APPENDIX D-4 Beneficiary Eligible Mitigation Action Certification

# BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary \_\_\_\_\_

Action Title:	
Beneficiary's Project ID:	
Funding Request No.	(sequential)
Request Type: (select one or more)	Reimbursement   Advance     Other (specify):
Payment to be made to: (select one or more)	□ Beneficiary □ Other (specify):
Funding Request & Direction (Attachment A)	<ul> <li>Attached to this Certification</li> <li>To be Provided Separately</li> </ul>

# **SUMMARY**

<b>Eligible Mitigation Action</b>	Appendix D-2 item (specify):						
Action Type	□ Item 10 - DERA Option (5.2.12) (specify and attach DERA Proposal):						
Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1):							
Detailed Description of Mi	tigation Action Item Including Community and Air Quality Benefits (5.2.2):						
Estimate of Anticipated N	Ox Reductions (5.2.3):						
Identification of Governme	ental Entity Responsible for Reviewing and Auditing Expenditures of Eligible						
Mitigation Action Funds to	o Ensure Compliance with Applicable Law (5.2.7.1):						
Describe how the Beneficia	ry will make documentation publicly available (5.2.7.2).						
-							
Describe any cost share rec	quirement to be placed on each NOx source proposed to be mitigated (5.2.8).						
Describe how the Beneficia	ry complied with subparagraph 4.2.8, related to notice to U.S. Government						
Agencies (5.2.9).							

If applicable, describe how the mitigation action will mitigate the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions (5.2.10).

# <u>ATTACHMENTS</u> (CHECK BOX IF ATTACHED)

Attachment A	Funding Request and Direction.
Attachment B	Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline (5.2.4).
Attachment C	Detailed Plan for Reporting on Eligible Mitigation Action Implementation (5.2.11).
Attachment D	Detailed cost estimates from selected or potential vendors for each proposed expenditure exceeding \$25,000 (5.2.6). [Attach only if project involves vendor expenditures exceeding \$25,000.]
Attachment E	DERA Option (5.2.12). [Attach only if using DERA option.]
Attachment F	Attachment specifying amount of requested funding to be debited against each beneficiary's allocation (5.2.13). [Attach only if this is a joint application involving multiple beneficiaries.]

# **CERTIFICATIONS**

By submitting this application, the Lead Agency makes the following certifications:

- 1. This application is submitted on behalf of Beneficiary \_\_\_\_\_\_\_, and the person executing this certification has authority to make this certification on behalf of the Lead Agency and Beneficiary, pursuant to the Certification for Beneficiary Status filed with the Court.
- 2. Beneficiary requests and directs that the Trustee make the payments described in this application and Attachment A to this Form.
- 3. This application contains all information and certifications required by Paragraph 5.2 of the Trust Agreement, and the Trustee may rely on this application, Attachment A, and related certifications in making disbursements of trust funds for the aforementioned Project ID.
- 4. Any vendors were or will be selected in accordance with a jurisdiction's public contracting law as applicable. (5.2.5)
- 5. Beneficiary will maintain and make publicly available all documentation submitted in

support of this funding request and all records supporting all expenditures of eligible mitigation action funds subject to applicable laws governing the publication of confidential business information and personally identifiable information. (5.2.7.2)

DATED: \_\_\_\_\_

Melvin	fatition	<u>Chief, Air Divisi</u> on
[NAME]		,
[TITLE]		

[LEAD AGENCY]

for

[BENEFICIARY]

# [SAMPLE ATTACHMENT B - USE OF THIS FORMAT IS NOT MANDATORY]

# PROJECT MANAGEMENT PLAN PROJECT SCHEDULE AND MILESTONES

Milestone	Date
Lead Agency Provides Notice of Availability of Mitigation Action Funds	
Project Sponsor Submits Proposal to Lead Agency	
Lead Agency Provides Written Approval of Project Sponsor's Proposal	
Lead Agency Incorporates Project Sponsor's Proposal into Mitigation Plan	
Trustee Acknowledges Receipt of Project Certification and Funding Direction	
Trustee Allocates Share of State Funds for Approved Project	
Lead Agency Directs Funding (Advance Funded Projects)	
Project Sponsor Obtains Cost Share, Notifies or Certifies to Lead Agency	
Project Sponsor Enters into Contracts, Purchase Orders, etc Start	
Project Sponsor Enters into Contracts, Purchase Orders, etc Complete	
Project Installation(s) – Start	
Project Installation(s) – Complete	
Project Sponsor provides detailed invoices for all claimed project costs, documentation for emission reduction estimates, required certification documents to Lead Agency to support direction to Trustee for Payment (Reimbursement, Direct-to-Vendor) or final accounting (Forward Funded Projects)	-
Lead Agency completes review and certifies payment direction to Trustee (Reimbursement)	
Trustee Acknowledges Receipt of Direction for Payment(s) (Advance Funded, Reimbursement)	-
Project Sponsor Certifies Project Completion	
Lead Agency Reports Project Completion	

## **PROJECT BUDGET**

Period of Performance:						
Budget Category	Total Approved Budget \$	Share of Total Budget to be Funded by the Trust \$	Cost-Share, if applicable (Entity #1) \$	Cost-Share, if applicable (Entity #2) \$		
1. Equipment Expenditure	φ	φ	φ	φ		
2. Contractor Support (Provide List of Approved Contractors as Attachment with approved funding ceilings)	\$	\$	\$	\$		
3. Subrecipient Support (Provide List of Approved Subrecipients or Grant Awardees as Attachment with approved funding ceilings)	\$	\$	\$	\$		
4. Administrative <sup>1</sup>	\$	\$	\$	\$		
Project Totals	\$	\$	\$	\$		
Percentage	%	%	%	%		

<sup>1</sup> Subject to Appendix D-2 15% administrative cap.

# PROJECTED TRUST ALLOCATIONS:

	2017	2018	2019	2020	2021
1. Anticipated Annual Project Funding Request to be paid through the Trust	\$	\$	\$	\$	\$
2. Anticipated Annual Cost Share	\$	\$	\$	\$	\$
3. Anticipated Total Project Funding by Year (line 1 plus line 2)	\$	\$	\$	\$	\$
4. Cumulative Trustee Payments Made to Date Against Cumulative Approved Beneficiary Allocation	\$	\$	\$	\$	\$
5. Current Beneficiary Project Funding to be paid through the Trust (line 1)	\$	\$	\$	\$	\$
6. Total Funding Allocated to for Beneficiary, inclusive of Current Action by Year (line 4 plus line 5)	\$	\$	\$	\$	\$
7. Beneficiary Share of Estimated Funds Remaining in Trust	\$	\$	\$	\$	\$
8. Net Beneficiary Funds Remaining in Trust, net of cumulative Beneficiary Funding Actions (line 7 minus line 6)	\$	\$	\$	\$	\$

# Beneficiary Eligible Mitigation Action Certification Supplemental Information and Attachments B, C, and D Beneficiary: State of Mississippi Lead Agency: Mississippi Department of Environmental Quality In Support of Funding Request No. 5

# **Supplemental Information**

Eligible Mitigation Action Type Appendix D-2 item (specify): Appendix D-2, Category 4: Ferries/Tugs

#### Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1):

Mississippi's BMP allocates \$9,870,000 to the ten (10) Eligible Mitigation Actions (EMAs) and associated administrative expenses allowed under the Trust Agreement. One of the 10 EMAs includes the replacement or repowering of ferries and tugs. This EMA Certification and funding request involves repowering a passenger ferry with a new, lower emitting diesel engine. This project will be completed in Harrison County, Mississippi.

# Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2):

This request is for \$282,986.25 in Trust Funds: \$246,075 to Pan Isle, Inc. and \$36,911.25 in administrative cost. The estimated lifetime emission reductions are 80.81 tons of NOx and 11371.02 tons of additional pollutants (PM2.5, HC, CO, and CO2).

Pan Isle, Inc. will be awarded \$246,075 for up to 40% of the cost to repower their M/V Gulf Islander ferry with new diesel engines and a new diesel onboard generator. The project would significantly reduce NOx emissions by replacing the current Tier 0 diesels with Tier 3 diesels. The M/V Gulf Islander is a 250-passenger ferry that provides service from the Gulfport Harbor to Ship Island, part of the Gulf Islands National Seashore. It operates on a seasonal schedule between March and October making the 22 mile trip to and from Ship Island. The diesel engines operate an average of 1150 hours annually.

#### Estimate of Anticipated NOx Reductions (5.2.3)

MDEQ used the US EPA's Diesel Emission Quantifier to estimate the anticipated annual reductions of NOx, PM2.5, HC, CO and CO2.

Project	Annual Emission Reductions (tons/yr)						
	NOx PM2.5 HC CO C						
Ship Island	8.081	0.168	0.213	1.341	1137.4		
Totals	8.081	0.168	0.213	1.341	1137.4		

Identification of Governmental Entity Responsible for Reviewing and Auditing Expenditure of Eligible Mitigation Action Funds to Ensure Compliance with Applicable Law {5.2.7. 1)

Mississippi Department of Environmental Quality

#### Describe how the Beneficiary will make documentation publicly available {5.2.7.2)

The Mississippi Department of Environmental Quality has established a VW Settlement website (<u>https://www.mdeq.ms.gov/air/vw-mitigation-trust/</u>) to provide information about the settlement, related activities happening in the state, and points of contact for questions. Requests for Applications will be posted to this site as well as announcements of projects selected for funding after EMA Certifications are approved by the Trust Administrator.

During the development of the BMP, MDEQ conducted three public stakeholder meetings in north, central and south Mississippi attended by concerned citizens, industry, environmental groups, and government entities in which DEQ presented information about the settlement and heard public comments and suggestions for the BMP. An email list was established of trade organizations, governmental entities, industries, environmental groups, and any other interested parties to send program information and updates. That same list was used to provide project solicitations.

# Describe any cost share requirement to be placed on each NOx source proposed to be mitigated (5.2.8)

MDEQ will use Environmental Mitigation Trust Funds to provide up to 40% of the cost to repower an eligible ferry/tug. Pan Isle, Inc. is required to provide at least 60% of the replacement cost.

# Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9):

The Mississippi Department of Environmental Quality sent the required notifications to the specified U.S. Government Agencies on February 26, 2018.

# If applicable, describe how the mitigation action will mitigate the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions (5.2.10).

The M/V Gulf Islander ferry is based in the Gulfport Harbor in Harrison County, Mississippi. This project meets the overall goal of reducing NOx emissions by replacing the existing Tier 0 diesel engines with significantly more efficient Tier 3 diesel engines. While most of the emissions benefits will be realized in Harrison County and surrounding communities, the Gulf Island National Seashore will also see benefits due to the ferry's frequent visits there. The Gulfport Harbor and The Gulf Islands National Seashore are both centers of tourist visitation. Harrison County is currently in attainment for all National Ambient Air Quality Standards; however, just 20 miles away is the Brenton Island National Wildlife Refuge, which is a designated Class 1 Area under the Clean Air Act. This classification receives special protection for air quality and visibility. By replacing the diesel engines onboard the M/V Gulf Islander ferry, the emissions reductions will also benefit this protected area.

# ATTACHMENT B

# Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline (5.2.4)

# PROJECT MANAGEMENT PLAN PROJECT SCHEDULE AND MILESTONES

Milestone	Date
Lead Agency Provides Notice of Availability of Mitigation Action Funds	CY 2021 Q2
Project Sponsor Submits Proposal to Lead Agency	CY 2021 Q4
Lead Agency Provides Written Approval of Project Sponsor's Proposal	CY 2022 Q1
Trustee Acknowledges Receipt of Project Certification and Funding Request and	CY 2022 Q3
Direction	
Trustee Allocates Share of State Funds for Approved Project	CY 2022 Q3
Lead Agency Directs Funding	CY 2022 Q3
Project Sponsor Obtains Cost Share, Notifies or Certifies to Lead Agency	CY 2022 Q3
Project Sponsor Enters into Contracts, Purchase Orders, etc Start	CY 2022 Q3
Project Sponsor Enters into Contracts, Purchase Orders, etc Complete	CY 2025 Q1
Project Installation(s) – Start	CY 2022 Q3
Project Installation(s) – Complete	CY 2025 Q1
Project Sponsor provides detailed invoices for all claimed project costs,	
documentation for emission reduction estimates, required certification documents to	CY 2025 Q1
Lead Agency to support direction to Trustee for Payment (Reimbursement, Direct-to-	
Vendor) or final accounting (Forward Funded Projects)	
Lead Agency Completes Review of Invoices and Project Documentation and Directs	CY 2025 Q1
Final Payment(s)	
Project Sponsor Certifies Project Completion	CY 2025 Q1
Lead Agency Reports Project Completion	CY 2025 Q1

# PROJECT BUDGET

F	Period of Performance: January 2022 – January 2025						
Budget Category	Total Approved Budget	Share of Total Budget to be Funded by the Trust	Cost-Share (Pan Isle, Inc.)				
1. Equipment Expenditure	\$679,045	\$246,075	\$432,970				
2. Contractor Support (Provide List of Approved Contractors as Attachment with approved funding ceilings)	\$0	\$0	\$0				
3. Subrecipient Support (Provide List of Approved Subrecipients or Grant Awardees as Attachment with approved funding ceilings)	\$0	\$0	\$0				
4. Administrative	\$36,911.25	\$36,911.25	\$0				
Project Totals	\$715,956.25	\$282,986.25	\$432,970				
Percentage	100%	39.5%	60.5%				

# PROJECTED TRUST ALLOCATIONS

		2022	2023	2024	2025	2026
1.	Anticipated Annual Project Funding to be paid through the Trust	\$282,986.25				
2.	Anticipated Annual Cost Share	\$432,970				
3.	Anticipated Total Project Funding by Year (line 1 plus line 2)	\$715,956.25				
4.	Cumulative Trustee Payments Made to Date Against Cumulative Approved Beneficiary Allocation	\$0				
5.	Current Beneficiary Project Funding to be paid through the Trust (line 1)	\$282,986.25				
6.	Total Funding Allocated to for Beneficiary, inclusive of Current Action by Year (line 4 plus line 5)	\$282,986.25				
7.	Beneficiary Share of Estimated Funds Remaining in Trust	\$2,662,501.04				
8.	Net Beneficiary Funds Remaining in Trust, net of cumulative Beneficiary Funding Actions (line 7 minus line 6)	\$2,379,514.79				

# ATTACHMENT C

# Detailed Plan for Reporting on Eligible Mitigation Action Implementation (5.2.11)

The Mississippi Department of Environmental Quality will provide detailed reporting on this Category 4 Ferries/Tugs repower project in two ways:

- 1) Updates to the Mississippi Department of Environmental Quality webpage. https://www.mdeq.ms.gov/air/vw-mitigation-trust/
- 2) Mississippi's semiannual reporting obligation to the Wilmington Trust.

# ATTACHMENT D

# Detailed cost estimates from selected or potential vendors for each proposed expenditure exceeding \$25,000 (5.2.6)



#### PUCKETT POWER SYSTEMS

14028 Highway 49 North Gulfport, Mississippi 39505 Phone: (228) 832-1711; Fax: (228) 832-4728 PROPOSAL 30924164 6/28/2021 Revision 1

#### Pan Isle, Inc Attn: Louis Skrmetta Subject: C9.3 EPA T3 375 BHP PORT AND STARBOARD

Puckett Power Systems Offers For Your Consideration The Following Quotation Per Your Inquiry.

Note: Revision 1 add breakout pricing for ZF marine gear and controls.

#### Quote Summary: Two C9.3 Marine Engines \$129,832.00 Two ZF Marine Gears \$22,633.00 ZF Controls \$7,925.00

Two (2) New Caterpillar Model C9.3 EPA Tier 3 Marine Propulsion Engines, rated at 375 BHP @ 1800 RPM, B-Rated, Heat Exchanger Cooled with the following standard equipment and attachments. (Arranged for Port and Starboard Service with both Engines being standard rotation)

Complete With The Following Standard Consist As Modified Or Replaced By The "Additional Accessories" Included In This Proposal:

#### AIR INLET SYSTEM

Single Turbocharger, Jacket Water Cooled Turbocharger Inlet, 127 mm (5 in) OD Straight Connection

#### CONTROL SYSTEM

Programmable Low Idle (600 - 750 rpm) Electronic Diagnostics and Fault Logging Engine and Transmission Monitoring (Speed, Temperature, Pressure) Electronic Fuel/Air Ratio Control Engine Protection Mode for Extended Ambient Conditions 70-pin Customer Connector Throttle Input Signal Options 0 - 5 Volts 4 - 20 mA PWM (Pulse Width Modulated) SAE J1939



PROPOSAL 30924161 6/28/2021

#### COOLING SYSTEM

Engine Mounted Aftercooler, Shell and Tube Engine Oil Cooler, Plate Type Jacket Water Pump, Belt Driven, Centrifugal Auxiliary Water Pump, Rubber Impeller, Gear Driven

#### EXHAUST SYSTEM

Jacket Water Cooled Exhaust Manifold & Turbocharger 4 Bolt, 82 mm (3.25 in) ID Flanged Turbocharger Outlet

#### FLYWHEELS & FLYWHEEL HOUSINGS

SAE Standard Rotation (CCW facing flywheel end) Flywheel Housing: SAE No. 1 Flywheel: SAE No. 14, 113 teeth

FUEL SYSTEM Fuel Transfer Pump, Gear Driven High Pressure Common-Rail Fuel Pump, Gear Driven Fuel Supply Connection Size: 1-3/16-12 ORFS on left side of engine

#### LUBE SYSTEM

Deep, Front Sump Oil Pan Valve Cover Oil Filler Location Oil Level Gauge Installed on Service Side Oil Pump, Gear Driven

#### GENERAL

Heat Exchanger Cooled Engines Ship with Sacrificial Zinc Anodes Front Mounted Belt Guard

CERTIFIED TO EPA TIER 3 MARINE COMMERCIAL PROPULSION (E3) CYCLE EMISSIONS STANDARDS

#### WITH THE FOLLOWING ADDITIONAL ACCESSORIES INCLUDED:

12 VOLT

#### IMO EIAPP CERT

#### NON GERMAN FLAGGED VESSELS

#### NO GERMAN FLAG IMO CERT



PROPOSAL 30924161 6/28/2021

#### NO EXTENDED SERVICE COVERAGE

#### AIR CLEANER

TECHNICAL: Provides an air cleaner without fumes disposal, installed.

#### BARB CONNECTIONS HEX

TECHNICAL: Provides hose barb connections for seawater inlet and outlet. Inlet diameter 51 mm (2 in) and outlet diameter 44.5 mm (1.75in).

#### HEAT EXCHANGER COOLED

TECHNICAL: Sea water aftercooled (SWAC) with engine mounted jacket water heat exchanger, shell and tube.

#### RUBBER IMPELLER PUMP

TECHNICAL: Gear driven, rubber impeller pump installed on left hand (LH) side of engine.

#### NON TYPE APRVD SW CONNECTIONS

TECHNICAL: Provides sea water circuit connections with hose barb and hose clamp connections. May not meet Marine Certification Society Requirements

#### SIMPLEX OIL FILTER

#### DRIP TRAY-SIMPLEX OIL FILTER

TECHNICAL: Provides drip tray installed under simplex oil filter on service side. 15.9mm (5/8 in) hose barb connection on bottom for installation of drain hose. May be required for Marine Certification Society Approval.

#### STD HP PIPES NC

TECHNICAL: Provides single wall high pressure fuel rail.

#### SIMPLEX FUEL

TECHNICAL: Provides three-stage fuel filtration system with simplex filters. System includes shipped loose primary simplex filter and secondary/tertiary simplex fuel filters installed on the engine service side.

Requires customer supplied mounting of primary filter and associated fuel lines.





#### FUEL COOLER

TECHNICAL: Provides a fuel cooler installed on the LH side of engine. Fuel return location is provided on fuel cooler, 11/16-16 ORFS connection.

#### MANUAL PRIMING PUMP

Shipped Loose TECHNICAL: Provides a shipped loose manual priming pump to be customer installed after primary filter. Inlet and outlet connections are 1-3/16-12 ORFS.

#### NO ALTERNATOR

#### 12V ELECTRIC STARTER

TECHNICAL: Mounted on left hand (LH) side of engine

#### JACKET WATER HEATER-120 V

Shipped Loose TECHNICAL: 120V / 1000 W Customer supplied mounting and lines

#### MECP I MAR ENG CONT PANEL

Shipped Loose TECHNICAL: Shipped loose panel for off-engine mounting. This option does not include mounting bracket hardware and only includes the panel and harness.

#### CMD8 GEN 2 DISPLAY GROUP (1 per engine)

Shipped loose.

One electronic display for monitoring vessel information. Features an 8-inch, HD 1280x720 LCD touch screen with LED backlight technology. Supports 2 CAN, 3 Ethernet, 2 USB 2.0, 2 USB 3.0 and 1 RS-485. Has 4 digital inputs and 2 digital outputs. Displays engine, transmission, generator, and vessel information. TECHNICAL: 12 to 24 VDC. For single or twin engine applications using J1939 or Modbus over TCP. For triple engine applications, one LDRK is required. FOR USE WITH: Color Display Drop Harness, and marine transmission sensors if monitoring capability is required. Compatible with Asset IQ kits and MSCS.

#### CMD DUAL DSPLY HARN (lper engine)

Shipped loose. TECHNICAL: Y-harness which provides ability to display parameters from two engines on a single CMD. Refer to LEGM001 for installation information.





#### CMDWRKT DISPLAY GROUP (1 per engine)

Shipped loose.

TECHNICAL: CMD wiring connection kit which includes sockets, receptacles wedge plugs, plug assemblies, terminating resistor, cable assembly, and sealed tubing required for installing each CMD. Dealer or customer supplied wiring required. REQUIRES: CMD5001, CMD08G2 OR

#### CRANKSHAFT PULLEY

TECHNICAL: Provides a 3 groove v-belt pulley.

#### STANDARD FRONT SUPPORT

TECHNICAL: Provides propulsion engine style, adjustable front support. Spans 268 mm (10.5 in) from centerline of crankshaft. Three sets of mounting holes: 67 mm (2.6 in), 117 mm (4.6 in) and 167mm (6.6 in) below centerline of crankshaft.

#### NO REAR ENGINE SUPPORT

#### VIBRATION ISOLATORS

Shipped loose. TECHNICAL: For mounting under front supports and transmission supports in thrust applications. 1-14 Stud.

#### FRONT MOUNTING BRACKETS \$

Quantity 2, shipped loose. TECHNICAL: Shipped loose brackets that mate with adjustable mounting holes on STANDARD FRONT SUPPORT (FTSPSD0). Single 27.5mm (1.08 in) mounting hole provided, 384 mm (15.1 in) from centerline of crankshaft. Compatible with VIBIS01 and VIBIS00 Vibration Isolators.

NO COOLANT LEVEL SENSOR - HEX

NO OIL LEVEL SENSOR REQUIRED

NO SEA WATER PRESSURE SENSOR

NO AIR ST PRESS SNSR ELEC ST

NO EXHAUST TEMPERATURE SENSOR

#### WATERCOOLED ELBOW

TECHNICAL: 90 degree wet exhaust elbow with hard-coated insulation and water-cooled nozzle canister with 127 mm (5 in) O.D. outlet. Customer

Page | 5



PROPOSAL 30924161 6/28/2021

is responsible for supplying 47.6 mm (1 7/8 in) water lines and connections for raw water supply to the elbow.

#### COMMERCIAL FINISH

The Commercial Finish is a high gloss finish achieved using polyurethane paint over epoxy primer. Masking is limited to those components such as air cleaners, gages, etc. where paint would inhibit function or durability.

#### CAT YELLOW PAINT

PRESERVATION GP ENGINE TECHNICAL: Standard protective measures.

#### 80 FT OEM WIRING HARNESS Shipped loose.

Shipped loose.

#### WIRING GROUP-TRANS SENSOR

Shipped loose.

TECHNICAL: Includes transmission pressure and temperature sensors jumper harness to connect to main engine harness. Provides sensor input to the ADEM 4 Electronic Control Module (ECM) for monitoring of transmission. Temperature sensor is 3/4-16 STOR and pressure sensor is 1/2-20 STOR.

#### ENGLISH LITERATURE

#### ENGLISH DECAL

#### MARINE PROPULSION ANALYSIS - One Driveline Only

Provides a torsional report for a simple marine propulsion system powered by a Caterpillar engine. The report includes natural frequency calculations, mode shapes and forced vibration predictions for the engine, coupling, gear box and propeller shafting. Select MPAPROP for complex marine applications where pumps or other equipment is driven from the front of the engine crankshaft or marine gear PTO. The following technical information is needed to perform the TVA:

Coupling mass-elastic data. This includes coupling inertia and torsional stiffness. Provide complete coupling part number and catalog reference sheets if available.

Marine gear mass-elastic data. Provide the gear manufacturers mass-elastic data sheet. If the data sheet is not available provide the manufacturer name, model number and gear ratio.





Propeller shaft. Provide dimensioned shaft drawings and shaft material. If shaft drawings are not available provide shaft diameter and length.

Propeller. Provide propeller drawing with listed inertia. If the draw or inertia value is not available provide propeller diameter and number of blades.

#### START UP, SEA TRIAL AND FREIGHT

Two (2) New Caterpillar Model C9.3 EPA Tier 3 Marine Propulsion Engines, rated at 375 BHP @ 1800 RPM: PRICE: \$64,916.00 each, Plus any applicable taxes <u>\$129,832.00 Two, F.O.B. factory with freight allowed to Miss. Gulf Coast Jobsite</u> Puckett Power Systems Terms and Conditions Apply.

#### Breakout price for ZF marine gear: Per Shipset \$22,633.00 USD

Installed and Painted 60' TWIN SCREW PASSNGER VESSEL CAT C9 375 HP @ 1800 RPM ZF 305-3A R:2.037 LIGHT DUTY RATED UP TO: 450 HP @ 1800 RPM 2000 HOURS YEARLY 0.2500 X RPM = RATED HP (MAX RPM = 3000)

ZF 305-3A R:2.037 SAE1 ZF 305-3A R:2.037 SS2, BELL HOUSING SAE1 (305A), COUPLING V4011S-14 (311/325), EB31 ELEC. CONTROL KIT NPTF KIT (ZF305-1), KIT,ELECTRIC VALVE 12v ON/OFF, Qt

3214118001 01 MOUNTING BRACKETS RIGID 3208199026 01 PROP FLANGE & BOLT KIT 3208107006 01 OIL COOLER KIT, ZF 305-1 Shipment is approximately 6 months from factory VIA ocean freight.

#### ZF Clear Command Twin Screw 1 Station Controls \$7,925.00 USD

Shipped Loose CLEARCOMMAND-ELECT ENG MC2000-4P CONTROL HEAD, DUAL, 14261-80 CONTROL HEAD CABLE, 13631-30 WIRE HARNESS-PWR/S.I. 13316-10 WIRE HARNESS- SERIAL 15719-30 WIRE HARNESS, CLUTCH 13533-30 WIRE HARNESS-THROTTLE

Page | 7



PROPOSAL 30924161 6/28/2021

Engine Delivery: Approximately 23-25 weeks after receipt of firm order

Bid Validity: 30 days from the date of this Proposal.

#### Cancellation policy:

All orders are considered firm. Cancellations will not be accepted.

#### Terms:

10% Non Refundable down payment required at time of purchase. Balance due net 30 days after delivery of equipment, subject to credit approval.

#### Note 1:

References to right hand and left hand items refer to their location on the engine as viewed facing the flywheel end.

#### Note 2:

All Invoices Will Be Dated The Date of Shipment, Unless Purchaser Requests Shipment To Be Delayed In Which Case The Invoice Date Shall Be The Date Manufacture Of The Products Was Completed.

Thank you for the opportunity of quoting this project. We remain at your disposal for any additional information or assistance that you may require.

Puckett Power Systems

Jason McWhorter Engine Sales

Quoted prices do not include Federal State or Local taxes which may be applicable. Quoted prices include normal testing, packaging, and instructional literature. Special testing, packaging, additional instructional literature, parts, provisioning lists or prints are not included. Pricing for these services will be quoted separately.

Page | 8





(954) 979-5899 (954) 979-4349 (FAX)

# PHASOR MARINE GENERATOR QUOTE

SOLD TO:	PAN ISLES INC		SHIP 1	o:	DATE: June 25, CUSTOMER WILL AL	
	Ship Island Excursion	on				
	P.O. Box 1467					
	Gulfport, MS 39502					
TEL: 228	235-1600		TEL:			
E-M: shipislar	ndsales@outlook.com	TAX NO.			FORWARD	Will Advise
TERMS	Check		Out-of-State		NAME:	Pete
SALESMAN:	Alan M.		DATE Three W	/eeks	P.O. #	Quote
xxx Marine	0				REPLACEMENT	
XXX I	Heat Exchanger				TEMP/FLEX	
xxx	Cast Stainless Stee	el Exhaust E	lbow	xxx	TIER 3 2013	
	Radiator Cooled				Tier 4	
EMER	GENCY STATION	ARY STAND	BY	-	Prime Power	
EXPO	RT					

#### Customer PO must be attached stating application

DESCRIPTION	LIST PRICE	OEM PRICE
JD4-65.0 KW 208 Volts, Three Phase, 60 Hertz	\$28,520.00	\$57,040.00
G-7020 Controller AC-DC-Electronic Digital	\$450.00	\$900.00
Exhaust Elbow Stainless Steel w / Temp Switch	\$700.00	\$1,400.00
	Sub-Total	\$59,340.00
PRODUCTION TIME THREE WEEKS		
WARRANTY FIVE YEAR LIMITED		
F.O.B. POMPANO BEACH, FL		
	JD4-65.0 KW 208 Volts, Three Phase, 60 Hertz G-7020 Controller AC-DC-Electronic Digital Exhaust Elbow Stainless Steel w / Temp Switch PRODUCTION TIME THREE WEEKS WARRANTY FIVE YEAR LIMITED	JD4-65.0 KW 208 Volts, Three Phase, 60 Hertz \$28,520.00 G-7020 Controller AC-DC-Electronic Digital \$450.00 Exhaust Elbow Stainless Steel w / Temp Switch \$700.00 Sub-Total PRODUCTION TIME THREE WEEKS WARRANTY FIVE YEAR LIMITED

2880 Hammondville Road Pompano Beach, FL 33069

# JD4-65.0KW

# Standard Features

- Single bearing brushless generator
- = +/- 1% Solid-state voltage regulation
- Low 1,800 RPM operating speed
- Automatic engine shutdown for low oil and high coolant temperature
- Freshwater heat exchange cooling
- Zinc anode in heat exchanger
- Water-cooled manifold and Stainless Steel exhaust elbow
- Direct drive seawater pump
- Primary fuel filter
- Secondard fuel filter
- Air intake Cleaner / Silencer
- 12 Volt DC start / Battery charging alternator
- 4-Point isolation motor
- Awl-Craft 2000 urethane finish
- S-Year Limited Warranty

# Specifications

Model	JD4-65.0
Engine	John Deere 4045TFM
Cu. In. Displacement	276
Bore x Stroke	4.19 x 5.00 (in.)
Dims (LxWxH)	65 x 32 x 38 (in.)
Enclosure Dims (LxWxH)	68 x 38 x 41 (in.)
Weight (lbs.)	2375
Output (volts)	120/240 Single phase
Output (amps)	542/271
Output (watts)	65,000
Fuel Consum. @ 50% load	2.6 GPH
Fuel Consum. @ 100% load	4.8 GPH
Exhaust Dia.	3.5 in.

Specifications are subject to change without notice

# Optional Equipment

- J-can electronic control panel with display for all engine and generator functions
- Three phase output
- · 24 Volt DC start / battery charging alternator
- · Dedicated motor starting generator windings
- Stainless Steel drip pan

- Powder coated aluminum enclosure
- Remote oil filter kit
- 50 cycle output
- · Custom chrome packages
- Bow thruster FPTO
- Spare parts kit



2880 Hammondville Road · Pompano Beach, FL 33069 Ph: 954-979-5899 · Fax: 954-979-4349 info@phasormarine.com · www.phasormarine.com

rev020316





(954) 979-5899 (954) 979-4349 (FAX)

## PHASOR MARINE GENERATOR QUOTE

SOLD TO: _	PAN ISLES INC		SHIP 1	o:	DATE: June 25, 2 CUSTOMER WILL AD	
	Ship Island Excursi	on				
	P.O. Box 1467					
	Gulfport, MS 39502					
TEL: 228	235-1600		TEL:			
E-M: shipislar	ndsales@outlook.com	TAX NO.			FORWARD	Will Advise
TERMS	Check		Out-of-State		NAME:	Pete
SALESMAN:	Alan M.		DATE TWO W	EEKS	P.O. #	Quote
xxx Marine	9				REPLACEMENT	
XXX F	leat Exchanger				TEMP/FLEX	
XXX	Cast Stainless Ste	el Exhaust E	lbow	XXX	TIER 3 2013	
F	Radiator Cooled				Tier 4	
EMER	GENCY STATION	ARY STAND	BY		Prime Power	
EXPO	RT					

# Customer PO must be attached stating application

QTY	DESCR	IPTION	LIST PRICE	OEM PRICE
One	K3-7.0 KW 1	20/240, Single Phase, 60 Hertz		\$7,740.00
One	101-0069 L	C Gauge Panel w / Start / Stop /	20ft Harness	\$445.00
			Sub-Total	\$8,185.00
	PRODUCTION THE	TUDES WESKA		
	PRODUCTION TIME WARRANTY	THREE WEEKS FIVE YEAR LIMITED		
	F.O.B.	POMPANO BEACH, FL		
_				
	F.U.B.	POMPANO BEACH, FL		_

2880 Hammondville Road Pompano Beach, FL 33069



## Standard Features

- Kubota Diesel Engine
- Single bearing direct coupled brushless generator
- +/- 1% Solid-state voltage regulation
- Low 1,800 RPM operating speed
- Safety shutdown system for high coolant temperature or low lube oil pressure
- Single series circuit control system with no printed circuit boards - tinned wiring
- Main line circuit breaker single phase
- Freshwater double pass heat exchanger
- Water-cooled exhaust manifold with removable intergral Cupro-Nickel heat exchanger core
- Zinc anode in heat exchanger
- Stainless Steel exhaust elbow cast
- Gear-driven raw water pump
- 4-Point isolation mounts S/S
- Molded blue silicone water hoses with Stainless Steel AWAB clamps
- Air intake Cleaner / Silencer
- Spin-on lube filter
- Secondary 5 Micron fuel filter
- Self-bleed fuel system
- USCG approved fuel lines
- Electric fuel transfer pump
- Forged brass oil drain valve with safety lock
- Awl-Craft 2000 urethane finish
- Belt guard
- 5-Year Limited Warranty

### Specifications

Kubota Model	D1005-E4BG
Cylinders	3
Cu. In. Displacement	61
Bore x Stroke	2.99 x 2.90 (in.)
Dims (LxWxH)	31.5 x 18 x 22.5 (in.)
Enclosure Dims (LxWxH)	35 x 22 x 25.5 (in.)
Weight (lbs.)	567
Output (volts)	120/240
Output (amps)	58/29
Output (watts)	7,000
Exhaust Dia.	2 in.
Raw water Dia.	3/4 in.
Fuel Line Dia.	5/16 in.
Return Line Dia.	3/16 in.

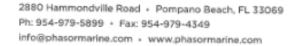
favorifications are subject to intempt without notice

## **Optional Equipment**

- Start / Stop 20 ft. harness
- · Custom remote engine / generator instrument panels
- DC Gauge panel 20 ft. harness
- Stainless Steel drip pan
- Three phase generator output
- 24 Volt starting system



- Dedicated motor starting generator windings
- Sound insulation blanket
- Powder coated aluminum enclosure
- Remote oil filter kits
- Custom chrome packages
- Spare parts kit



/#¥820318