



MITSUBISHI ENGINE NORTH AMERICA, INC.

1250 Greenbriar Drive - Suite E

Addison, Illinois 60101-1098

PH: (630) 268-0750

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REGISTRATION _____

START UP INSPECTION FORM

INSTRUCTIONS: Complete the Start Up Form when the Mitsubishi powered machine, generator or engine is delivered to the end customer. Send the completed Start Up Form to Mitsubishi Engines within 15 days of engine delivery to customer. IF THE START UP INSPECTION IS NOT COMPLETED WITHIN 30 DAYS OF DATE DELIVERED TO CUSTOMER, SEE BACK PAGE.

ENGINE DATA

CUSTOMER DATA

Engine Model: _____
Engine Serial Number: _____
Engine Address: _____
City, State/Province: _____
County, Zip Code: _____
Country: _____

Name: _____
Address: _____
City, State/Province: _____
County/Zip Code: _____
Country: _____

County, Zip Code: _____
Country: _____
Machine/Generator Mfr: _____
Machine/Generator Model: _____
Machine/Generator S/N: _____
Generator KVA Rating: _____

Engine Horsepower: _____ Rated RPM: _____
Engine Delivery Date: _____
Engine Application Code: _____
SEE BACK PAGE FOR APPLICATION CODES:

SOLD BY:
Dealer/Distributor/OEM: _____
Address: _____
City, State/Province: _____

Generator Voltage: _____ Hz: _____
Application: Continuous _____ Standby _____

COMPLETE THIS INSPECTION BEFORE STARTING ENGINE:

Engine Oil API Classification or Military Specification _____ Weight _____
Brand Name _____
Oil Pan Level Between High and Low YES NO
Diesel Fuel Specification _____
Aftercooler Core Vented YES NO
Radiator Coolant Within Operating Level YES NO
Battery Level OK YES NO
Fan & Water Pump Belt Tension OK YES NO
Transmission Oil Level OK YES NO

ENGINE OPERATING CONDITION

Engine Starts and Stops Properly YES NO
Engine Sound OK YES NO
Engine Vibration Level Normal YES NO
Fuel, Oil or Coolant Leaks YES NO
Engine Operation OK YES NO

ENGINE SAFETY DEVICES & INSTRUMENTS

INDICATE IF THESE ITEMS FUNCTION OK
Engine Warning Lights YES NO
Engine Oil Pressure, Tachometer and Coolant Temperature Gauges YES NO
Low Oil Pressure Shutdown Switch YES NO
High Coolant Temperature Shutdown Switch YES NO
Overspeed Switch YES NO
Generator Low Frequency Relay YES NO

MANUALS AND WARRANTY

Mr. Customer:

Did You Receive Operation Manual and Parts Catalog YES NO Mitsubishi Engine Warranty Statement YES NO
An Explanation of Engine Starting, Stopping and Operating Procedures in Mitsubishi Operation Manual YES NO
An Explanation of Required Maintenance Listed in Mitsubishi Operation Manual YES NO
The Recommended Fuel and Lubricating Oil Classifications Listed in Mitsubishi Operation Manual YES NO

COMPLETE THIS ENGINE PERFORMANCE TEST: IT MAY NOT BE POSSIBLE TO FULLY LOAD ENGINE SO INDICATE IF ENGINE WAS OPERATED UNDER FULL LOAD.

	ENGINE RPM	LOAD KW	COOLANT TEMP	OIL TEMP	OIL PRESS	EXHAUST TEMP	INTAKE RESTRICTION	INTAKE MANIFOLD PRESSURE
LOW IDLE	_____	_____	_____	_____	_____	_____	_____	_____
HIGH IDLE	_____	_____	_____	_____	_____	_____	_____	_____
LOADED	_____	_____	_____	_____	_____	_____	_____	_____
FULLY LOADED	<input type="checkbox"/> YES <input type="checkbox"/> NO		SEE BACK PAGE FOR MEASUREMENT LOCATIONS.					

COMMENTS _____

Customer Name _____ Dealer/Dist. Performing Start Up: Name _____
Customer Signature _____ Date _____ Signature _____ Start up Date _____

DELAYED START UP INSPECTION: If start up inspection will not be completed within 30 days of date engine delivered to end customer, fill in the engine, customer, selling organization name and machine/generator information and send to MITSUBISHI ENGINES WITHIN 15 DAYS OF ENGINE DELIVERY TO CUSTOMER. When start up inspection is performed, send a completed start up inspection form to MITSUBISHI ENGINES WITHIN 15 DAYS OF ENGINE START UP INSPECTION.

MEASUREMENT LOCATIONS: Measure exhaust gas temperature after turbocharger(s). Measure intake manifold pressure between turbocharger compressor housing and intake manifold or in intake manifold. Measure intake restriction in intake piping between air cleaner and intake manifold or in air cleaner outlet pipe(s).

ENGINE APPLICATION CODES

Select the engine application code from this listing. First, select the major market segment code, then end user code and finally the specific code that best describes the engine's use. Enter the codes you selected on the front page in the application code blocks.

MAJOR MARKET SEGMENT CODE

Agricultural	1	Off Highway Mobile	4	Marine Commercial	6
Generator Sets	2	On Highway	5	Marine Pleasure	7
Industrial Stationary	3				

END USER CODE

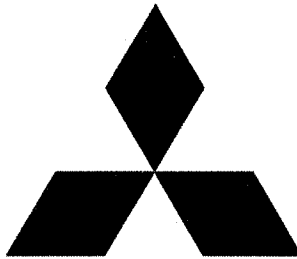
Airline	01	Dairy	19	Petroleum Drill Rig	38
Airport	02	Distillery	20	Plantation, Sugar	39
Amusement Park	03	Dregging Co.	21	Port Authority	40
Bank	04	Farmer	22	Prison	41
Barge Line	05	Feed Lot	23	Pumping Station	42
Bus Line, Intercity	06	Fire Department	24	Railroad	43
Bus Line, Transit	07	Golf Course	25	Rancher	44
Cement Plant	08	Homeowner	26	Ready Mix Plant	45
Chemical Plant	09	Hospital	27	Refinery	46
College	10	Hotel	28	Rental	47
Commercial Building	11	Logger	29	Research Center	48
Computer Center	12	Lumber/Pulp Mill	30	Saw Mill	49
Contractor, Bridge	13	Marine Survey	31	School	50
Contractor, Commercial	14	Mine	32	Shipyard	51
Contractor, Electrical	15	Military	33	Shopping Center	52
Contractor, General	16	Municipality	34	Steel Mill	53
Contractor, Highway	17	Nursery	35	Telephone Company	54
Contractor, Pipeline	18	Offshore Oil Platform	36	Truck Line	55
Contractor, Residential	19	Orchard	37	Warehouse	56

If appropriate end user code is not listed, describe end user: _____

ENGINE USE CODE

Air Blower, Frost Protection	01	Generator, Co-Generation	23	Marine, Auxiliary, Pleasure	44
Air Compressor, Portable	02	Generator, Peak Shaving	24	Marine, Bow Thruster	45
Air Compressor, Stationary	03	Generator, Prime Power, Marine	25	Marine, Main Prop, Commercial Fisher	46
Aircraft Starter	04	Generator, Prime Power, Non Marine	26	Marine, Main Prop, Crew Boat	47
Aircraft, Ground Support	05	Generator, Standby, Marine	27	Marine, Main Prop, Ferry	48
Airport Sweeper	06	Generator, Standby, Non Marine	28	Marine, Main Prop, Patrol	49
Back Hoe, Hydraulic	07	Grader	29	Marine, Main Prop, Pleasure	50
Bus, Highway Coach	08	Grain Blower	30	Marine, Main Prop, Sport Fisher	51
Bus, Inter City	09	Hammer Mill	31	Marine, Main Prop, Survey	52
Bus, School	10	Harvester, Sugar Cane	32	Marine, Main Prop, Tug	53
Compactor	11	Hoist	33	Paver, Asphalt or Concrete	54
Conveyor	12	Lift Truck	34	Petroleum Drill Rig, Draw Works	55
Crane Carrier	13	Loader, Crawler	35	Petroleum Drill Rig, Mud Pump	56
Crane, Upper Works	14	Loader, Wheel	36	Pump, Barge Unloading	57
Crusher	15	Locomotive, Main Line	37	Pump, Concrete	58
Distillation Plant	16	Locomotive, Switcher	38	Pump, Dredge	59
Ditcher	17	Log Chipper	39	Pump, Dredge	60
Dozer, Crawler	18	Log Debarker	40	Pump, Irrigation	61
Dozer, Wheeled	19	Log Loader	41	Pump, Pipeline	62
Dragline Crawler	20	Log Skidder	42	Pump, Sand & Gravel	63
Drill, Blast Hole	21	Log Yarder	43	Pump, Standby Fire	64
Drill, Earth	22				

If appropriate engine use code is not listed, describe engine use: _____



**MITSUBISHI
ENGINE**

**STANDBY GENERATOR ENGINE
3 YEAR LIMITED WARRANTY
SA, SB, SR & SH SERIES
Engines Delivered After January 1st, 2007**

INDUSTRIAL ENGINE LIMITED WARRANTY

Engines Delivered After January 1st, 2007

Mitsubishi Engine North America, Inc. (MENA) warrants to the first User Purchaser / Owner that each new SA, SB, SR & SH Series Standby Generator Engine marketed by MENA as a separate power source and used in electrical generation applications in North America, under normal use and maintenance, shall operate without defects in material or workmanship for the period described in this schedule:

	WARRANTY PERIOD		WARRANTY ADJUSTMENT	
	Months*	Engine hours*	Parts	Repair labor**
Engine	0 – 24	0 – 1000	100 %	100 %
Instrument gauges	0 – 6	0 – 1000	100 %	100 %
Optional accessories	0 – 12	0 – 1000	100 %	100 %
Major components warranty***	25 – 36	0 – 1500	100 %	None

*Warranty period limited by whichever interval occurs first.

**Engine removal and replacement labor limited to 10 hours.

***Warranty for major castings only, which consist of the Crankcase, Crankshaft, Connecting Rods.

Excluding Crankshaft Main Bearings, Camshaft Bushings, Connecting Rod Bearings and Bushings.

APPLICATION DEFINITION AND WARRANTY STARTING DATE

SA, SB, SR & SH Series Standby Generator Engine applications are electrical generator sets, which are used only as a source of power when commercial power is interrupted. Industrial Engine and Marine applications are excluded from this warranty. The Standby Generator Engine warranty and warranty coverage on optional accessories and instruments supplied by MENA with the new engine begins on the date of delivery to the first Owner and extends for the period in the schedule.

DEFINITION OF A STAND-BY GENERATOR

Rating	Overload	Definition	Allowable average load per 24 hours	Yearly average load factor	Yearly operating hours	Application
Stand-by	None	Applicable for the supply of emergency power with varying load for the duration of a normal power interruption. (Equivalent to Fuel Power Stop in accordance to ISO8528)	- 80 % of rated power. - 100 % of rated power is available in case of emergency	Less than 60 %	Less than 500 hrs.	Stand-by power source

STAND-BY GENERATOR ENGINE AND MAJOR COMPONENTS

Standby Generator Engines consist of internal and external components supplied by MENA and include fan drive, water pump, thermostat, vibration damper, injection pump and nozzle assemblies, turbocharger, oil pump, flywheel and flywheel housing. This Standby Engine Warranty applies only to components supplied by MENA. Major Components consist of the crankshaft, crankcase and the connecting rods and exclude connecting rod bearings and bushings, crankshaft main bearings and camshaft bushings.

WARRANTY ADJUSTMENTS

Standby Generator Engine warranty adjustments are provided through MENA Authorized Engine Distributors' factory trained technicians. During the warranty period, provided that the engine is installed and operated according to MENA 's and or its related companies' manual(s) and instruction(s), MENA will provide at its exclusive election, for any part determined by MENA to be defective, either (1) a new or remanufactured replacement or repaired part, or (2) reimbursement for the cost of the part repair or replacement.

Repair labor provided under the Standby Generator Engine Warranty includes labor expenses necessary to complete a warranted repair, including reasonable labor (as defined by MENA) incurred for Engine removal and re-installation when necessary to perform a warranted repair. Labor expenses will be reimbursed according to Mitsubishi's flat rate manual and at regular daytime labor rates. MENA will reimburse travel expenses for a MENA Engine Distributor Technician, when travel is necessary to complete a warranted repair including lodging, meals and mileage to readily accessible North American locations during the warranty period when repair labor is provided; however, round trip mileage is limited to 400 miles per warranted repair.

MENA's responsibility during the Major Component Warranty is limited to repair or replacement of the defective qualifying part. MENA shall not be responsible for labor costs incurred for repairs covered under the Major Component Warranty nor shall MENA be responsible for parts other than the qualifying parts.

OWNER RESPONSIBILITIES

The Owner must advise a MENA Engine Distributor of a failure and potential warranty claim within the warranty period and have the repairs completed by an Authorized MENA Engine Distributor. The Owner is responsible for normal wear, adjustments and scheduled maintenance including injection nozzle cleaning and engine valve adjustments. The Owner is responsible for maintaining the Industrial Engine according to recommendations contained in the Mitsubishi Industrial Engine Operations and Maintenance Manual and all other manuals and instructions supplied by MENA and or its related companies. Maintenance parts and fluids including lubricating oil, antifreeze and belts are the Owner's responsibility unless the materials were damaged by the failure and cannot be reused. The Owner is responsible for all labor costs and other costs not specifically described herein as MENA's responsibility, including overtime or holiday repair labor, lodging and transportation to remote sites and premium transportation expenses. During the Major Component Warranty, the owner is responsible for all parts and labor costs, except for the parts covered by the Major Component Warranty.

WARRANTY LIMITATIONS

The following operational practices damage the engine and any failures resulting from these operational practices are not covered by this warranty: operating the engine at fuel rates higher than established by MENA; overspeeding; operation without adequate or specified lubricating oil, coolant or fuel; operating the engine beyond published MENA coolant or lubricant temperatures; inadequate maintenance of cooling systems, and failure to keep the engine air intake free of foreign material, improper storage, warm-up, shutdown or run-in practices; and/or other practices which damage the engine.

Neither MENA nor its related companies are responsible for failures resulting from the alteration or modification to engines by anyone who has not been so authorized by MENA in writing. MENA is not responsible for failures resulting from improper repairs.

Neither MENA nor its related companies shall be liable for claims attributable to the following: replacement of a complete assembly instead of repairing the assembly unless replacement was approved by MENA; repairs necessary due to use of parts not supplied by MENA; repairs caused by abuse, misuse, accidents, acts of God or unauthorized modification; repairs made by unauthorized repair shops; corrections of alleged defects where documentation is inadequate to support the claim or the failed parts needed for analysis have been improperly preserved rendering failure analysis impossible; and unnecessary repairs caused by improper diagnosis. Normal wear that occurs to parts during use of the engine is not covered by warranty including but not limited to these parts: pistons, liners, piston rings, valves, valve seats, valve guides, gears, bearings, crankshaft, camshaft, nozzle and plunger. The following items are not covered by warranty because they are deemed to have resulted from normal engine use or to have been caused by environmental exposure or pollution: rusting or deterioration of plated parts, discoloration, fading or rusting of painted parts, damage or deterioration due to extended storage of the engine after shipment by MENA.

THE WARRANTIES LISTED HEREIN ARE THE ONLY WARRANTIES APPLYING TO MENA'S ENGINES AND WITH RESPECT TO INDUSTRIAL ENGINES, THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL MENA, OR ANY PARENT OR AFFILIATED COMPANY OF MENA BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER ARISING FROM CONTRACT, TORT OR STRICT LIABILITY, AT LAW OR IN EQUITY, INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR REVENUE, ECONOMIC LOSS, "DOWN TIME", LOST PRODUCTION, OR FAILURE TO MEET CONTRACTUAL OBLIGATIONS. THE TOTAL LIABILITY OF MENA AND OF ANY PARENT OR AFFILIATED COMPANY OF MENA, SHALL IN NO EVENT EXCEED THE AMOUNT ACTUALLY PAID BY THE OWNER FOR THE PRODUCTS OR SERVICES WHICH GAVE RISE TO THE ALLEGED CLAIM, LOSS OR DAMAGE.

This Limited Warranty and the rights and obligations of MENA and the Owner concerning products or services supplied by MENA shall be governed and construed in accordance with the internal laws of the state of Illinois, without regard to its choice of law rules. Any and all claims, suits or demands asserted by the Owner concerning this Limited Warranty and/or products or services supplied by MENA shall be submitted to arbitration in Chicago, Illinois before the American Arbitration Association ("AAA") before a panel of three (3) arbitrators. The arbitrators will not have authority to award damages beyond the remedies provided for in this Limited Warranty. The arbitrators will not have authority to award punitive or exemplary damages or attorneys' fees to any party. Any action or claim arising out or relating to this Limited Warranty or the supply of products or services by MENA must be brought within one (1) year of the alleged failure or shall be deemed waived.

The terms of this Limited Warranty and any obligation of MENA relating to this Limited Warranty, may not be modified except as in writing signed by an authorized officer of MENA. This Limited Warranty shall supercede any prior or contemporaneous oral or written warranties, representations or statements made concerning products or services supplied by MENA. MENA makes no other warranty except as set forth herein.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.



MITSUBISHI ENGINE NORTH AMERICA, INC.

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