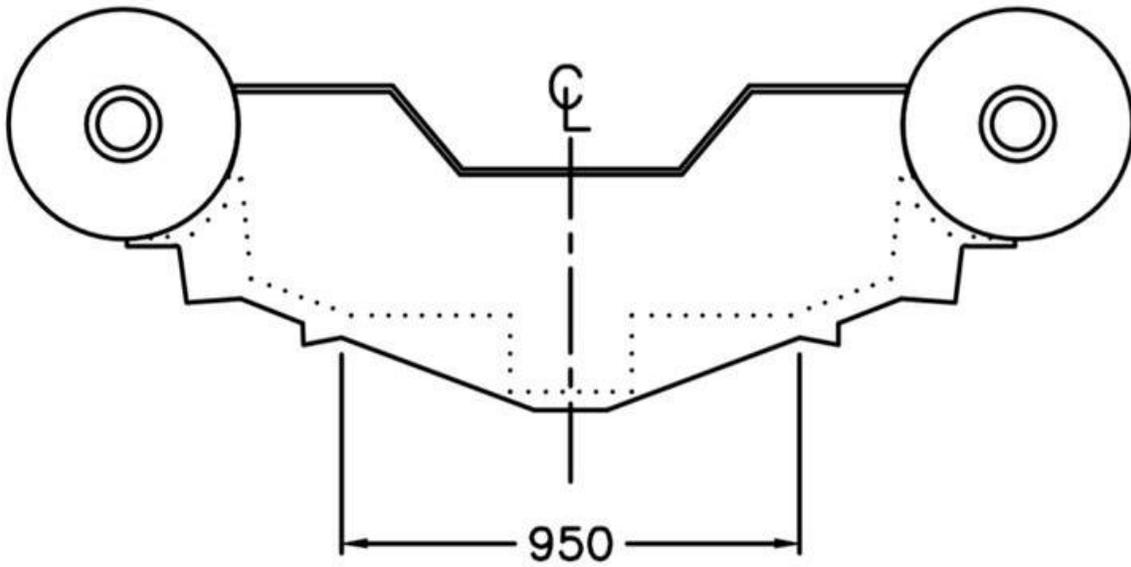
Hull: MK5  
Beam: 250 cm  
Tube diameter: 64 cm



Hull: 472  
Beam: 207 cm  
(Tubes not shown, dimension shown in mm)



Hull: 540  
Beam: 232 cm  
(Dimension shown in mm)



Appendix 2

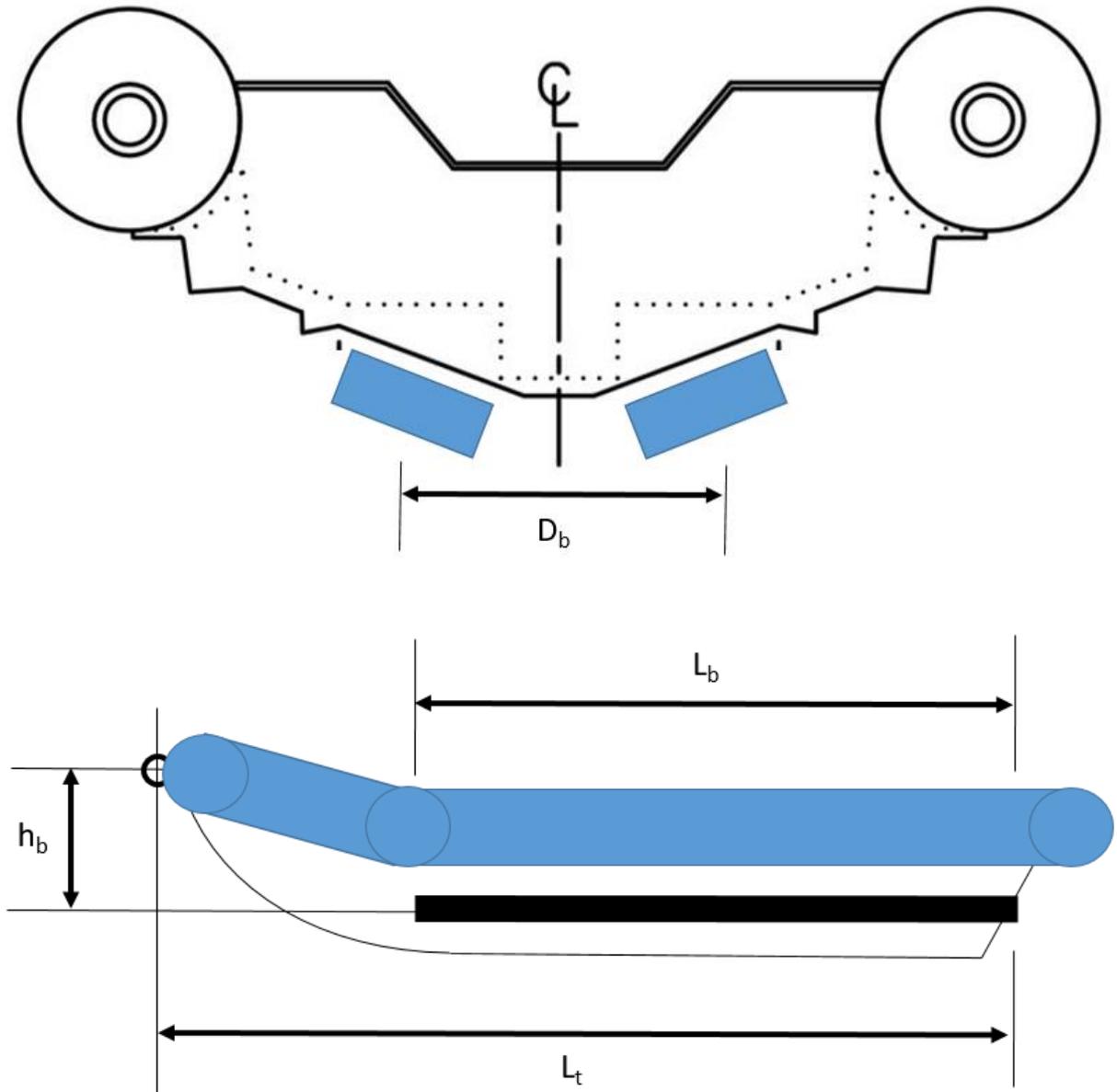
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W8476-216413/001/SV

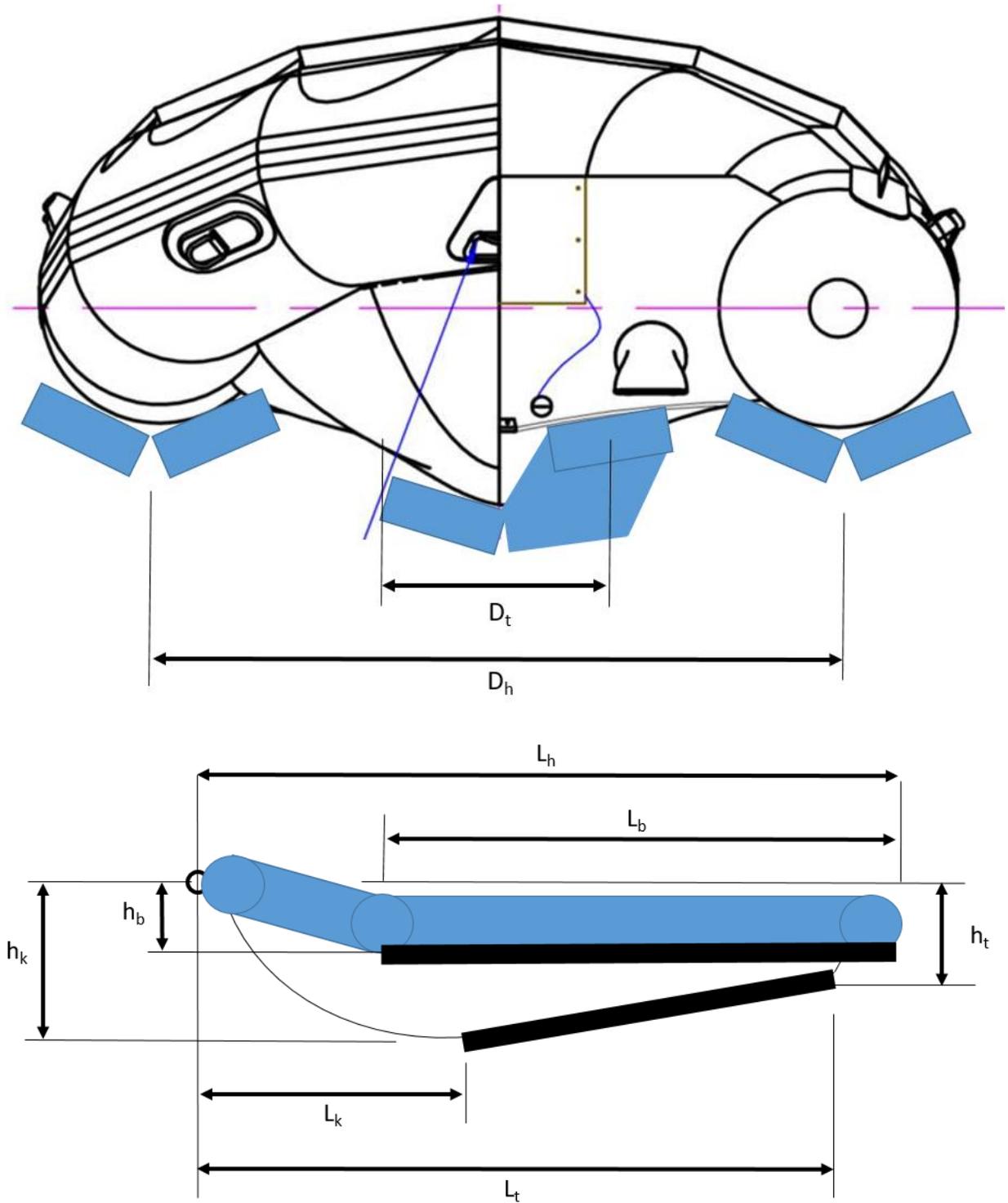
July 2021

### BUNK LAYOUTS

BUNK LAYOUT 1: Trailers 540, 472



BUNK LAYOUT 2: Trailer MK 5



### BUNK LAYOUT 3: Trailers MK 2, MK 3

