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AP500 Installation Manual

Below are the installation instructions for the AP500 cruise control system (mechanical throttle control):

1. Install the command module in the steering column housing. After installing the command module, place the wires into the connector housing according to the colors marked on the housing. Please remember that operating the command module by putting your hand between the steering wheel spokes is prohibited!

2. Select a mounting location for the control unit inside the vehicle

3. Install the electric actuator inside the engine compartment. The actuator should be positioned at least 30 cm away from the exhaust manifold, alternator and ignition system. It should also be installed in a location that allows the cable to be routed with a bend radius greater than 30 cm.

4. Connect the cable to the throttle control in the engine compartment. In some cases, connection inside the engine compartment is not possible. In such cases, connect the cable directly to the accelerator pedal

The factory-set cable travel of the electric motor is 38 mm. This value can be changed to 45 mm. The cable must be mounted in such a way that, at the maximum cable travel of the cruise control motor, the throttle is not opened fully, but only to approximately 80%.

Before tightening the cable, check that the cable is in its maximum position. To do this, follow the procedure below:

a) hold the command module in the SET position

b) switch the ignition on

c) release the command module

d) switch the cruise control on

e) press SET - the cruise control cable will then be pulled into the outer cable sheath. It is recommended that another person holds the end of the cable with their fingers. Do not allow the cable to enter the outer sheath completely

f) press RESUME - the cable will move back. Make sure the cable retracts fully to its maximum position

g) tighten the cable with minimum play, approximately 1 mm

5. Route the 4 wires (green/red, pink/red, black and blue/red) from the control unit to the electric motor control. Insert the wires into the 4-pin housing according to the colors marked on the connector housing.

6. Connect the blue wire to the speed signal. Before connecting the wire, measure the voltage changes with a voltmeter at different throttle positions. The changes should be within the range of 1.5 to 24 V. In practice, there are 4 main locations where the speed signal can be found: the ECU, the speedometer, the speed sensor in the gearbox, or the ISO connector behind the radio.

7. Connect the yellow wire to the tachometer signal. In practice, this can be the W+ terminal of the alternator, the ECU, the negative terminal of the ignition coil, or the tachometer control wire. If it is not possible to find the RPM signal, insulate the yellow wire.

8. Connect the purple wire to the clutch pedal in such a way that a state change occurs when the clutch pedal is pressed. If there is no original clutch pedal switch, one must be installed additionally (it is included in the cruise control kit). The green/white wire can then be used as a signal wire – ground signal.
9. Connect the brake pedal signal using an analog connection. Connect the brown wire to the brake light switch power supply (+12 V), and connect the white/brown wire to the +12 V signal output from the brake light switch. This means that +12 V should appear on the white/brown wire when the brake pedal is pressed. When the brake pedal is not pressed, this wire should be connected to ground.
10. If the yellow wire (RPM signal) and the blue wire (speed signal) are connected, it is not necessary to connect the clutch wire (purple wire). However, if the yellow wire (RPM signal) or the blue wire (speed signal) has not been connected, it is then necessary to connect the purple wire to the clutch. A state change must appear on the purple wire when the clutch pedal is pressed. This may be: applying ground, removing ground, applying +12 VDC, or removing +12 VDC.
Another way to connect the clutch is to connect it in series with the brake circuit.
11. Connect ignition-switched +12 V – orange wire (most commonly at the fuse box).
12. Connect the green wire to ground.
13. Perform the calibration.
a) start the engine
b) switch the cruise control on
c) press and hold the brake pedal
d) press SET four times
e) release the brake pedal
f) press and hold the brake pedal
g) press RES once (one low tone)
h) release the brake pedal (one high tone)
i) drive at a speed of 70 km/h
j) press SET if you want the speed information to come from the blue wire
or
press RES if you want the speed information to come from the yellow wire
[a single tone will be heard] drive several dozen meters while observing whether the device maintains the set speed
k) press the brake pedal briefly
l) stop in a safe place (do not switch off the engine)
m) press and hold the brake pedal
n) press SET four times [one long signal will be heard]

14. Check that the device operates correctly.
15. Enjoy the device.
If you have any questions, please call +48 515 601 431.