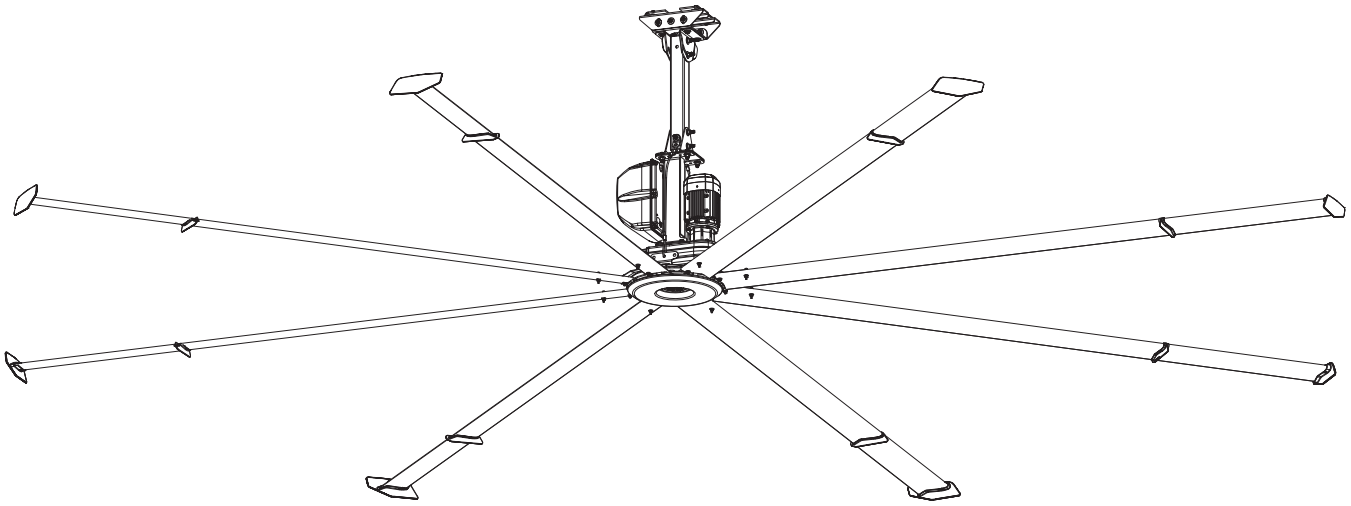
BIG ASS FANS®



POWERFOIL® X4

Operation and Maintenance

bigassfans.com

OPERATION: STANDARD CONTROLLER

Connecting fans

Install the fan and connect it to the controller according to the fan installation guide, the controller installation guide, and any applicable accessory kit instructions. When the fan is connected and power is applied, the controller will automatically detect it and start controlling it.

Controlling fans

Press the power button to turn the fan on/off.

Tap or press and hold **+** to increase the fan speed.

Tap or press and hold **–** to decrease the fan speed.

Reversing fans

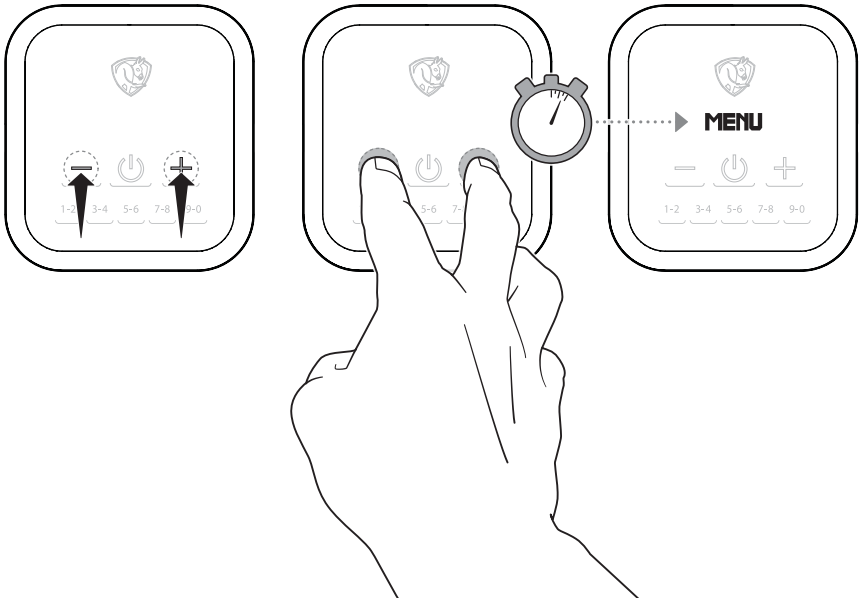
Big Ass Fans does not recommend reversing your fan—just run it at a slow forward speed during the winter to keep your space evenly comfortable from floor to ceiling. Visit bigassfans.com/faq to learn more about heat destratification and running your fan during the winter.

The fan can only be reversed by changing parameters. Contact Customer Service for assistance with changing parameters.

Accessing the settings menu

Press and hold the **–** and **+** buttons until the Menu screen appears.

Press **+** to navigate through the menu options. Press **–** to exit the menu.



Setting up a passcode

1. Press and hold the **–** and **+** buttons until the Menu screen appears.
2. Press **+** until you reach the Create Passcode screen, and then press the power button to select.
3. Use the number buttons at the bottom of the screen to create and confirm your passcode.
4. Press **–** to exit the settings menu. A lock icon appears on the home screen to indicate a passcode is set.

Changing or removing a passcode

To change a passcode:

1. Press a button on the controller. When prompted, enter your passcode.
2. Press and hold the – and + buttons until the Menu screen appears.
3. Press + until you reach the Change Passcode screen, and then press the power button to select.
4. Enter your current passcode.
5. Enter and confirm your new passcode.
6. Press – to exit the settings menu.

To remove a passcode:

1. Press a button on the controller. When prompted, enter your passcode.
2. Press and hold the – and + buttons until the Menu screen appears.
3. Press + until you reach the Remove Passcode screen, and then press the power button to select.
4. Enter your passcode to remove it.
5. Press – to exit the settings menu.

Turning off a passcode-protected fan

Press the power button to turn the fan off. The fan can always be turned off even if the controller requires a passcode. To turn the fan on again, you will need to enter the passcode.

Resetting the passcode

If you forgot your passcode, you will need to reset the controller to its factory defaults.

1. Remove the controller from the mounting bracket as shown on the following page.
2. Unplug the CAT5 cable from the back of the controller, and then plug it back in.
3. During the startup screen, press and hold the **1-2** button until the Factory Reset screen appears.
4. Press – to confirm the reset, or press + to cancel.

All custom settings (passcode, motion sense settings) will be reset to factory defaults.

Adjusting controller settings

Press and hold the – and + buttons until the Menu screen appears. Press + to navigate the menu options. You can:

- Edit parameters with the assistance of Customer Service.
- Create a passcode to restrict access to the controller.
- Enable/disable and configure Motion Sense (if the fan has an occupancy sensor installed).
- View your fan's Modbus address, drive type, and firmware version.

Viewing fan information

1. Press and hold the – and + buttons until the Menu screen appears.
2. Press + until you reach the About screen, and then press the power button to select. You can view the fan's Modbus address, drive type, and firmware version.
3. Press – to exit the settings menu.

Clearing error messages

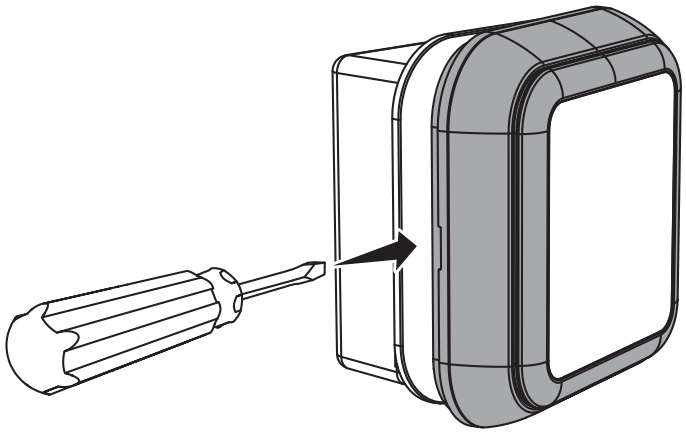
Follow the instructions on the screen to clear the error message. If the error persists, contact Customer Service.

Viewing and modifying fan parameters

Contact Customer Service for assistance with modifying fan parameters. To access parameters, press and hold the **–** and **+** buttons until the Menu screen appears. Press the power button to select the Edit Parameters option. Follow the instructions provided by Customer Service.

Removing the controller from the mounting bracket

To remove the controller from the mounting bracket, insert a flat head screwdriver into the slot on either side of the bracket, and carefully tilt the controller out of the bracket.



Resetting the controller to factory defaults

1. Remove the controller from the mounting bracket as shown above.
2. Unplug the CAT5 cable from the back of the controller, and then plug it back in.
3. During the startup screen, press and hold the **1-2** button until the Factory Reset screen appears.
4. Press **–** to confirm the reset, or press **+** to cancel.

All custom settings (passcode, motion sense settings) will be reset to factory defaults.

Enabling/disabling the fan occupancy sensor

1. Press and hold the **–** and **+** buttons until the Menu screen appears.
2. Press **+** until you reach the Motion Sense screen, and then press the power button to enable/disable the occupancy sensor.
3. Press **–** to exit the settings menu.

Adjusting fan occupancy sensor settings

1. Press and hold the **–** and **+** buttons until the Menu screen appears.
2. Press **+** until you reach the Motion Sense screen, and then press the power button to enable the occupancy sensor.
3. Press **+** to navigate to the Motion Timeout screen. Motion timeout specifies how much time should pass after no motion is detected before the occupancy sensor turns the fan off.
4. Press the power button to adjust the motion timeout: 30 minutes (default), 1 hour, 2 hours, 4 hours, or 8 hours.
5. Press **–** to exit the settings menu.

OPERATION: BAFCON CONTROLLER

Connecting fans

Install and connect each fan to the controller according to the fan installation guide, the BAFCon installation guide, and any applicable accessory kit instructions. You can connect up to eight fans. Each time a new fan is connected, BAFCon will automatically detect it and start controlling it. To view and manage all connected fans, tap the menu icon on the Home screen, and then tap **FAN MANAGEMENT**.

Removing fans

Disconnect the fan(s) from the controller, and then tap **FORGET** on the Fan Disconnected screen.

Note: You will not see the Fan Disconnected screen if If you only had one fan connected. The controller is no longer connected to power after the CAT5 cable is disconnected.

Reconnecting fans

Reconnect the fan's CAT5 cable to the controller or to your other fans that are daisy chained to the controller. BAFCon will automatically detect the fan and start controlling it. To view all connected fans, tap the menu icon on the Home screen, and then tap **FAN MANAGEMENT**.

Controlling fans

BAFCon supports up to eight fans. Fans can be controlled from the Home screen individually or as a group (On, Off, SmartSense, Forward/Reverse, and speed adjustment). The minimum and maximum fan speed and fan name can be set for each individual fan. Each fan's diagnostic information can also be viewed individually for troubleshooting. To view or adjust settings for an individual fan, tap the menu icon on the Home screen, and then tap **FAN MANAGEMENT** > Fan Name.

Controlling a single fan

If you have multiple fans connected, tap the fan name at the top of the Home screen to select the fan you want to control.

To turn the fan on or off, tap **ON/OFF** on the Home screen.

To adjust fan speed, tap the **+** and **–** buttons or use the the slider bar.

To enable SmartSense, tap **SMART**. SmartSense eliminates the need for manual fan control. See *Using SmartSense* on the following page to learn more about SmartSense.

Controlling all fans as a group

On the Home screen, tap the fan name at the top of the screen to view the FANS screen. On the FANS screen, tap the slider under Group All Fans to enable it, and then tap **APPLY**. The heading "ALL FANS" now appears at the top of the Home screen to indicate you are controlling all of your fans as a group.

Turning off all fans

At the top of the Home screen, tap either the fan name or **ALL FANS** to view the FANS screen. On the FANS screen, tap **Master Power** to turn off all of your fans. To turn fans back on, you can either tap **Master Power** again, or on the Home screen, tap ON or adjust the fan speed.

Ungrouping fans for individual control

On the Home screen, tap **ALL FANS** at the top of the screen to view the FANS screen. Tap the slider under Group All Fans to disable it, and then tap the **X** in the top right corner of the screen to return to the Home screen. You can now control each fan individually. Tap the fan name at the top of the Home screen to select the fan you want to control.

Setting the minimum and maximum fan speed

To restrict users from setting fan speeds outside a specific range (for example, if the controller is accessible to the public or to all employees in a building), you can set a minimum and maximum speed for each fan.

On the Home screen, tap the menu icon, and then tap **FAN MANAGEMENT** > Fan Name > **Fan Settings**. Tap the **+** and **–** buttons to set the minimum and maximum fan speed.

Note: Users will always see a speed range of 0 to 100% on the Home screen. The adjustments they make will fall within your set speed range. For example, if you set a maximum speed of 80%, the fan will run at 80% when a user sets the speed to 100%.

Reversing fans

Big Ass Fans does not recommend reversing your fan—just run it at a slow forward speed during the winter to keep your space evenly comfortable from floor to ceiling. Visit bigassfans.com/faq to learn more about heat destratification and running your fan during the winter.

On the Home screen, tap the reverse icon in the top left corner of the screen and follow the instructions. The icon will change from gray to red to indicate the fan is running in reverse. To return the fan to the forward direction, tap the reverse icon. The icon will change from red back to gray.

Note: SmartSense cannot be used while the fan is running in reverse. The reverse icon does not appear on the Home screen while SmartSense is enabled. If you enable SmartSense while the fan is in reverse, the fan will automatically return to the forward direction.

Viewing all fans

At the top of the Home screen, tap either the fan name or **ALL FANS** to view the FANS screen. All connected fans are shown on the FANS screen. You can also view and manage each fan's settings by tapping the menu icon on the Home screen and then tapping **FAN MANAGEMENT**.

Renaming fans

On the Home screen, tap the menu icon, and then tap > **FAN MANAGEMENT** > Fan Name > **RENAME**. Enter a new name for the fan, and then tap **ENTER**.

Tip: If you have multiple fans connected to the controller and aren't sure which one you're renaming, tap **IDENTIFY** next to the box where you enter the new fan name. Follow the instructions on the screen. The controller will stop all fans except the one you are identifying. If all fans are already stopped, the one you are identifying will start spinning.

Using SmartSense

SmartSense is an optional BAFCon setting that eliminates the need for manual fan control. When enabled, SmartSense uses BAFCon's built-in temperature and humidity sensors to maintain a consistent year-round temperature from floor to ceiling, maximizing comfort and energy savings. As the temperature rises with warmer weather, SmartSense automatically speeds up your fan to provide cooling. During cooler weather, SmartSense automatically slows down the fan to destratisfy the air, pushing warm air trapped at the ceiling down to the floor without creating a draft.

SmartSense is turned off by default. To enable it, tap **SMART** on the Home screen. Tap the thermometer icon at the top of the screen to set your ideal temperature. SmartSense will use this setting to automatically adjust the fan speed as ambient conditions change.

If you manually adjust the fan speed or turn the fan on/off from the Home screen while SmartSense is enabled, SmartSense will be disabled. To re-enable it, tap **SMART**. If you want SmartSense to resume automatically after a manual adjustment is made, you can enable this feature from the controller's advanced SmartSense settings.

Enabling/disabling SmartSense

SmartSense is turned off by default. To enable it, tap **SMART** on the Home screen. To disable it, tap **ON/OFF** or adjust the fan speed from the Home screen.

Note: All sensors needed for SmartSense are built into your controller. Floor and ceiling sensors are not needed.

Configuring Advanced SmartSense settings

Advanced SmartSense settings let you set a minimum and maximum SmartSense fan speed and set SmartSense to resume automatically after a manual fan adjustment is made.

To access advanced SmartSense settings, tap the thermometer icon in the top right corner of the Home screen while SmartSense is enabled, and then tap **Advanced SmartSense Settings** at the bottom of the screen.

- Tap the slider next to Return to SmartSense to enable or disable the Return to SmartSense feature. When enabled, the fan will automatically return to SmartSense a set period of time after you manually adjust speed or turn the fan on/off. When disabled, the fan will not return to SmartSense after a manual fan adjustment is made (this is the default setting).
- Tap the **+** and **–** buttons next to Manual Override Timeout to adjust the number of hours until the fan returns to SmartSense after a manual adjustment is made. The default time period is two hours. A timer showing how long until SmartSense resumes will be displayed on the Home screen.
- Tap the **+** and **–** buttons next to Maximum Fan Speed and Minimum Fan Speed to set the fan's maximum and minimum speeds when SmartSense is enabled.

Setting up a passcode

To set up a passcode, tap the menu icon on the Home screen, and then tap **PASSCODE**. Tap **SETUP** next to the type of passcode you want to create. Follow the instructions on the screen. You can set up two types of passcodes:

- **User passcode:** Secures access to the entire controller and must be entered each time the controller is awakened from screensaver mode. People with user level access can turn fans and lights on and off, adjust fan speed/light brightness, reverse fans, and enable/disable SmartSense.
- **Admin passcode:** Secures access to the controller's settings and must be entered each time the menu icon (general settings) or thermometer icon (SmartSense settings) is tapped. People with admin level access can adjust all controller functions. *Note: If both a user and admin passcode are set up, the admin passcode will work when the controller prompts you for either passcode.*

Changing or removing a passcode

Tap the menu icon on the Home screen, and then tap **PASSCODE**. Tap **EDIT** next to User Passcode or Admin Passcode. Tap **CHANGE USER PASSCODE**, **REMOVE USER PASSCODE**, **CHANGE ADMIN PASSCODE**, or **REMOVE ADMIN PASSCODE** and follow the instructions on the screen.

Turning off a passcode-protected fan

Tap **EMERGENCY STOP** on the passcode entry screen to stop the fan during an emergency. This feature is always available even if the controller requires a passcode. Tap **FORGOT PASSCODE?** if you need Customer Service to reset the passcode.

Restting the passcode

Tap **FORGOT PASSCODE?** on the passcode entry screen and follow the instructions for contacting Customer Service. When you call, you will need to provide the Customer Code displayed on the screen. Customer Service will then issue you a new passcode.

Viewing fan fault history

On the Home screen, tap the menu icon > **FAN MANAGEMENT** > Fan Name. Tap **Diagnostics** > **Fault History** to view a list of recent faults.

Clearing all fan faults

On the Home screen, tap the menu icon > **FAN MANAGEMENT** > **CLEAR ALL FAULTS**.

Clearing error messages

Tap **MORE INFO** to view a detailed description of the error and to access Customer Service and diagnostic information. Tap **DIAGNOSTICS** to view fan information, fault history, and VFD parameters. Tap **CLEAR** to clear the message, if possible. If the error persists or the Clear option is not available, contact Customer Service.

Adjusting controller settings

Note: If you set up an admin passcode, you will need to enter it to access the controller's settings.

On the Home screen, tap the menu icon, and then tap **GENERAL**. You can select the temperature units, change the screensaver, and select the display language.

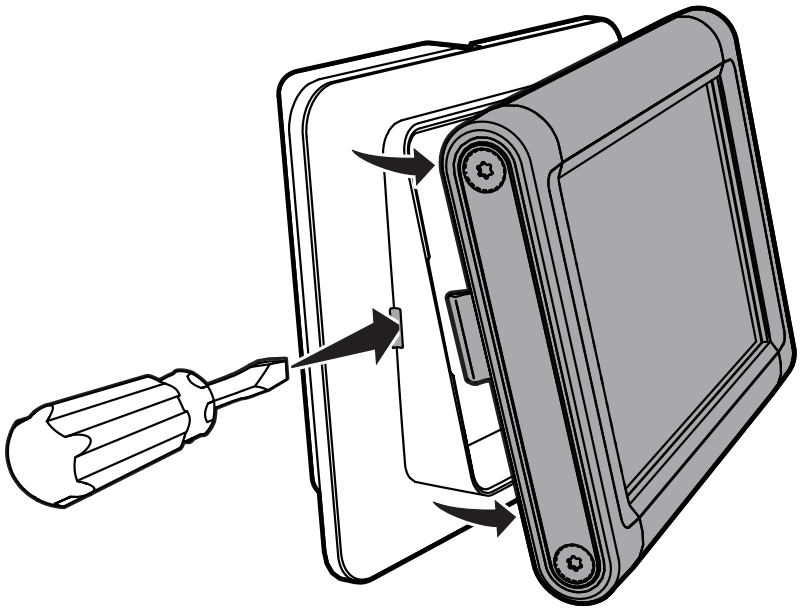
Viewing and modifying fan parameters

You will need to contact Customer Service to view or modify fan parameters. On the Home screen, tap the menu icon > **FAN MANAGEMENT** > Fan Name > **Diagnostics** > **VFD Parameters**.

You will be prompted to enter a Customer Service code. Call the phone number on the screen and provide the Customer Code shown below the phone number. Enter the code provided by Customer Service and follow their instructions. *Note: The Customer Code is valid for 24 hours.*

Removing the controller from the mounting bracket

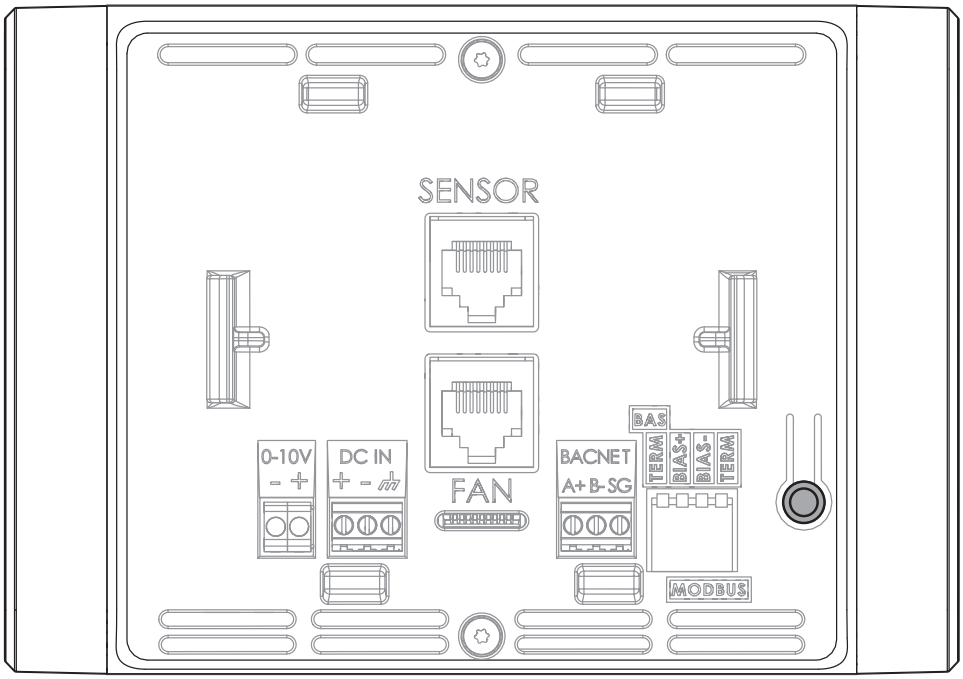
To remove the controller from the mounting bracket, insert a flat head screwdriver into the slot on either side of the bracket, and carefully tilt the controller out of the bracket.



Resetting the controller to factory defaults

Press and hold the reset button on the back of the controller until the screen changes, and then release the button. Follow the instructions on the screen to perform a screen calibration. When asked if you want to reset the controller to its original factory default configuration, tap **RESET**.

All custom settings (min/max fan speeds, fan names, SmartSense settings, etc.) will be reset to factory defaults.



Controlling lights

Before you can control lights, you will need to tell the controller that lights are connected.

On the Home screen, tap the menu icon, and then tap **LIGHTS**. Tap the slider next to Enable Lighting Control to enable your lights. When this setting is enabled, a light bulb icon appears in the top right corner of the Home screen. Tap the icon to switch from fan control mode to light control mode. *Note: The icon is yellow when lights are turned on and gray when lights are turned off.*

To control your lights, tap the light bulb icon in the top right corner of the Home screen.

To turn lights on or off, tap **ON/OFF**. *Turning the fan light on or off requires dedicated power running through a separate switch.*

To adjust light brightness, tap the **+** and **–** buttons or use the slider bar.

Note: All lights connected to the controller (including fan light kits) are controlled from the light control screen as a group.

Setting the minimum and maximum light brightness

To restrict users from setting brightness levels outside a specific range (for example, if the controller is accessible to the public or to all employees in a building), you can set a minimum and maximum brightness for all connected lights.

On the Home screen, tap the menu icon, and then tap **LIGHTS**. Tap the **+** and **–** buttons to set the minimum and maximum light brightness.

Note: Users will always see a brightness range of 0 to 100% on the light control screen. The adjustments they make will fall within your set brightness range. For example, if you set a maximum brightness level of 80%, the brightness will be 80% when a user sets it to 100%.

Enabling/disabling the fan occupancy sensor

On the BAFCon Home screen, tap the menu icon, and then tap **FAN MANAGEMENT** > Fan Name > **Motion Sense**. Tap the slider next to Enable Motion Sense to enable or disable it.

Adjusting fan occupancy sensor settings

On the BAFCon Home screen, tap the menu icon, and then tap **FAN MANAGEMENT** > Fan Name > **Motion Sense**. Tap the slider next to Enable Motion Sense to enable it, and then adjust the settings.

- **Occupancy (Auto On, Auto Off):** Select this option if you want the fan to turn off when no motion is detected and turn on when motion is detected again.
- **Vacancy (Manual On, Auto Off):** Select this option if you want the fan to turn off when no motion is detected and remain off when motion is detected again. The fan must be turned back on manually each time it is turned off by the occupancy sensor.
- **Motion Sense Timeout:** Specify how much time should pass after no motion is detected before the occupancy sensor turns the fan off: 30 minutes (default), 1 hour, 2 hours, 4 hours, or 8 hours.
- **Unoccupied Behavior:** Specify what the fan should do when no motion is detected: turn off or mix warm air near the ceiling with cooler air near the floor at a low speed.

Creating and modifying fan schedules

BAFCon's Schedules feature lets you schedule start, stop, speed, and Auto settings for your fans. You can create up to four fan schedules. Your schedules will apply to all fans connected to the controller.

Setting up an on/off schedule

1. On the Home screen, tap the menu icon, and then tap **SCHEDULES**. *Note: If you have not set the date and time on your controller, you will be prompted to do so.*
2. Tap **+** in the bottom right corner of the Schedules screen to create a new schedule.
3. Select **ON** at the top of the screen, and then select the day(s) you want the schedule to occur. All days are selected by default.
4. Set the start time (fan on), the speed at which you want the fan to run during the specified time period, and the stop time (fan off).
5. Tap **<** to return to the main Schedules screen. Your new schedule and its details will be displayed.

Setting up an Auto schedule

1. On the Home screen, tap the menu icon, and then tap **SCHEDULES**. *Note: If you have not set the date and time on your controller, you will be prompted to do so.*
2. Tap **+** in the bottom right corner of the Schedules screen to create a new schedule.
3. Select **AUTO** at the top of the screen, and then select the day(s) you want the schedule to occur. All days are selected by default.
4. Set the Auto mode start time, your ideal temperature that you want the fan to maintain during the specified time period, and the Auto mode stop time.
5. Tap **<** to return to the main Schedules screen. Your new schedule and its details will be displayed.

Modifying a schedule

1. On the Home screen, tap the menu icon, and then tap **SCHEDULES**.
2. Tap **>** next to the schedule you want to modify.
3. Modify the schedule settings, and then tap **<** to return to the main Schedules screen.

Pausing a schedule

1. On the Home screen, tap the menu icon, and then tap **SCHEDULES**.
2. Tap the slider next to the schedule you want to pause. Tap the slider again to resume the schedule.

Deleting a schedule

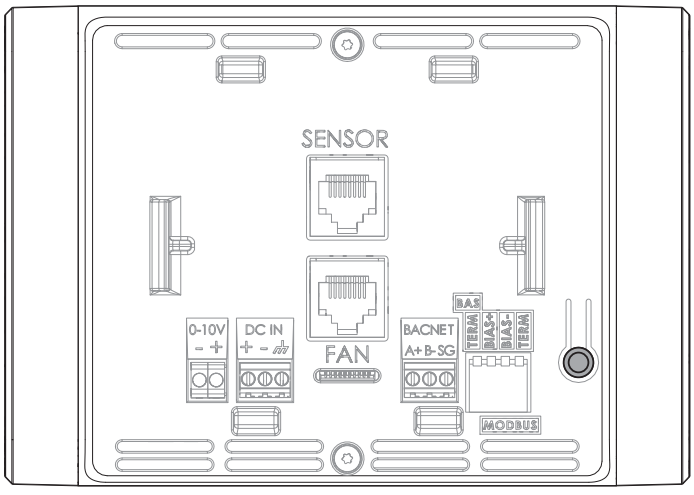
1. On the Home screen, tap the menu icon, and then tap **SCHEDULES**.
2. Tap **>** next to the schedule you want to delete, and then tap the trash can in the top right corner of the screen.
3. Tap **DELETE** to confirm. The schedule will be permanently deleted and cannot be re-enabled.

Setting the controller date and time

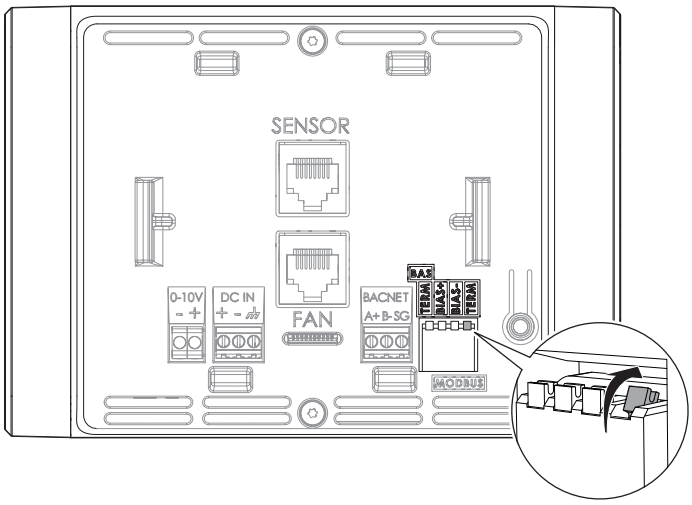
On the Home screen, tap the menu icon, and then tap **CLOCK**. Set the date, time, and time zone. The time will be displayed on the Home screen and on the screensaver (if enabled).

If you want to use the BAFCon Updates app to automatically update your controller's clock and time zone, tap **Automatic Clock Update** on the Clock menu, and then download the app on your mobile device. Use the app to sync the mobile device's local date and time to the controller.

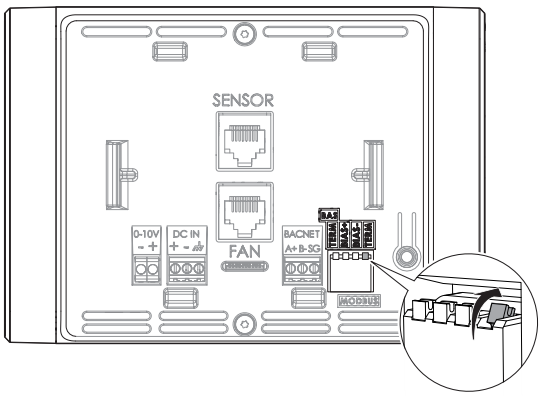
TROUBLESHOOTING

ISSUE	SOLUTIONS
My fan will not start.	✓ Make sure all wires are securely connected and that supply power is adequate and functional. If the fan still does not start, contact Customer Service.
A popping noise is coming from my fan.	✓ Airfoil noise occurs when airfoils are not tightened to the specified torque. Disconnect the fan from power, and then tighten the airfoil hardware to **29 ft·lb (39.3 N·m)**. *Note: If the hardware is stainless steel, tighten the airfoil hardware to **10 ft·lb (13.6 N·m)**.* If popping still occurs, verify that the airfoils are not contacting each other. If they are, contact Customer Service.
My fan wobbles during operation.	✓ Verify that the mounting structure is rigid enough to support the fan and that the fan is not being exposed to external air forces. ✓ If guy wires were installed, confirm proper installation. If guy wires were not installed, contact Customer Service.
The BAFCon controller's screen is not responding.	✓ Press and release the reset button on the back of the controller to reset the screen.  If the controller still does not respond, press and hold the reset button until the screen changes, and then release the button. Follow the instructions on the screen to perform a screen calibration. When asked if you want to reset the controller to its original factory default configuration, tap **CANCEL**. ***If you tap* RESET*, all custom settings (min/max fan speeds, fan names, SmartSense settings, etc.) will be reset to factory defaults.***

TROUBLESHOOTING (CONT.)

ISSUE	SOLUTIONS
The BAFCon controller stays on the startup screen after I apply power.	✓ The controller may be unable to find your fan. Try the following: ✓ Make sure the fan is powered on. ✓ Check all CAT5 cable connection points. ✓ Make sure the CAT5 cable is not damaged. ✓ Turn on the controller's fourth DIP switch. Remove the controller from the mounting bracket and locate the four DIP switches near the bottom right corner of the back of the controller. Set the fourth DIP switch from the left to the ON position by pushing it inward. Refer to the illustration. 
I do not see the correct number of fans under Fan Management on the BAFCon controller.	✓ Two of the fans may be set to the same default Modbus address. Change each fan's Modbus address until you see all of your connected fans. On the Home screen, tap the menu icon, and then tap **FAN MANAGEMENT** > Fan Name > **Fan Settings**. Next to Modbus Address, tap **CHANGE**. Enter a new address between 1 and 247, and then tap **ENTER**.
My fan's VFD generates radio frequency (RF) noise.	✓ VFDs generate RF noise in many ways, but this can be prevented using proper wiring practices. ✓ Do not run your fan and sensitive equipment on the same power line. ✓ Ensure proper grounding at the motor, at the VFD, and from the VFD to the utility. ✓ If noise is still present, contact Customer Service.

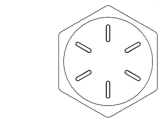
TROUBLESHOOTING (CONT.)

ISSUE	SOLUTIONS
My fan is not responding to the BAFCon controller or responds intermittently.	✓ Check the connection between the fan and the controller. On the Home screen, tap the menu icon > **FAN MANAGEMENT** > Fan Name > **Diagnostics**. Check the value under Connection Quality on the right side of the screen. If the quality is low, try the following: ✓ Change the fan's Modbus address. On the Home screen, tap the menu icon > **FAN MANAGEMENT** > Fan Name > **Fan Settings**. Next to Modbus Address, tap **CHANGE**. Enter a new address between 1 and 247, and then tap **ENTER**. ✓ Turn on the controller's fourth DIP switch. Remove the controller from the mounting bracket and locate the four DIP switches near the bottom right corner of the back of the controller. Set the fourth DIP switch from the left to the ON position by pushing it inward. Refer to the illustration. ✓ If you connected multiple fans, you may need to install an end-of-line termination resistor. You can also install a resistor and splitter for end-of-line termination on a single-fan installation. Contact Customer Service for more information. 
My fan's motor makes noise when the speed is increased.	✓ Audible high-frequency carrier noise may be an indicator of a stall condition. ✓ Some motor, gearbox, or VFD noise is to be expected and is normal.

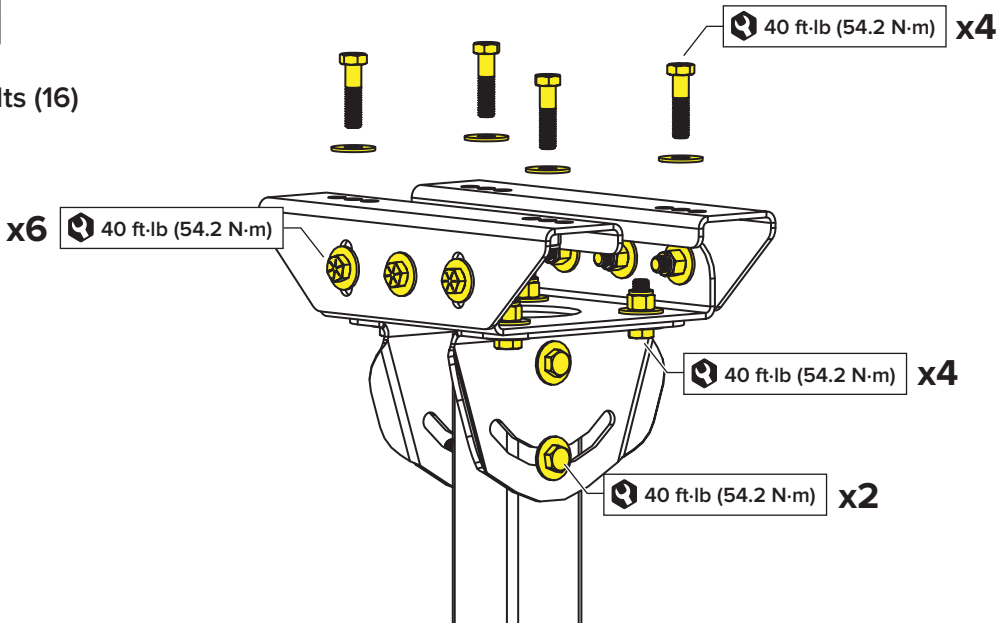
MAINTENANCE–POWERFOIL®X

Inspection checklist

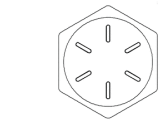
1. Isolate power to the fan following lockout/tagout procedures.
2. Check guy wires (if installed) for fraying or damage.
3. Check the upper safety cable and shackle. The cable should be wrapped tightly around the building structure, leaving as little slack as possible. The shackle should be securely tightened and located on the topside of the structure.
4. Ensure all 16 upper mounting bolts are present and torqued to **40 ft·lb (54.2 N·m)**.



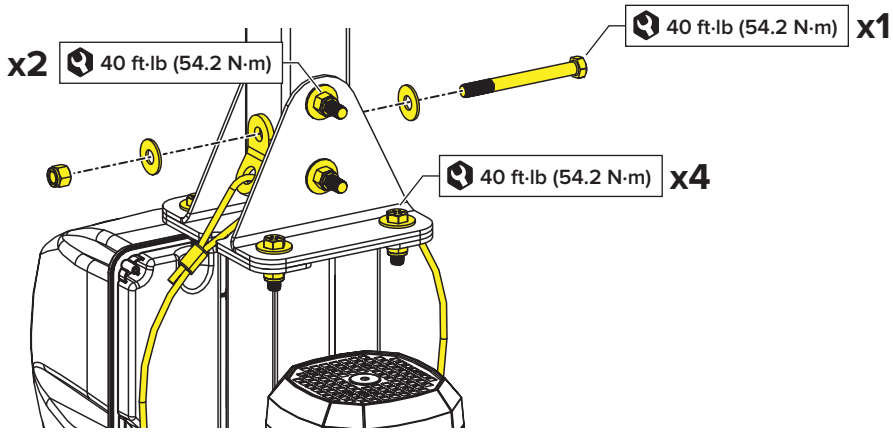
Grade 8 Bolts (16)



5. Check the two lower safety cables. The cables should be attached from the main fan unit to the bottom of the extension tube (or to the angle irons for fans mounted directly to angle irons). Ensure the bolt securing the lower safety cables is present and torqued to **40 ft·lb (54.2 N·m)**. Ensure all six bolts securing the extension tube and lower yoke to the fan frame are present and torqued to **40 ft·lb (54.2 N·m)**.

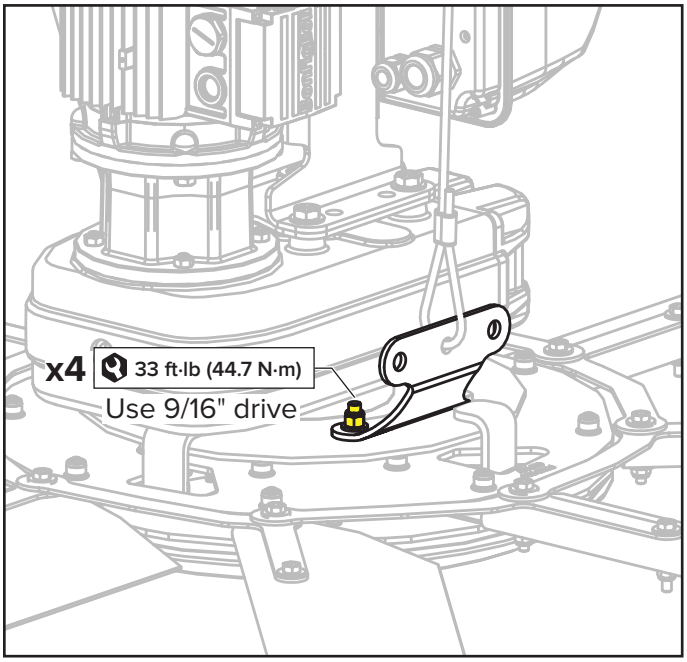


Grade 8 Bolts (7)

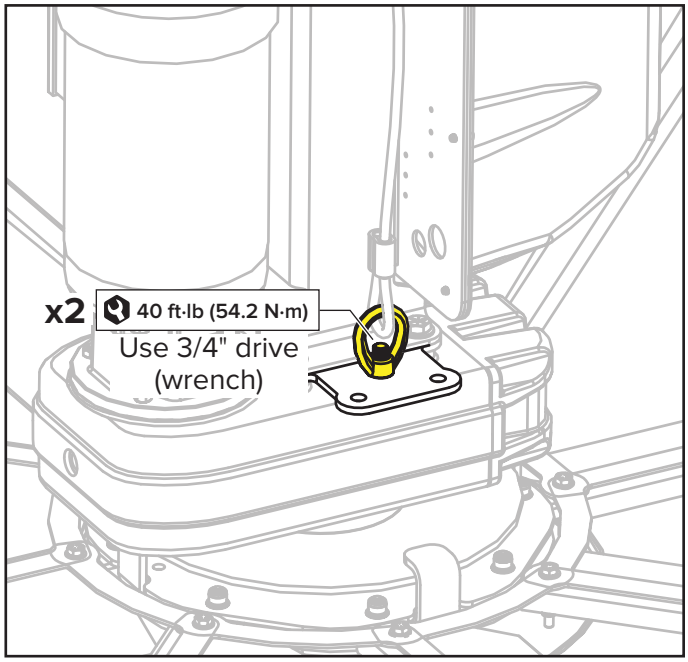


6. Check the hardware securing the lower safety cable attachment plates to the fan. Ensure all hardware is present and torqued as specified below for your fan type.

Fans with four bolts and nuts

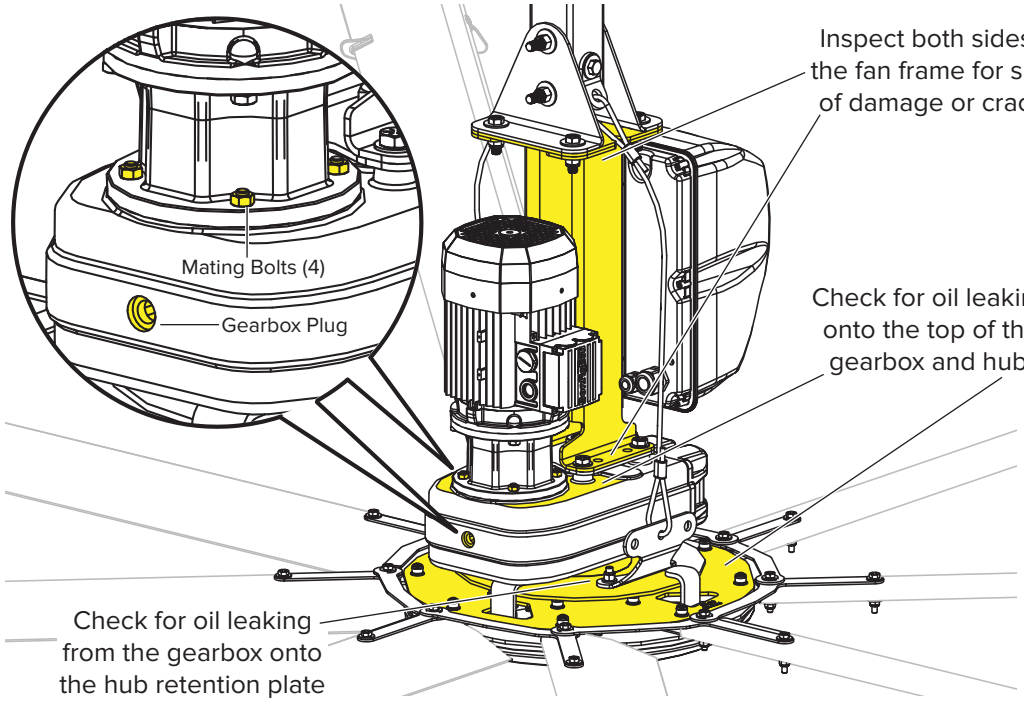


Fans with two eye nuts and bolts

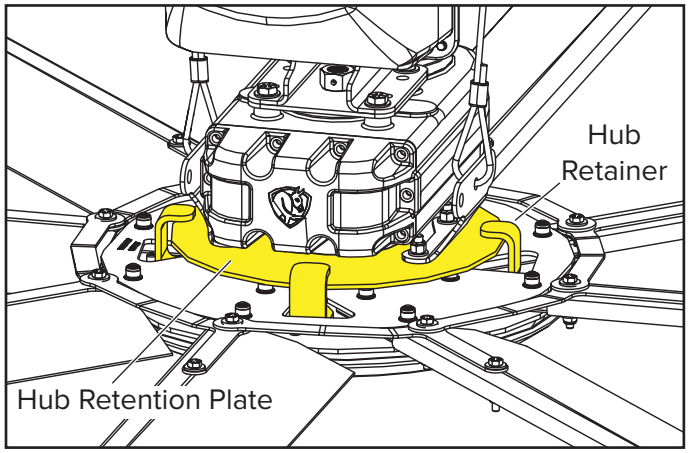


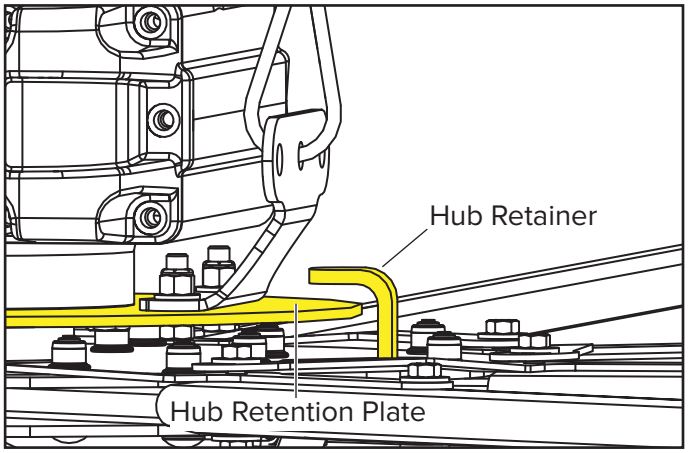
7. If installed, remove the fan's light to access the fan hub. Refer to the light installation guide linked to at the end of these instructions if needed. Check the locations shown below for oil leakage. **If signs of leakage are present, DO NOT return the fan to service. Contact Big Ass Fans Customer Service**. Inspect both sides of the fan frame for signs of damage or cracks. **If any damage or cracks are identified, DO NOT return the fan to service until repairs can be made. Contact Big Ass Fans Customer Service**.

Check for oil pooling around or leaking down the gearbox from the four mating bolts. Check for oil leaking from the gearbox plug.

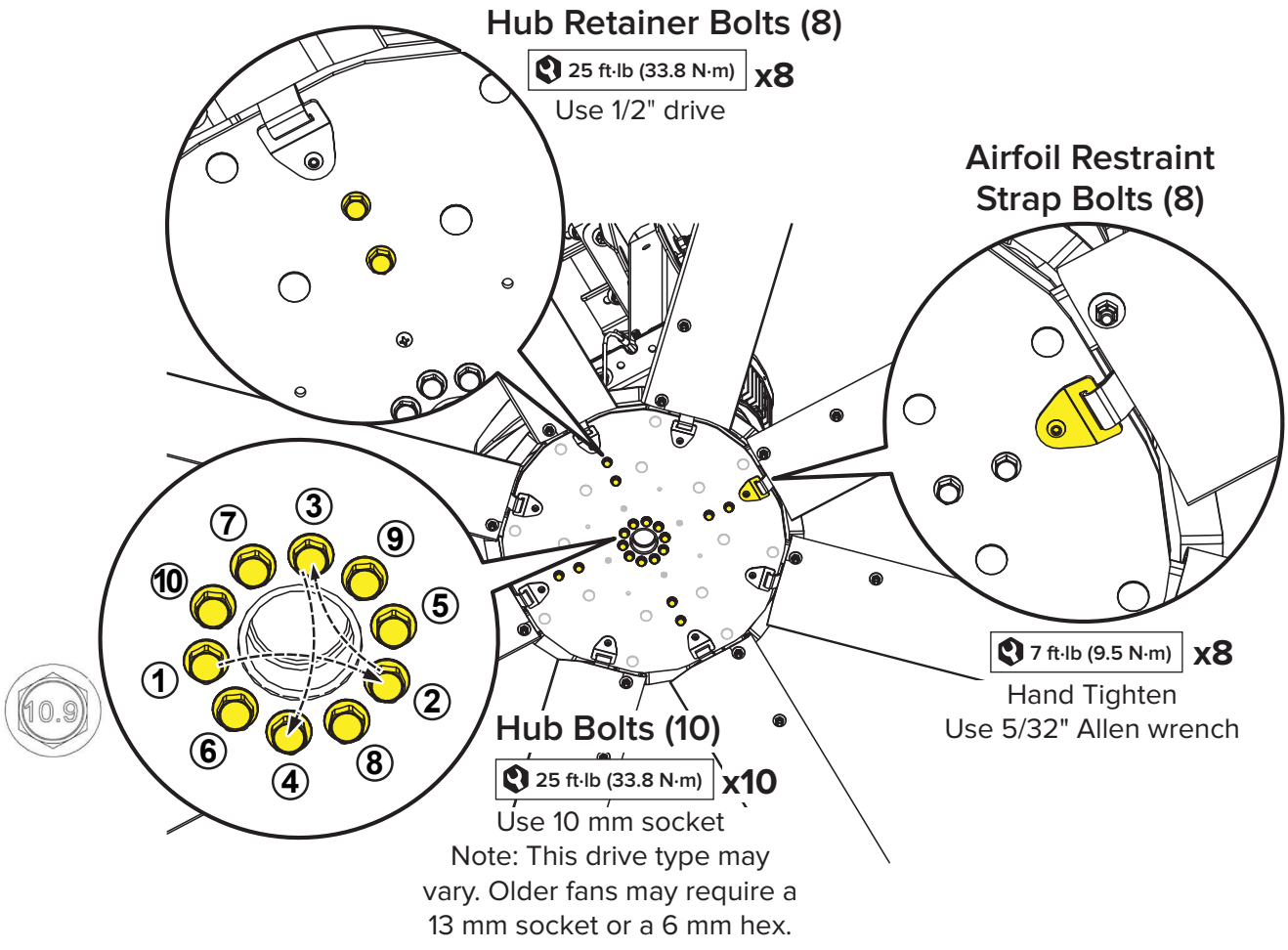


8. Inspect the hub retainers. Ensure there is clearance between the retainers and the hub retention plate and that the retainers are not bending or showing signs of wear. **If any damage is identified, DO NOT return the fan to service until repairs can be made. Contact Big Ass Fans Customer Service**.





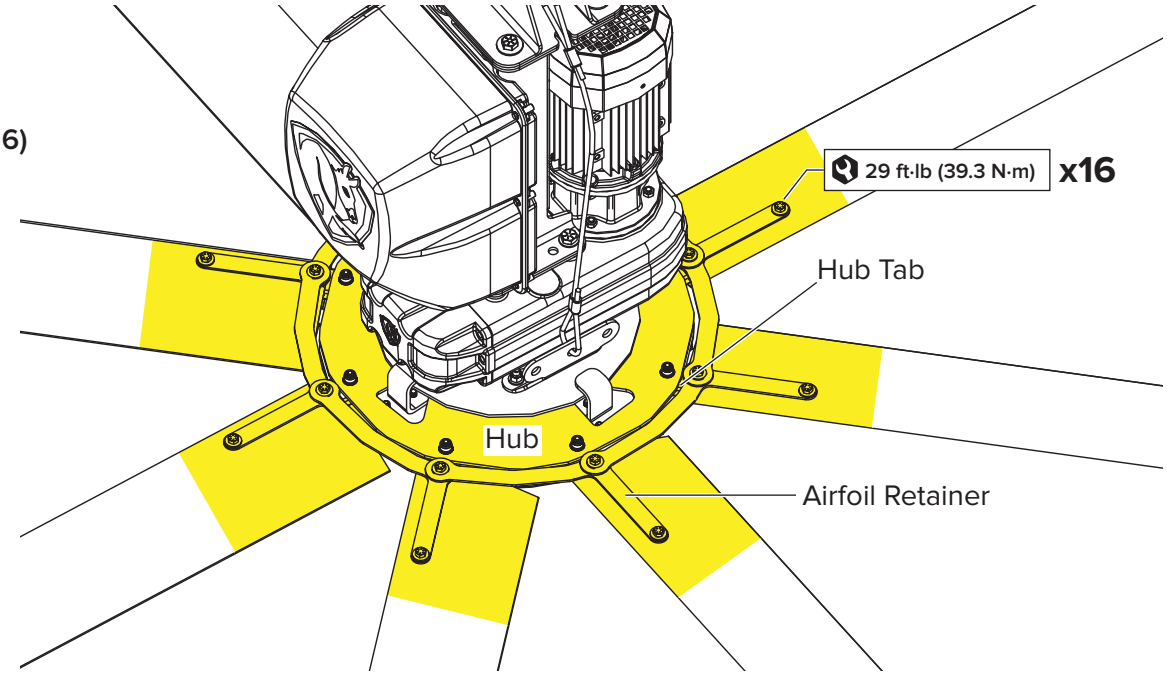
9. Check the ten bolts securing the hub to the gear reducer and the eight bolts securing the hub to the hub retainers. Ensure all hub bolts and hub retainer bolts are present and torqued to **25 ft·lb (33.8 N·m)**. Mark the current head position with a marker after torquing. **If any of the bolts are missing or fail to achieve the target torque specified (rotation is greater than 180°), DO NOT return the fan to service. Contact Big Ass Fans Customer Service**.
10. Check the eight bolts securing the airfoil restraint straps to the hub. Ensure all airfoil restraint strap bolts are present and hand tightened to **7 ft·lb (9.5 N·m)**.



11. Inspect the hub, hub tabs, airfoil retainers, and airfoils (especially the areas of the airfoils near the hub) for signs of damage or cracks. **If any damage or cracks are identified, DO NOT return the fan to service until repairs can be made. Contact Big Ass Fans Customer Service**.
12. Check the hardware securing the airfoils to the hub tabs. Ensure all 16 bolts are present and torqued to **29 ft·lb (39.3 N·m)**.



Grade 8 Bolts (16)



13. Ensure the hardware securing the winglets (x8) to the airfoils is present and securely tightened.
14. Inspect the whole fan for signs of corrosion, discoloration, pitting, or flaking of metal.
15. Reinstall the fan's light (if applicable). Refer to the light installation guide linked to at the end of these instructions if needed. Restore power to fan. Turn on fan, change speeds, and monitor for noise. Motor drive electrical and gear mesh noise is normal during speed changes and constant speed operation. Grinding and/or other loud mechanical noises are not common. **If these types of noises are noted, immediately stop the fan and contact Big Ass Fans Customer Service**.

General inspection

- ☐ Verify proper fan rotation. The fan should be rotating counterclockwise when viewed from the floor.
- ☐ Dust the airfoils, motor, and motor housing. If desired, use a gentle cleaner or degreasing agent to polish the airfoils. Do *not* use Clorox® or other chlorine-based cleaners. This could result in the release of toxic/fatal fumes.
- ☐ Observe the motion of the fan during operation. The fan should not wobble or gyrate. If any wobble is noticed, ensure the mounting structure is rigid enough to support the fan. If guy wires were used, make sure they are sufficiently taut. If guy wires were not used, installing them is recommended. Contact Big Ass Fans Customer Service if wobbling persists.
- ☐ Check the fan's clearances to the ceiling, walls, and obstructions. Refer to the diagram on the following page.

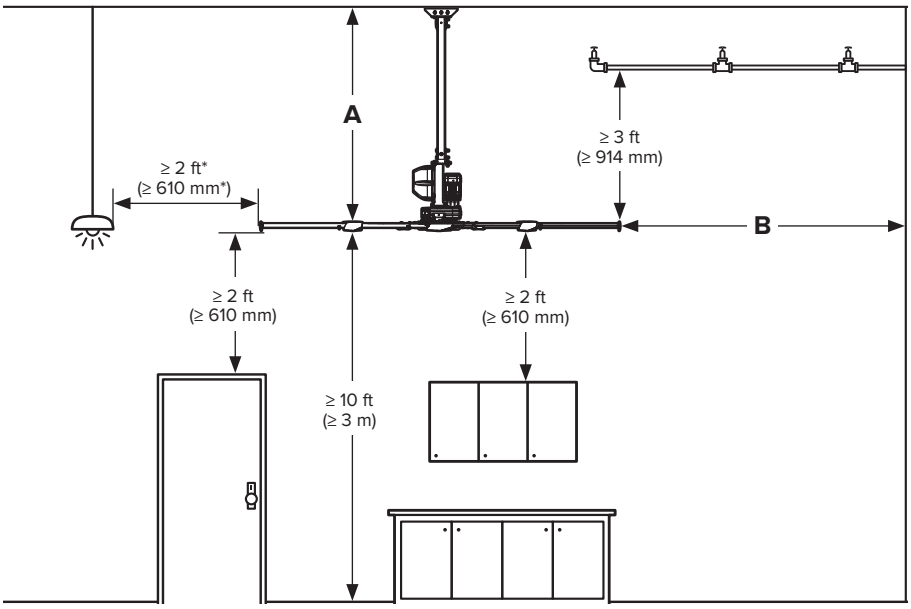
For questions or help with maintenance, call Big Ass Fans Customer Service at 1-877-BIG-FANS.

Light installation guide

Refer to the Powerfoil LED Installation Guide for information on installing the fan light.

www.bigassfans.com/docs/accessories/powerfoil-led-install-guide.pdf

Clearances



For the minimum clearance to combustibles, see the manufacturer's requirements.

Powerfoil® Winglets

Fan Diameter	Distance from Ceiling (A)**	Distance from Wall (B)***
12 ft (3.7 m)	≥ 5 ft (≥ 1.5 m)	≥ 6 ft (≥ 1.8 m)
14 ft (4.3 m)	≥ 5 ft (≥ 1.5 m)	≥ 7 ft (≥ 2.1 m)
16 ft (4.9 m)	≥ 6 ft (≥ 1.8 m)	≥ 8 ft (≥ 2.4 m)
18 ft (5.5 m)	≥ 6 ft (≥ 1.8 m)	≥ 9 ft (≥ 2.7 m)
20 ft (6.1 m)	≥ 7 ft (≥ 2.1 m)	≥ 10 ft (≥ 3.0 m)
24 ft (7.3 m)	≥ 7 ft (≥ 2.1 m)	≥ 12 ft (≥ 3.7 m)
30 ft. (9.1 m)****	≥ 10 ft (≥ 3.0 m)	≥ 15 ft (≥ 4.6 m)

PowerfoilPlus Winglets

Fan Diameter	Distance from Ceiling (A)**	Distance from Wall (B)***
14 ft (4.3 m)	≥ 6 ft (≥ 1.8 m)	≥ 7 ft (≥ 2.1 m)
16 ft (4.9 m)	≥ 6 ft (≥ 1.8 m)	≥ 8 ft (≥ 2.4 m)
18 ft (5.5 m)	≥ 7 ft (≥ 2.1 m)	≥ 9 ft (≥ 2.7 m)
20 ft (6.1 m)	≥ 7 ft (≥ 2.1 m)	≥ 10 ft (≥ 3.0 m)
22 ft (6.7 m)	≥ 8 ft (≥ 2.4 m)	≥ 11 ft (≥ 3.4 m)
24 ft (7.3 m)	≥ 8 ft (≥ 2.4 m)	≥ 12 ft (≥ 3.7 m)

*When possible, lights should be level with the fan's airfoils. We recommend turning lights off if located above the fan's rotating airfoils.
**The distance from the ceiling should be measured from the top of the winglets to the ceiling.
***The distance from the wall should be measured from the outer edge of the winglets to the wall.
****The 30 ft (9.1 m) diameter option is NOT available for any buildings with an existing sprinkler system (including an ESFR system) or where such a system may be installed, in accordance with applicable NFPA standards.

ANNUAL MAINTENANCE CHECKLIST

Fan Model:

Serial #:

Location:

Date	Initials

Fan Model:

Serial #:

Location:

Date	Initials

Fan Model:

Serial #:

Location:

Date	Initials

CONTACT US

Talk to a Big Ass Fan Expert. Call us at one of the numbers below or visit www.bigassfans.com

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bigassfans.com

Manufacturing and Warranty

You are responsible for providing and paying for shipping when returning a product to Big Ass Fans for the purpose of recycling under the WEEE directive.

Manufacturer
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Lexington, KY 40511
USA

Warranty and WEEE Returns
2201 Jaggie Fox Way
Lexington, KY 40511
USA

Manufacturing Site
2251 Innovation Drive
Lexington, KY 40511
USA

BIG ASS FANS®

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