



## **Installation Manual**

B301 Autosteer System

## What's in the Box?



B301 Steering Controller



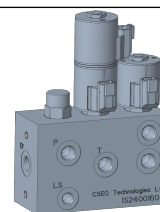
B302 Inertial Measurement Unit (IMU)



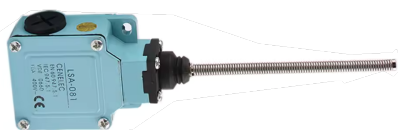
Tablet PC



Ball Mount Kit



Hydraulic Valve Assembly



Workswitch



Wheel Angle Sensor (WAS)



4G (LTE) Antenna



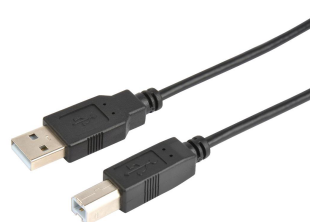
GPS Antenna



Wiring Loom



RJ45 (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.

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# Hydraulic Installation

## Closed Centre and General Advice

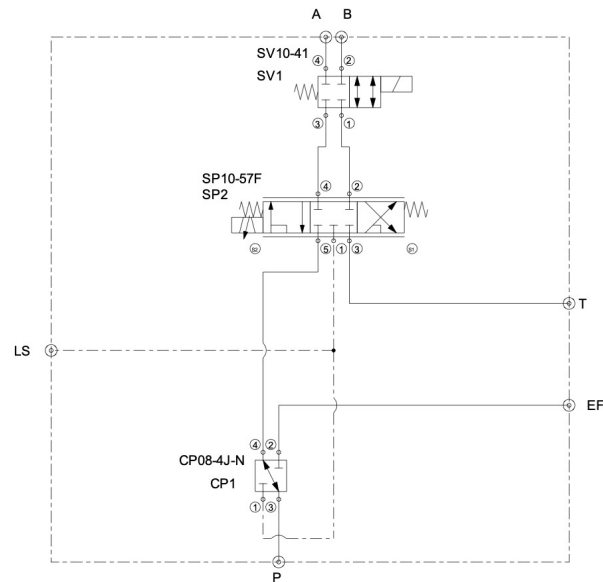
### Hydraulic Schematic:

Valve ports:

P, T, A, B - 3/8 BSP

LS - 1/4 BSP

EF - No Connection



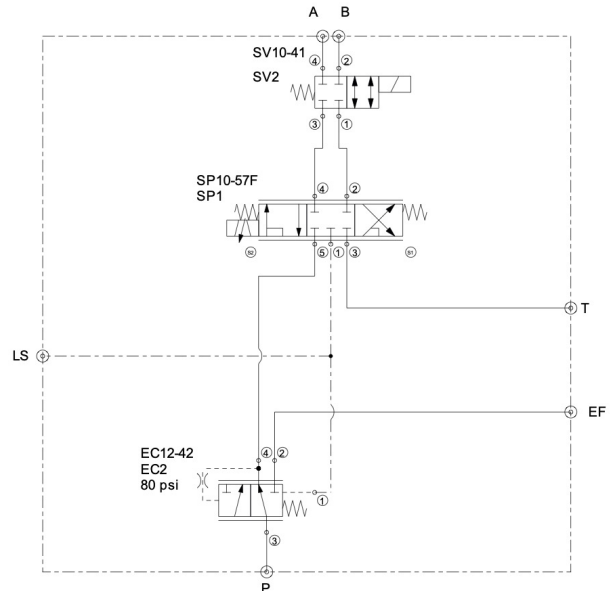
1. Mount the valve in a safe and convenient location on the tractor. The rear of the valve block has 4 holes tapped to M8 threads. They are arranged in a 135 x 80mm square.
2. Identify the two hydraulic lines running to the steering ram. Add a T-piece to each line and run them to ports A and B of the valve. The specific order does not matter at this stage.
3. 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.
4. Connect them to the P, T and LS lines of the valve block.

# Hydraulic Installation

## Open Centre machines only

### Hydraulic Schematic:

Valve ports:  
All ports - 3/8 BSP  
LS – No Connection



1. Follow steps 1 and 2 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 valve block.
4. Run the EF (Excess Flow) port from the valve back to the port where you removed the P line from the vehicle.
5. Connect port 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. The IMU 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 valve block, connect the Left and Right cables to the two stacked coils; the specific order does not matter at this stage. The Enable connector should be plugged into the single coil.
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 RJ45 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*. (Some batches may be labelled 4G 主 and 4G 副 instead of *LTE Main* and *LTE 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.
13. Assemble the ball mount kit
  - a. In the tablet box, you will find a bag with sub-plate, washers and screws. In the general kit you will find two 25mm ball mount bases and one clamping arm. One of the bases will have threaded holes.
  - b. Using the M6 low-profile bolts, attach the threaded base to the sub-plate.
  - c. Using the M3 screws, attach the sub-plate to the rear of the tablet. Use the 4 included washers to stand the sub-plate off the back of the tablet.
  - d. The other 25mm ball mount base can be attached to a convenient location on your vehicle. Other 25mm RAM mount style accessories are compatible.