



SENSOR CALIBRATION REQUIREMENTS

This document is intended to identify when a sensor calibration is required. A sensor calibration requires a computer to interface with the trowel's Machine Control Unit (MCU).

Models HTXD6i and STXD6i utilize potentiometer style sensors to relay information to the MCU. The MCU interprets this information for output commands to the blade pitch control valve for synchronization and to the pump stroke cylinder.

PROCEDURES THAT REQUIRE A SENSOR RECALIBRATION

A pitch calibration is required if any of the following events take place:

The reason for recalibrating is to ensure the MCU knows where the full stroke position and ratio of cylinder extension to pitch is. This only changes when part of the mechanical linkage changes as outlined below. If the pitch is out of sync due to parts being replaced the blade pitch can still be switched into Manual Pitch Mode and synchronized manually.

- **SPIDER REPLACEMENT:** Requires recalibration of the pitch cylinders for proper blade pitch synchronization.
- **THRUST COLLAR ASSEMBLY REPLACEMENT:** Bearing or bushing replacement requires recalibration of the pitch cylinders for proper blade pitch synchronization.
- **PITCH YOKE OR PITCH CYLINDER REPLACEMENT:** Requires recalibration of the pitch cylinders for proper blade pitch synchronization.
- **ALL TROWEL BLADE ARMS:** Replacing all fingers or pitch adjusting bolts on either side requires recalibration of the pitch cylinders for proper blade pitch synchronization.
- **UNBALANCED PITCH:** When the pitch from side to side is not equal when pitch is synced in smart pitch mode.
- **DRIVE MOTORS:** Drive motor or lower/upper motor housings are replaced.
- **TRUNNION REPLACEMENT:** Pitch and pivot trunnion replacement.



PROCEDURES THAT REQUIRE A SENSOR RECALIBRATION

PUMP STROKE CYLINDER FOLLOWER: A calibration is required if:

- Changing / Adjusting max blade speed.
- Replacing a stroke cylinder.
- Adjusting zero stroke position.

FOOT PEDAL: A calibration is required if:

- A pedal sensor is replaced.
- A pedal sensor shaft position loses its position due to lock nuts loosening or other mechanical problem with the foot pedal.

PROCEDURES THAT DO NOT REQUIRE A RECALIBRATION

- **TROWEL BLADES:** Changing the trowel blades does not require any sensor calibration.
- **SINGLE ARM, PITCH BOLT AND LEVER:** Replacing a single or multiple trowel arms, pitch adjusting bolts, trowel arm levers and bushings do not require sensor calibration.

NOTE: Recalibration is not required if these replaced parts are set to match the remaining original arm, lever and pitch adjusting bolts that have already been calibrated from factory or prior service.
- **REUSE OF ORIGINAL SPIDER AND THRUST COLLAR ASSEMBLY:** Reusing the original spider and thrust collar assembly that are not worn out or damaged does not require any sensor calibration.
- **RE-SYNCING BLADE SPEED:** Re-synchronizing the right side blade speed to the left side (assumes the left side is already set to factory specifications and the maximum blade speed stop bolt is not moved).
- **RELIEF VALVES:** Inspecting or replacing main drive circuit (300-bar) relief valves.