Marine Propulsion Engine Application Review Form - May **202**5

Application Review Number:_____ SA Job Number: _____

General Information

Customer Name

Customer is: ☐ End User ☐ Shipyard ☐ Other

Vessel Location

Technician(name)

Technician's Company

Dealer

Distributor

Entity Which Sold Engine

Sea Trial Test Date

Present at Sea Trial ☐ Customer ☐ Dealer ☐ Builder ☐ Distributor

First article app review number (if production sea trial)	

Vessel Information

Vessel Name

☐ New Build ☐ Repower

Hull Make/Model

Hull Build Date

Hull Material

Measurements LOA _____ ☐ ft ☐ m

Max Weight (Disp.) _____ ☐ lbs ☐ kg

Full load at sea trial ☐ yes ☐ no

Loading Comments

_____

New Engine Information

Model _____ S/N _____ Power _____ ☐ hp ☐ kW RPM _____ M Rating _____

☐ Keel Cooled ☐ Heat Exchanged Hours on Engine at Time of Sea Trial

Application Information

Hull Type
☐ Displacement
☐ Semi-Disp
☐ Planing
☐ Catamaran

Vessel Type
☐ Fishing
☐ Tug/Tow
☐ Workboat
☐ Passenger
☐ Sport Fish

☐ Rec. Trawler
☐ Barge
☐ Sailboat
☐ Other _____

% Time @ Full Throttle _____ %

% Time @ Cruising Speed _____ % @ _____ RPM

For Tug/Tow: % Time Towing _____ % @ _____ RPM

Expected Application Load Factor _____ %

Design Hull Speed _____ knts Annual Hours _____

Multi-Engine Installation ☐ Yes # _____ ☐ No

Engine Placement ☐ Port ☐ Port-Mid ☐ Center ☐ Stbd-Mid ☐ Stbd

Max Outside Ambient Air Temperature _____

Max Sea Water Temperature _____

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Previous Engine/Gear/Propeller (Repower Only)

Engine Make/Model _____ Power _____ ☐ hp ☐ kW RPM _____

Sea Trial Performed Prior to Repower ☐ Yes ☐ No Maximum Vessel Speed _____ Knots Max Engine Speed _____ RPM

Propulsion Type ☐ Fixed Pitch ☐ Waterjet ☐ Sterndrive ☐ POD ☐ Other _____

Gear Make & Model _____ Gear Ratio _____ :1

Waterjet/Sterndrive/POD Make & Model _____

Propeller/Impeller Make & Model _____ Propeller Material _____

Propeller/Impeller Size ☐ in ☐ cm Pitch ☐ in ☐ cm # Blades Cup ☐ Yes ☐ No ☐

New Gear/Driveshaft/Propeller

Propulsion Type ☐ ixed Pitch ☐ Waterjet ☐ Sterndrive ☐ POD ☐ Other _____

Shaft Material _____ Shaft Diameter ☐☐ in ☐ mm Shaft Angle ___ deg

Gear Make & Model _____ Gear Ratio _____ :1 S/N _____

Waterjet/Sterndrive/POD Make & Model _____

Propeller/Impeller Make & Model _____ Propeller Material _____

Propeller/Impeller Size ☐ in ☐ cm Pitch ☐ in ☐ cm # Blades Cup ☐ Yes ☐ No ☐

Powered Components (including alternator(s)) (AG31)

Make and Model (JD Part Number if Applicable)	Engaged While: Cranking	Neutral	In Gear	Max Power Required	Drive Type: Aux/ Pulley/Crank/etc	Used For
	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	_____ hp		
	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	_____ hp		
	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	_____ hp		
	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	_____ hp		

Factory Installed Alternator ☐ Yes ☐ No Alternator Voltage Alternator Current

Engine Mounting (AG27/ AG23.5)

Engine Installation Angle _____ ° ☐ Nose Up ☐ Nose Down Dipstick Re-marked ☐ Yes ☐ No

Type of Mounting ☐ Solid ☐ Isolated ___ # points

Engine Lift Straps must be removed after engine installation

Engine Lift Straps Removed?* ☐ Yes ☐ No, Customer Acknowledges and Assumes Risk of Non-Removal

Customer Signature and date if not removed _____

*Technician should use best efforts and strongly encourage removal of lift straps, and inform customer of removal requirement, including the safety reasons for doing so. If customer refuses following instruction, customer shall check "No, Customer Acknowledges and Assumes Risk of Non-Removal" box and then have customer sign and date the form. If customer refuses to sign, technician (and other witness if available) should check the "No" box and hand write "Customer Refuses to allow removal of lift straps" on the form and then list time, date and location of the interaction along with their name (and witness).

JOHN DEERE

Air Intake (AG03)

Engine Within Enclosure or Engine Room ☐ Yes ☐ No

Total Engine Room Intake Vent Area _____ ☐ in^2 ☐ cm^2

Total Engine Room Exhaust Vent Area _____ ☐ in^2 ☐ cm^2

Remote Mounted Air Filter ☐ Yes ☐ No

Diameter _____ ☐ in ☐ cm

Pipe Length _____ ☐ ft ☐ m

Number of Elbows: 45° _____ 90° ___

Air Filter ☐ Standard ☐ Other _____

Intake Fan ☐ Yes No ☐ Rated Flow _____

Exhaust Fan ☐ Yes No ☐ Rated Flow _____

Comments

Lube Oil System (AG23.5)

Crankcase Ventilation ☐ Closed System ☐ Open System

Duplex Oil Filter ☐ Yes ☐ No

Remote Mounted Oil Filter ☐ Yes ☐ No

Comments

Exhaust System (AG17.5)

☐ Dry ☐ Wet

Adequate Flex ☐ Yes ☐ No

Exhaust Wrapped ☐ Yes ☐ No

Exhaust Outlet Above Waterline ☐ Yes ☐ No

Wet Exhaust Elbow ☐ Deere ☐ Other _____

Muffler ☐ Yes ☐ No

Exhaust Muffler Make/Model _____

Exhaust Pipe Length _____ ☐ ft ☐ m

Exhaust Pipe Diameter _____ ☐ in ☐ mm

Exhaust Piping Material _____

Number of Elbows: 45° _____ 90° _____

Comments

Turbo Outlet Pipe Supported ☐ Yes ☐ No

Fuel System (AG19)

Pre-Engine Filter/Water Seperator ☐ Yes ☐ No Make/Model _____

Multiple Fuel Tanks ☐ Yes ☐ No Total Fuel Capacity _____ ☐ gal ☐ L Day Tank ☐ Yes ☐ No

Fuel Level During Sea Trial _____ ☐ % ☐ gal ☐ L Fuel tank Material _____

Horizontal Distance Between Inlet and Outlet Fittings on Fuel Tank _____ ☐ in ☐ cm

Horizontal Distance Between Tank and Engine _____ ☐ ft ☐ m

Fuel Inlet Line Diameter _____ ☐ in ☐ cm Length _____ ☐ in ☐ cm Material _____

Vertical distance from suction point in tank to low pressure pump _____ ☐ in ☐ cm

Fuel Return Line Diameter _____ ☐ in ☐ cm Length _____ ☐ in ☐ cm Material _____

Unique return line for each engine ☐ Yes ☐ No

Fuel Return Valve(s) Installed ☐ Yes ☐ No Valve Type(s) _____

Fuel Return Monitoring System Installed ☐ Yes ☐ No Details _____

Duplex Fuel Filter ☐ Yes ☐ No

Comments

Electrical System (AG10/AG11/AG11.5-P)

Isolated Ground ☐ Yes ☐ No Positive Cable Length _____ ☐ ft ☐ m Size _____

Engine Grounded to Bonding Strip ☐ Yes ☐ No Negative Cable Lenth _____ ☐ ft ☐ m Size _____

# of Batteries _____ Battery Type _____ System Voltage ☐ 12 ☐ 24 System CCA _____ Amps

Instrument Panel(s) ☐ John Deere ☐ Other Controller Information _____

TVP Installed ☐ Yes ☐ No Comments

Cooling System (General) (AG08/AG09.5)

Engine Coolant Type ☐ Cool-Gard II ☐ Other _____ John Deere Cooling System ☐ Yes ☐ No

Gear Oil Cooler ☐ Yes ☐ No Block /Coolant Heater ☐ Yes ☐ No

Location ☐ Before Engine ☐ After Engine Remote Top Tank ☐ Yes ☐ No

Coolant Recovery Bottle Volume _____ ☐ qt ☐ L

Recovery Bottle Relative to Top Tank ☐ Above ☐ Below Height Relative to Top Tank _____ ☐ in ☐ cm

Auxiliary Coolant Utilized (i.e. cab heat) ☐ Yes ☐ No Aux Cool Location: Out of Engine _____

Aux Coolant Line Diameter _____ ☐ in ☐ cm Return to Engine _____

Comments

Cooling System (Heat Exchanged) (AG09.5)

SW Discharge Above Waterline ☐ Yes ☐ No

SW Pump Inlet Tube Diameter ____ ☐ in ☐ cm

SW Strainer Hole Diameters ____ ☐ in ☐ cm

SW Discharge Tube Diameter ____ ☐ in ☐ cm

Seacock Installed ☐ Yes ☐ No

Comments

Cooling System (Keel Cooled) (AG09.5)

Keel Cooler ☐ Channel ☐ Pipe ☐ Grid Tube Cross Sectional Area ____ ☐ in² ☐ cm² Length ____ ☐ in ☐ cm

Make/Model if Applicable ____ Number of Paths or Tubes ____

Material ____ Painted ☐ Yes ☐ No Keel Cooler Line Size Inlet ____ Outlet ____ ☐ in ☐ cm

Comments ____

Dual Circuit Keel Cooled (DCKC) ☐ Yes ☐ No DCKC Make/Model/Serial # ____

DCKC Ridid Impeller Pump ☐ Yes ☐ No DCKC Coolant Type ☐ Cool-Gard II ☐ Other ____

Aftercooler Circuit Top Tank Volume ☐ qt ☐ L Comments

Cooling System (Radiator Cooled) (AG09.5/AG04)

Radiator Make/Model ____ Part Number ____ Flow ☐ Vertical ☐ Cross

Cooling Fan Make/Model ____ Fan Direction ☐ Blower ☐ Suction

Fan Diameter ____ ☐ in ☐ cm

LAT (Reference AG-04 for Test Procedure) ____ ☐ °F ☐ °C

Comments

Marine Classification Unit Certification ☐ Yes ☐ No

☐ American Bureau of Shipping (ABS)

☐ Bureau Veritas (BV)

☐ Det Norske Veritas (DNV)

☐ Lloyd's Register (LR)

☐ China Classification Society (CCS)

☐ Other

Installed Components:

☐ Double Wall Fuel Lines

☐ Insulation Blanket

☐ Isolated ground options

☐ RACOR Low Pressure Fuel System (4045A only)

☐ Metal ECU case (4045TFM75 and 6068TFM76 only)

☐ Duplex Fuel Filters

☐ Metal Fuel Parts

☐ Metal Oil Filter Cap (6090 Only)

Emission Certification Requirements:

☐ Non-regulated	☐ EU Stage V
☐ EPA Tier 2	☐ China Stage 1
☐ EPA Tier 3	☐ China Stage 2
☐ IMO Tier 2	☐ Canada Transport
☐ IMO Tier 3	☐ Other

Data Set: Full Sea Trial (for production sea trial, see next page)

Engine Serial Number | Application Review Number

Perf Curve Date

RPM Please circle crusing RPM	Units	1000	_____	_____	_____	_____	_____	_____	Rated _____	Max _____	Limits
Ambient Air Temperature	☐ °F ☐ °C										N/A
Vessel Speed	Knots										N/A
Analog Input 1: Coolant Pump Inlet Pressure**	☐ psi ☐ kPa										
Analog Input 3: Exhaust Back Pressure	☐ psi ☐ kPa										
Analog Input 4: Fuel Inlet Pressure	☐ psi ☐ kPa										
Analog Input 5: Fuel Return Pressure	☐ psi ☐ kPa										
Analog Input 7: Auxiliary Temp. 1 (Temp. at Air Cleaner)	☐ °F ☐ °C										Ambient +17C/30F
Analog Input 8: Air Inlet Restriction	☐ psi ☐ kPa										
Analog Input 9: Auxiliary Temp. 2 (Engine Room Temp.)	☐ °F ☐ °C										
Barometric Air Pressure*	☐ psi ☐ kPa										N/A
Engine Coolant Temperature*	☐ °F ☐ °C										
Engine Load at Current Speed*+	%										
Engine Oil Pressure*	☐ psi ☐ kPa										_____ (Ref)
Fuel Usage Rate*+	☐ gph ☐ Lph										N/A
Manifold Air Pressure--Actual/Boost Press.*	☐ psi ☐ kPa										_____ (Ref)
Manifold Air Temperature*	☐ °F ☐ °C										
TC 1: Coolant Pump Inlet Temperature	☐ °F ☐ °C										N/A
TC3: Exhaust Temperature	☐ °F ☐ °C										_____ (Ref)
TC4: Fuel Return Temperature	☐ °F ☐ °C										
Sea Water Temperature	☐ °F ☐ °C										N/A DCKC

Analog Input 2: Inlet Pressure - Sea Water Pump (HE) - CAC Coolant Pump (DCKC)		psi		kPa									
Analog Input 6: Inlet Temp - Sea Water Pump (HE) - CAC Circuit Coolant (DCKC)		°F		°C									N/A DCKC: 27°C/81°F
TC2: Sea Water Return Temp (HE) CAC Coolant Out Temp. (DCKC)		°F		°C									N/A

Key ☐ -Measured on all coolant system types -Measured on heat exchanged or dual circuit keel cooled engines only

Data Set: Production Sea Trial (Prior John Deere approval required)

Article 1 App Review No.

Application Review Number

Engine Serial Number

Perf Curve Date

RPM	Units	Cruise _____	Rated _____	Max _____	Limits
Ambient Air Temperature	°F °C				N/A
Vessel Speed	Knots				N/A
Barometric Air Pressure*	psi kPa				N/A
Engine Coolant Temperature*	°F °C				
Engine Load at Current Speed*+	%				
Engine Oil Pressure*	psi kPa				_____ (Ref)
Fuel Usage Rate*+	gph Lph				N/A
Manifold Air Pressure--Actual/Boost Press.*	psi kPa				_____ (Ref)
Manifold Air Temperature*	°F °C				
Sea Water Temperature	°F °C				N/A

* Denotes a parameter that can be monitored via Service ADVISOR™

+Denotes a parameter that is not monitored on mechanical eng

**If cooling inlet port is not available on base engine, this data point is not required and N/A.

Serviceability Checklist

Inspect all items below and determine if servicability/access of the item is acceptable in the currently installed condition. If not, notify vessel representative to aid in ease of service at a later date.

N/A	Yes	No	Daily Maintenance & Checks
	☐	☐	Check oil level
	☐	☐	Add oil
	☐	☐	Check coolant level
	☐	☐	Add coolant
	☐	☐	Check & drain fuel water separator
	☐	☐	Adjust hose clamp tension
☐	☐	☐	Close seacock
☐	☐	☐	Clean sea water strainer
☐	☐	☐	Fuel return valve open
☐	☐	☐	Access to hand primer

Yes	No	General
☐	☐	Operator manual reviewed with customer

N/A	Yes	No	Regular Maintenance
	☐	☐	Change engine oil
	☐	☐	Replace oil filters
	☐	☐	Replace air cleaners
	☐	☐	Replace fuel filters
	☐	☐	Adjust valve lash
	☐	☐	Change engine coolant
	☐	☐	Replace vibration damper
☐	☐	☐	Service crankcase vent system
☐	☐	☐	Replace zinc anodes
☐	☐	☐	Replace raw water pump impeller
☐	☐	☐	Clean and remove heat exchanger core
☐	☐	☐	Clean and remove CAC core
☐	☐	☐	Adjust all belt tension

Sea Trial and Serviceability Comments and Recommendations

By signing on the next page, all parties are indicating that the information in the application review form is accurate to the best of their knowledge and any data points not meeting John Deere requirements have been noted and communicated to the vessel representative with the understanding that those points not meeting John Deere requirements could lead to reliability or performance issues.

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Configurable Engine Derates & Shutdowns Sheet (details on page 2)

General Information

Configuration Date:							
Engine Serial Number:							
Engine Location:		Center		Port		Starboard	
Configuration:		Initial		Periodic Inspection		Adjusted	

Vessel Information

Vessel Name:	
Vessel Owner:	
Vessel Representative:	
Vessel Rep. Title:	

John Deere Authorized Technician Information

Authorized Tech. Name:				
Company:				
Type of Company:		Dealer		Distributor

If Adjusted from prior settings, brief description of reason for changes:

Derate and shutdown information can be found in service advisor by the following steps:

1. Connect to Service Advisor
2. From the Home icon, pick 'Reprogramming'

---- If the payload is already downloaded on your laptop, proceed to step 6 ----

3. Select 'Engine", pick 'Action' pull-down, click 'Go'
4. From the Options window, select 'Reprogramming current ECU', click 'Done'
5. The current payload will be downloaded to the computer, Select 'Back'
6. Select 'Engine', from the Action pull-down, pick 'Start Reprogramming'
   If the EDL is connected, pick which type you are using, select 'Go'
7. The changes can be made before connecting to the engine by picking “Proceed”.
   Otherwise, an EDL needs to be connected and selected from the options pull-down
8. Trim page is available for review/editing
9. Use the final 'Report' tab to print out the revised settings (if desired)

By signing below, all parties are indicating that the information included above is accurate, been reviewed and approved by Vessel Representative

Signatures

	Company	Name	Date	Signature
John Deere Authorized Tech.				Authorized Representative
Dealer Representative				Authorized Representative
Vessel Representative				Authorized Representative
Distributor Representative				Authorized Representative

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Parameter	Factory Settings		Settings TODAY		Diagnostic Trouble Code	Default Lamp Color
	Derates	Shutdowns	Derates	Shutdowns		
Water-in-Fuel[1]	Enabled	Disabled	○ Enabled ○ Disabled[2]	○ Enabled ○ Disabled	97.00	Red
Oil Pressure[1]				○ Enabled ○ Disabled	100.01	Red
				N/A	100.18	Amber
Manifold Air Temperature[1]				○ Enabled ○ Disabled	105.00	Red
				N/A	105.16	Amber
Coolant Temperature[1]				○ Enabled ○ Disabled	110.00	Red
				N/A	110.16	Amber
Fuel Rail Pressure[1]				○ Enabled ○ Disabled	157.01	Red
				N/A	157.18	Amber
Fuel Temperature[1]				○ Enabled ○ Disabled	174.00	Red
Low Coolant Level[1,4]				○ Enabled ○ Disabled	111.01	Red
Crank Timing Sensor[1]				N/A	637.02	Amber
				N/A	637.08	Amber
				N/A	637.10	Amber
ECU Temperature[1]				N/A	1136.00	Red
Fuel Rail Pressure Sensor Voltage	Enabled	Disabled	○ Enabled ○ Disabled	N/A	157.03	Red
	Enabled	Disabled	○ Enabled ○ Disabled	N/A	157.04	Red
Air Filter Restriction	Enabled	Disabled	○ Enabled ○ Disabled	N/A	107.31	Red
Engine Overspeed	Enabled[3]	Disabled[3]	○ Enabled ○ Disabled	○ Enabled ○ Disabled	190.00	Red

1 Denotes parameters considered part of the same group
2 Disabling will cause all grouped parameters with 1
3 Engine overspeed is either Derate OR Shutdown
4 Optional switch needed