

Vertical Performance Issues (GPS drift).

March 2025

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Symptoms:
Blade seems to drift throughout the day. When grading over an area of the field that is thought to be ‘finished’ the blade consistently begins to either cut or fill. For larger sudden jumps in elevation, see Sudden Vertical Shifts.

Possible Cause:

- Using SF6000 and SF3000 receivers together as a base and rover, or as tractor and implement.
- Base is configured as a Quick Survey base when using iGrade.
- Poor GPS availability throughout the day.
- Base station in a non-ideal location.
- Base station being interfered with by passing vehicles.
- High VDOP values are shown by T3RRA Software.

Solutions:

- ALWAYS look for correlations with something that is happening in your vicinity when the issue is occurring. If the issue always happens at a certain time, or in proximity to buildings, trees, powerlines or other features then troubleshooting options can be narrowed.
- If using a 3000 receiver on the implement, John Deere recommends using an external antenna.
- John Deere recommends not mixing Receiver generations, as Base-Rover or as Machine-Implement configurations.
- Ensure the base is always configured as an absolute base when using iGrade.
- You must ensure Signal sharing is turned off in AutoTrac settings when using iGrade.
- Check GPS conditions at http://satpredictor2.deere.com/address. GPS conditions may be non-ideal, shift activities to bulking work until the GPS constellation improves.

- Use a mobile base and place it as close to the working area as practically possible.
- Move the base away from obstructions (building, vehicles, trees) and higher off the ground.
- Tune iGrade hydraulic thresholds.
- If you notice that degraded accuracy consistently occurs at certain times of the day there may be unavoidable satellite/atmosphere conditions. Try and schedule bulking work for this period, leaving high accuracy finishing grading for other periods in the day.

Dealers are encouraged to file a John Deere DTAC case if vertical accuracy issues are not solved using other recommendations in this guide.