



Temperature Controlled Heated Grips System

Instructions for Installation and Use

CLS HEAT

CLS-Chain Lube Systems
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Introduction

Thank you for choosing CLS Heat. Please read these instructions fully prior to commencing installation. Should you have any questions please do not hesitate to contact us.

Installation

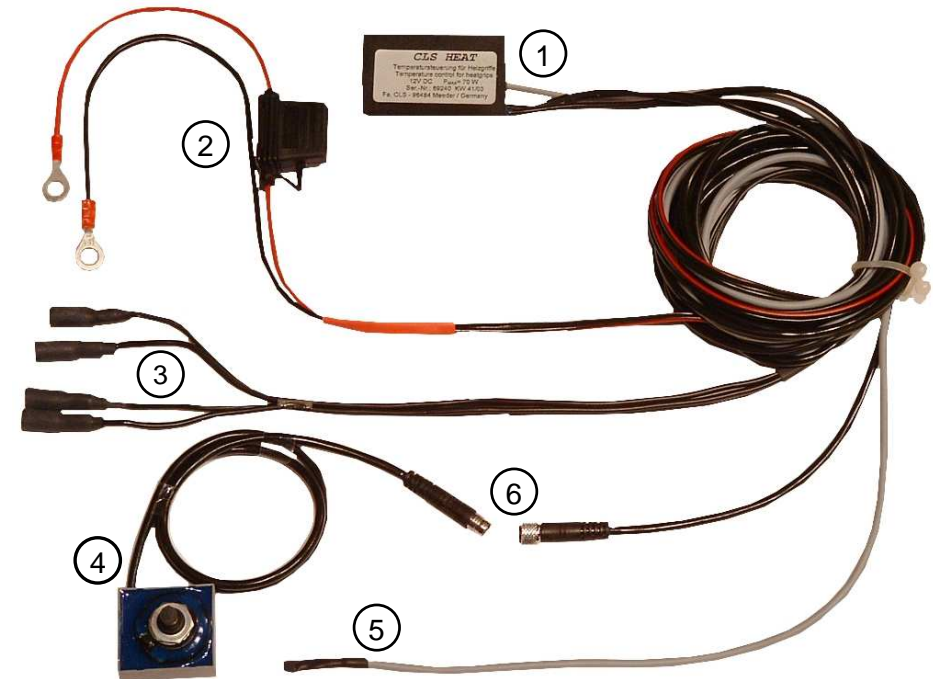
Identify a suitable location for the electronic control unit. The unit can be mounted at any angle; it is watertight and fully protected against vibration. Therefore it can be mounted in virtually any convenient space.

Remove the original grips. Now fit the heated grips (11) to the handlebars. Should your vehicle have handlebar weights carefully cut out the end of the grips using a sharp knife taking care not to damage the original grips.

The heated grips (11) have different internal diameters, the smaller one is for the clutch side, the larger one for the throttle side. Check that the weights and the grips sit correctly. Now brush the inner sides of the heated grips (11) with adhesive (Pattex®/Greenit®). The adhesive should be applied sparingly. Its purpose is to lubricate during fitting and to prevent the grips moving after fixing. Push the grip into the preferred position and take care that the cable of the gas grip has enough slack for movement. The throttle must be able to return to its idling position by itself!

Connect the plugs of the grips to the leads (3) of the electronic control box; one pair of plugs to each pair of contacts. Now fix the temperature sensor (5) to the handlebars with cable clips (10). In order that realistic temperature values can be measured, the temperature sensor (5) should be located in the vicinity of the grips. All cables must be so routed that movement of the handlebars is not compromised in any way.

Now identify a location for the rotary switch (4). The switch can be integrated into the fairing or fixed to the handlebars or cockpit using the fixing bracket (7). The fixing bracket (7) can also be used as a template (Ø10 mm; 3,5 mm). The switch should be so located that it can be operated without danger during the journey. After fixing mount the knob and tighten the nut. Lastly fit the cap to the knob.



Parts supplied:

- | | |
|--------------------------------------|--|
| 1 Electronic controls | 7 Fixing plate for rotary switch |
| 2 Connection lead 12V battery | 8 Rotary switch with cap |
| 3 Connection lead for heated grips | 9 Spare fuse 7.5A |
| 4 Rotary switch for output selection | 10 Cable ties, large & small |
| 5 Temperature sensor | 11 Heated grips with connection leads, 2 off |
| 6 Cable connector | |



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Finally, connect the electronic control box (1) to the battery using the connection cable (2) and secure with cable ties (10). Take care that the cable cannot be damaged or squashed (eg by the seat or fairing). Screw fix both leads to the battery terminals.

Warning

Pay attention to the polarity. Connect the red lead (with fuse holder) to the + terminal of the battery, the black lead to the – terminal.

When making the connections the ignition and the engine must be turned off. Ensure that the screws at the terminals of the battery are properly tightened. When handling the battery there is a risk of a short circuit. Never connect the terminals of the battery together as this may result in a risk of explosion!

Operation

CLS HEAT is a temperature controlled heated grips system. It controls the heat output of the grips automatically according to variations in temperature. The electronic controls constantly monitor the voltage of the battery. On starting the engine the nature of the battery voltage changes from a constant to a variable voltage. The system makes use of this difference to automatically switch itself off and on.

Once the engine is running the system waits approximately 20 seconds so as not to unduly load the battery immediately after starting. Then the ambient temperature is measured using the sensor. If this is under 15 °C the grips are automatically preheated for 45 seconds. This quickly brings the grips up to temperature. The electronic controls continue to measure the ambient temperature at the sensor every 15 seconds and vary the heat output of the grips accordingly.

Because each person's temperature sensitivity is different, and because this sensitivity can change as a result of a variety of influences, CLS Heat is fitted with a rotary switch. Using this stepped switch it is possible to vary the heat output of the grips to suit individual temperature sensitivity and preference. The basic setting is the fifth notch, counting from left to right. Turning the switch to the left reduces the heat output, to the right increases the output. In the fully left position the system is switched off and in the fully right position the system the heat output is 83% of maximum possible output, independent of the ambient temperature.

Important Notice

→ Please note that when using heated grips weatherproof membranes such as GORE-TEX® do not function as normal. These membranes only function when the internal temperature within the glove is higher than that outside it. In the event of operational grips and rain the function of the membrane reverses so that water penetrates the glove. Overgloves should therefore be used.

→ When recharging the battery in-situ switch the heated grips off as the voltage waveform of some chargers could activate the electronic controls. Turn the rotary switch fully anti-clockwise (OFF) or remove the fuse (2) from its holder.

→ The system is guaranteed for 24 months. Guarantee claims will not be accepted following any technical alteration to parts (eg shortening of cables).

Technical Data

Operating voltage	10 – 15 V DC
Connected load	max 70 W _{eff}
Heat output per Grip	29 W @ 12 V dc / 41 W @ 14.5 V dc
Fusing	7.5 A (Vehicle flat fuse, type FKS, colour brown)
Output control	On – OFF (PWM)
Polarity protection	for internal electronics - In case of reverse polarity heated grips are continually activated (100% ED). Returns to normal operation when polarity corrected.