



Installation Manual

B301 Autosteer System

What's in the Box?



B301 Steering Controller



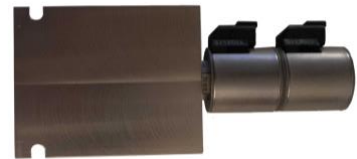
B302 Inertial Measurement Unit (IMU)



Tablet PC



Hydraulic Valve - Safety



Hydraulic Valve - Proportional



Work Switch



Wheel Angle Sensor (WAS)



4G (LTE) Antenna



GPS Antenna



Wiring Loom



Ethernet Cable



USB A-B Cable

A Note on Safety

This product is supplied as a kit of components for installation by suitably qualified personnel.

Simply put, you will be modifying a part of your tractor that is crucial to safety. **DO NOT** take any half-measures and if in any doubt, consult a qualified hydraulic fitter.

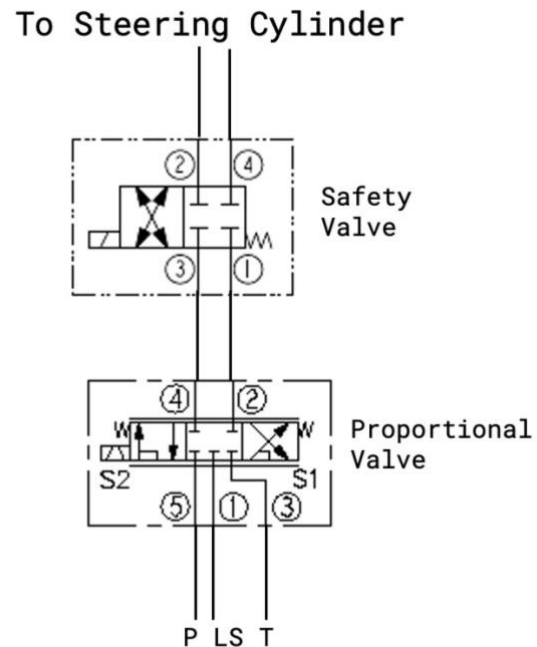
THIS HARDWARE AND SOFTWARE IS PROVIDED BY CSEQ TECHNOLOGIES LTD, THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL CSEQ TECHNOLOGIES LTD BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE OR HARDWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Hydraulic Installation

Closed Centre and General Advice

Hydraulic Schematic:

Valve connections: 3/8 BSP



1. Mount the two valves in a safe and convenient location on the tractor. The proportional valve is larger and has two solenoid coils, the safety valve has only one coil and is the smaller of the two.
2. Connect ports 4 and 2 to ports 1 and 3 of the safety valve. (If more convenient for hose routing, the ports on the safety valve can be swapped).
3. Identify the two hydraulic lines running to the steering ram. Add a T-piece to each line and run them to ports 2 and 4 of the safety valve. The specific order does not matter at this stage.
4. On your tractor, identify the pressure (P), Load Sense (LS), and free-flow return to tank (T) lines. It may be helpful to contact your dealer for specific help with your machine.
5. On the main proportional valve, connect port 5 to P, 1 to LS, and 3 to T.

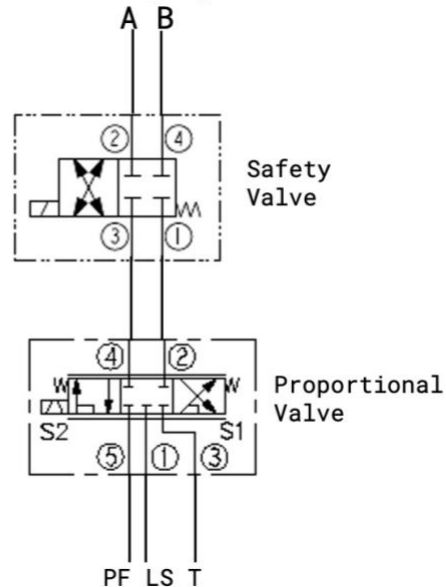
Hydraulic Installation

Open Centre machines only

Hydraulic Schematic:

All valves use BSP connections

To Steering Cylinder



1. Follow steps 1, 2 and 3 of the general instructions above.
2. On your tractor, identify the pressure (P), and free-flow return to tank (T) lines. They can be taken from the spool block, loader ports etc. It may be helpful to contact your dealer for specific help with your machine.
3. Disconnect the vehicle's P line from its destination, and route it to the P port of the priority valve.
4. Run the EF (Excess Flow) port of the priority valve back to the port where you removed the P line from the vehicle.
5. Run the PF (Priority Flow) and LS (Load Sense) lines between the priority valve, and ports 5 and 1 of the main steering valve.
6. Connect port 3 (T) to a free-flow return to tank line on the tractor.

Electrical Installation

1. Find a suitable location for the IMU and steering controller. This should be flat on the floor, near the centreline of the cab, with the connector facing rearward. The steering controller can be mounted in any orientation.
2. Mount the WAS securely over the steering ram (on vehicles with 2 rams, choose any one). Ensure the sensor does not reach the end of its travel at either end of the ram's stroke. Exhaust clamps and pipe clamps are useful for mounting to cylinders.
3. Mount the red e-stop and black steering engage buttons in easy-to-reach locations in the cab. The e-stop is to be used for safety on the road and for emergency shut-down. The steering engage button should be mounted close-to-hand, so it is easy to press while operating the vehicle.
4. Mount the GPS antenna on the cab roof, preferably with a metal baseplate at least 10 cm in diameter, ideally on the centreline of the cab as far forward as possible. Mount the 4G antenna anywhere convenient on the cab roof.
5. Run each cable in the main loom to its matching connector. At the proportional valve, it does not matter yet which order the Left or Right connectors are plugged in. The Enable connector should be plugged into the safety valve.
6. The blue Workswitch connector should be mounted on the rear of the tractor; the workswitch can be attached to any implement where you will need coverage mapping. The workswitch can be left unplugged when not in use.
7. Connect the power cable to an ignition-switched 12 V power source of at least 5 A. The control box is internally fused.
8. Run the Ethernet cable between the IMU unit and the IMU socket on the control box.
9. Connect the GPS antenna to the GPS port on the front of the steering controller.

10. Connect the two 4G antenna cables to the front of the steering controller: "LTE Main" to Main and "LTE Aux" to Aux.
11. Remove the rear panel of the steering controller (the panel with no connectors). Insert a SIM card into either SIM1 or SIM2.
12. Connect the USB cable between the steering controller and the tablet, and charge the tablet with the USB-C cable.