

Service Instruction

1 Component: AFG2 Control Software Upgrade

Gyratory Models: AFG2A(S)/AFG2C(S)

2 Scope

This document details how to upgrade the control software version of the AFG2 Superpave Gyratory Compactor. Calibration data, test data, and test settings are not affected when upgrading machine software. However, it is recommended to save a copy of the current calibration data as a backup.

3 Tools Required

USB Memory Device containing the proper control programs, one or more of the following files:

- g2 (no extension)
- g2motion.pgm
- network_upgrade.gz

4 Hazards/Precautions

This document does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this document to establish and follow appropriate safety practices associated with the described tasks. If unsure about the required qualifications for performing this procedure contact Pine Instrument Company or seek qualified assistance.

5 Instructions






5.1 Prepare the USB Memory Device on a computer

5.1.1 Extract the program file(s) from the g2.zip file

The AFG2 SGC utilizes several files to upgrade the control software. The g2.zip file provided by Pine Instrument Company or a representative contains one or more of these files depending on a particular instrument's requirement. Extract the files contained in the g2.zip file to the root directory of a USB memory device. The program files can not be in a sub-folder; they must be on the root directory of the memory device.

5.2 Insert the prepared memory device into one of the AFG2 USB ports.

5.3 Save Calibration Data

- Use the  button to navigate through the main menu and select the **SETUP/STANDARDIZE** submenu. (Remember to press the  button one time to enter a submenu.)
- Next, select the **Machine Setup** submenu.
- Use the  button to navigate through the menu. Select the **Advanced Setup** option from the submenu.
- Use the  button to again navigate through the menu. Select the **Save/Load Cal Data**, then choose **Save Cal Data**. Press the  button and follow the screen instructions.

This copies the AFG2 current calibration data onto the USB memory device in case there is a problem during the control upgrade. After the upgrade is complete, please copy the calibration data from the USB memory device to a computer as a backup. These files can be reloaded onto the AFG2 using the Load Cal Data function if a problem develops in the future:

G2cal.cfg: Calibration Data
 G2setup.cfg: G2 Configuration (angle, number of gyrations, mode, etc.)
 G2000.cfg: Machine serial number
 Hours.cfg: Machine run hours
 G2network.cfg: Network configuration

```
GYRATIONS (N) :    100
HEIGHT (mm) :    16.0
ANGLE I(deg) :    1.16
PRESSURE (kPa) :    600
```

```
MOLD DIAM (mm) : 150
COMPACT:  GYRATIONS
TEST DATA:      +
▶ SETUP/STANDARDIZE +
```

```
Machine Information
▶ Machine Setup      +
Standardize         +
Exit
```

```
External Angle Calc
▶ Advanced Setup    +
Networking Setup
Exit
```




```
Upgrade Control
▶ Save/Load Cal Data
Load Beam Setup
Swivel Frame Setup
```

```
▶ Save Cal Data
▶ Load Cal Data
Exit
```

This step also confirms the USB memory device is recognized. If the device is not recognized, turn the G2 off then back on and try again. Cycling power will usually correct any issue with USB device issues.

The USB device can be left in the compactor after saving calibration data. Proceed directly to step 5.4 Upgrade Control

5.4 Upgrade Control

- Use the  button to navigate through the main menu and select the **SETUP/STANDARDIZE** submenu. (Remember to press the  button one time to enter a submenu.)
- Next, select the **Machine Setup** submenu.
- Select the **Advanced Setup** option from the submenu, and the display below appears:
- Select the **Upgrade Control**. Press the  button and answer **yes** to confirm the upgrade.

```

GYRATIONS (N) :    100
HEIGHT (mm) :    16.0
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PRESSURE (kPa) :    600

```

```

MOLD DIAM (mm) : 150
COMPACT:  GYRATIONS
TEST DATA:      +
▶ SETUP/STANDARDIZE +

```

```

Machine Information
▶ Machine Setup      +
  Standardize        +
  Exit

```

```

External Angle Calc
▶ Advanced Setup      +
  Networking Setup
  Exit

```

```

▶ Upgrade Control
  Save/Load Cal Data
  Load Beam Setup
  Swivel Frame Setup

```

The new control program will automatically start. If the AFG2 had not previously been programmed for network compatibility or requires a network upgrade, the system will prompt for the network upgrade file, which should be on the USB memory. The display will indicate to cycle power after the files have been loaded. Turn power off then back on. The AFG2 update is complete.

Confirm the new version of control has been loaded properly by noting the control version displayed during power up. This process does not change calibration data, test data, or machine setup configuration. Compactors previously connected to a network will retain their network configuration.