

**VEVOR°**

**Air heater KW2.0**

**5.08.0 Manual**

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**Working Time:**

**Mon-Fri 8:00 am to 5:00 pm**

**VEVOR**

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**Air Heater**

**Installation Instructions and Manuals**

**caveat**

1 add gasoline

2 After the machine is installed,check whether the phone is stuck,if it is

stuck,it cannot be started.

3 The red power cord must send out the battery

4 After the red power line is connected,you need to check whether the load voltage reaches 1.5V,and there is no need to check the battery or wiring

5 After installation,you need to start multiple oil circuit air repairs before you can start the machine normally

6 Install the outlet pipe without any bends around,and the outlet pipe

should not be bent

7 Install the input pipe and the direction of the outlet pipe

8 This machine is for domestic use.Please pay attention that there should be no gasoline outside the exhaust pipe.The domestic power supply

needs to reach 350W

**D3/D5 diesel oil 12V**

**Technical specifications and installation**

**Operation and security maintenance instructions**

**D3/D5 diesel oil 24V**

**Contents**

I.Introduction

1.Application fields and purpose of heater

2.Installation and operation safety instructions

I.Product information

1.Complete sets of equipment and installation components of heater

2.Technical parameters

3.Product dimension

Ⅲ.Installation

1.Installation position

2.Installation angle and fastening

3.Installation of combustion air duct and exhausting device

4.Installation notes for heating air duct

5.Fuel supply

IV.Operation and Control Mode

1.Fuel filling

2. Control mode

V.Circuit

1.Wiring of heater

2.Circuit diagram

VI.Fault,maintenance and service

03

03

03

04

04

05

05

06

06

07

08

09

10

12

12

12

12

12

12

13



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**I.Introduction**

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| --- | --- |
| **Applicatioa fields of heater**The air beaker will not be affected by the engine and will be installed in the folkowing vchkles on the premise of following the heating power.·Variuus naures of automobile aed uailer·Construction machinery·Agriculural machinery·Ships and boats·RV**Purpose of heater**·Preheating and defrosting the glass·Heating and insulat ing the following arcas·Cab,working eabin,ship cabin-Cargo warchouse-Within the perwenel or teaem carier-RVThe heater eannot the applied in the follewing occasions regarding the regulations for fiactions:·Long-time and continaus heating;-Living room,garage·Home ship,ete.·Heating ar drying;-Life (pesple or animals).IV direet heating modewill be usod-ltem·Blow hot air to the container**lastallatiom and operatioa safety instrwctioas**·Setting of heaterPrevent the heater from high temperature or damages.**·exhaust gas system**When the discharge oullet of exhaust gas is placed,it should preveut the wate gas enteing the autoaoble through the ventlation device,inlet of hot air er Window.**·Air inlet of combustien air**Do not breathe the coabustion air used in healer ombustion ffom the pasenger compartment.When insalling the air inlet,note that it should not be bocked by other materials.**·Inlet of beating air**The heating ar which is supplied should be composed by the fresh sir or eyeled air and be druwn fom a clean area.The inlet pipeline should be proteeted with safety fence or other preper tools. | ·Outlet of heating airWhen the bor air pipeline is placed in the aulomobile,it should ensure that it is didlicult fo be contasted and prevmt the persoenel or makrials fruum damages.**·Exhaust system**When placing the eshaust pipe,we should note that the outlet of exhaust pipe should avoid the combustibies and prevent heating or buraing the grond combusibles er loafing esyos**Safety lnstructions fur iastallation and****operation**The following measures shoald not be taken. -Change key parts on heater-Use the parts of other mmufacturers withoul thee company's permissioe-Go against the specifications spexifiol in the instructions during the iastallation or operation.·It is only allowed to use the original accesscries and fittings during the installaticm er maintemance. ·It is not allowed to use heaters in the plaxe Where the Flammable vapor or dust muy produze.-Fuel dkpot-Carbon storage warchouse-Wood material warehouse·granary and similar poimts**·TDe heater should be losed whea fucling.**· If the fuels fow (diselose)out of the fuel system of the heating equipment,it should be immediately reurned to the serrice provider for mainlemanee.·In the working ptocess off heater,it is not allowed te stop heater by powering off. |

3

**II.Product information**

**Complete sets of equipment and installation components of heater**



1.Heater;2.Metering oil pump;3.Control switch;4.Fixed clamp of exhaust pipe;5.Output line, positive/negative;6.Control element transmission line;7.Exhaust pipe:8.Combustion air duct;,9. Belting,10.Dose pump bracket;11-12 Deoiling pipe;13.Air outlet hose clamp;14.Deoiler,15. Air intake grille;16.Outlet housing;17.Air duct;18.Heater harness

4



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**II.Product information**

**Texhnical** **parameters**

|  |  |  |
| --- | --- | --- |
| **Haler Mod** | **XL-AIRD5** | **XL-AIRD3** |
| **Heating meds** | **Air** | **Air** |
| **Heat nting** | **Lel** | **Rating** |
| **SuperJHb-krvel** | **Middle-lew** | **low level** | **Clos** | **Supen** | **ligh-lew** | **dele-krell ow-knel** | **cbs** |
| **Calonfe valae )** | **2000** | **3500** | **2000** | **00** |  | **0000** | **2200** | **1600** | **900** |  |
| **Digkstrie flus Og h)** | **185** | **50** | **10** | **bo** | **24** | **150** | **20** | **00** | **40** | **24** |
| **Fwd coasmpuon I h)** | **0.64** | **0.40** | **0.28** | **D.11** |  | **0.35** | **0.25** | **0.18** | **0.10** |  |
| **Flectne****cnsamplian** | **Fow@****(W)** | **40** | **24** | **3** |  |  | **24** | **16** | **10** |  |  |
| **hea starting** |  |  |
| **Rad wokage** | **12W or 24V** | **12Ver 24V** |
| **Lower limit ot****ndr-soltg****petecion** | **10.5Vor 2IV** | **10.5V er 2IV** |
| **Lower hit ot****owervollage****Teetectioe** | **6V or32V** | **16Ver S²V** |
| **Fnwironmeatal****hempeature,becr doaee eil pume** | **When eperalimg** | **Non opereng** | **ahen opeein** | **Nen aperting** |
| **-40C o +40℃** | **40℃ 0+8S℃** | **0CM+40C** | **40℃ 0+8S℃** |
| **40C to+50℃** | **40℃+125℃** | **40℃10+50T** | **40℃0+1257** |
| **Inle temperitue of het ar** | **t40℃(highet)** | **140℃(hghet** |
| **@** | **About 4.SkB** | **Ah p** |

**Product dimension**



1.It is used in minimum installation space to open cover,dismandle A-Waste gas

ignition phag and controller.

2.It is used in the minimum installation distance to draw the heating air. B-Fuel

·The above figure shows the product dimensions of XL-AIRD5.TheV-Combustion air

owernll length of XL-AIRD3 is 326mm.OSher dimensions are the same

with the overall dimensions of XL-AIRD5.

**III.Installation**

|  |  |
| --- | --- |
| **Iastallation position**Fasten the healer on the bottom of vchicle or the vchick wlll with four serews on the stand bar of heater.When installing the healer,csough cperatkon space should be reservel in the at inlet and the place to dismantle ignitica plug and controller.(The suggesed installaion position and methods are showa as follows)Installstion positioa within tnakWithin the truck,the bheater will be irstalled in the drivingeab.If it is impossibe to install in the driving cab,the herier may be installed in the tooltbox ar container.1.The heater is loeated at the foot of co-pilot.2.The healer is located at the back wall of driving cab. 3.The hcaler is located at the beck of driver's seat.4.The heater is located in the toolkit.Installahion positioa in car/arge carIn car/arge car,the healer mainly is iastalled in the vchikles passenger toom or lugerge.If unale,the herler may be fastened under the vehicle, but we should note the water spaying | 1.The henkr is located in the front of co-pilot 2. The heater is located between driver's seat and eo-piks seat.3. The heater is located unde tteundersurface.4. The heakr is localed under the back set. 5. The heater is localed in the huggnsImsallation position within RVWithin the RV,the healer is mainly insallkd in the room ar lugeege.The heater may also be fastened en the vchicle bottom,but it should prevent the water spraying1.The heater is keated in the front of eo-pilot2.The heater is located between dive's seat mdeo-pilot seat.3.The heater is kcated in the bottom4.The healer is kealed under the counler5.The heater is keated in the luggage.Issallation pesstion in the drioing eab of eseavakor 1.The lhieater is keated in the box at the diva's seat2.The beater is keated at the back will of dnving cab.3.The heater is keated in the pretcetion ease |



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**III.Installation**

**Installation angle and fastening**

**Allowable installation angle**

As shown in the figure,the norral angle should be used to install the heater.According to different installation conditions,the heater may incline 30°(the flowing direction is downward) at most or rotate 90 around the long axis.(Exhaust pipe position,the ignition plug is upward).



1.Inlet of heating air 2.Position of ignition phug

3.Flow directions

**Assembly and fastening**

The holes used to process waste gas,combustion air and fuel pipe.

The mounting face of heater

legs should be flat.



Horizontally fasten the heater on vehicle wall.

Fasten the heater on the wchicle botsom.

Be sure to reserve a space between heater and vehicke bottom.In addition,check whether the ventilation wheels operate freely.2.The assembly surface should be flat:3.The sealing gasket should be assembled;4.The vchicle wall should be flat;5.Reinforcement plate(used when

necessary);6.Spring sheet 7.M6 hexagon nut

**1.III.Installation**

**Installatton of combastion alr duct and exhaustiag Safety iastructions for galding device of combustion**

|  |  |
| --- | --- |
| **device**Guiding device of combustion irThe imtallation somgonents conthin a Flexibkcomeustice air hese and the ianer dismeer is 25mm.Aavoerding to the installation cosditions,the length of comkustioa air dict may be sherlened to 30cm e prokeged so Im at nost.Fastem the comkustion air duct on heater with hosr elamp.Aaother end is fastened with nbbon fo preveatshalbing and falling | air:The anifee of cuabusika alr duet sdould kesp unbkeked.·When installing the suction inlet of combustion air, nole that the wase gus shoul not be taken as ee coabustoa air.·The sacticm inkt ofeombustike air should not align al the diving dretion. |

0.3m-Im

|  |  |
| --- | --- |
| **Eshaasfing dnie**The installsikn comgonents seoukt oontain oee eshust pipe that the inner dimter is 24mm.Acvowding to the installation ewaditions,the length of exhust pipe may he sherlened to 30em or pnolongpd ao Im m mostFasten oee end of eshnst pie te hater with hoe damp md fatm ancher end en the wchide wih snpport. | land 2 Hose lamp:3.Fxhams pipe:4.Combustion air pipe:5.Ihkt and outlet,6.Skeve of waste gas pipe 7.Cip of inlet pipw |

**Safety iastructions for exhausing devke**

In the whokk operatixn proswss ffom the heating ·The epening of exhanst pipe should sot be bloskod oreration,all parts of waste gs eshst dvice will be by the dirt and snow.

|  |  |
| --- | --- |
| bumt.Therefore,be sure to install the eshusting devke acooxding to the installatica insruztions.·The outiet of exhust air should be plxed outside the wehicle.·The waste pipe shouli not go beyoad the boundary on the vchicle side.·The exhaust pipe sdould be plased downwad ao facilitate tae dischar ge of ecedemule waler·It shoukt not affeet the functions of purts whkh ame imgortat fur tae vchicke operaton (aote to kecp noigh spacng)·When installing,nste to keep enough spacing between tae edaust pipe and heat seasitive comgoncnts.We sheuld puy pariculur attesticn to the fud pipe,wire and teake hase.·Ta peevent the exhaust pipe ffum wihration and damuges, aoud be Sslened sably (the recoamended teference spacing is 50um).·When paving eshaust pipe,note that the waste gas which in dischurgd shoald sot be sol s the | ·The opening of exhust pipe should net direet to the driving direction.**Protectioa instrucioas**It will produc bat and tosie gas in burning time. Pkase install the exhausting device according to the iastallatioa instructions.·Ia the healing period,it shoald nst opense in ae aicea where the exhaust guiding devce locates in.·When opernting on the waste gas dicharpe dewike, firstly dos the hoaler until all puts are cooled.Wes te predective gloves when tosesary.·Do tot take the waste gas. |

8



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**II.Installation**

**Installation notes for heatimg air duct**

**Heating alr duet Notes**

·The instullation components contain one ·When placing the saxtioe inkt of heating air, flexible pipe that the diameter is 475mm. mote that the waste gas from velicle engine and

beater sbould not be taken and the heating air **Safety iastruetions** should not permeate the dust and salt fog under · When paving and fastening the heating air the normal operathon conditions.

|  |  |
| --- | --- |
| guide tube or bot air oullet,we should not touch it directly doe to bigh thermal radiation or directly blow the bamans,animals or thermal sensitive msterials with bot air,or it will cause umneessary dimiges and injuries.·In the whole operation process starting from heating,the thermal air conduit will be in high temperature.Therefore,the operation in the thermal air conduit shoukd be avoidod in the whole bealimng poxess.If the operatson in the area is required,firstly close the heater.When all parts are completely cooked,wear the protective ghoves wlen necessary. | ·When hesting with circulating air and placing the saxtion inkt of circulating air,note that the bealing air ceannot be direetly takcn in.·In case of fault caused by beating,the loeal therml atr temperature may reach 15 C and the surface temperature may reach 90 C before shutdoan.Therefore,it is allowed to guide the beat air with the high kmperature air hose in the compiny's installation components·When checking the functions,afler operaling about 10 minales,the arverage temperature of discharged heat air which is mcasired at about 30km from the outlet stould not exced 110℃(the air saxtion temperature is about 20℃).· The heater and air conduit and other components should not be trampled,covered and pressed,Or it will injure the persoenel,burn the inflammables or damage the bcater. |



1.Inuake grille protection

2.Oulet housing

4.Soft air duct

3.Hose clamg

**III.Installation**

|  |  |
| --- | --- |
| **Fuel supply**Installation angle of dose oalWhen installing dose oil,note that the nozzke should be upward.The installation angke should be larger than -15°.The imstallatbon angle between 15°and 35°should be given priority.As | **Coanectioa of oll pipe**When coanecting the oil pipe,after inserting heater ail nozzle,pump oil nozzle,oil taker and T-shaped TEE oil sozzle into the rubber house,it should be comnected to the oil pipe in next end to prevent bubbles in the oll channel,oe it will |

|  |  |
| --- | --- |
| shown in the figure below:1.It is not allowed to select the installstion angle between 0-15°2.Give priority to the installation angke betwexn 15°-35°3.It is allowed to select the installation anglebetween 35\*-90° . | noise and infuence the combustionproduceeffect.1.Correet coenection,2.Wrong coneection-forming bubblesInstallatioe angle of T-shaped TEE parts1.From oil tank 2.Lead to auto engine |

**Take oil from oil tank near to the eil channel of auto engine with T-shaped TEE parts**



**10**



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1.Dcoiling pipe 2.Lead to auto engine eil pump 3.T-shaped TEE parts 4.Dose oil pump

5.Comnexting hose 6.Oil pipe

**III.Product information**

Deo ling Installsioe Diagram of Deoiler



|  |  |
| --- | --- |
| 1.Deoiler3.Dosage oll pumpSafety Instructices of Deoiling Pipe LayingIn order to awoid the oll pipe desroy er giw rho to noiue due to the vihration,the esl ppe seall be fixed fimnly.· Durisg the laying.plesse seoid the ed pipe stretching,thiction er vihration eaused by the wehidke reversing ar engine movement.The oil circuit sball keep away frum the heat souce,intead of being laid under the hig≥-tempeature environment.Please dn't lay the exbaus pipe or fis the oil pipe along wih the heater ee vchicke engins at choas meee.Whin it is neceaary to eress eve theoe pipeline,please keep the enough heul insulaion distnce and put the pretestive hose whes nevessary.· Plese install all oil wpply equipment,then,checkphemcnsron afer hater bas boon sarsd ad eperaled for a certain period of time.The oil pum kh is stalledwshicte wall be prohetad to povide oll for the heater. | 2.Coanecting hoses4.Deoiling ppe1. Joint on the beater2. Maximum eil precure height3 Minimum fuel ccatests**Notest**a.The vertical height a when the oil pump is installed below the oil tank shall be 3mmaximally.b,The vertical heiget b when the oil pump is installed above the oil tank sball be Im or 0.Sm al the mas in ease of diesel oil or gasoine.e.The vertical height e from the otl pump to the healer (the oil pump shall be iastalled below the heater)shall be 2mmaximally.Operating Laguirements of T-shaped Triple VaheIn order to woid the fudl oil injection in the haater and the huge risks under the hige preasure of wchick eal pamp,the triple walve bedy shall be installed betwcen the wehide oil pump amd oil tonk.instesd of hetween the vchicle oil pump and engine.The vehikles of which the vchicle eil pamp is ineallod in the oil tank shall apply the deuiler,insteat of T-shaped triple valve body, to estroet the oil.Oil Circuit Maintenance ad Overhaul ecautioms· Mease cheek whether the adapting picces ef oll eireuits Aave become Dexible before ssing he heater in wnter.CBeck whether the ccenecting hose and oil pipe have become sging.Chedk Whether the counection beween the oil circuits have suffered fiom eleotne leknge when the heater has been operaled for a certain perkd of time.Amy prcbless found sbculd be solvel promgty.When the heater is used for he frst time. the healer is likely to be uable to be started during ae earty seversl Iounching due to the long-emm wused behaviors.This is the noemal phenomemon,at this moment,please start it for several times until the oil pump ean suck up the fuel oil |

**IV.Operation and Control Mode**

**Fuel filling**

You shall infill the ail circuit via the fuel oil infilling function when you have installed heater host,oil circuit and clectrie circuit,otherwise,the beater is likely to fail to be started due to the fuel oil absence in the oil circuit.

●

The fuel oil shall be refueled in the following way:Press the rocker switch for 8 times continuously at the following frequency after connecting the power line correctly,namely,open it for I second and close it for 1 second.At this moment,the heater will start the fuel oil heaing procedures to continuously send out the drive pulse of fuel melering pump and keep it for 5 minutes.During that period,the indicator on the rocker switch will flicker at the one-sccond on and coe-second out frequency,moreover,the buzzer will make beep.Yeu shall pay contimuous attention to the fuel oils position in the oil circuit during the refucling period of fuel oil.When the fuel oil has approached the heater oil inlet for 10cm,please turn off the rocker swikch to stop the refueling process.

**V.Circuit**

|  |  |
| --- | --- |
| **Wiring of heater**Safety inserugtionsIt is raquestod to realice the ekectrical connection of heater acoording to the dloctromugnetie compatihility pnncple· Ceasidkrisg the the dactromagnetie eampatibility will be affected by the misoperation,please sbide by the folkowing requireeatg· Plkase make efforts to avoid destroying the iasulation of power line and prevent akeasion. breakage,elsmping or @ermal influence· As for the walerpoof piug,pkase make use of blind plug to bkek the uoecupiod plug enity and prevent the dirt aad water.· Plese ealize te clectrie cmnedion and grounding fimly without corrosion. | **Notes**Please pay allentiom to the foBowimg sffaars whe the electnie wiring and ekment operation are conducte for the healer:· Pkase keep away from the overheating pars to moid the healing &bumidity and affected fuaction wten the electric line,switca and coneroller ee installed in the atomobile· Pkease dont fix the bardness on the moving or vibrating compseents to woosl the kmsk failure or jgeint falling wthen the hardness is fixed. · The postive and segative dextrede ef the hardness shall not be lengthened without pemission. |

**12**



oil tank and oil pipe?

. Whethar the fuse is

ncrmal?

. Whether the circuits,the

connection and the connectors are in good coediton?

**13**

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Rud (1.5mm)-postive dletrode of tormge twnery (main coatrol toad)

BI<k (15mm)-negstve electrede of storage buery (main coatrol huand)

BIsk (0.5m)-wanve ckwtrode of oil punp tmsin

cordl bod)

orange (0.5mm)=pesitive eleceole efoil pump fmain oed hee

puple(0.5mm)-sommaneatios fmsin ecotrol toand) Red (1.5mm)-positive elstrode of stoeagebwtery

Blek(15mm)-negitive dectote of ssage batiery Omge (0.5mm)=megatiw ckstrode efoil pump

Crmgefo sam)-pusere dlctede ofed pemp

Blue (1.5mm)-rocker swikh OFF

Red (1.5mm)=segive dectrole of idiealor

Green (15mm)-positive clectrode of indicaer

|  |  |
| --- | --- |
|  | Tesperatue sensor |
|  | Main coetrol boand |
|  | Posiive ckctrode ot dranght tan |
|  | Negative elkctrode of draught fan |
|  | Indkator |
|  | Rocker switch B |
|  | Recker switch B |
|  | Positive ckctrode ot oil pump |
|  | Nezauive ekctrode of oil pumg |
|  | negative electrode |
|  | Positive cectrcde |
|  | Cemmunicalsoe |
|  | Positive ckctrode of ignition plag |
|  | Nezative eketrode of ignitioa plug |
|  | Wind turbine |
|  | Igniton pheg |
|  | Plug B |
|  | Plug A |
|  | Sufe electie current loA |
|  | Sa/e electie current SA |
|  | Storage buttery |
|  | Reckar witch |
|  | Oil pump |

**VI.Fault,maintenance and service**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Fault and handling**· The beater caaaot startupoe sartup:-Shutdown,Restart afher shutdown.· The healer still does aot surt,tde following should be checket, Whether there is fucl in the | · The bealer is lilely to be out of order when thebealter is used abecrmally.The general using conditions, faults and disposing uc thods will be lislel below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Unit | Minimumvalue | Nonmal vale | Maximumvalue |
| Rated voltage | v | 21 | 27 | 32 |
| Rated yoltage current | A | 0.06 | 2 | 10 |

 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| MovementNoise | dB | 35 | 55 | 65 |
| Ful oil consumption | Litre/hr | 0.138 |  | 0.472 |
| Reeirculsting wind flow | cfm | 30 |  | 85 |

.Please contact with the sales persons or manufacturers when the heater still fails to be normally

started or steadily operated on the premise that the foregoing contents are normal.

**Please pay attention to the fullowings:**

Supposing that the heater is changed by others or due to the unknown installed components,or the heater is destroyed without normal operation due to the artificial factors,the customers will lose the power to ask the manufacturers to make repairing

**VI.Fault,maintenance and service**

|  |  |
| --- | --- |
| **Maintenance instructions**· The hoater shall be stiatad fisr 10 minutes in summer and other mooths when the heater isnet sed.· Pkase make the pilot rn for the heater before the using periud.· Pkase ckose the heater as long as there is dense smoke for leng term,or abaormal combustion soise ar fuel smell or overheating elextricallelectronie component.· Take cut fuse.Seck an advke fro the | **Serrvice**When you have any technical peublem or your heating equipencat is out of order,please contact with the sales installers in time. |
| installation · Please | compamy check | for inspection. the oil circuit | carefully |
| before the using period of the healer,and check whether the connection has become flexible and whether the oil pipe bas become aging.Please check whether there is oil kakage on the connection wten the heater has made pilct run for a certain period of time.· Pkase check the opening of heating air duct.combustioa air duct and exhaust pipe after long-term unused behaviors.When necessary, pkase wash them |

**After-sales Warranty**

Dealer:

MM/DDYY

Uve²s nme

Contaet No



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|  |  |  |
| --- | --- | --- |
|  |  | koseness condscns of wirisg terminal |
| Break Ene fault | 7 indicalurs dlicker | Chexk the oonnssting plug of parel,and whethe the blus hamee comactiom has lecome tieuble or dsonnested |
| The flame is | indcators flicker. | Chexk wether the el eirxuit has air er blockage,check whether |
| exlinguished. |  | the temperalure sensor en the shell is aut of orde or whether thecomecker lermnal has beme Okxibk |

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|  |  |  |  |
| --- | --- | --- | --- |
| Heaier Mede |  | Instaithation position: |  |
| Type of lcense plate |  | Instualation time: |  |
| Vedicle type: |  | Iasuller |  |
| Maimtenance time |  | Maimtenance items |  |
|  |
|  |
|  |
|  |

**Rotary Knob Panel Instructions**

Introduxtion of keys

ON->sltap

OFF->shadan

Roary kisb->temperaure ausdmert anl wind peed contu

Lighting instructicas

Canideringthut there is lidreng below fhe ONOFF key,the apentors will find eus the sstary knsb eaaily ander the dark enviroamers.TNe hgbting on the ouhide ofroury knob wil show the temperalure viue and failare stak.

**Key function introduction**

OW>Please pns the ON key geney when he working volage has sotisfisd therelsed condnoas

OFF~Plas pes ae OEF key genthy when thenachins is ander the working ste.

Rotary knol->the temperaeure wll ne when he rotary lob is ntated sklwse,at tha monen,the ral iadcidon will be inacasod on the oubide of the rclary kaoe.

The tempa slare will dowa when the rotary knoe isntatol ali doskwiie,at this memeat,the rol iadictors will be reduead on the outeide of the rotary knch,

**Fuel filling by hands**

Pkame otale theretary knob clockwise under the OFF dale until the rod indkadon ar m,then,pease pres the OFFbaten Sor more than 3 sesoos,at this nommt,themausl oil pampiag will be sarted.Pease press the OEF key geatty to sop the dl punping when the at has bon emowsd fron he all circait.

**Fault** **state** **description**

|  |  |  |
| --- | --- | --- |
| Macing full | Se dapay | Tatacs mattod |
| Uhde-vollags ofpower appey | 1 iadcdur flcken | Booe the vollage ef powe upply |
| Onerveltage of power wpph | 2 indsoton ficker | Reduse the weluge of peower sapply |
| ne ieaitiee phag is cut of orde | 3 iadxutop ficker | Chesk whether te ignfson piug has sulfered fon open cicait eshort eincut |
| 0a pmp frh | 4 iadcton lide | Chack whether the eil pump has suftered from bookes line ershort eineut |
| The macline iaweleating | 5 indiodon dider | Chack the lerpeatune senaor en the shdll or whethe the fan has ae abpomal roatioe speed |
| Motor fult | 6 indkatos ficer | Chwk the mogaet polanity,the Hall saser kcatieo or the |

**Fault Code Description**

|  |  |  |
| --- | --- | --- |
| Machine faukt | Status display | Solution |
| Undervoltangepower source | Pel display E-0I | Raise the power supply voltage |
| Overvoltagepower source | Pmel display E-02 | Reduce the power supply volage |
| lgnitien plug fault | Pael display E-03 | Check whether the ignitioe piug is open-circuit or sbort-circuit |
| Oil pump fault | Panel display E-0M | Check whether the oil pump is disconnected or short-circuit |
| Machine overheat | Panel display E-05 | Check the temperature sensor on the shell,or check whether the fan revolation speed is sbnormal |
| Modor fault | Panel display E06 | Check the polarity of the magnet and the position of theHall sensor |
| Discoanectionfault | Panel display E-07 | Cheek the cormecting plug to the panel,and werify whether the connectioa of the blue commurication line is abecrmal |
| Flameextingaishment | Pnel display E-08 | Cheek whether the oil line has any air or whether it is obstructed.Chedt whether the shell temperature sensor is malfunctioning.or whether the cooact of the socket terminal is abaomal. |

The contients in the table are subject to the digital panel.Faults of the panel with remote control function are identical with the description in the above table.Faults of the panel with knob coetrol are identiceal with the deseription in the above table,but the display mode of fault is indicated by the times of blirking of an indicators

**16**



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**VEVOR°**

**VEVOR°**

**12V-24V Common Digital Panel Operation Instruction**

1. **Indicators**

**Status-**>Permanently on upon startup,blinking upon the initialization

of shutdown,off upon the completion of shutdown

**Time**->Permanently on when displaying the time or setting the timed startup or shutdown,and off under other statuses.

**Voltage-**>Permanently on when displaying voltage or setting the parameters in relation to voltage,and off under other statuses

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**Temperature->** Permanently on when displaying the ambient temperature or setting the operating temperature,and off under other statuses.

**2.Key Function**

▲>Under the setting status,press it to raise the parameter to be set; under the non-setting status,press it to raise the operating temperature to be set

Set>Enter the setting status to adjust parameters and change the machine's operating status

**On/off** >Promptly press it to start up the machine,and the status indicator becomes permanently on;press and hold the key for 2 sec to shut down the machine,and the status indicator becomes blinking

**OK>** Under the setting status,press it to confirm the current setting value and proceed to the next parameter to be set;under the non-setting status,press it to view the machine's status

V>Under the seting status,press it to reduce the parameter to be set; under the non-setting status,press it to reduce the operating temperature to be set

**Description of Setting Parameters (Press the Set Key to Enter)**

→Press the OK key,and consceutively set the Hour (24-hour system)and the Minute,and press the OK key to proceed to the next parameter

Time

Use the up/down keys to adjust the parameter

1.

setting

→Press the OK key to It is off by default,displaying 1-OF; consecutively set the first group of press the up arrow key to activate it, startup/shutdown time values and the

2. Timed startup and shutdown

setting

displaying 1-on second group of startup/shutdown

time values,and then press the OK key again to proceed to the next parameter

\*

Admin

password

input

+

3.Pump oil

volume setting

4. Fan

revolution

speed setting

5.Operating

voltage setting

6.Revolution

speed signal

selection

+

7. .Admin

password

modification

Press the up/down arrow keys,and when the correct value appears,press the OK key to proceed to the next digit.After all four digits are input correctly, press the OK key again to proceed to the next parameter

|  |  |
| --- | --- |
| Press the up/down keys to modify the minimum pump volume,and press the OK key when the required value is set | For the maximum pump oil volume setting,use the up/down arrow keys to modify it as required, and then press the OK key to proceed to the next parameter |

|  |  |
| --- | --- |
| Press the up/down arrow keys to modify the minimum fan revolution speed,and press the OK key when the required value is set | For the maximum fan revolution speed seting,use the up/down arrow keys to modify it as required,and then press the OK key to proceed to the next parameter |

The mainboard's operating voltage can only be adjusted under the shutdown

status.Press the up/down arrow keys to switch the operating voltage to the 12V system(displaying U-12)or to the 24V system(displaying U-24).

(Before startup,please check whether the oil pump,the motor and the ignition plug are suitable to each other,to avoid damage)

Press the up/down arrow keys to set the revolution speed signal.Select 1 if the vane wheel has two magnets with the opposite polarity or has only one magnet.Please select 2 if the vane wheel has two magnets with the same polarity.Ifthe parameter is incorrect,I-fold speed error will occur.

By default,the OFF status is displayed.Press the OK key if no modification is needed,to skip the password modification and automatically quit after saving the parameters.Press the up arrow key,and when the ON status is displayed,press the OK key to enter the modification status,and input a 4-digit new password,and press the OK key again to save the new password and the adjusted parameters for automatic quit.



**19**

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Note:after all parameters are set.you must press the OK key to quit and save the set parameters If you qui**t by pressing the Set key,the paurameters will not he aved.Plesse earefully chesk** each digit of the new **password,and keep it in mind so that you can use it to change parameters next time**.

**4.Description of Machine Status Query**

→ 十 Set lemperature

Time display Ambient display (automatie

temperature temperature

display contrdlyset pump oil

volume display

(manal temperature

control)

Under the non-setting Hisorical Power supply olage

status,press the OK fault code display

key to view eydlically display

**5.Manual Fuel Filling Description**

Under the non-setting status,first press ind hold the down arow key,and then press the OK key simultancously to enter the manual oil pumping inserface.When H-OF is displayed,first release the OK key,and then release the down arow key.Press the up arow key to activate manual ou pumping.H-ON will be displayed and you will hear the oil pumping noise.Simply press the down arrow key or the Set key to deactivate it and quit themamual oil pamping.

6. **Timed StartupShutdown Description**

Afher setting the run time,press the OK key to enter the timed startap/shutdown setting functicn. By default,OF indixates the off status,and please press the p arrow key to activate the ON status,thes you ean press the OK key the set the first group of valaes,with the hour and minate values for the sartup to be set first,amd seeondly enter and set the hour and minute values for the shutdown if the valaes for the sartup are set.Then.press the OK key to enter the second group of values,with similar seting measures as those of the first group.You may speeify an interval between the two groups of valxs.The timing function can only be performed once upon eaxh seling,ie if the set timing values are performed,they will be invalid,and you nmeed to reactivale the timing functioe and set new values fcr the timing

**7.Temperature Control Mode Switchover Description**

Under the non-sctting status,first press and bold the up arrow key,and then press the Set key simulaneously,if the panel displays P-xx (xx indicales pump oil volume),it indxales that you have enlered the manual temperaure ovntrol mode and the pump oil volume for operation is restruined within a ange between the current pump oil volume and the initial pump otl volume. When you press the above mentioeed keys simaltaneously and the panel displays xx ℃ (xx indicales temperature valhe),it indicsles that you have entered the autemalie temperalure control mode and the pump oil volume for cperation is restrainod within a range berween the maximum pump oll volume and the inital pump ol volume.Under the two mode,the automatie changes of pump oil volume boch depesd on the varation of the temperature,but the difference between the two modes is that,under the automatie mode,the pump oil volume can reash the maximum value set for the parameter,which leads to higher temperature of the machine,under the mamual mode, the pump oil volume is limited to the earrent selling value and can not reach the maximam value set for the parameler,thus the equipment's temperature is limited to the selkcted range,wtikh is more adapable te cerain od-fashioned drivers

**8.The instructions on the LCD panel**

In the condition of not sctting,press raised first,press the confirmation key at the same time,to keep more than 3 secoeds.Remote control to the code into the interface,display HFA-.press cn the remote control to open fire away

Control code,the code after the exit of code interface,the machine into the boot ssate,if the code does not enter the boot failure state.Timeout is wrong code automatically withdraw from code.

LCD panel using the above method

|  |  |
| --- | --- |
| Warnimg | 1.The fixed hackhoard shall be sealed and separated from the vehicle sheet meal during installation to avoid the physical injury to the driver wthen the combustion gasthows in the driving eab fiom the gap2.The exhaust pipe length shall be 30cm at least3.The exhsust gas outlet shall be firmly placed in the empty spase 4.The exhaust pipe outlet shall not look at the driving direction. |
| Recommendations:It is suggested to apply the sealant to block off the installation gap when the heater has been fixed. |



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Main boand anpersing volsge aan anly he wlwad ankr the shudosn sate.Mes

6 Operating wlege sening

p-eglalen tutos or dowa-rnydation tumoe to suliwh the wting sf the

opeatag wtae,afust the I2V syyen te H 24V gsen to H\* o

conglete the sclectien Befiee surt ap.chst wtetter tte ol punp moor and iinie plug af the machire are matcheot thus svsiding dinuge

when it divplays I se press up-egulatien butoe or down-rgulrfon buios to

7 Sdecticn of

sped sgul

s the spod sigul.Seleet with the same pelarty of two magrets ef the

impeler,and seieet I idefalt valie)wih differert potartty of the magrets r mly ane mmgnet.This paranster is incurractly selectet,which wil lead to the peed &feng of l em

★

When it dslay4,press up-regdatken bumon ar dwn-reglaion bunon to molify the runhen (1=35W,2=40W,3=45W,4=80W,5=85W.6=90W and default value is 5.It is secommenld Bo adopt defiault valus,er make modifkation afher verificasios

8 Sdectien of igaitien dug power

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It intiully dnplayv,pres curfirn bumon to skip the pisaward modificaticn and ave sbeve nadified paransten.Preas the ip-neguldios butlan when medifying

9 Adminisratnve Pnwo

modfcaisn

then press cunfrm bueun to ener puasswond moifcatioe sule wlenit dsplay

Press ap-regulsiom buron or drwt-regulaion tuton to adjst.Ant after emeing the 4-digt passwond comecy.press the cenfirm binon to emer he next digt.

then save the new password and atjust ae setings poramelers to exk uonalkally.

naadien:Fea dost fme,sat the tining df aan -ap and shuadosn,ad t will tite sftet innsdasty str wig Ahe wtig all paransars sfter the stbtnisenirs pasuwoet you muat wes confrm banse n e the tem 9 so esh,thromyP which we coudt srve the set parameers.If quining in be midwsy.previos dimee dn will se hst sd imalkt.Mese cdedk esth ses dipl ef poswind earefully and sve it.theugh whikh yos an enter to the puranster med fkatioe mxt time

**Imtractikas for Uw of I2V-24V Geerl LCD Panel**

**1.Buttoa fuartea**

→ln n-seting ste,inxreae the working tenperaere a all mens. li he setning sate,inrease the setlingparaster

**0m'O>** ,Lang press fir 3 sesedk to sur-up.the seeen diplays\*,and kng ress 3 secends to shadrwn,the screm displnp.

▶→l me-seting stng,dxrvave the worling tempereue m ell mass. Ie the wting stee,the shovwe stne is suffcien for the basie opeation edf drerease the stting poraneters.Oher aperaions are deseribod as fslows.

**Prameter** **settiap** Mess the tp epilton teun for a lig time to ener the scting suke.Seting peranssers ean be adustet to chunge the warking suts of the machine

**la the paranscter eunfirmatina** →setling tate,cnefimn the cunent seting ulhe by pesing On batsn to enter the reat pranrkr seting le the tn stling sale,ress Owoff bah so view the nneing sate of the ma:hine.

**Reaote eustrul cole matching**→Press diwn-reptisicon btin Ssr a krg tine to ener the rente oertrol pirisg sale,and pres reimte emtrul poaer hulon fir puiring Mese refer lo the decrption Luer fir dcailed eperation.

**Tenperatare eantrsl coserniee** →Switch the tenperahre cortrdl mode

ty presuing and Mddding the ue mgslsion and OwOe bosn al tte sane

tine Piease sefer to the folowing dewrptioe fer deails.

**Ful flieg→**Phessand hold doan-egplatien bunen and OnO banint be same tine to sor the fiel filing fuxtion,as desnbed laer.

**2.Ouery machine satus (keep sdirt prss of tte Ow O hattoe** te stich eae state st t tine to mske it

**phiy esdieally)**

Time dsplay →Amhicnt tenperature dipluy →Sering lemperaae daplay (atoruic

tenperahre cetrd)hetirg ol mass dsplay (Marusl temperiare contrdl)

4 nos oufinm butkm lw gdhaly Mary fut cak Asgly Ahus agpue

\*Supy vohage dixpluy

**3.Deseriptios af fuel tlling in maaual mode**

Uhder tte shatdorwn sale.pes the doan eepilslen biasn ad OnOif tueoe sinaltneanly to sandiet fuel

fiing mutually.whkh dsplays .an afher reieasing.pres up-regalrin bunen and it dielpsH al ,ae oil punp sarts to work.Vos can hear the sound of the oll punp worling and the eil pamp icen ligie ap has duan-regulrien buion to dnpiay",esit fuel filing,tae eil panp icon diuppears.The process of lise air evaxuation shul be dooe inder wach wten the ol resxhes the posihion of the oll isle of the nachine,It can be stopped If there ts too much oil erters theuxhine,there will be Mack snoke when igthig.

4.Deseriptiua af temperature euatrsl mode sniiching

hes the apregrluien tuton and OnOif banun sindlurewsaly to eamdnt tenpersnre eotrul nde mitch

TMere are mamal tempersere senrol mote (oll mass adustmert t shessE e aunberreprseds the ol mass)md atematie tenperaurw eostnl mode (lenperanns atjesmsent shes,BC manher represrts the tempereure).The

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2 Tined sar-up

wting

3 Timed shadpun ting

4 Sting of punp oll anum

5 Fam speed setling

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dBeense berween two modes is thue:is aorutk mode.punp oll amout ca raxh the aaximum sps pwraneker setting and thenaxhine heat is higber,themamal pump oll ancun is Imited to the cunert seting valhe and will ast reaa be maxinam all valie set by the purnmetet,wtich makes gears ciearty stown and is wary converiert fo the par dd hans.

**5.Deeriptloe of remote esatrul eode matching**

In the shudwasate,kng press the LCD pnel dmerggalsiu lene .Eaertthe renste cosl eode mukdig interface ao make i diplr,f# ,then press the On bualan o rente corod to tarsnit the rente ccrnol cok, and swasful code maxling will make it atonuically est the code interface.If the cote natching faik,it will ns erder the sart-up sute.The cole matching ate will te atonuikally exied when i dces rot receive sende coned esle we time.

6 Dcsertythe af pareneter sttlng procedars (pres sp ngpsbtteahuttos to eater settiag stat)

1 Time seting Mess the p-mglaticn banen ar deuereyalaien bus to adjat pranein

→

wting pranvars df heur (24-tour syuten)and minale in tam,and pres

cumfirm buton to confimn the paraneten te erter the not ikm.

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| --- | --- |
| Cbsel ty dfut,it shows id pmes ap-eglatien biten te sort up ie shomy'\*,pres cuafinmbahen m eterCbsd ty deaut,i show;d . Pes pefaion binn te n up a shwsl ,reas cotfirmbunes e eae | Seing f hurs,sinste ia um Tining is the coaridrmn.asimun b 99 minss and 59 senmkSening of hurs,tinses ia tum Tining ls the coutdown.masimun b 99 minees and 59scons |

Mess u-doanbahoes to adust,wlen the correct nunber ayears preis confim buhee to enter tte neal dgt,after ae 4-4igit poswerd is erkrel corectly.pres cunfinm butum toenter fhe test iten,inpat ernr will kad to returring to the sep of wuiing the fird runber to entet.There is mo seed to mdlify suhiegaentdatt,res seting butlon uati il esits,ar wat fir Io soond,it wll esit atoeatkaly fr owering.

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adninidritive Passord

|  |  |
| --- | --- |
| ress p-rgalricn bene r deut-regslithon bunn to modify mininun pump al anourt,after t rexhes thereuired munher,pras comfim buton to ese usinim | Phes upteglaticn bumon x aown-repilsion biroe so modify the maviman pamp eil amount after t raxhes the rayuind rumher.press sonfrn bunom to |

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|  |  |
| --- | --- |
| eil mass enigPhess spregulatisn bulendown regslrfios baeon to mmsifyihiman fn spad,adter i saxhehe squircd miniket,pres confimshunon to ener nsimm speetwtig | eder the net hen.Pas the ue-egpdfaion bunondown eeplafos bunen so nodf the maximun fin pad to ithe quirel vahe,and then Pes confrn bunon te ener the nest hen |

Msin boart aperating wihius ea anty be selestod antr the shudous sate.Phess

6 Opentig vwlage tling

apegdsiun butlsn er dwn-erglatisebulin to swita the stting of the epenting

volage,adut the I2V syten o . 24V sysem toeN to complee

swlectisn teres aan ie.dhwt utvesr the ot punp.mae and edtiss phg of te mc hire are mutted.dus ansifng dme

When it dlsplrysPI to press sp-nglatoe beon ar dowarepltion bumon to set thw pud sipul.Sek.t with the same polerity of twe magnsts ef the impsller, and skei!(dkaut value)wit different pdarity of the ayrets ar asly one mgnet.This paranvler is ineomatly sdectat,which wil lad te he speed

7 Selatiom ef

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differenee of I sme.

When it daplays\*4,pes apenylrfon bunen or dowu-rmplaion budon to

8 Selacon af

phg

ipitien powe

oafy ne anbes (1-35W.2-40%,3-45W.4-80W.5-85W.6-90W ad drelt vlw is 5.Ih is momnesdd to adpr drtad vaus,w molke msGficafos aher verficalisn.

lt initialy displip.,press confire butan ao dkip the pusnud madificsicn and awe ahowe modifhod poramter.Pas the ap-regplatlen tanan wthen modfying ae preas catfirn bunsn to eiter paswand madftcsien sae wtee it diply. Press ap mgdslon bieon or downeeplatken bunsn to a .And aher esering hw 4-duit possword soreeth,pres the eonfirn bunon to eser the mest digk,thn sve the aew pesword and adjust tre setlingeprameiersle eut aidinatiasly.

9 Admirisrdive password

modifkarion

Pewaston:Far shwt fine,set th tiaing of sun-p and shadrws,and t wil obe efee immnfaely ahe sting AB saing sl paastos st tte atootouatry pesed yoe mat wes oasdue heese uell n the nen 9 so eut,troud whish we esdd anve the wei puransten.Hf qitiny in the mibeay.pwevios afustnee dis will be lont aat invalit Plase chosk each new dig of pawwond arefully ad ave in,through whih yoe ean ete o the paranster modfcaise ses fne

**24**



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lastructieas for Cre sf 12V-24V Genenl LCD had

1.Battea fusction

4→le the setling stale,iacrase the seiling paraneter,tor-sctling stuke, irervave the warking terrpralare o oil muss.

ONiOFF-→Short res sar-ap butm.LCD serren digplays ,and kng

pes shuidown bunon fir3 seonh,LCD semn dnpiays,

▶△In sting sare,dereae the seting paraneirs,in son-seting state, dreresse werting tempersure or all mass.The basker operaioe ean be relerned to sheve swe,and the folkesingoyerstion descriptlens aan be uned Se setingg.

Settiag → Ener the seling wre,atjust seting paraneper,and denge the woking suatas of the naxtie

**Coafirm** →Under tte seting state,eenfirm the curert setisg iue

and ener be set paraneter sening View the mctine sae is the noo-selirg stee.

2.Qrerg machine satus (keep short pess af ae oafrm hettea te setch ese tate st a tine to make t dpey ey

Time diply →Ambismt smperase dsplay→Sering tmperatre dhpay(msonatie

tenperoose cortrollseting oll mas display (Manal senpernae coondl)

4 nes cnfirm sunn to vies eyclkally\*Haey fat ao aply Atiut dapiagy

\*Supply wolnge disday

**3.Descrtploe of fuil filing in masul aode**

Under the shutdows sus,ress the dnwe nyrtsian huaue anl seling Sutee sinadtureosly to canduse ful fing mamuly,whics dsplays\*t .ad after rekaning.pes up regutafon banen and it diplaysh all ,the cdtl punp sarts to work.Yos cean hesr the sound of the ell pune werking and the ell pume ioan lipe tp.hes down-regalafon bunon to dispay,eait fel filirg,the all punp icon diaypeas.The procas af lie ar vaxutio shall be dose under walh when the ell naches the ppoition of the oll inlet of the maxhinm,it can be topped.If there is boo much oll eters the maxdire,there wil be back smoke when igeling

4. **Dessrtpchie of temperatare eonirol mode swftehiag**

hes the spreeplrson tunoe and omtfimn huns simslureosly to oonbst tengerstse sorrsl node sulkt TBere are munul lenperhure costrul mole (oi mass adjustnert t sbon-aanber represeats the oil mass)and ahonehie tenpe ature cottrol nede tenyeranre sfustmen shes,&\*,nneer rgreerts te tenpertae).The diferece beween two modes is that:in aitoealie mole,panp all anoust can readd the muxinan tpon parameier sefieg and be machine he is hiphe,tte manul pinp all anoat is limilted to the curert seding wuue a will n reach the masimam oll vlue set by the paraneer,which sates gean diearty shour and is very onveaiens foe the par de hands.

5.Descrtpelae of remote esatrol eede matching

lh tte shudsws sale,was power tnun and cofrn butos sirukarxousy in the renste crol fins,tten test of wsing fur maithing aypear ot the wncte cartol then kmp lng pres apmgalsios ans deusmplrin

nas of LCD pmnsl.Wlan shouing it enen the renve costrol eode mushing iserfsxe,upsn sises,t

will automatically exit the interface,then,it shows normal working parameter.If the code matching failed,it would not enter the normal state of displaying working parameters.The code matching state will be automatically exited when it does not receive remote control code over time.

**6.Deseription of parameter setting procedare (press st**ting buttan to enter setting state)

1 Time setting Press the up-regulation button or down-regulation button to adjust parameters

setting parameters of hour (24-hour system)and minute successively,and press confirm button to confirm the parameters to enter the next item.

|  |  |  |
| --- | --- | --- |
| 2 Timed star-up | Closed by default.it shows fd | Setting of hours,minutes in turn. |
| setting | press up-regulation button to start up.it shows ,press confirm button to enter | Timing is the countdown. maximum is 99 minutes and 59 seconds |

3 Timed shutdown Setting of hours,minutes in turn.

setting Timing is the countdown.

Closed by default,it shows dd

press up-regulation button to start maximum is 99 minutes and 59

seconds.

up.it shows 2 ,press confirm

button to enter

Inputting *of* Press up-down buttons to adjust,when the correct number appears,press confirm

administrative button to enter the next digit,after the 4-digit password is entered correctly,press

passwond confirm button to enter the next item,input error will lead to returning to the step

of walting the first number to enter.There is no need to modify subsequent data, press setting button until it exits,or wait for 10 seconds,it will exit automatically for overtime.

Press up-regulation button or down-regulation button to modify maximum pump oil amount,after it reaches the required number, press confirm button to enter the nexr item

4 Setting of pump oil amount

Press up-regulation button or down-regulation button to modify minimum pump oil amount,after it reaches the required number,press confirm button to enter maximum

oil mass setting.

Press the up-regulation button or down-regulation bution to modify the maximum fan speed to reach the required value,and then press

Press up-regulation button or down-regulation butron to modify minimum fan speed,after it reaches the required number,press confirm

speed

5 Fan setting

25 **26**



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**2018** **Main** **Board** **Fault** **Code** **Deseriptiom**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Madine fai | LCD al dinpg | pdy& | Kab pneldpeg | Handfg mcthd |
| Rower sappy undr wolhage |  | E-I | I iadusar liee ftah | Bost aeply olag |
| 民esre |  | E4Q | 2 indceor lighs flnh | Psg sh ihg |
| lgntion plig fit |  | E-0 | J indcaer lighe finh | Cect whether the ipition plig is it cpen ciruit ar sher iut |
| Oil pump |  | E-04 | 4 indicatsr lighs flnh | Owet whathkr the ail unp is diomid |
| M mching s eeheig |  | E-46 | 5 indcer lighe ftuh | Ceck the tenpenatire semer en the shell er stether the tia las tte ahamal ntufion gpeed |
| Mer fah |  | E-06 | 6iafoer ligbe fiah | Oed the mapet plrity the Hall smsr heafinir te osmos conftiom of wiring lmin |
| Broten cornecticn fauk |  | E-4T | T imdcatsr lighs finh | Ceck the comecting pig of the panel,and whether te bg hames comasot has beons log a lemmeetgd |
| he fane is elingaislel |  | E-4W | 8iadcer lids flah | Oact whether the oil errult hs ar er sas Hclg. oulting in poor oil sapply |
| Sem fad |  | E-09 | \*ideer ihe fiok | Oect wheher the semer pleg is hose,bostem,a in dat crmut |
| hikat ia igiiat |  | E-I0 | 10 imktr lestah | Oeck whether thre all inost is Hoclol,r the eil rmporufen is at smocth,h ail np i suctdrion mt is hlal da to he oll modat pobiem,and ather reaons thut case tturt ?ipihion fik to bum mrmaly |

The LCD pnei faut dsplay is thur gnptis and manher are diylayes at the same tine,de mameral minher is ane as tthe dpiul parel cdas oontet

**Bi-directional Remote Control Operation Instructions**

**1.** **Operation instruction of buttons**

山 t-up/shutdown Press and hold for 2 seconds to turn on,or tum

Confirm button View host working stats

**0K**

Up-regulation buton Increase the oll mass or temperature

according to the temperature control methd.

Down-regulation button Increase the oil mass or temperature

according te the temperature contrul method.

**2.** **Remote control pairing operation**

In the shutdown state,first long press down-regulation huton on the LCD panel that needs to be paired first.

Showing means it enters the remote control code matching interface.

Then press the power button and eonfirm bunon on the remote control at the same time,the text of waiting matching remote control appears on the remote control,the remote control and switch enter the automatie matching process,and afher successful code mutching,it will automatically exits the code interfase and displays the normal working parameters.If the code matching failed,it would not enter the normal state of displaying wurking parameters.The code matching state will be automatically exited when it does not receive remote control code over time.

**3.** **Temperatare** **eontrol** **mode** **swite** **hing**

**When the temperature c** ontrol mode is selected hy remcte control,enly press the up -regudaton faaton ansd **down-regulatkon button a**t the same time te display the temperature when switching to automatie temperature control,and it will display the oll mass if the temperature is controlled manually.

**4.** **Working** **status** **adjustment**

The working status of the heater can be adjusted at any time by remote control.The methods are as follows;

**UP-regudafian huton** Inerease the pump oll amount (mumual temperature control mode)or raise the setting temperature te increase the output temperature of the heater.

Down regulation buton Decrease the pump oll amount (manual temperature control mode)or reduce the

setting temperature to decrease the output temperature of the heater.

**27**

**Instructions for use of bi-dirvetional remote contrul receiving**

**Introduction of buttons:**

OnOff>long press On'O

**Lighting instructioas**

There is the light under the switch buton,long lighing indicates the start-up and

flashing indicates that there is a fault.

**Introduction of button functions**

Sar-up>When the operating voltage meets the conditions.press ONOFF for a lng time.

**Fael filing in manual mode**

In shuadown state,start the manual oll pumping by pressing On/off buton 5 times continuously and quickly.Please

press the On Off button gertly to stop the oll pumping when the air has been removed from the oil circuit.This

process requires observation of specially -assigned person to avoid evcessive fuel entering the machine and black

smoke at start-p.

**Remote contrul pairing**

In the start-up state,press On Off button 5 times contimaounsly and quickly,the indicator lighe flashing means it has

entered the remote control pairing waiting stute.At the same time,press the power button +setting button on the

remote control fer a longtime te start the remote control pairing.Wait for auto-completion of pairing te exit.

**Fault** **state** **deseription**

|  |  |  |
| --- | --- | --- |
| Machine fault | State display | Handling method |
| Power supply under voltage | The indicator light flashes I time | Boost supoly voltugg |
| Pwer supply with odpresure | The indicater light lashes 2 times | Reduce supply voltage |
| gnition plug fault | The indicator light flashes 3 times. | Check whether the ignition plug is in open circult er short circult. |
| Oil pump fault | Me indicator light he 4 times | Check whether the oll pump has suffered from broken line er shor circuit |
| The machine is overheating | The indicator light flashes 5 times. | Check the temperature sensor on the shell or whether the fan has the abnormal rotation speed. |
| Motor fault | Me indicato light lashes 6 times | Check the magnet polarity,the Hall sensor location or the looseness onditions of wiring terminal. |
| Brokenconnectionfaul | The indicator lighr lashes 7 times | Check the connecting plug of the panel,and whether the blue harness conmection has become loose or disconnected. |
| The flame is extinguished. | The indicator light lashes 8 times | Check whether the oil circulit has air or Miockage,check whether there s fault on temperature sersor on the shell or whether the connecte erminal has become loose. |
| Semsor fault | The indicator light lashes 9 times. | Check whether the sensor plug is loose,broken,or in short circuit. |
| Failure ignition | in | The indicator light lashes 10 times. | Check whether the oil circuit is blocked,er the oil transportation is not smooth,the oll pump is stueck,the volatilization net is blocked due to the oll produet problem,and other reasens that cause that 2 igniticn fails to burn normally |

**28**



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**Operation instructions for parking heater 一.** **the control panel is shown below**



1 、overshift key 2 、on/off key 3,downshift key 4 、setting key 5,deterministic key 6 、work status symbol 7 、display ambient temperature 8 、timing symbol 9、

plateau symbol 10 、fault symbol 11 、display data parameters 12,host schematic

**二、use operation**

1**、switching operation**

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shutdown status boot mode(manual mode) **boot mode(automatic mode)**

1)boot-up operation

In shutdown state,long press “o”key for 2 seconds,equipment start-up, display boot status as shown above.

2)shutdown operation

On-state,long press“”key for 2 seconds,equipment entering blov-off cooling

process,display :”.turn off the equipment after cooling.

At this time,do not force the power off for the cooling block.Direct power failure can damage parts because the body temperature is too high to dissipate

heat,only when the machine is turned off can the power be cut off.

3) manual mode operation

Manual mode has six gears(Hl-H6)H6 represents maximum power,as shown above,boot status,add or subtract gears by“▲”or“▼”,main engine schematic diagram and bar chart to show the current gear.

4)automatic mode operation

automatic mode,the figure above shows the setting of 20 degrees Celsius.add or subtract temperature values by“▲”or“▼”,setting range 5-30 degrees Celsius,switching manual/automatic mode by long pressing "\*"keyboard.

**2、manual oiling operation**

In shutdown state,two seconds after pressing the “▲"and"”at the same time,manual control of pumping,stop oiling after releasing the key.please use

**cautiously!**

**3、plateau model operation**

At the same time ,press the button for 2 seconds to enter the plateau mode.

“▲ ”display start plateau mode,press the“\*”and “ok”key for two seconds to exit the plateau mode at the same time.please use cautiously!

**4、setting timing switch time operation**

Two seconds after pressing the “ok”and"~"key at the same time,enter the

timing setup time interface,the following figure is shown.tab

flicker,display shows 10.1hours on time.if it display OFF,it means setting a timed shutdown time.



1)Press“▲”or“▼”key to adjust time value,time range:1-24 hours.

2)Short press “”key,switch to adjust digital bits.

3)Short press “”key,switching the Timed Start-up and Timed Shut-down Time

value.

4)Short press “ok”key,save the settings and exit the interface.

5)Press “\*”key for 2 seconds,do not save the settings,exit this interface.

**29** **30**

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6) Starting Timing Function

At the same time,long press the “ ”and“▲”key to start the timing function,start the timing boot in the shutdown state,start the timing shutdown in the boot state,press the C key short to see the remaining time.

**6 、remote control code-matching operation**

In shutdown state,simultaneous long press “"and“▼”for two seconds,enter remote control code as follows.

1)Press“▲”or“▼”key to adjust the third digit value for remote control coding,the numerical range is 1-5,corresponding five remote controls.

2)Choose the Code of Remote Controller,arbitrarily press a key of the remote control,Machine Coding Successfully and Exit Coding State.

3)Short press “”key to exit remote control code.

\*Remote Control Requirements:433mhz,24-bit code.remote control function is optional function,please specify if you need to place an order.

**7、fault alarm**

Show the following figure,corresponding to the failure symbol flicker,and corresponding to the failure device icon flicker,display data as fault code,its meaning please refer to the fault table.

**\*Spark plug.oil pump,fan,sensor,power supply and other symbols,Jlicker indicates that the corresponding**

**device failure.**

**fault table**

|  |  |  |
| --- | --- | --- |
| Faultcode | Cause of failure | solutions |
| E-2 | Power supply voltage range | Normal range:24V(18-32V),12V(9-16V)Check whether the battery or generator is normal and whet her the fuse is aging |

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|  |  |  |
| --- | --- | --- |
| E 3 | Ignition plug failur e | 1)Check whether the ignition plug connector is loose orthe wire is short-circuited to the housing2)Detect whether the ignition plug is damaged |
| E-4 | 011 Pump Failure | Check for damage,loosening,oxidation,short circuit and breaking of oil pump connections and connectors |
| E-5 | High temperaturealarm(intake>50 C:case>230 C) | 1)Check whether the heating duct is unobstructed 2)Check whether the fan is working properly3)Check whether the temperature sensor is normal |
| E-6 | Fault of Fan | l)Check whether the impeller is stuck2)Check if the connection plug-in is loose3)Excessive gap between magnet on wind turbine and Hall sensor on controller4)Whether the line is short-circuit or open-circuit;lea kage of motor |
| E-8 | Flameout | 1)Check for oil shortage,low temperaturesolidification of oil,blockage of oil pipeline and blockage of oil pump2)Check whether the intake and exhaust ducts are unblocked3)Check whether the housing temperature sensor is infull contact with the housing and whether the pressure spring is strong |
| Unsuecessful startup | 1)The shell temperature is too high to blow the cooling shel1 for 3 minutes after starting.2)There is a lot of white smoke in the exhaust gas2.1)Check that the filter beside the ignition plug is Clean and not cleaned or replaced2.2)Check whether the fuel injection is effective2.3)Check whether the ignition plug is aging2.4)Is the clearance of the internal wind turbine too 1arge?2)A small amount of white smoke or no smoke in the exhaust gas |

**31**

**32**

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\*0ur company is not responsible for any loss or liability caused by the failure to install and use according to Article 1 to 6.

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|  |  |  |
| --- | --- | --- |
|  |  | 3.1)Check for oil shortage,frozen or blocked oilpipelines3.2)Check whether the pump is janmed or damaged and the pump is powerless to pump.3.3)Check whether the intake and exhaust passages ofcombust ion are unobstructed3.4)Check whether the ignition plug is damaged4)The ignition is normal but the failure of ignition isstill reported.Check whether the housing temperature sensor is in full contact with the housing,whether the pressure spring is strong,whether the sensor is normal |
| E-9 | Sensor failure | Whether the temperature sensor connectors andconnectors are damaged or loosened,whether the sensor i s damaged or not |

**code of use**

1.It is prohibited to use in high humidity,conductive dust,flammable and

explosive gases,dust,materials,corrosive media,strong light,strong

magnetic,high voltage and high current equipment nearby.

2.Voltage range of power supply:DC24V controller is suitable for(18-32)V;

DC12V controller is suitable for(9-16)V;different voltage controllers are

not universal,and it is forbidden to use beyond the applicable voltage range.

3.The 5KW controller must be used on the 5KW organism;the 2KW controller must be

used on the 2KW organism.

4.If the controller or external device is damaged,it must be replaced by the

prototype device and professionals.

5.It is forbidden to open the controller shell privately

6.Equipment must be installed strictly and must be used under safe conditions.

7.The company is not responsible for the loss and liability of the controller

due to the misconnection short circuit and damage of the external devices

and lines.

8.At the high temperature of the body,the fan can not operate,so it must be

cooled quickly for the body to make its temperature.Cooling air is injected

from the combustion inlet to make the body temperature less than 100 ℃.Prevent

high temperature from burning parts or causing fire.