COMPRESSOR TESTER

CLT1

USER MANUAL

Ref. 4018100

User Manual

CLT1 – Test- Tool for external operated Compressor

Dear Costumer,

You have done a selection to buy a technical highlight . We wish you a lot of fun and success with this unit.

Technics:
The CLT1 is a Unit to drive a normally external steered clutch less compressor without the electronic of the car. This unit is the issue to test a modern compressor simply. It helps you to find the right direction of trouble shouting. That means: You can select the right way to find a problem on a modern system of an A/C system with these compressors. A further positive aspect is to use this unit for servicing A/C Systems in times with a low outside temperatures. You can operate and check the compressor in any conditions.

General Information:

- Please read this user manual carefully to do no mistakes during the test. It helps you to save the test unit and the compressor.
- The technical guy has to have A/C knowledge.
- This unit is replacing non special knowledge.
- Perfect would be a temperature up to +15°C, but it is not necessarily.
- For damages due to of not correct using CTR Group is not responsible.

Technical Data:

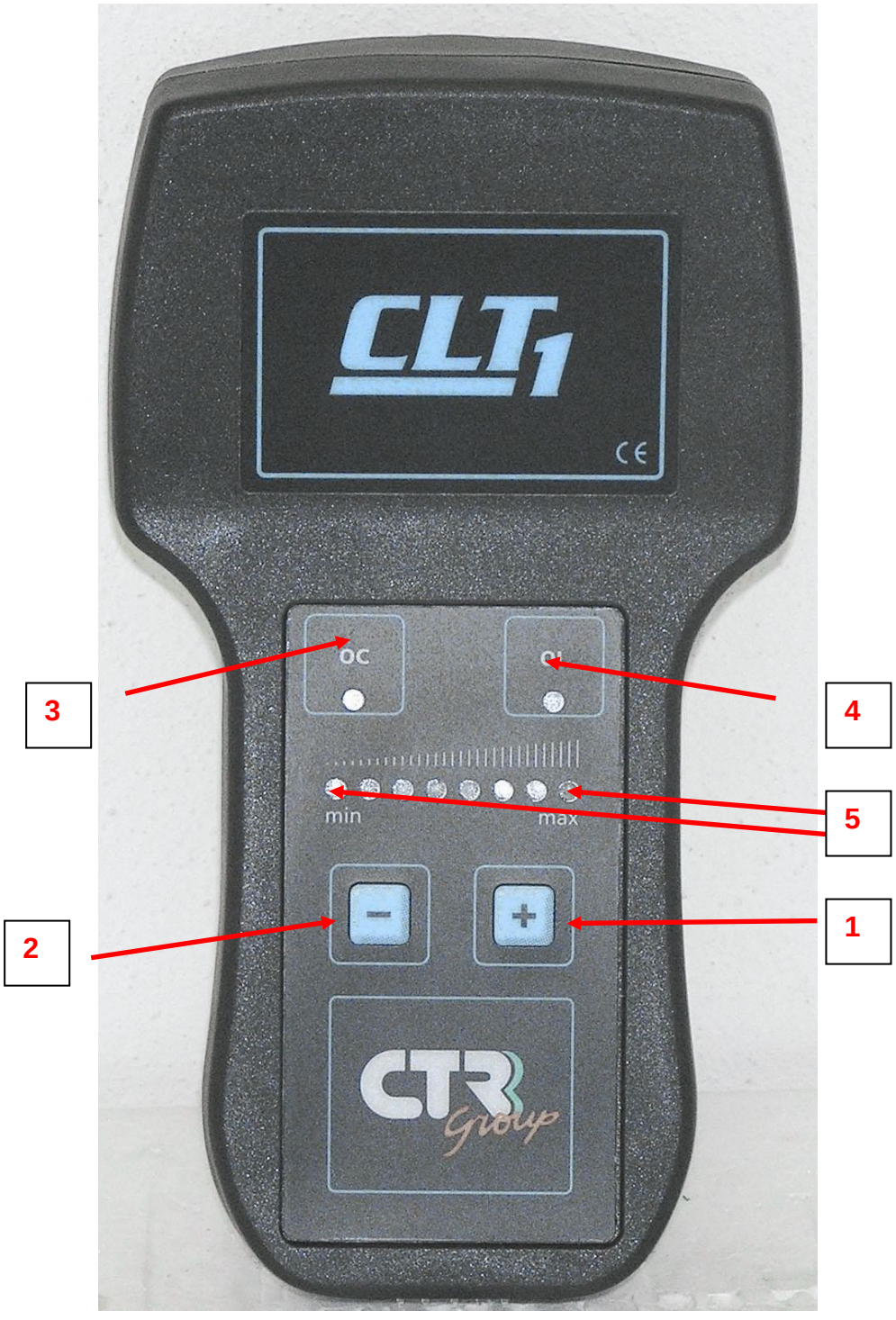
- Voltage supply: 11 to 15 Volt
- Temperature to use -10°C to 40°C
- Storage temperature -20°C to +50°C
- Power consumption max. 3A
- Drives the compressor from 3 to 100%
- Weight: ca. 600 Gram
- CE and EMV approved

Art of Shipments:

Ref : 4018400

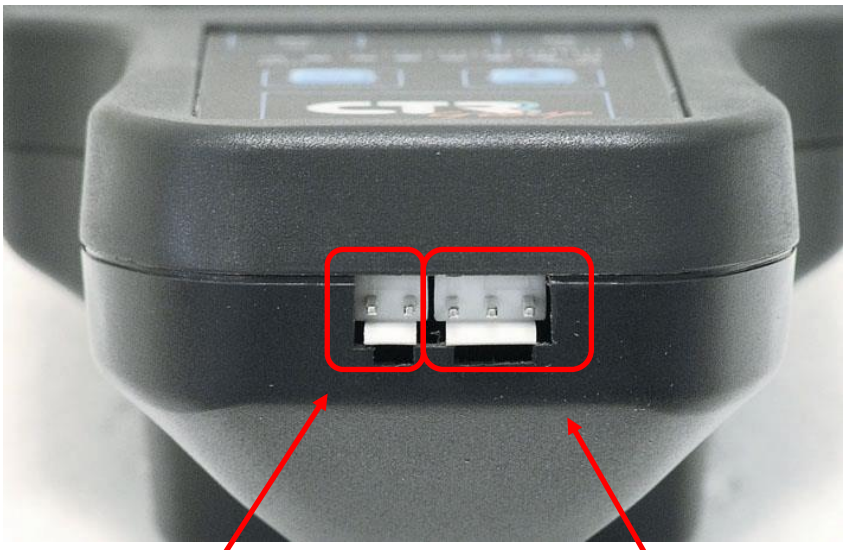
- CLT1 Test- Unit with user manual
- Cable with clamps for Power Supply
- Universal Cable to connect the magnetic valve
- Shipped in a strong plastic box
- Hook with a strong magnet
- Cable with an connector for VAG- Group
- Cable with an connector for Compressor from Denso
- Simulator for connecting on the car

Unit description:



1. Button to increase the compressor power
2. Button to decrease the compressor power
3. Flare for short-circuit or interruption at the electromagnetic valve
4. Flare for to high power input of the electromagnetic valve
5. Announcement for handling capacity min = left and max. = right

Connection on the CLT1



A.) To attach plug with 2 pins for the control line over at the compressor

B.) Plug with 3 pins for the current supply of a 12V automotive battery to avoid connecting mistake

Preparation and start-up of the CLT1

Fig. 1

Fig. 2

1.) Fig.1 Currentsupplycable connect with the plug planned for it at the equipment on connector with 3 pins.

2.) Fig. 2 You connect the control line for the compressor with the plug with 2 pins planned for it. There are 3 different specific cables with connectors. (See point: Art of shipments). This illustration shows the combination with the cable of the VAG-group.

Cable kit universal
For the possibility universally directly at the pin to attach

Cable Kit for the VAG-Group
For the connection at models of the VAG group to order

Cable Kit for Denso- Compressors
For the connection at models of Denso- Compressors

Preparing work on the vehicle:

- The vehicle should be at operating temperature.
- The operation of the air conditioning system is to set on maximum cold.
- Fan to set on maximum speed and the setting of the air flow have to be thru the air ducts at the instrument panel. This is also the measuring point for the air outlet temperature
- A measuring system (A/C Service station is optimal) for the pressure has to be attached to the air conditioning system.
- To measure the out let temperature use a thermometer.
- Disconnect the plug direct on the compressor and connect the line from the CLT1.
- Should the plug not fit - use the appropriate adapter or the universal set of cables.

Fig. 3

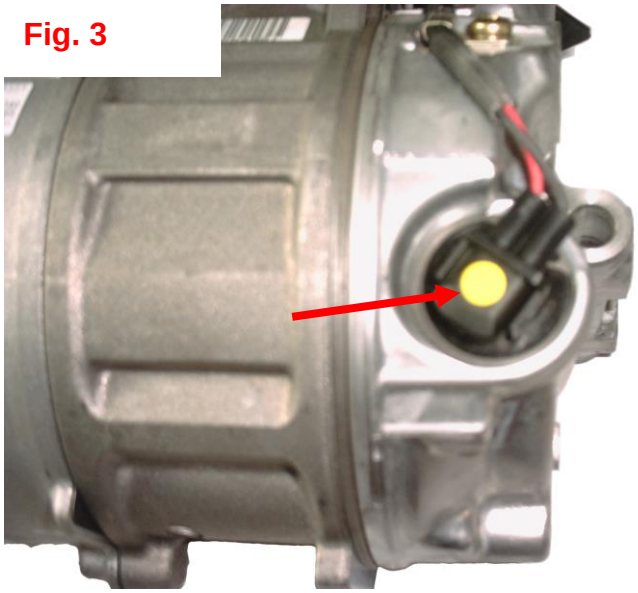


Fig. 4

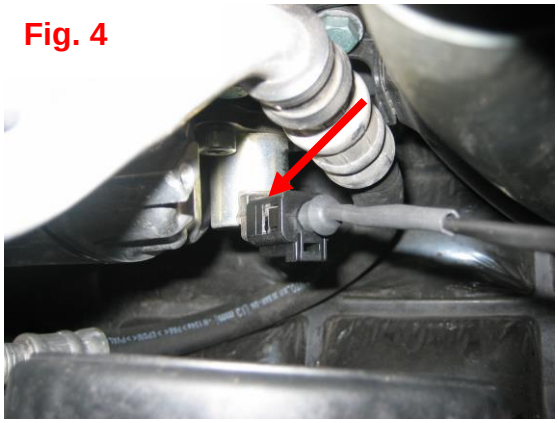


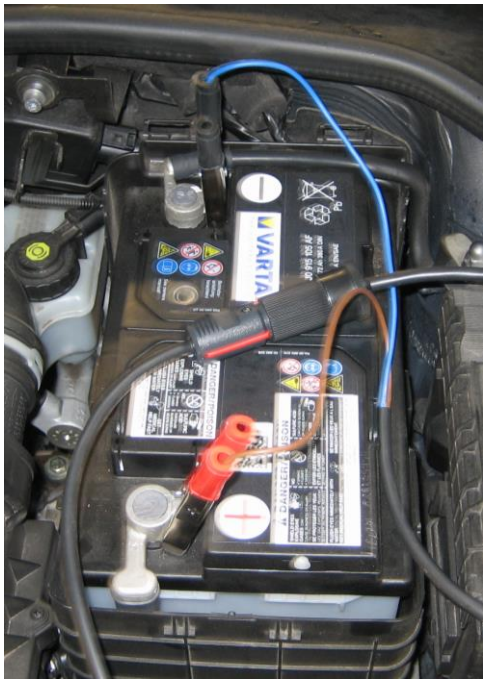
Fig. 3 Shows you the point of connection at a Denso Compressor

Fig. 4 Shows you the point of connecting in a VW Touran with a Sanden compressor.

General reference:
The polarity when connecting the electromagnetic control valve does not have relevance. However a clear polarity should be ascertainable should for the protection of the equipment and the compressor these be kept.

- Connection on the vehicle Battery

Attach now the clamps of voltage supply to the automotive battery. Paid attention: Keep absolutely to the polarity.



That means:

Red = positive = plus = 30

Black = negativ = ground = 31

Test procedure :

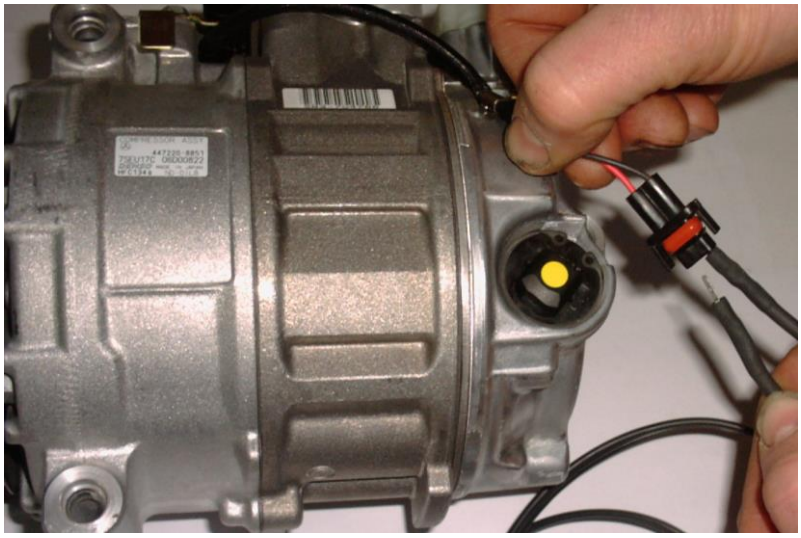
- CLT1 over the minus key by repeated operate switch off. You recognize this by the fact that at the bar for the announcement no lamp shines for the mechanical handling capacity.
- Vehicle to run let bring and on constant, increased idling speed (~1500 U/min)
- Over manipulation of the pluses key stage for stage of the mechanical handling capacity increase.
- Between each stage wait for some seconds (~15 seconds) and control the pressures of the air conditioning system
- Between each increase control whether the compressor the stages promotes accordingly
- Keep always the pressures in your eye. Unfavourable operating conditions do not lead a starting of the condenser fans to an enormous rise of high pressure by that!
- Check Temperatur and Pressures!

Setting on CLT1	Low Pressure	Outlet Temp.
Maximum	1,6 +/- 0,5 bar	0°C +/- 3°
Minimum	3 +/- 0,7 bar	10°C +/-3°

It is to be noted that the tolerances are a result from the thermal loads of the ambient. Between the minimum and maximum values the compressor must to be

regulated in stages. The changes on low pressure side should be similar to the change of the settings on the CLT1.

- To prevent storing error in vehicle electronics, use the simulator . Connect it with the free connection of the compressor expensive line of vehicle electronics.



The simulation box simply contact with the free plug of vehicle electronics.
For that use the universal pins on the simulations box.

The polarity is with the simulation box without relevance. For Vehicles with only one line you connect the second line of the simulation box with ground (31).

Possible electrical disturbances of the electronic single solenoid valve:

If the lamp , OC shines :
Shining the lamp OC shows you :

- Not well connected valve
- Valve with complete interruption
- Valve with short – circuit (smaller than 3 ohm)

If the lamp , OL shines :
Shining the lamp OL shows you :

- Too high power consumption of the valve