



CERTIFICATE NUMBER	24-2450544-PDA
EFFECTIVE DATE	18-Jan-2024
EXPIRY DATE	17-Jan-2029
ABS TECHNICAL OFFICE	Houston ESD - Piping

## CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

### **KOBELT MANUFACTURING CO. LTD.**

located at

**8238 129TH STREET, , SURREY, Canada, V3W 0A6**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

**Product:** Electronic Engine Control System  
**Model:** Mighty Mariner 6501S, 6505S, 6506, 6505-2000, 6503, 6527S, 6500-SK and 6570  
**Endorsements:**  
**Tier:** 5 - Unit Certification Required

This Product Design Assessment (PDA) Certificate remains valid until 17/Jan/2029 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

*John Vincent Ulep*  
John Vincent Bog-Acon Ulep, Senior Principal Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

**KOBELT MANUFACTURING CO. LTD.**

8238 129TH STREET

SURREY B.C.

Canada V3W 0A6

Telephone: 604-572-3935

Fax: 604-590-8313

Email: ekaterinaw@kobelt.com

Web: www.kobelt.com

**Tier: 5 - Unit Certification Required**

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**Product:** Electronic Engine Control System

**Model:** Mighty Mariner 6501S, 6505S, 6506, 6505-2000, 6503, 6527S, 6500-SK and 6570

**Endorsements:**

**Intended Service:**

Marine & Offshore Application - Controls the Clutch and Throttle of Single or Multiple Marine Engines either mechanically with Actuators or electronically with Output Signals. It is intended for Systems with Communication Cable runs less than 40 meters.

**Description:**

"Mighty Mariner" Electronic Engine Control System consists of the following components:

Control heads (6501S, 6505S, 6506)

Remote Control Interface Unit (6505-2000)

Electronic Control Interface Unit (6503)

Electronic Actuator (6527-S)

Synchronizer Proximity Sensor (6500-SK)

Twin Station Twin Engine System (6570)

**Rating:**

24VDC Power Supply

Operating Temperature Range: -10 °C to +55 °C

**Service Restriction:**

Unit Certification is required for this product, in case of Main Propulsion Control System. Due to communication cable length (40m max.) limitation on these electronic products, the system is not recommended, in general, for vessel greater than 30m in length or as far as the cable the cable length allows.

Actuators (6527-S) & Electronic Engine Interface (6503): These units, while traditionally mounted in or around the engine room, should not be mounted where excessive heat or moisture is present. Nor should it be mounted next to high power devices such as motors, heaters, or transmitters.

Automatic power supply transfer is to be verified for each specific installation.

**Comments:**

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

**Notes/Drawing/Documentation:**

Document No. Test Report - ACME 2004076\_RevA - MM EMC, Models 6503, 6506-B, 6505-2000-B, 6505S-TC-6500-SK dated November 10, 2004, Revision: 1, Pages: 83;

Document No. Test Report - QAI E10996-2110\_Kobelt\_Mighty Mariner Propulsion System Rev 1.0 dated February 17, 2022, Revision: 1, Pages: 41;

Document No. Test Report - QAI E10996-2202\_Kobelt\_Mighty Mariner Propulsion System \_Rev 1.0 dated October 19, 2022 Revision: 1, Pages: 20;

Document No. Test Report - Goshu 680012\_Rev1.0 dated December 27, 2022, Revision: 1, Pages: 88;

Document No. Test Report - Goshu 680040\_Rev1.0 dated December 30, 2004, Revision: 1, Pages: 128;

Document No. Test Report - LabTest - 30.00.21114-1\_Rev.0 - Vibration Test Report dated September 29, 2022, Revision: 0, Pages: 42;

Document No. Test Report - LabTest - 30.00.21599-1\_Rev.0 Kobelt LR-IEC- 6300-0100, 6300-0200, 6300-0300, 7175, 6506, 6605, 6500-SK dated March 22, 2022, Revision: 0, Pages: 21;

Document No. Test Report - LabTest 8422-1.0\_Rev1.0 - MM 6503 - LRS Test Spec 1 (2002) dated June 30, 2006, Revision: 1.0, Pages: 54;

Document No. 6570, Electronic Propulsion Control Head, Revision: -, Pages: 104;

Document No. 6605, Electronic Propulsion Control Head, Revision: -, Pages: 83;

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Document No. Test Report - LabTest 8426-1-EMC\_Rev1.0 - MM EMC, dated June 01, 2006, Revision: 1.0, Pages: 46;

Document No. Test Report - LabTest 9669-1S\_Rev0, Environmental Control, dated August 23, 2010, Revision: 0, Pages: 71;

Document No. Test Report - QAI - E10996-2105 IP56 Report - Rev1, dated November 29, 2021, Revision: -, Pages: 26;

Document No. Test Report - E10996-2302\_Kobelt\_Mighty Mariner\_ Rev 1.0. dated August 22, 2023, Revision: 1.0, Pages: 22;

**Terms of Validity:**

This Product Design Assessment (PDA) Certificate remains valid until 17/Jan/2029 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

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**STANDARDS**

**ABS Rules:**

2024 Rules for Conditions of Classification, 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2024 Rules for Building and Classing Marine Vessels: 4-9-3/11.9, 4-9-9/13, 4-9-9/ Table 1

2024 Rules for Conditions of Classification, Offshore Units and Structures 1-1-A2, 1-1-A3, which covers the following:

2024 Rules for Building and Classing Mobile Offshore Unites: 4-3-5/3.11.2.

**National:**

NA

**International:**

NA

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

None