GE 6500 LBS

0504

256239003 - GB

ENGLISH

21/05/04 25623M00 preparato da UPT approvato da DITE



THE INTERNATIONAL CERTIFICATION NETWORK CERTIFIC CISQ/ICIM MOSA Divisione della BCS S.p.A. Viale Europa, 59 I-20090 CUSAGO (MI) for the following field of activities Design, production and servicing of engine driven welders and generating sets has implemented and maintains a Quality Management System which fulfills the requirements of the following standard ISO 9001:2000 Issued on: 2003-03-06 Validity date: 2006-03-05 Registration Number: 1T-3722 coursens 5 not Fabio Rovers Giontenzo Prati President of IQNet President of CISO AENOR Spain AVAQ France Alli-Vin CQM China CQS Careh Republic DQS Germ IRCQAA Hong Keng ICONTFC Colombia IR Neutliko Certification Neuvoy NSAI Iridan SAI IRChal Australia SFS Finland SAI fig. DQS Germany. I Colombia. IRAM dr v. NSAL byland. OQS land. SH Israel. SIQ S etherlandi EFO Koner MSZI Hung ertification Supposer QMI Circula U Esmanla TEST St Petersharg Famili 6Q DOS, KEMA, NSAL QMI and SALE





UNI EN ISO 9001: 2000

MOSA has certified its quality system according to UNI EN ISO 9001:2000 to ensure a constant, high quality of its products. This certification covers the design, production and servicing of engine driven welders and generating sets.

The certifying institute, ICIM, which is a member of the International Certification Network IQNet, awarded the official approval to MOSA after an examination of its operations at the head office and plant in Cusago (MI), Italy.

This certification is not a point of arrival but a pledge on the part of the entire company to maintain a level of quality of both its products and services which will continue to satisfy the needs of its clients, as well as to improve the transparency and the communications regarding all the company's actives in accordance with the official procedures and in harmony with the MOSA Manual of Quality.

The advantages for MOSA clients are:

- Constant quality of products and services at the high level which the client expects;
- Continuous efforts to improve the products and their performance at competitive conditions;
- Competent support in the solution of problems;
- Information and training in the correct application and use of the products to assure the security of the operator and protect the environment;
- Regular inspections by ICIM to confirm that the requirements of the company's quality system and ISO 9001 are being respected.

All these advantages are guaranteed by the CERTIFICATE OF QUALITY SYSTEM No.0192/3 issued by ICIM S.p.A. - Milano (Italy) - www.icim.it



K...

ACCESSORIES

INDEX (for all MOSA models)

M 2.6 M 2.7 M 3 M 4 M 6 M 20 M 21 M 22 M 25 M 26 M 27 M 30 M 31 M 32 M 33 M 34 M 35 M 36 M 37 M 38 M 39 M 40 M 43 M 44 M 45	SYMBOLS AND SAFETY PRECAUTIONS ABBREVIATIONS LEGEND SYMBOLS INSTALLATION AND ADVICE BEFORE USE INSTALLATIONS AND ADVICE INSTALLATION PACKING TRANSPORT AND DISPLACEMENTS ASSEMBLY: CT SETTING-UP THE UNIT (DIESEL ENGINE) ENGINE STARTING AND USE (DIESEL ENGINE) STOPPING THE ENGINE (DIESEL ENGINE) STOPPING THE ENGINE (GASOLINE ENGINE) STARTING THE ENGINE (GASOLINE ENGINE) STOPPING THE ENGINE (GASOLINE ENGINE) CONTROLS LEGEND CONTROLS (FRONT PANEL) USE AS HYDRAULIC POWER TAKE-OFF USE AS A WELDER USE AS A BATTERY CHARGE USE AS A GENERATOR USE OF THE REMOTE CONTROL USE OF THE ENGINE PROTECTION TROUBLE SHOOTING MAINTENANCE PERIODIC MAINTENANCE STORAGE	only for TS only for TS only for TS
M 46	CAST OFF	
M 51	TECHNICAL DATA	
M 52	TECHNICAL DATA ENGINE DRIVEN WELDER	only for TS
M 53	DIMENSIONS	Offig for 13
M 55	RECOMMENDED ELECTRODES	only for TS
M 60	ELECTRICAL SYSTEM LEGENDE	only for 10
M 61	ELECTRICAL SYSTEM	
M 65	HYDRAULIC SYSTEM	
R1	SPARE PARTS LIST SPARE PARTS	

ATTENTION

This use and maintenance manual is an important part of the machines in question.

The assistance and maintenance personel must keep said manual at disposal, as well as that for the engine and alternator (if the machine is synchronous) and all other documentation about the machine.

We advise you to pay attention to the pages concerning the security (see page M1.1).

MOSA

@ All rights are reserved to said Company.

It is a property logo of MOSA division of B.C.S. S.p.A. All other possible logos contained in the documentation are registered by the respective owners.

The reproduction and total or partial use, in any form and/or with any means, of the documentation is allowed to nobody without a written permission by MOSA division of B.C.S. S.p.A.

To this aim is reminded the protection of the author's right and the rights connected to the creation and design for communication, as provided by the laws in force in the matter.

In no case MOSA division of B.C.S. S.p.A. will be held responsible for any damaga, direct or indirect, in relation with the use of the given information.

MOSA division of B.C.S. S.p.A. does not take any responsibility about the shown information on firms or individuals, but keeps the right to refuse services or information publication which it judges discutible, unright or illegal.



INFORMATION

Dear Customer, We wish to thank you for having bought from MOSA a high quality set.

Our sections for Technical Service and Spare Parts will work at best to help you if it were necessary.

To this purpose we advise you, for all control and overhaul operations, to turn to the nearest authorized Service Centre, where you will obtain a prompt and specialized intervention.

- In case you do not profit on these Services and some parts are replaced, please ask and be sure that are used exclusively original MOSA parts; this to guarantee that the performances and the initial safety prescribed by the norms in force are re-established.
- The use of **non original spare parts will cancel immediately** any guarantee and Technical Service obligation from MOSA.

NOTES ABOUT THE MANUAL

Before actioning the machine please read this manual attentively. Follow the instructions contained in it, in this way you will avoid inconveniences due to negligence, mistakes or incorrect maintenance. The manual is for qualified personnel, who knows the rules: about safety and health, installation and use of sets movable as well as fixed.

You must remember that, in case you have difficulties for use or installation or others, our Technical Service is always at your disposal for explanations or interventions.

The manual for Use Maintenance and Spare Parts is an integrant part of the product. It must be kept with care during all the life of the product.

In case the machine and/or the set should be yielded to another user, this manual must also given to him.

Do not damage it, do not take parts away, do not tear pages and keep it in places protected from dampness and heat.

You must take into account that some figures contained in it want only to identify the described parts and therefore might not correspond to the machine in your possession.

INFORMATION OF GENERAL TYPE

In the envelope given together with the machine and/or set you will find: the manual for Use Maintenance and Spare Parts, the manual for use of the engine and the tools (if included in the equipment), the guarantee (in the countries where it is prescribed by law).

Our products have been designed for the use of generation for welding, electric and hydraulic system; ANY OTHER DIFFERENT USE NOT INCLUDED IN THE ONE INDICATED, relieves MOSA from the risks which could happen or, anyway, from that which was agreed when selling the machine; MOSA excludes any responsibility for damages to the machine, to the things or to persons in this case.

Our products are made in conformity with the safety norms in force, for which it is advisable to use all these devices or information so that the use does not bring damage to persons or things.

While working it is advisable to keep to the personal safety norms in force in the countries to which the product is destined (clothing, work tools, etc.).

Do not modify for any motive parts of the machine (fastenings, holes, electric or mechanical devices, others..) if not duly authorized in writing by MOSA: the responsibility coming from any potential intervention will fall on the executioner as in fact he becomes maker of the machine.

Notice: this manual does not engage MOSA, who keeps the faculty, apart the essential characteristics of the model here described and illustrated, to bring betterments and modifications to parts and accessories, without putting this manual uptodate immediately.







Tel.: 02 - 90352.1 Fax: 02 - 90390466 e-mail: info@mosa.it www.mosa.it





Divisione della BCS S.p.A V.le Europa 59 - 20090 Cusago (Mi) - Italia

DICHIARAZIONE DI CONFORMITA'



Déclaration de Conformité - Declaration of Conformity - Konformitätserklärung Conformiteitsverklaring - Declaración de Conformidad

MOSA dichiara sotto la propria responsabilità che la macchina: MOSA déclare, sous sa propre responsabilité, que la machine MOSA declares, under its own responsibility, that the machine: MOSA erklärt, daß die Aggregate: MOSA verklaard, onder haar eigen verantwoordelijkheid, dat de machine: MOSA declara bajo su responsabilidad que la máquina:

Modello/Modèle/Model/Model/Model/Modelo:

Codice/ Code/ Code/ Kode/ Code/ Codigo:

è conforme con quanto previsto dalle Direttive Comunitarie e relative modifiche. est en conformité avec ce qui est prévu par les Directives Communautaires et relatives modifications: conforms with the Community Directives and related modifications: mit den Vorschriften der Gemeinschaft und deren Ergänzungen übereinstimmt: in overeenkomst is met de inhoud van gemeenschapsrichtlinemen gerelateerde modificaties:

comple con los requisitos de la Directiva Comunitaria y sus anexos:

89/336/CE 98/37/CE 73/23/CE 2000/14/CE

per la verifica sono state considerate le seguenti norme armonizzate, Norme nazionali e internazionali: pour la vérification de la conformité ont été consultées les normes harmonisées suivantes, normes nationales et internationales:

to check the conformity, the following harmonized norms, national and international norms, have been

zur Prüfung hat man die folgenden übereinstimmenden nationalen und internationalen Normen herangezogen: ter verificatie van de overeenkomst, zijn de volgende geharmoniseerde normen, nationaal en internationaal, geconsulteerd: para su verification se han tenido en cuenta las Normas armonizadas, Normas nacionales e Internacionales:

Norme armonizzate - normes harmonisées - harmonized norms - übereinstimmende Normen geharmoniseerde normen - Normas armonizadas: EN 292-1 EN 292-2

EN 50199 EN 60974-1 (Solo per modelli - Seulement pour les modèles - Only for models - nur für die

Modelle - Alleen voor de modellen - Sólo para modelos: TS)

EN 50081-2 EN 50082-2

Altre norme - autres normes - other norms - andere Normen - andere normen - otres normas: ISO 8528 (Solo per modelli - Seulement pour les modèles - Only for models - nur für die Modelle - Alleen voor de modellen - Solo para modelos: GE)

Benso Marelli

Cusago, _

MM 065.2.doc



The CE mark (European Community) certifies that the product complies with the essential safety requirements provided by the applicable COMMUNITY DIRECTIVES. In the Conformity Declaration are reported the HARMONIZED NORMS and not, used for the checking.

SYMBOLS IN THIS MANUAL

 The symbols used in this manual are designed to call your attention to important aspects of the operation of the machine as well as potential hazards and dangers for persons and things.

IMPORTANT ADVICE

- Advice to the User about the safety:
- N.B.: The information contained in the manual can be changed without notice. Potential damages caused in relation to the use of

these instructions will not be considered because these are only indicative.

Remember that the non observance of the indications reported by us might cause damage to persons or things.

It is understood, that local dispositions and/or laws must be respected.

WARNING



<u>Situations of danger - no harm to persons or things</u>

Do not use without protective devices provided

Removing or disabling protective devices on the machine is prohibited.

Do not use the machine if it is not in good technical condition

The machine must be in good working order before being used. Defects, especially those which regard the safety of the machine, must be repaired before using the machine.

SAFETY PRECAUTIONS



DANGEROUS

This heading warns of an <u>immediate</u> danger for persons as well for things. Not following the advice can result in serious injury or death.



WARNING

This heading warns of situations which could result in injury for persons or damage to things.



CAUTION

To this advice can appear a danger for persons as well as for things, for which can appear situations bringing material damage to things.



IMPORTANT



NOTE



ATTENTION

These headings refer to information which will assis you in the correct use of the machine and/or accessories.

SYMBOLS (for all MOSA models)



STOP - Read absolutely and be duly attentive



Read and pay due attention



GENERAL ADVICE - If the advice is not respected damage can happen to persons or things.



HIGH VOLTAGE - Attention High Voltage. There can be parts in voltage, dangerous to touch. The non observance of the advice implies life danger.



FIRE - Danger of flame or fire. If the advice is not respected fires can happen.



HEAT - Hot surfaces. If the advice is not respected burns or damage to things can be caused.



EXPLOSION - Explosive material or danger of explosion. in general. If the advice is not respected there can be explosions.



WATER - Danger of shortcircuit. If the advice is not respected fires or damage to persons can be caused.



SMOKING - The cigarette can cause fire or explosion. If the advice is not respected fires or explosions can be caused.



ACIDS - Danger of corrosion. If the advice is not respected the acids can cause corrosions with damage to persons or things.



WRENCH - Use of the tools. If the advice is not respected damage can be caused to things and even to persons.



PRESSION - Danger of burns caused by the expulsion of hot liquids under pressure.

PROHIBITIONS No harm for persons

Use only with safety clothing -



It is compulsory to use the personal protection means given in equipment.

Use only with safety clothing -



It is compulsory to use the personal protection means given in equipment.

Use only with safety protections -



It is a must to use protection means suitable for the different welding works.

Use with only safety material -



It is prohibited to use water to quench fires on the electric machines.

Use only with non inserted voltage -



It is prohibited to make interventions before having disinserted the voltage.

No smoking -



It is prohibited to smoke while filling the tank with fuel.

No welding -



It is forbidden to weld in rooms containing explosive gases.

ADVICE No harm for persons and things

Use only with safety tools, adapted to the specific use -

It is advisable to use tools adapted to the various maintenance works.

Use only with safety protections, specifically suitable It is advisable to use protections suitable for the different welding works.

Use only with safety protections -



It is advisable to use protections suitable for the different daily checking works.

Use only with safety protections -



It is advisable to use all protections while shifting the machine.

Use only with safety protections -



It is advisable to use protections suitable for the different daily checking works.and/or of maintenance.



ACCES FORBIDDEN to non authorizad peaple.

GE_, MS_, TS_

M 2.3

°C: temperature Celsius grades

10:10 kVA synchronous (wording example)

10000:10 kVA asynchronous (wording example)

A: Ampere
A: ADIM engine
atm: pressure
B: pretrol
BAT: battery

BC: base current C.A.(c.a.): alternating current

C.B.: battery charger C.C.(c.c.): direct current

cc: cm³ (volume)
CE: European norm conformity

CF: special for pipe welding
CTL: slow touring trolley

CTM CTV: fast touring trolley: hand touring trolley

D: diesel D: GFI

D: Deutz engine E: electric start

EAS: automatic intervention panel for generating sets for connection to the mains

EL: electronic regulation, allows to use welder and generating set simultaneausly

EP1: automatic accelerator according to requestedpower, engine protection, low oil pressure, high temperature with engine stop, troble warning lights

EP2: engine protection, low oil pressure, hight temperature with engine stop, trouble warning lights

EP4: engine protection, low oil pressure, high temperature with engine stop, no battery charge, belt broken, low fuel level with engine stop, trouble warning lights

EP5: engine protection, low oil pressure, high temperature with engine stop, no battery charge, belt broken, low fuel level with engine stop, everspeed, trouble warning lights

ES: oil/temperature engine protection device

EV: electrovalve

g/kwh: grams/kilowatt hour (engine consumption)

GA: asynchronous alternator

GE: generating set

GHF: high frequency alternator GS: synchronous alternator h: hour meter (symbol)

H: Hatz engine H: Honda engine HI: hydraulic central

Hz: frequency

I: single-phase auxiliary generation (symbol 1~)

IP: protection grads for electric devices against acess to dangerous parts according to the IEC 529 norm (Internal Protection)

kg: kilogram (mass)
K: welding cables set
kVA: kilovolt ampere
kW: kilowatt (engine power)
kWh: kilowatt hour (energy)

I: liters (capacity)

L: Lombardini engine

Lwa: maximum acoustic (power level) according to

EEC norm 535/536

mm: millimeter (length) (measure)

m: meter (length) mA: milliampere

MS-MSG: MOSA engine driven welder with high

frequency alternator MT: magnetothermic switch

MT: grounding kit

MTD: magnetothermic switch / GFI OH: heater (engine oil) for generating sets

P: plus

PAC: power electric frame PAR: device for double PB: battery holder PL: "pipe line" welding PS: exhaust pipe extension

PW: welder for polyethylene and propylene pipes

QEA: automatic electric panel **QEM**: manual electric panel

R: Ruggerini engine

RVT: voltage electronic regulator

S: symbol of EN 60974-1 **S**: Suzuki mengineotore

SKID: unit assembled on a base with no protection (no

fairing)

S-SC: silenced (faired) - silenced compact (faired

SX-SXC: supersilenced (faired and sound prof) - supersilenced compact (faired and super sound prof)

T: thermic switch

TC-TCM-TCPL: remote control

TS: welder with asynchronous alternator

V: Volt

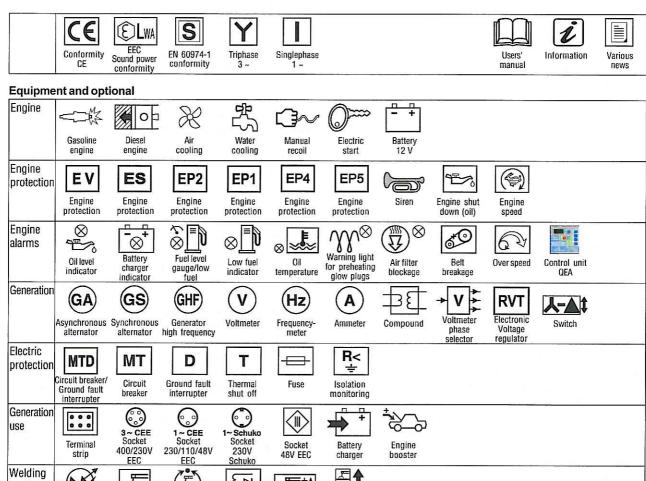
Y: Yanmar engine

Y: three-phase auxiliary generation (symbol 3~)



GE_, MS_, TS_

M 2.4





control



Arc

control



.7

Welding with

covered



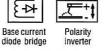
Welding cur-

point





*







D.C.

A.C.













lifting eye





Plus





Optionals



Standard

equipment



Options on

request



cables





(B) INSTALLATION AND ADVICE BEFORE USE

GE_, MS_, TS_

M 2-5

The installation and the general advice concerning the operations, are finalized to the correct use of the machine, in the place where it is used as generator group and/or welder.

		4.7		
1 1	Stop engine when fueling		Do not touch electric devices if you	
	Do not smoke, avoid flames, sparks or electric tools when fueling.	SI-11-	are barefoot or with wet clothes.	
	Unscrew the cap slowly to let out the fuel vapours.	₽	Always keep off leaning surfaces	
ENGINE	Slowly unscrew the cooling liquid tap if the liquid must be topped up.	BOA	during work operations	
	The vapor and the heated cooling liquid under pressure can burn face, eyes, skin.		Static electricity can demage the parts on the circuit.	
	Do not fill tank completely.	ᅴ띮		
	Wipe up spilled fuel before starting engine.	ᅴ끙		
	Shut off fuel of tank when moving machine (where it is assembled).		An electric shock can kill	
	Avoid spilling fuel on hot engine.			
v	Sparks may cause the explosion of battery vapours			



FIRST AID. In case the operator shold be sprayed by accident, from corrosive liquids a/o hot toxic gas or whatever event which may cause serious injuries or death, predispose the first aid in accordance with the ruling labour accident standards or of local instructions.

Skin contact	Wash with water and soap
Eyes contact	Irrigate with plenty of water, if the irritation persists contact a specialist
Ingestion	Do not induce vomit as to avoid the intake of vomit into the lungs, send for a doctor
Suction of liquids from	If you suppose that vomit has entered the lungs (as in case of spontaneous vomit) take the
lungs	subject to the hospital with the utmost urgency
	In case of exposure to high concentration of vapours take immediately to a non polluted zone the person involved



FIRE PREVENTION. In case the working zone, for whatsoever cause goes on fire with flames liable to cause severe wounds or death, follow the first aid as described by the ruling norms or local ones.

	EXTINCTION MEANS
Appropriated	Carbonate anhydride (or carbon dioxyde) powder, foam, nebulized water
Not to be used	Avoid the use of water jets
Other indications	Cover eventual shedding not on fire with foam or sand, use water jets to cool off the surfaces close to the fire
Particular protection	Wear an autorespiratory mask when heavy smoke is present
Useful warnings	Avoid, by appropriate means to have oil sprays over metallic hot surfaces or over electric contacts (switches,plugs,etc.). In case of oil sprinkling from pressure circuits, keep in mind that the inflamability point is very low.

				⚠ C	AUTION	SNO	
Hi Garage		<u> </u>	FUEL				
-+			Con Con				7



THE MACHINE <u>MUST NOT BE USED</u> IN AREAS WITH EXPLOSIVE ATMOSPHERE





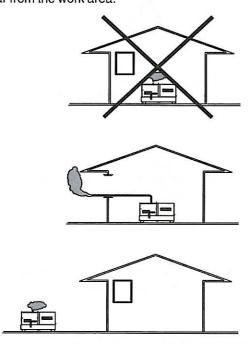
INSTALLATION AND ADVICE BEFORE USE

GASOLINE ENGINES

Use in open space, air swept or vent exhaust gases, which contain the deathly carbone oxyde, far from the work area.

DIESEL ENGINES

Use in open space, air swept or vent exhaust gases far from the work area.

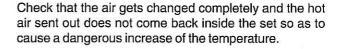


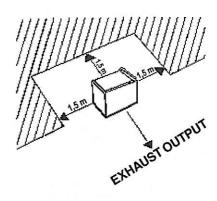
POSITION

Place the machine on a level surface at a distance of at least 1,5 m from buildings or other plants.



Maximum leaning of the machine (in case of dislevel)





Make sure that the machine does not move during the work: **block** it possibly with tools and/or devices made to this purpose.

MOVES OF THE MACHINE

At any move check that the engine is off, that there are no connections with cables which impede the moves.

PLACE OF THE MACHINE

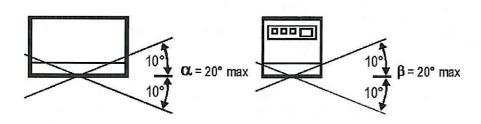


In spots where it often rains and/or there are flooded areas, do **not** put the machine:

- in the bad weather
- in flooded places.

Protect all the electric parts at risk, because water infiltrations could cause short circuits with damages at persons and/or things.

The protection degree of the machine is put on the data plate and in this manual at page "Technical Data".





(B) Installation

(1) Installazione (1) Luftzirkulation **(E)** Instalación

GE 6500 LBS

M 2.7

Air inlet

Entrada

aire

@ MOSA

1.0-05/04 F Installation

(N)

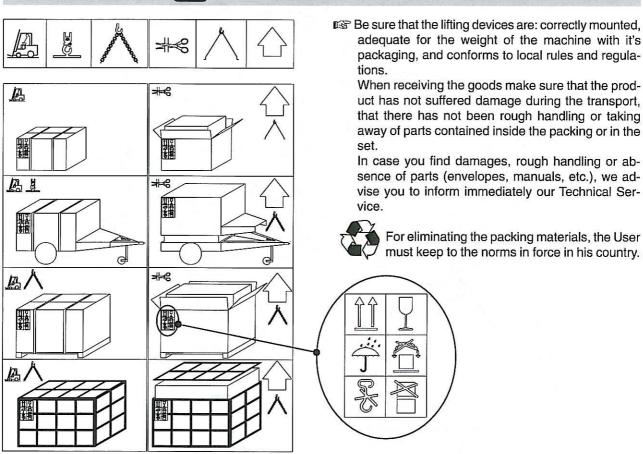
SURFACE TRES CHAUDE HEIBER BEREICH SUPERFICIE CALIENTE

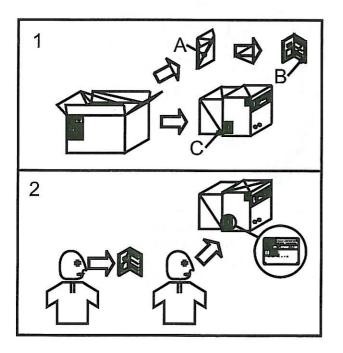
OF 5500 LES Entrata aria Entrée air Lufteintritt Entrata aria Air inlet Uscita aria Entrée air Air outlet Lufteintritt Expulsion air Entrada Caricamento carburante Luftausttritt aire Fuel filling Salida aire Remplissage carburant Tankstutzen Carga combustible 00 0 Entrata aria Air inlet Scarico silenziatore motore Entrée air Gas exhaust pipe Lufteintritt Tuyau d'échappement gaz Entrada SUPERFICIE CALDA Auspuffgase Motor aire **HOT SURFACE**

Tubo de descarga gas



NOTE





- 1) Take the machine (C) out of the shipment packing. Take out of the envelope (A) the user's manual (B).
- 2) Read: the user's manual (B), the plates fixed on the machine, the data plate.







GE_, MS_, TS_

M 4-1

NOTE

In case you should transport or move the machine, keep to the instructions as per the figures.

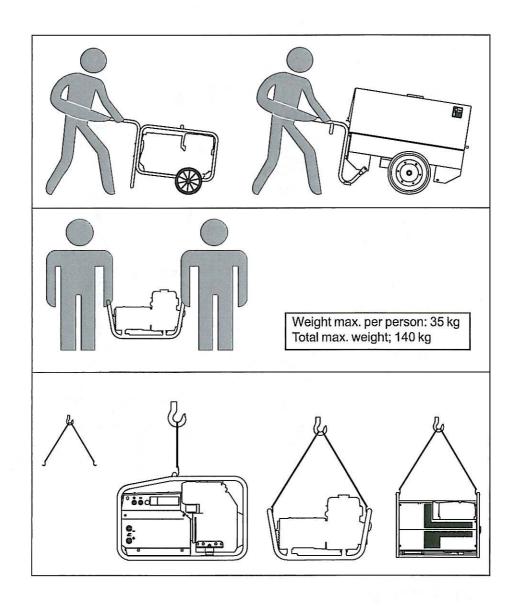
Make the transportation when the machine has no petrol in its tank, no oil in the engine and and electrolyte in the

Be sure that the lifting devices are: correctly mounted, adequate for the weight of the machine with it's packaging, and conform to local rules and regulations.

Only authorized persons involved in the transport of the machine should be in the area of movement.

DO NOT LOAD OTHER PARTS WHICH CAN MODIFY WEIGHT AND BARICENTER POSITION. IT IS STRICTLY FORBIDDEN TO DRAG THE MACHINE MANUALLY OR TOW IT BY ANY VEHICLE (model with no CTM accessory).

If you did not keep to the instructions, you could damage the structure of the machine.









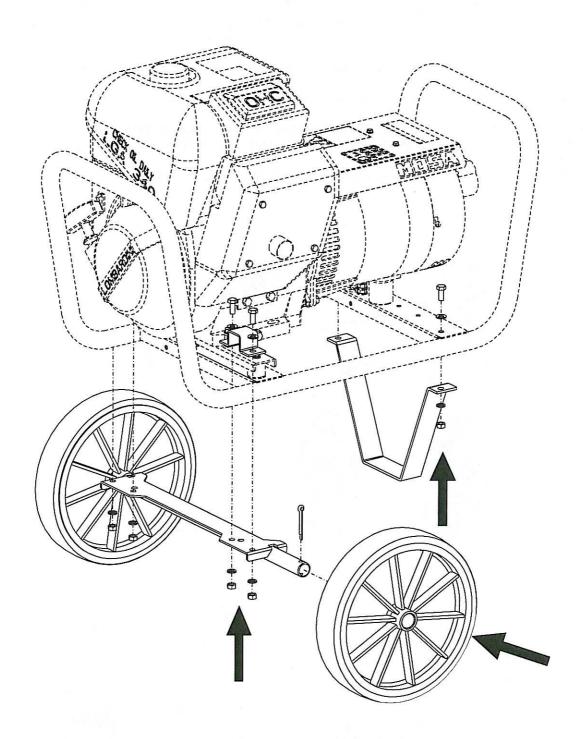




CTM6000

M 6.11

Note: Lift the machine and assemble the parts as shown in the drawing





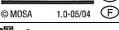
ATTENTION

The CTM accessory cannot be removed from the machine and used separately (actioned manually or following vehicles) for the transport of loads or anyway for used different from the machine movements.











LUBRICANT



Check the level of the engine oil using the (appropriate oil dipstick: the level should be between the minimum and maximum marks.

If necessary, add more oil through the appropriate inlet.Fill the air filter using the same oil up to the level indicated on the filter (machine with <u>oil bath</u> air filter).

OIL RECOMMENDED

MOSA advises to choose **AGIP** for the type of oil. Please keep to the label put on the engine for the recommended products.



NOTE: before starting and switching off, see instructions in the engine owner's manual herewith attached.



FUEL

Check the level of fuel in the tank and, if necessary, add more standard gasoline of any type you can buy (e.g. $84 \div 96$ NO).



If during the filling of the tank some gasoline is accidentally spilled around the engine chassis, clean it immediately before starting up the engine.

OIL ALERT DEVICE

The OIL ALERT device will stop the engine in case of no oil or insufficient amount of oil in the engine.

In case one tries to start the engine with oil below the minimum level, the warning light (when assembled) will light and the device will not allow starting.



CLEANING OF DRY AIR FILTER

See page M43.



GROUND CONNECTION

It is <u>obligatory</u> to connect the ground connection point (12) by means of a sure efficient cable (please follow the installation local rules and/or regulations in force) in order to integrate or ensure the working of various electric protection devices referring to the several distribution systems TN.

The unit can be started only when the above operations have been correctly performed.



Check daily



NOTE

Do not alter the primary conditions of regulation and do not touch the sealed parts.

RECOIL START

Open the gasoline cock; use the starter if the engine is cold and the temperature is low.



Hold the starting handle firmly.



Pull the rope hard and fast. Pull it all the way out. Use two hands if necessary.



Then returning it slowly.

Once the engine is started, with the starter off, let it turn for a few minutes before drawing the load.

Accelerate the machine by means of the right lever (16), when it is assembled.

STOPPING

Before stopping the engine it is compulsory to effect the following operations:

stop to drawing the load

- turn off
- disconnect the electrical protection device (when mounted) (D-Z2-N2)

turn off the engine

- bring the idle and wait for few minutes to allow the engine to cool off (follow the instructions contained in the engine manual)
- turn off the gasoline cock
- press the stop push button until the engine is off.



Disconnect the sockets.

1

CAUTION

If the engine fails to start, do not insist for at least 15 seconds.

Space the further operations waiting for at least 4 minutes.



CAUTION

RUNNING-IN

During the first 50 hours of operation, do not use more than 60% of the maximum output power of the unit and check the oil level frequently., in any case please stick to the rules given in the engine use manual.



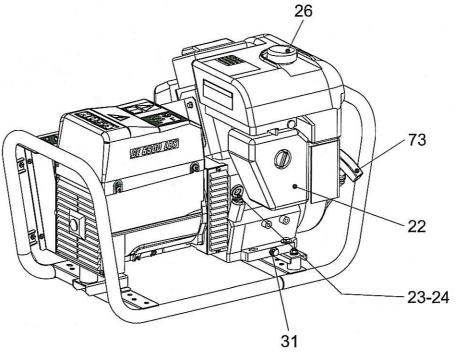


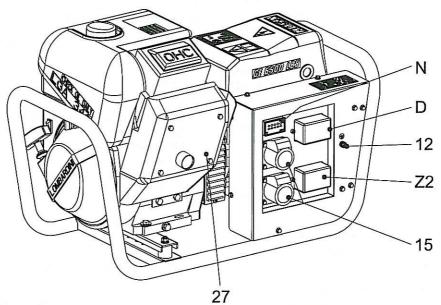












Pos.	Descrizione	Description	Description	Referenzliste
12	Presa di messa a terra	Earth terminal	Prise de mise à terre	Erdanschluss
15	Presa di corrente in c.a.	A.C. socket	Prises de courant en c.a.	Steckdose AC
22	Filtro aria motore	Engine air filter	Filtre air moteur	Luftfilter Motor
23	Asta livello olio motore	Oil level dipstick	Jauge niveau huile moteur	Ölmess-Stab
24	Tappo caricamento olio motore	Engine oil reservoir cap	Bouchon remplissage huile moteur	Füllverschluss Motoröl
26	Tappo serbatoio	Fuel tank cap	Bouchon réservoir	Füllverschluss Kraftstofftan
27	Silenziatore di scarico	Muffler	Silencieux d'échappement	Auspufftopf
31	Tappo scarico olio motore	Oil drain tap	Bouchon décharge huile moteur	Ablassöffnung Motoröl
73	Comando manuale avviamento	Starting push button	Commande manuelle démarrage	Taste start
D	Interruttore differenziale (30mA)	G.F.I.	Interrupteur différentiel	FI-Schalter (GFI)
N	Voltmetro	Voltmeter	Voltmètre	Voltmeter
Z2	Interruttore magnetotermico	Thermal magnetic circuit breaker	Interrupteur magnétothermique	Thermomagnetschalter (Si Automat)
	1	ı		I

It is strictly forbidden to connect the group to the public mains a/o to another source of electric power.

A

WARNING

Sockets are not **self-locked**: tension is avaible immediately after starting also with no plug.



WARNING

Keep out from exhaust system: temperature is very high and it may burn.

At the beginning of every work, check the electric parameters and/or the controls placed on the front.

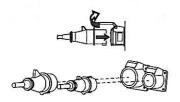
Make sure the unit is properly grounded (12) (where it is assembled).

- See page M25, 26, 27 -.

Move the accelerator lever (16) and reach the engine maximum speed, except for the engines with constant rpm; the voltmeter (N) (where it is assembled) shows the single-phase voltage whether three or single-phase current has to be drawn.

Nominal	Indicative no	o-load voltage
voltage	asynchronous	synchronous
110V	±10%	±5%
230V	±10%	±5%
230V	±10%	±5%
400V	±10%	±5%

Connect up the machine, using proper plugs and cables in good condition to the AC socket (15) to draw single or three-phase power.



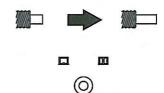
Using several sockets at tha same time, the maximum power possible is that indicated on the data plate.

The max. continuous power of the generating set or theload current must not be exceeded.

MACHINE WITH THERMOPROTECTION

If you overload the genset the thermoprotection will automatically switch off.

If the thermoprotection is released, disconnect all the connected loads.



CIRCUIT BREAKER

Reset the thermoprotection pressing the central pole. When reset, connect the loads again.

In case the protection should act furtherly, check: the connections, the wires or others, and if necessary call the Assistance Service.



Avold to hold the central pole of the thermoprotection pressed for a long time. Otherwise, in case of trouble, it will not click, <u>damaging</u> the generating set.

UNIT FITTED WITH GROUND FAULT INTER-RUPTER SWITCH (GFI)

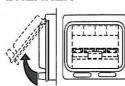




Turn on the GFI safety-switch (D) by pushing it upwards.

The GFI is a safety device which protects the circuit in the event of a malfunction. In this case the switch disconnects the three and single-phase circuit when in any part of the electric connections a current leakage of more than 30 mA occurs.

UNIT FITTED WITH THERMAL MAGNETIC BREAKER



Turn on the thermal magnetic breaker (Z2) by pushing it to the ON position.

The thermal-magnetic breaker is a safety device which protects the circuit in the event of a malfunction. In this case the switch disconnects the three and single-phase circuit when in any part of the electric connections a short circuit or a current absorption occurs above the data specified on the label of the unit.





WARNING



Have <u>qualified</u> personnel do maintenance and troubleshooting work.

· Stop the engine before doing any work inside the machine. If for any reason the machine must be operated while working inside, pay attention moving parts, hot parts (exhaust manifold and muffler, etc.) electrical parts which may be unprotected when the machine

Remove guards only when necessary to perform maintenance, and replace them when the maintenance requiring their removal is complete.



HOT surface hurt you

MOVING PARTS can injure Use suitable tools and clothes.

• Do not modify the components if not authorized.

- See pag. M1.1 -

By maintenance at care of the utilizer we intend all the operatios concerning the verification of mechanical parts, electrical parts and of the fluids subject to use or consumption during the normal operation of the machine.

For what concerns the fluids we must consider as maintenance even the periodical change and or the refills eventually necessary.

The routine cleaning of the machine is also considered maintenance.

The repairs cannot be considered among the maintenance activities, i.e. the replacement of parts subject to occasional damages and the replacement of electric and mechanic components consumed in normal use, by the Assistance Authorized Center as well as by MOSA.

The replacement of tires (for machines equipped with trolleys) must be considered as repair since it is not delivered as standard equipment any lifting system.

For the maintenance of the gasoline or Diesel engine please refer to the specific manual supplied with the unit.

The periodic maintenance should be performed according to the schedule shown in the engine manual. An optional hour counter (M) is available to simplify the determination of the working hours.

Every day check the oil level in the engine and in the air filter (if at oil bath). Make sure that these are no obstructions in the aspiration/exhaust ducts of the alternator, in the engine or in the cover (pieces of material, leaves or other).

See page M21 and M26.



NOTE

THE ENGINE PROTECTION DO NOT WORK WHEN THE OIL IS OF LOW QUALITY BECAUSE NOT CHARGED REGULARLY AT INTERVALS AS PRESCRIBED IN THE OWNER'S ENGINE MANUAL.















UNITS WITH ELECTRIC STARTER

Check periodically the electrolyte level in the battery, especially after long periods of inactivity.

ATTENTION: the battery must have all its elements in good condition and must be filled with electrolyte.

The battery is automatically charged while the engine is running at speed.

In the models with safety protections, in case the battery is not reloaded, check the thermic protection (59A) reload it if it is the caseas well as the fuse (35).

PROCEDURE FOR RECHARGING A BATTERY

Keep to the advice indicated page - M36 -

Take off the breather caps of the battery.

Check the electrolyte level in all the elements of the

If necessary, add up distilled water to have the liquid at the recommended level.

Put back the breather caps of the battery.

Use a densimeter to determine the charge state of the battery.

SPECIFIC WEIGHT	CHARGE PERCENTAGE
1.265	100%
1.230	75%
1.200	50%
1.170	25%

MODELS WITH DRY AIR FILTER (CLEANING)

Replace the air filter cartridge every 200 hours when using the unit in a clean environment.

In a dusty environment, the filter cartridge must be replaced every 100 hours.

ALTERNATOR (brushless)

No other further periodical maintenance is necessary, as the alternator has no brushes or slip tings, and the output regulation is entirely electronic.

ALTERNATOR (with brushless)

Control the wear and the position of the carbon brushes at regular intervals (refer to the alternator manual supplied with the machine for details).

MODEL WITH COOLING LIQUID

Every day check the cooling liquid level. Verify each day freezing liquid and check periodically the radiator state (losses obstructions for air circulation etc.)

once a year and replaced if missing or unreadable.

Check periodically the condition of the cables and tighten the connections.

In case the machine should not be used for more than 30 days, make shure that the room in which it is stored presents a suitable shelter from heat sources, weather changes or anything which can cause rust, corrosion or damages to the machine. See page M45.

In the maintenance operations avoid that polluting substances, liquids, exhausted oils, etc. bring damage to people or things or can cause negative effects to surroindings, health or safety respecting completely the laws and/or dispositions in force in the place.

In case of necessity for first aid and of fire prevention, see page. M2.5.



IMPORTANT



In the maintenance operations avoid that polluting substances, liquids, exhausted oils, etc. bring damage to people or things or can cause negative effects to surroindings, health or safety respecting completely the laws and/or dispositions in force in the place.

















In case the machine should not be used for more than 30 days, make sure that the room in which it is stored presents a suitable shelter from heat sources, weather changes or anything which can cause rust, corrosion or damages to the machine.

Have qualified personnel prepare the machine for storage.

GASOLINE ENGINE

Start the engine: It will run until it stops due to the lack of fuel.

Drain the oil from the engine sump and fill it with new oil (see page M25).

Pour about 10 cc of oil into the spark plug hole and screw the spark plug, after having rotated the crankshaft several times.

Rotate the crankshaft slowly until you feel a certain compression, then leave it.

In case the battery, for the electric start, is assembled, disconnect it.

Clean the covers and all the other parts of the machine carefully.

Protect the machine with a plastic hood and store it in o dry place.

DIESEL ENGINE

For short periods of time it is advisable, about every 10 days, to make the machine work with load for 15-30 minutes, for a correct distribution of the lubricant, to recharge the battery and to prevent any possible bloking of the injection system.

For long periods of inactivity, turn to the after soles service of the engine manufacturer.

Clean the covers and all the other parts of the machine carefully.

Protect the machine with a plastic hood and store it in a dry place.

In case of necessity for first aid and of fire prevention, see page. M2.5.



IMPORTANT



In the storage operations avoid that polluting substances, liquids, exhausted oils, etc. bring damage to people or things or can cause negative effects to surroindings, health or safety respecting completely the laws and/or dispositions in force in the place.



Have qualified personnel disassemble the machine and dispose of the parts, including the oil, fuel, etc., in a correct manner when it is to be taken out of service.

As cust off we intend all operations to be made, at utilizer's care, at the end of the use of the machine. This comprises the dismantling of the machine, the subdivision of the several components for a further reutilization or for getting rid of them, the eventual packing and transportation of the eliminated parts up to their delivery to the store, or to the bureau encharged to the cust off or to the storage office, etc.

The several operations concerning the cust off, involve the manipulation of fluids potentially dangerous such as: lubricating oil and battery electrolyte.

The dismantling of metallic parts liable to cause injuries or wounds, must be made wearing heavy gloves and using suitable tools.

The getting rid of the various components of the machine must be made accordingly to rules in force of law a/o local rules.

Particular attention must be paid when getting rid of:

lubricating oils, battery electrolyte, and inflamable liquids such as fuel, cooling liquid.

The machine user is responsible for the observance of the norms concerning the environment conditions with regard to the elimination of the machine being cust off and of all its components.

In case the machine should be cust off without any previous disassembly it is however compulsory to remove:

- tank fuel
- engine lubricating oil
- cooling liquid from the engine
- battery

NOTE: MOSA is involved with custing off the machine <u>only</u> for the second hand ones, when not reparable.

This, of course, after authorization.

In case of necessity for first aid and fire prevention, see page M2.5.



IMPORTANT



In the cust-off operations avoid that polluting substances, liquids, exhausted oils, etc. bring damage to people or things or can cause negative effects to surroindings, health or safety respecting completely the laws and/or dispositions in force in the place.





(B) Technical data and machine description

GE 6500 LBS

M 51

The generating set GE 6500 is a unit which transforms the mechanical energy, generated by endothermic engine, into electric energy, through an alternator.

Is meant for industrial and professional use, powered by an endothermic engine; it is composed of various main parts such as: engine, alternator, electric and electronic controls, the fairing or a protective structure.

The assembling is made on a steel structure, on which are provided elastic support which must damp the vibrations and also eliminate sounds which would produce noise.

Technical data	GE 6500 LBS
A.C. GENERATOR	
Three-phase generation Single-phase generation Frequency Power factor (cos φ)	6.5 kVA (5.2 kW) / 400 V / 9.4 A 4 kVA / 230 V / 17.4 A 50 Hz 0.8
ALTERNATOR	self-excited, self-regulated, brushless
Type Insulating class	Three-phase, synchronous H
ENGINE	
Mark Model Type Displacement Cylinders Output Speed Fuel consumption Cooling system Engine oil capacity Starter Fuel	LOMBARDINI LGA 340 4-Stroke 338 cm³ 1 6.9 kW (9.4 HP) 3000 rpm 342 g/kWh air 1.2 l recoil qasoline
GENERAL SPECIFICATIONS	gazonii
Tank capacity Running time Protection Dimensions / max. Lxwxh (mm) *	6 I 3.7 h IP 23 785x450x550
Weight * Noise level * Dimensions and weight are inclusive of all part	77 Kg 99 LWA (74 dB(A) - 7 m) swittegyt gottenal CTM

OUTPUT

Declared powers at the following ambient conditions: temperature 20*C, relative humidity 30% altitude 100 m above sea level. In an **approximative** way one reduces: of 1% every 100 m altitude and of 2.5% for every 5°C above 25°C.

For possible modifications or changes to be brought on the engines, with climate conditions different from those above mentioned, please call our Assistance Authorized Centers.

ACOUSTIC POWER LEVEL

The machine respects the noise limits, expressed in sound power, given in the a.m. directives.

These limits can be used to judge the sound level produced on site.

For example: the sound power level of 100 LWA.

The sound pressure (noise produced) at 7 meters distance is about 75dBA (the limit value less 25).

To calculate the sound level at other distances use this formula:

$$dBA_X = dBA_Y + 10 \log \frac{ry^2}{rx^2}$$

At 4 meters the noise level becomes:

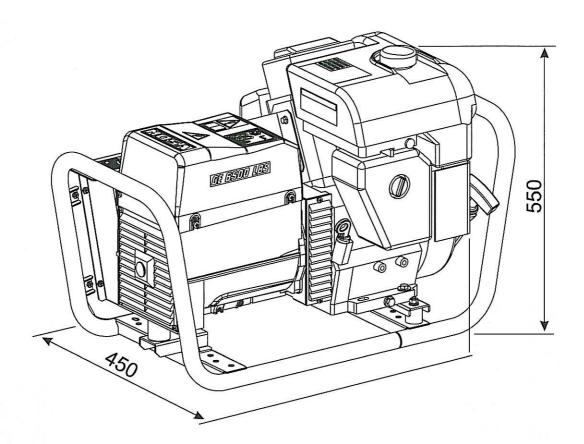
$$75 \, \text{dBA} + 10 \, \log \, \frac{7^2}{4^2} = 80 \, \text{dBA}$$

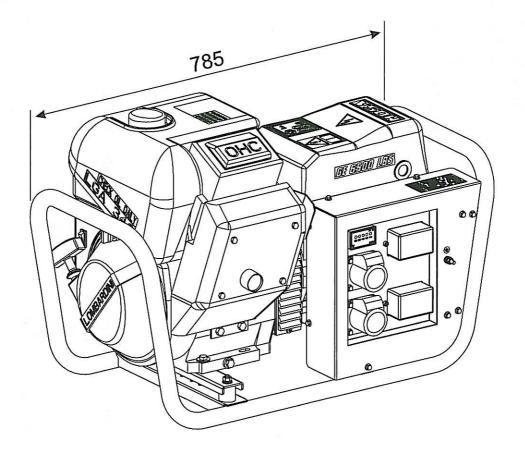


DIMENSIONS DIMENSIONS

SCHEMI ELETTRICI ELECTRICAL SYSTEM

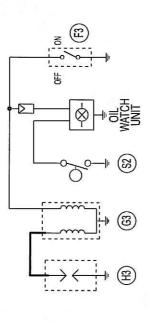
RICAMBI SPARE PARTS





MOTORI LOMBARDINI LOMBARDINI ENGINES

AVVIAMENTO A STRAPPO MANUAL RECOIL STARTER



LEGENDA / LEGEND / LEGENDE / REFERENZLISTE

S2: Trasmettitore livello olio / Oil level transmitter

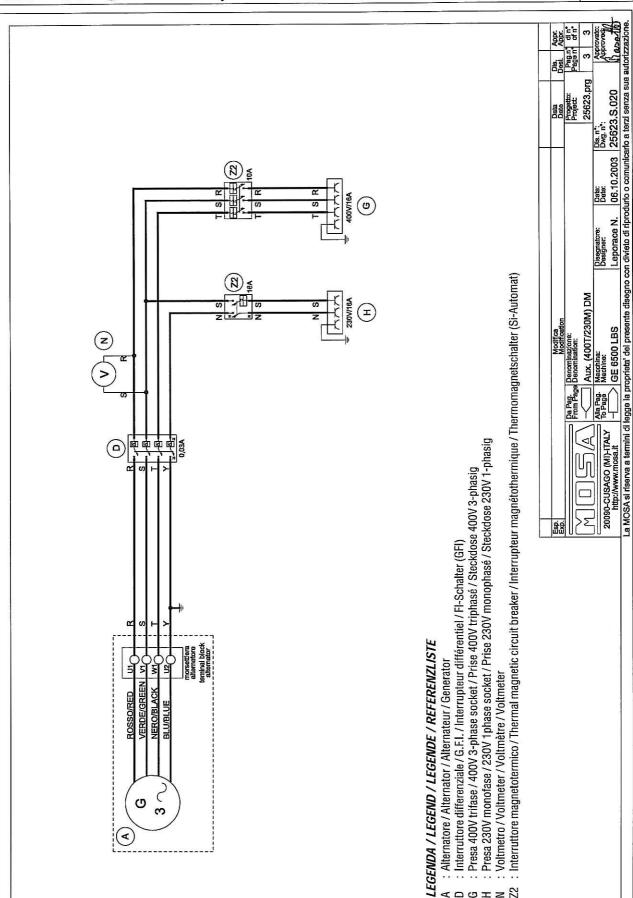
F3: Pulsante stop / Stop push-button / Bouton stop Transmetteur niveau huile / Ölstandssensor

Taste Stopp

G3: Bobina accensione / Ignition coil / Bobine allumage / Zündspule

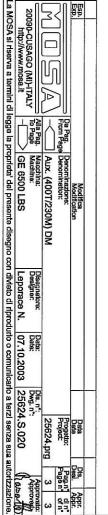
H3: Candela accensione / Spark plug / Bougie allumage / Zündkerze

Dis n*: 22112.S.010 Data: 21/12/2000 Engine Lombardini (manual recoil starter-oil alert) Leporace N. TS 181 BS/ELP



ZNHGDA

(a)



Electric diagramSchemas electriques

10A



	Introduzione tavole ricambi	① Ersatzteile	R
	Introduzione tavole ricambi Spare parts list	(E)	1
©MOSA 1.0-01/	94 F Pieces de rechange		

La MOSA è in grado di soddisfare ogni richiesta di pezzi di ricambio.

Se si desidera mantenere in efficienza la macchina, sempre nel caso di riparazione che comportino sostituzioni di pezzi MOSA, si deve pretendere che vengano usati solo parti di ricambio originali.

MOSA guarantees that any request for spare parts will be satisfied.

To keep the machine in full working order, when replacement of MOSA spare parts is required, always ask for genuine parts only.

MOSA est en mesure de satisfaire toute demande de pièces de rechange.

Si l'ont veut garder l'appareil en bonne condition de fonctionnement, dans le cas de réparations qui comportent le replacement de pièces, on doit exiger que soient employées des pièces d'origine MOSA.

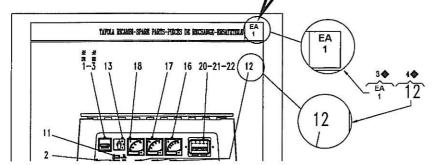
MOSA kann jedes Verlangen von Ersatzteilen befriedigen.

Wenn man die Maschine arbeitsfaehig halten will, im Falle von Reparaturen, die den Ersatz von MOSA-Teilen benoetigen, muss man immer originale MOSA Ersatzteile fordern.

Per ordinare le parti di ricambio indicare - When ordering the spare parts, it is recommended to indicate:

Pour commander les pièces de rechange, indiquer: Zur Bestellung der Teile muss man:

- 1) * n. di matricola / serial number / matricule de la machine / Seriennummer
- 2) ** tipo motosaldatrice e/o gruppo elettrogeno / model of welder and/or generating set / type de motosoudeuse et/ou groupe électrogène / Typ des Schweissgeraets und/oder Stromerzeugers
- 3) n. tavola / n. table / n. table / taflenummer
- 4) ◆ n. posizione / n. position / n. position / positionnummer
- 5) quantitativo / quantity / quantité / Menge

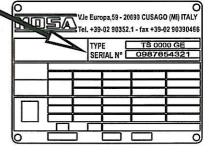


☐ Il dati richiesti si trovano sulla targa dati situata sulla struttura della macchina ben visibile e di facile consultazione.

#

The requested data are to be found on the data plate located on the machine structure, quite visible and easy to consult. *

Les données demandées se trouvent sur la plaque des données, située sur la structure de la machine, bien visible et facile à consulter. **



LEGENDA NOTE:

- (EV) Specificare all'ordine il tipo di motorizzazione e le tensioni ausiliarie
- (ER) Solo motore con avviamento a strappo
- (ES) Solo motore con avviamento elettrico
- (VE) Solo versione E.A.S.
- (QM) Specificare all'ordine la quantità in m
- (VS) Solo versioni speciali
- (SR) Solo a richiesta

ABBREVIATIONS AND SYMBOLS:

- (EV) When ordering, specify the engine type and the auxiliary voltage
- (ER) Engine with recoil starter only
- (ES) Engine with electric starter only
- (VE) E.A.S version only.
- (QM) When ordering, specify the length in meters
- (VS) Special version only
- (SR) By request only

LEGENDE DES NOTES:

- (EV) Type de moteur et/ou tensions auxiliaires doivent être spécifiés à la commande
- (ER) Moteur avec démarrage à cordelette seulement
- (ES) Moteur avec démarrage électrique seulement
- (VE) Version E.A.S. seulement
- (QM) A la commande spécifier la longueur en mètres
- (VS) Versions spéciales seulement
- (SR) Sur demande seulement

NOTENERKLAERUNG:

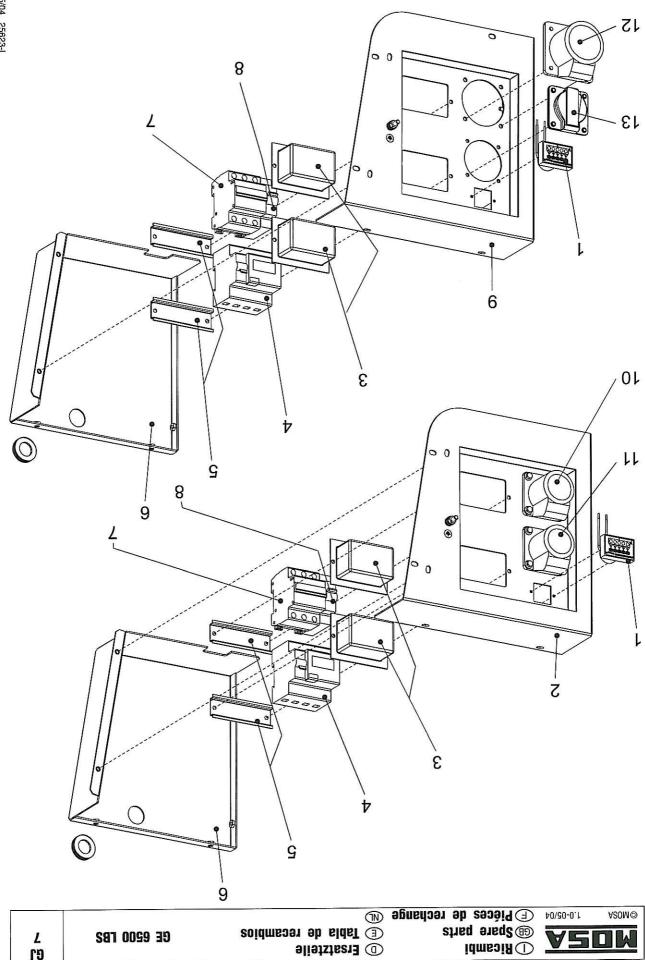
- (EV) Motortyp und Hilfspannungen beim Auftrag angeben
- (ER) Nur bei Motor mit Reversierstart
- (ES) Nur bei Motor mit Elektrostart
- (VE) Nur bei E.A.S Ausfuehrung
- (QM) Beim Auftrag die Laenge in Metern angeben
- (VS) Nur bei Sonderausfuehrungen
- (SR) Nur auf Wunsch

G1

CE 2200 FB2

		⊕Ricambi	① Ersatzteile	7 KW	GJ
MU		® Spare parts	E Tabla de recambios	GE 6500 LBS	6.1
© MOSA	1.0-05/04	F) Piéces de rechange	ND		

O IIIOO/1	1.0 00/01	go (
Pos.	Rev. Cod.	Descr.	Note
1	256233097	CUFFIA SUP. ALTERNATORE	
2	256282135	DEFLETTORE SCARICO ARIA MOTORE	
3	256252200	MOTORE LOMBARDINI LGA 340 OHC	
4	254602035	TRAVERSA SUPP. MOTORE	
5	256233100	ALTERNATORE	
6	102041250	ANTIVIBRANTE	
7	256221064	CAVALLOTTO SUPP. ALTERNATORE	
8	256231050	BARELLA	
9	254601035	ANTIVIBRANTE D30x30	
Pos.	Rev. Cod.	Descr.	Note
1	256233097	ALTERNATOR UPPER COVER	
2	256282135	BAFFLE PLATE ENGINE AIR OUTLET	
3	256252200	LOMBARDINI ENGINE LGA3400HC	
4	254602035	ENGINE BRACKET	
5	256233100	ALTERNATOR	
6	102041250	VIBRATION-DAMPER	
7	256221064	ALTERNATOR FIXING BRACKET	
8	256231050	PROTECTION FRAME	
9	254601035	VIBRATION-DAMPER D30x30	

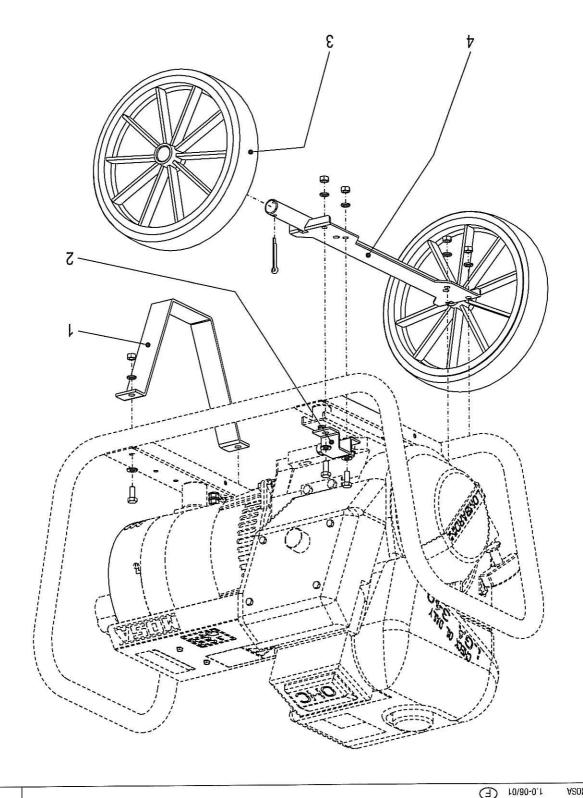


CE 0200 FB2

L ej

Mo	5A	→ Ricambi Spare parts	① Ersatzteile② Tabla de recambios	GE 6500 LBS	GJ 7.1	
©MOSA		Piéces de rechange	MADE AND THE STATE OF THE STATE			l

Marca 11			
Pos.	Rev. Cod.	Descr.	Note
1	256237300	VOLTMETRO	
2	256288003	FIANCATA CARENAT. CON FRONTALE	
3	232027130	CAPPUCCIO PROTEZIONE I.D.	
4	105111540	Vedi Cod.219937105	
5	232027036	GUIDA	
6	256287027	COPERCHIO CHIUSURA FRONTALE	
7	256557325	INTERRUTTORE MAGNETOTERMICO	
8	734507325	INTERRUTTORE MAGNETOTERMICO	
9	256298003	FIANCATA CARENATURA CON FRONTALE	
10	307017230	PRESA CEE 16A 380V (TRIFASE)	
11	307017240	PRESA 220V 16A	
12	305907270	PRESA CEE 16A 400V 3P+N+T	
13	259107241	PRESA SCHUKO 16A 230V - 2P+T	
Pos.	Rev. Cod.	Descr.	Note
			11010
		VOLTMETER	
1	256237300	VOLTMETER COVER WITH EBONT PANEL	
1 2	256237300 256288003	COVER WITH FRONT PANEL	
1 2 3	256237300 256288003 232027130	COVER WITH FRONT PANEL CAP	
1 2 3 4	256237300 256288003 232027130 105111540	COVER WITH FRONT PANEL CAP See part no. 219937105	
1 2 3 4 5	256237300 256288003 232027130 105111540 232027036	COVER WITH FRONT PANEL CAP See part no. 219937105 FIXING GUIDE	
1 2 3 4 5 6	256237300 256288003 232027130 105111540 232027036 256287027	COVER WITH FRONT PANEL CAP See part no. 219937105 FIXING GUIDE FRONTAL PANEL CLOSING COVER	
1 2 3 4 5 6 7	256237300 256288003 232027130 105111540 232027036 256287027 256557325	COVER WITH FRONT PANEL CAP See part no. 219937105 FIXING GUIDE FRONTAL PANEL CLOSING COVER CIRCUIT BREAKER	
1 2 3 4 5 6 7 8	256237300 256288003 232027130 105111540 232027036 256287027	COVER WITH FRONT PANEL CAP See part no. 219937105 FIXING GUIDE FRONTAL PANEL CLOSING COVER CIRCUIT BREAKER CIRCUIT BREAKER	
1 2 3 4 5 6 7 8	256237300 256288003 232027130 105111540 232027036 256287027 256557325 734507325	COVER WITH FRONT PANEL CAP See part no. 219937105 FIXING GUIDE FRONTAL PANEL CLOSING COVER CIRCUIT BREAKER CIRCUIT BREAKER COVER WITH FRONT PANEL	
1 2 3 4 5 6 7 8	256237300 256288003 232027130 105111540 232027036 256287027 256557325 734507325 256298003	COVER WITH FRONT PANEL CAP See part no. 219937105 FIXING GUIDE FRONTAL PANEL CLOSING COVER CIRCUIT BREAKER CIRCUIT BREAKER COVER WITH FRONT PANEL EEC SOCKET 16A380V/THREE-PHASE	
1 2 3 4 5 6 7 8 9	256237300 256288003 232027130 105111540 232027036 256287027 256557325 734507325 256298003 307017230	COVER WITH FRONT PANEL CAP See part no. 219937105 FIXING GUIDE FRONTAL PANEL CLOSING COVER CIRCUIT BREAKER CIRCUIT BREAKER COVER WITH FRONT PANEL	





R 1.1

Gentile cliente, potrà inviarci la richiesta per l'ordinazione di ricambi originali MOSA compilando questo modulo sia con le nuove tavole ricambi che con le vecchie, a mezzo FAX o per posta. Dear Customer, You can send us the request for order of MOSA original spare parts, filling in this form, with the new spare parts tables as well as with the old ones, by FAX or mail. Richiesta da/Request from:..... data/date:... firma/signature:..... Inviateci i seguenti ricambi della sotto elencata macchina /Please send use us following sapre parts for the machine below: RICAMBI MOSA / MOSA SPARE PARTS: modello tipo / model type: nr. matricola / serial nr: **VECCHIE TAVOLE NUOVE TAVOLE/NEW TABLES OLD TABLE** tavola nr. posizione q.tà codice / code q.tà/q.ty position q.ty table nr. RICAMBI MOTORE / ENGINE SPARE PARTS: modello motore / engine model: matricola motore / engine serial nr.:.... codice e/o posizione descrizione e/o tavola q.tà code and/or position description and/or table q.ty RICAMBI ALTERNATORE SINCRONO / SYNCHRONOUS ALTERNATOR SPARE PARTS: modello alternatore / alternator model:..... matricola alternatore / alternator serial nr.:.... descrizione e/o tavola codice e/o posizione q.tà code and/or position description and/or table q.ty

