



# ProMaker

## Boom Profile Creator

Web-based interface

## Operator Manual

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## Section 1: Setup

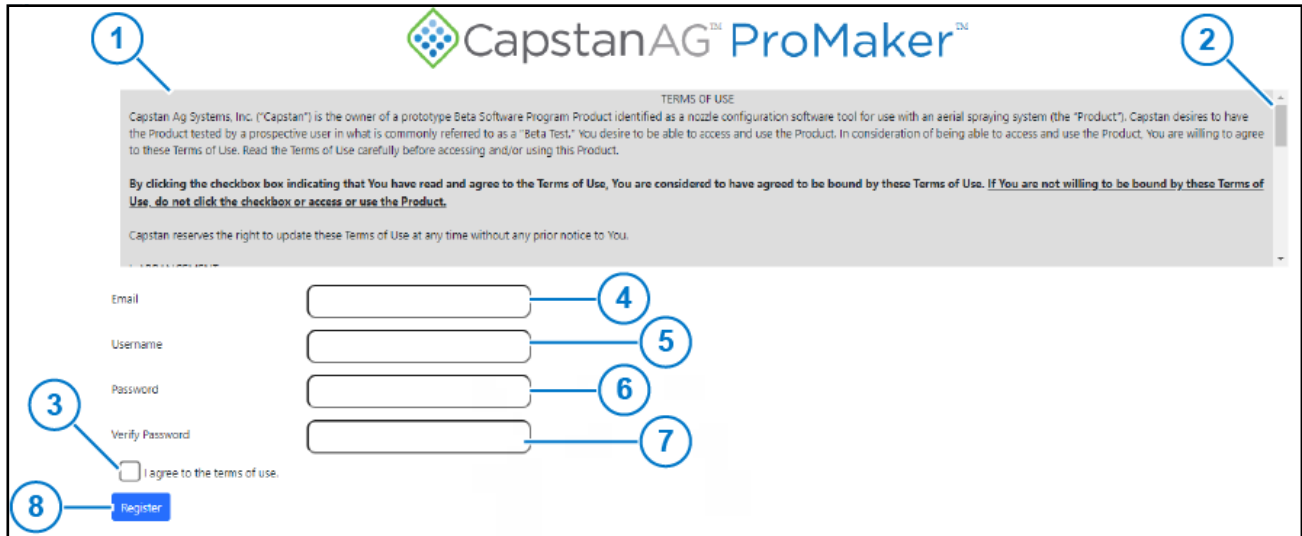
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### Topics:

- [Set up a ProMaker Account](#)
- [Main ProMaker Web Page Explanation](#)

## Set up a ProMaker Account

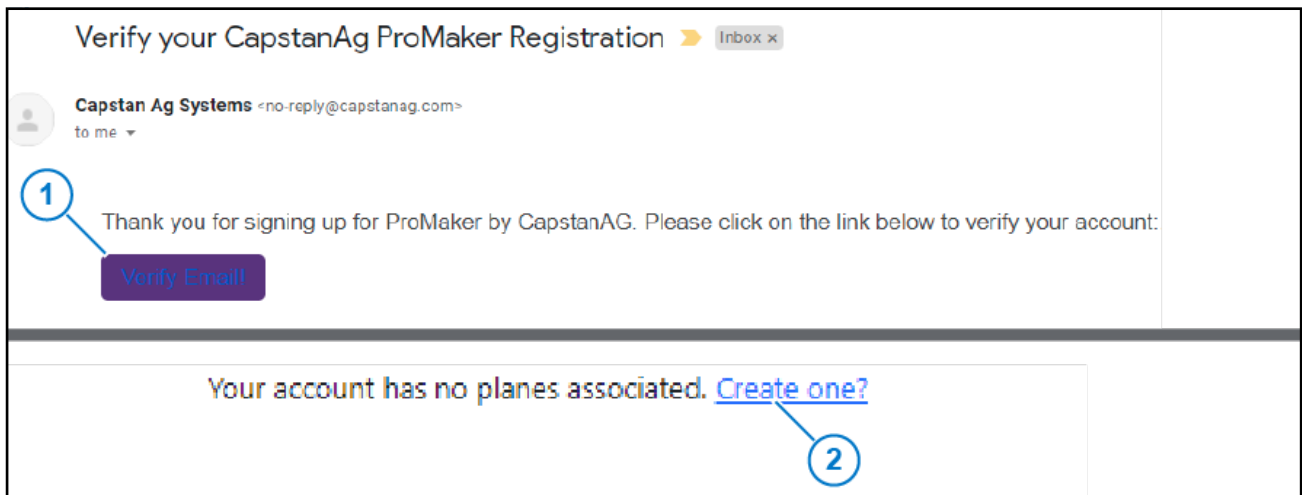
1. Visit <https://promaker.capstanair.com>.



**Figure 1: Sign Up Page**

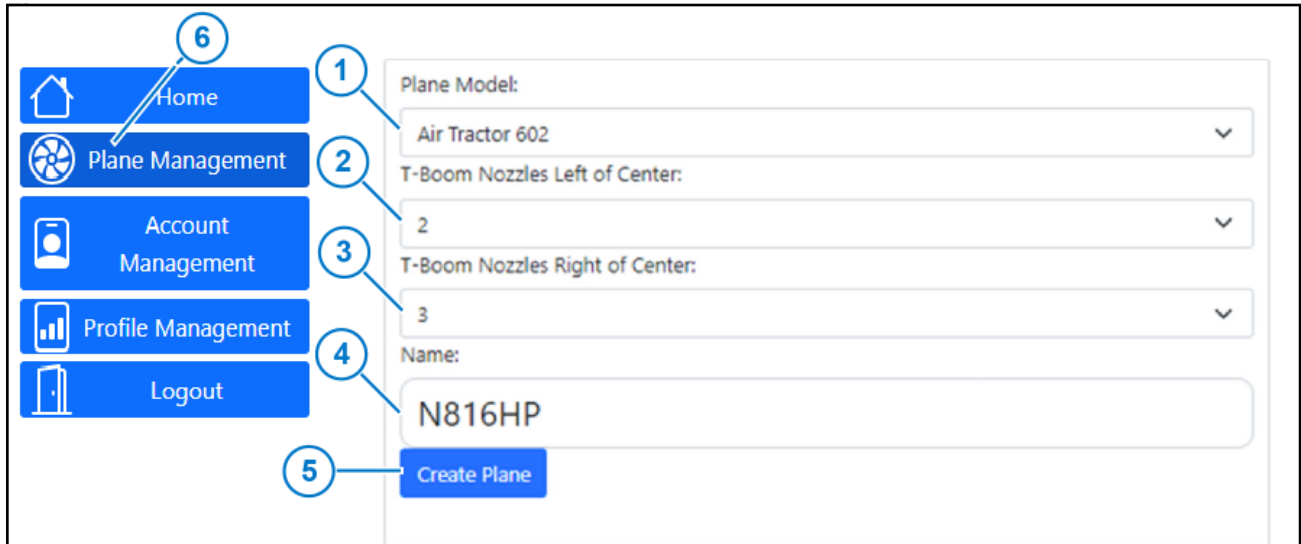
2. Read the **TERMS OF USE** (Figure 1, Item 1).
3. Use the slider bar (Figure 1, Item 2) to scroll through all of the information.
4. After you have read and understand the Terms of Use, put a checkmark in the box (Figure 1, Item 3) next to I agree to the terms of use.
5. Enter your email address (Figure 1, Item 4).
6. Enter a username (Figure 1, Item 5).
7. Enter a password (Figure 1, Item 6).
8. Verify the password (Figure 1, Item 7).
9. Select Register (Figure 1, Item 8)

A verification email is sent to the email address you provided.



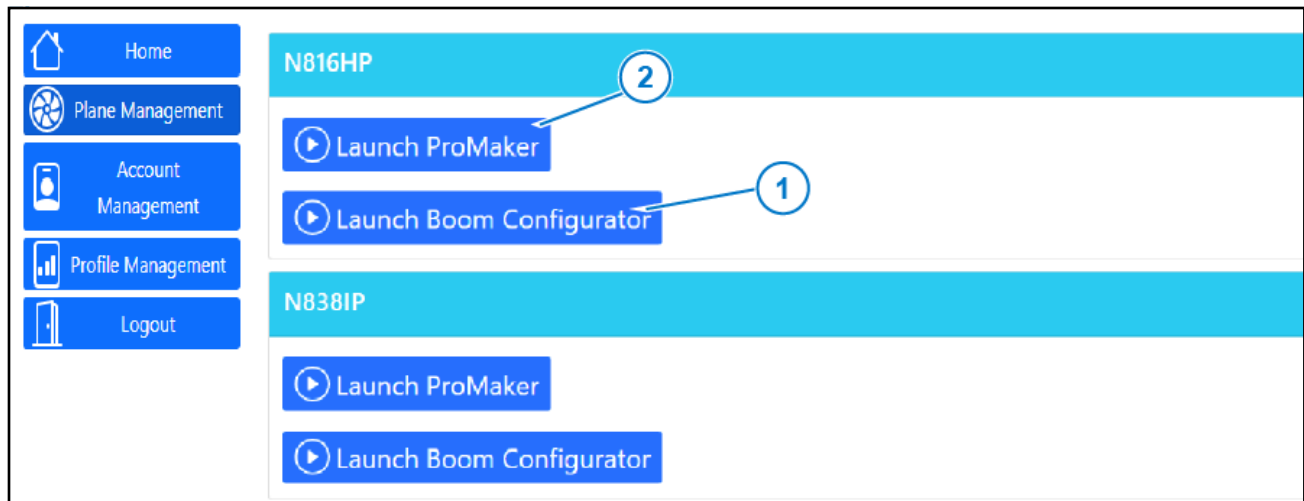
**Figure 2: Verify Email**

10. Go to your email and open the verification email.
11. Click Verify Email (Figure 2, Item 1) verify your account information.  
You will taken to the homepage.  
The first time you log in, your account will have no planes associated with your account.
12. Select Create one? (Figure 2, Item 2) to make a plane profile.



**Figure 3: Create Plane**

13. Select the box (Figure 3, Item 1) below Plane Model.
14. Select your plane model from the list.
15. Select the box (Figure 3, Item 2) below T-Boom Nozzles Left of Center.
16. Select the correct value from the list.
17. Select the box (Figure 3, Item 3) below T-Boom Nozzles Right of Center.
18. Select the correct value from the list.
19. Select the box (Figure 3, Item 4) below Name.
20. Enter a name for your plane.
21. Select Create Plane (Figure 3, Item 5).  
More planes can be created to fill out the entire fleet from Plane Management (Figure 3, Item 6) on the sidebar. For more information, refer to Plane Management.



**Figure 4: Home Screen**

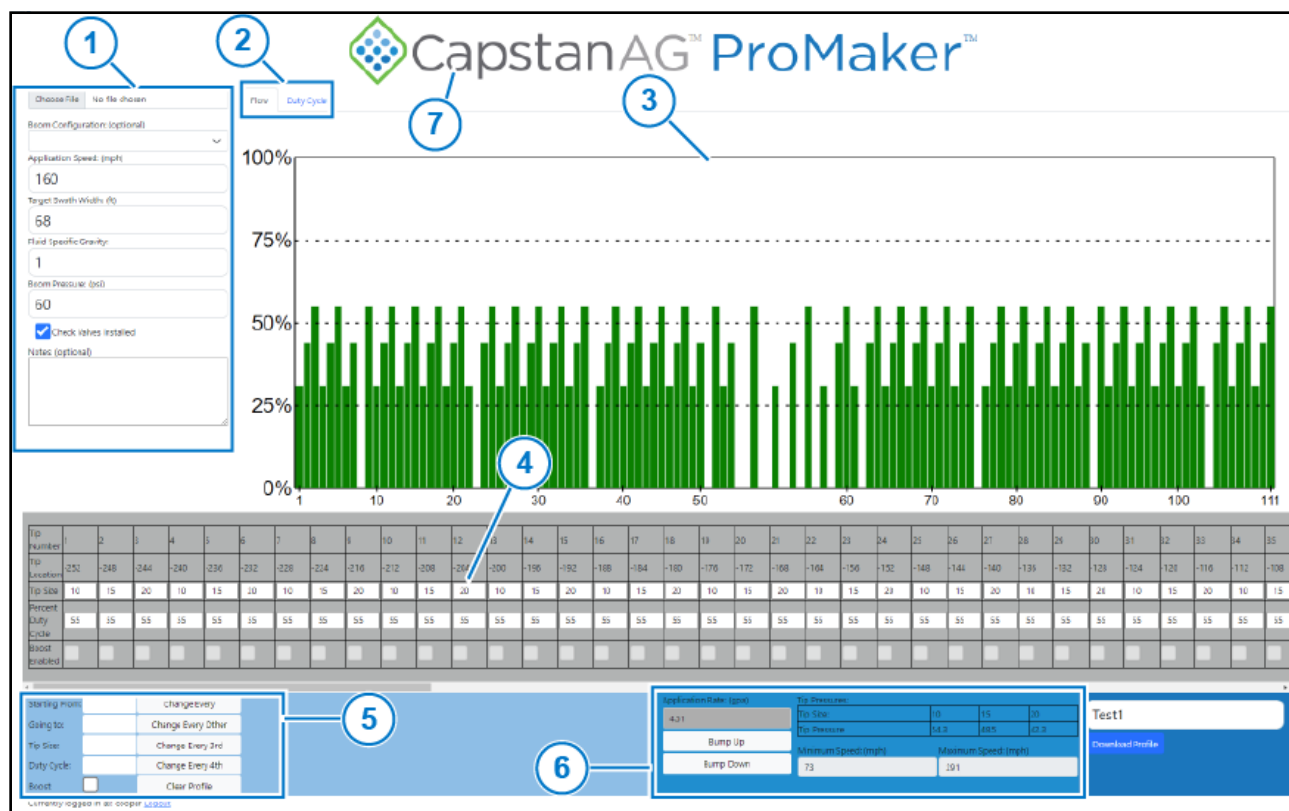
**22.** Select Launch Boom Configurator (Figure 4, Item 1) to make a boom configuration for the plane.

For more information, refer to [Make a Boom Configuration](#).

**23.** Select Launch ProMaker (Figure 4, Item 2) to make a profile.

For more information, refer to [Make a New ProMaker Profile](#).

## Main ProMaker Web Page Explanation



**Figure 5: Main Web Page**

Left side menu (Figure 5, Item 1) includes:

- Choose File—Lets you to find and edit an existing profile.
- Boom Configuration: (optional)—Loads an existing boom configuration, including the tip size, tip type, and color settings. For more information see Make a Boom Configuration.
- Application Speed:—The target ground speed at which the product will be applied.
- Target Swath Width:—The target width of product application.
- Fluid Specific Gravity:—This information will be found on the label for the chemicals you use.
- Boom Pressure:—The target boom pressure for application.
- Check Valves Installed—If the boom uses CapstanAG check valves this box should be checked.

The tabs (Figure 5, Item 2) show two different views of nozzles in the bar graph (Figure 5, Item 3) below.

- Flow—proportional flow
- Duty Cycle—proportional duty cycle

When all nozzles have the same tip size, the bar graphs look the same. At different tip sizes larger tips will show more flow at the same duty cycle.

You can manually enter the tip size and duty cycle for each nozzle using the table in the gray box (Figure 5, Item 4) below the menu and bar graph.

To enter information more quickly use the information in the light blue box (Figure 5, Item 5) on the bottom left side.

After the general profile information has been entered, the bottom middle darker blue box (Figure 5, Item 6) will show the application rate and tip pressures for each configured tip size. Use Bump Up or Bump Down to quickly adjust the target rate. Minimum Speed: and Maximum Speed: boxes are only relevant when using Auto mode. This will be the speed range where the target rate can be achieved within the inputted system parameters.

To return to the Home Screen, click on the CapstanAG logo. (Figure 5, Item 7).

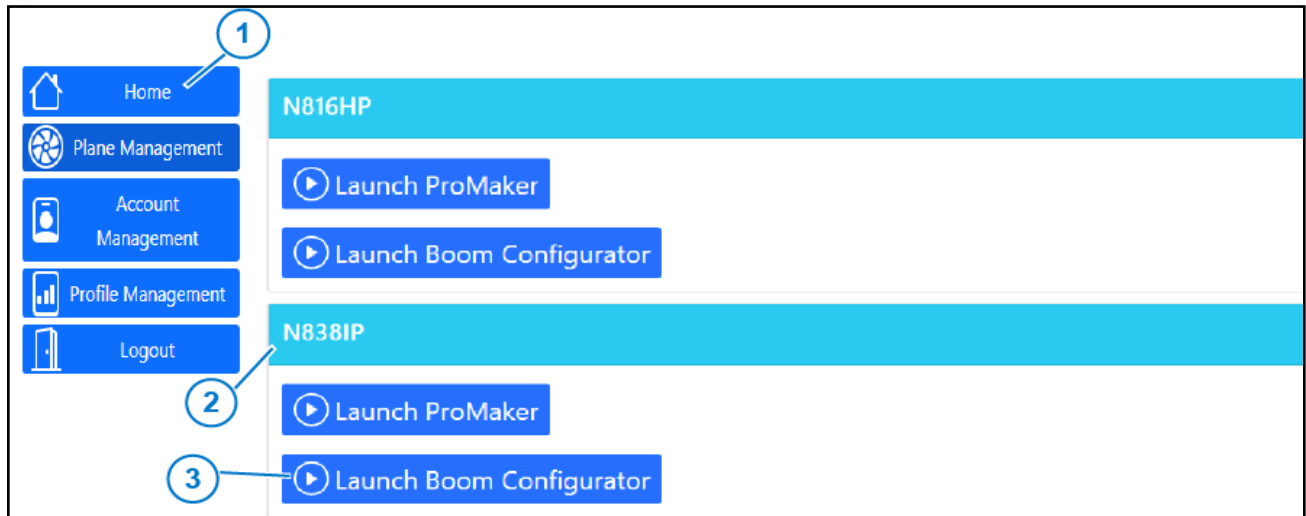
## Section 2: Operation

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### Topics:

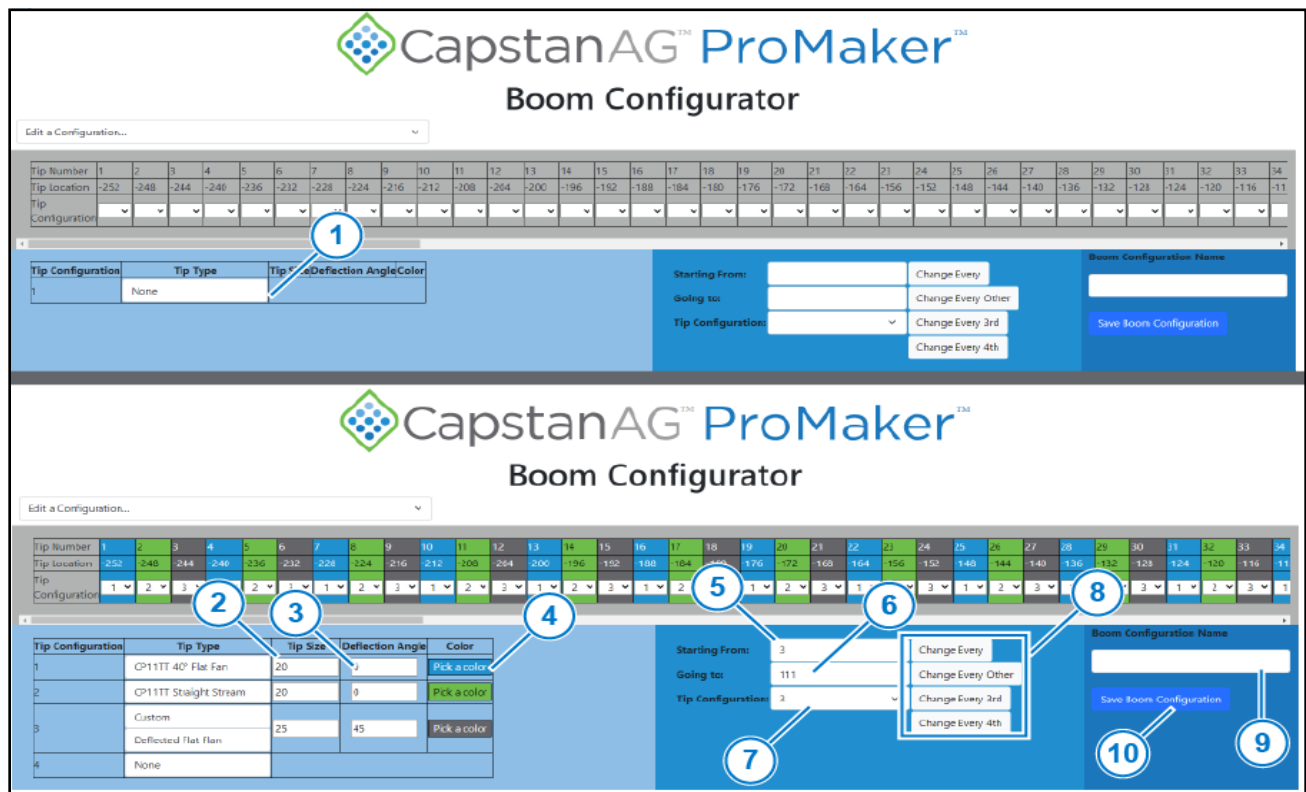
- [Make a Boom Configuration](#)
- [Make a New ProMaker Profile](#)
- [Upload and Change a ProMaker Profile](#)
- [Edit a Boom Configuration](#)
- [Plane Management](#)
- [Account Management](#)
- [Profile Management](#)

## Make a Boom Configuration



**Figure 6: Home Screen**

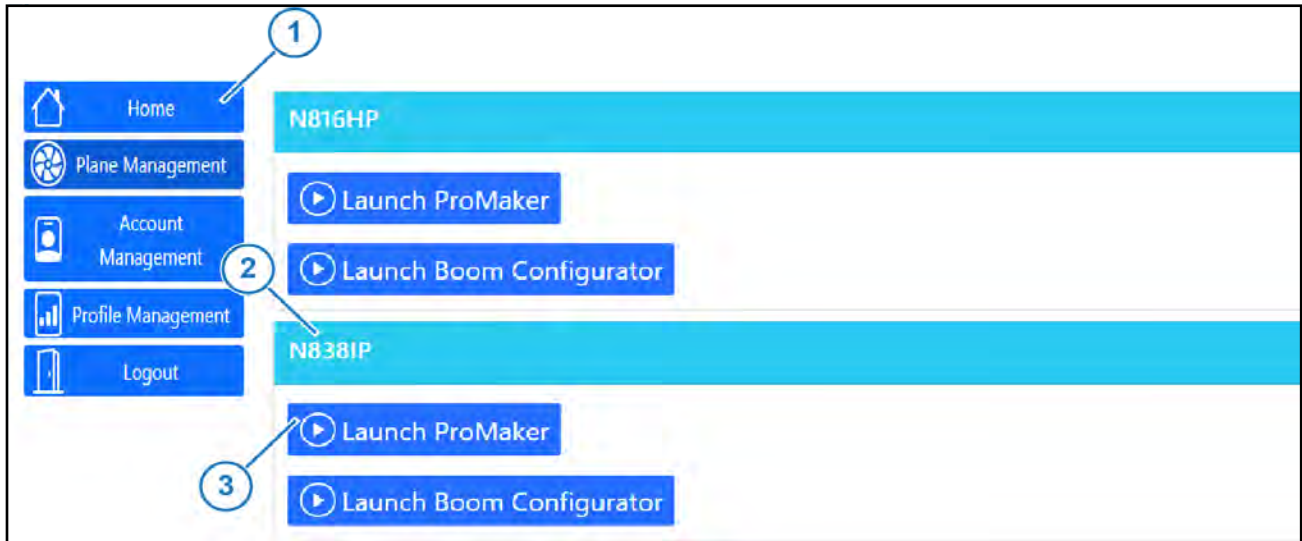
1. Log into your ProMaker account at <https://promaker.capstanair.com> or select Home (Figure 6, Item 1) from the sidebar.  
If you do not have a ProMaker account, refer to [Set up a ProMaker Account](#).
2. In the box (Figure 6, Item 2) below the desired plane, select Launch Boom Configurator (Figure 6, Item 3).



**Figure 7: Boom Configurator**

3. Click on the box (Figure 7, Item 1) below Tip Type.
4. Select the desired tip type from the list.  
Only use custom if the desired tip is not shown on the existing list.
5. Click on the box (Figure 7, Item 2) below Tip Size.
6. Enter the correct type size.
7. Click on the box (Figure 7, Item 3) below Deflection Angle.
8. Enter the correct value.
9. If desired, click on Pick a color (Figure 7, Item 4).
10. Pick the desired color and click anywhere outside the box that shows.
11. Repeat Steps 4 to 12 for each tip type installed on the boom.
12. After the tip configurations are made, assign the tips to the correct location on the boom.
  - a. Click in the box (Figure 7, Item 5) next to Starting From: and enter the starting tip number.
  - b. Click in the box (Figure 7, Item 6) next to Going to: and enter the ending tip number.
  - c. Click in the box (Figure 7, Item 7) next to Tip Configuration: and enter the correct tip configuration list on the left side of the page.
  - d. Select which tips to change from the list (Figure 7, Item 8):
    - Change Every
    - Change Every Other
    - Change Every 3rd
    - Change Every 4th
  - e. Repeat adding the tip configuration information until you have all of the information correct for your profile.  
Tip configurations can also be changed individually using the menu for each tip in the gray box.
13. Click on the Boom Configuration Name box (Figure 7, Item 9) and enter the desired name of the configuration.
14. Click Save Boom Configuration (Figure 7, Item 10).  
You will automatically go back to the Home screen.

## Make a New ProMaker Profile

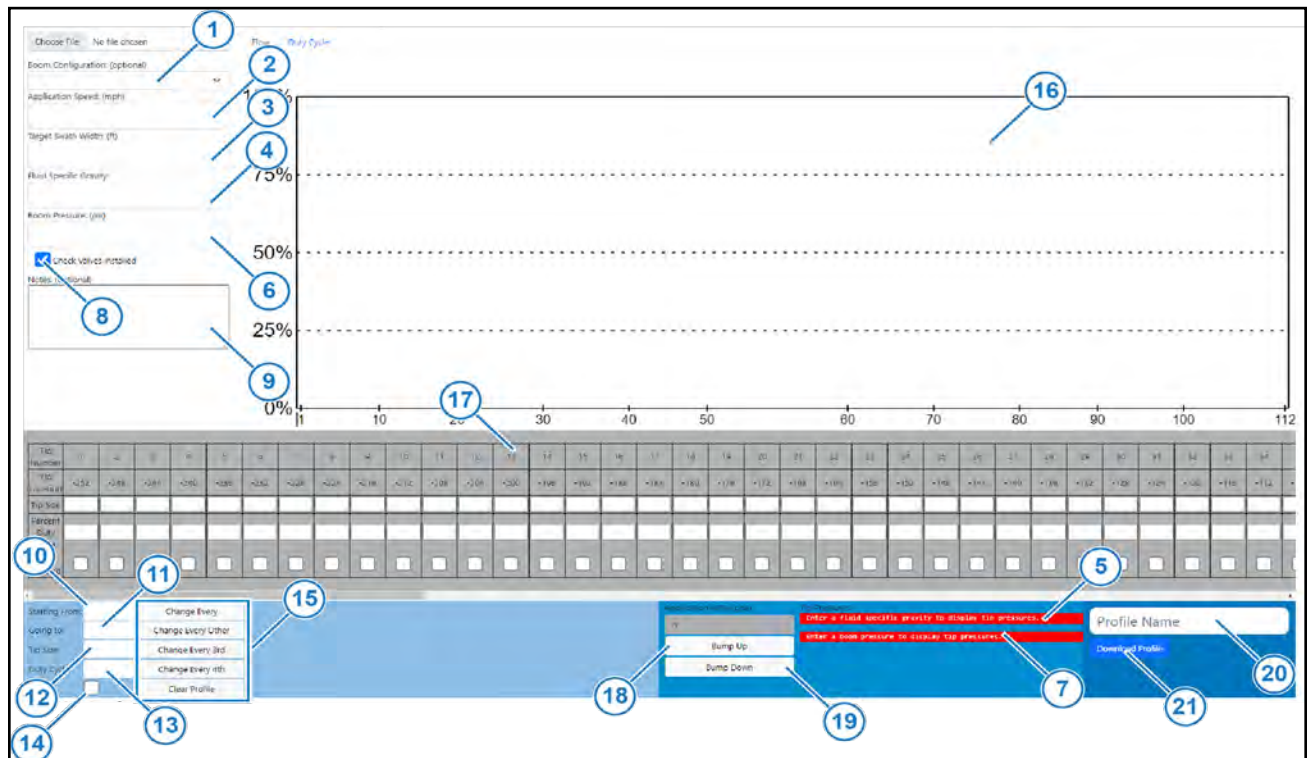


**Figure 8: Home Screen**

1. Log into your ProMaker account at <https://promaker.capstanair.com> or select **Home** (Figure 8, Item 1) from the sidebar.

If you do not have a ProMaker account, refer to [Set up a ProMaker Account](#).

2. In the box (Figure 8, Item 2) below the desired plane, select **Launch ProMaker** (Figure 8, Item 3).



**Figure 9: Main Profile Page**

3. If a Boom Configuration has been built, click on the box below **Boom Configuration: (optional)** (Figure 9, Item 1) and select the desired configuration.
4. Click in the box (Figure 9, Item 2) below **Application Speed:** and enter the target ground speed at which the product will be applied.
5. Click in the box (Figure 9, Item 3) below **Target Swath Width:** and enter the target width of product application.
6. Click in the box (Figure 9, Item 4) below **Fluid Specific Gravity:** and enter the information for the product you will apply.

This information can be found on the label for the chemicals you use. You must enter this value, or a message (Figure 9, Item 5) will show.
7. Click on the box (Figure 9, Item 6) below **Boom Pressure:** and enter the target boom pressure for application.

**Note:** This value is NOT the pressure at the tips.  
You must enter this value, or an error message (Figure 9, Item 7) will display.
8. If the boom uses CapstanAG check valves, make sure to put a check mark in the box (Figure 9, Item 8) next to **Check Valves Installed**.
9. If desired, click in the box (Figure 9, Item 9) below **Notes: (optional)** and enter any additional information you want to have with this profile.

This information will only show in ProMaker and will not show on the CapView display.

10. Enter your tip information:

- a. Click in the box (Figure 9, Item 10) next to **Starting From:** and enter the starting tip number.
- b. Click in the box (Figure 9, Item 11) next to **Going to:** and enter the ending tip number.
- c. Click in the box (Figure 9, Item 12) next to **Tip Size:** and enter the correct tip size.

This box can be left blank to change duty cycle without changing the tip size.
- d. Click on the box (Figure 9, Item 13) next to **Duty Cycle:** and enter the value of the desired duty cycle.

This box can be left blank to change tip size without changing the duty cycle.
- e. If you are using boost, make sure to put a check mark in the box (Figure 9, Item 14) next to **Boost**.

A nozzle can only be boost if its duty cycle is 0.
- f. Select which tips to change from the list (Figure 9, Item 15):
  - Change Every
  - Change Every Other
  - Change Every 3rd
  - Change Every 4th
  - Clear Profile—remove the duty cycle of all valves but does not remove other parameters such as tip size, application speed, swath width, etc.

Hovering over a button will show the changes you are about to make in orange.

Information will be added to the bar graph (Figure 9, Item 16) and the tip information table (Figure 9, Item 17).

- g. Repeat adding the tip size information until you have all of the tip sizes for your profile added.

If using a boom profile, buttons will show to let you change all valves with the same tip size in the range of start to end. When using a boom profile, tip size is disabled as it is configured in the boom profile.

11. To change the application rate, select **Bump Up** (Figure 9, Item 18) or **Bump Down** (Figure 9, Item 19).

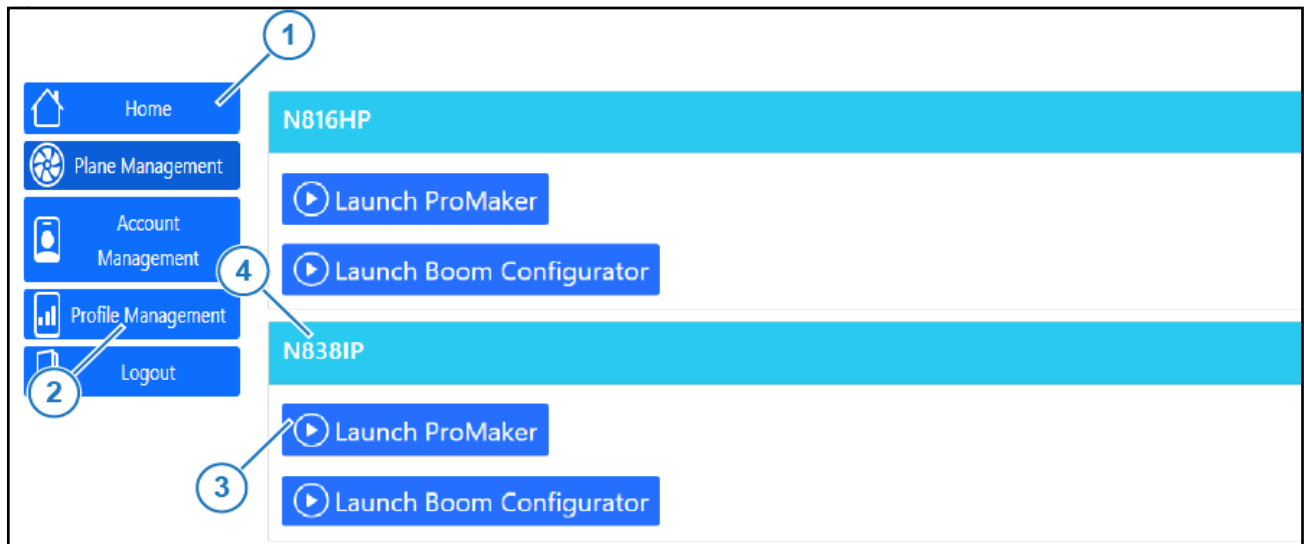
The profile can also be changed by directly editing information in the grey region.

12. Click on the **Profile Name** box (Figure 9, Item 20) and enter the desired name of the profile.

13. Click **Save Profile** (Figure 9, Item 21).

The profile is now ready to upload to the CapView, refer to Upload a Profile to the CapView in the Installation Manual, Pilot Operating Handbook, or the Instructions for Continued Airworthiness.

## Upload and Change a ProMaker Profile



**Figure 10: Home Screen**

1. Log into your ProMaker account at <https://promaker.capstanair.com> or select **Home** (Figure 10, Item 1) from the sidebar.

If you do not have a ProMaker account, refer to [Set up a ProMaker Account](#).

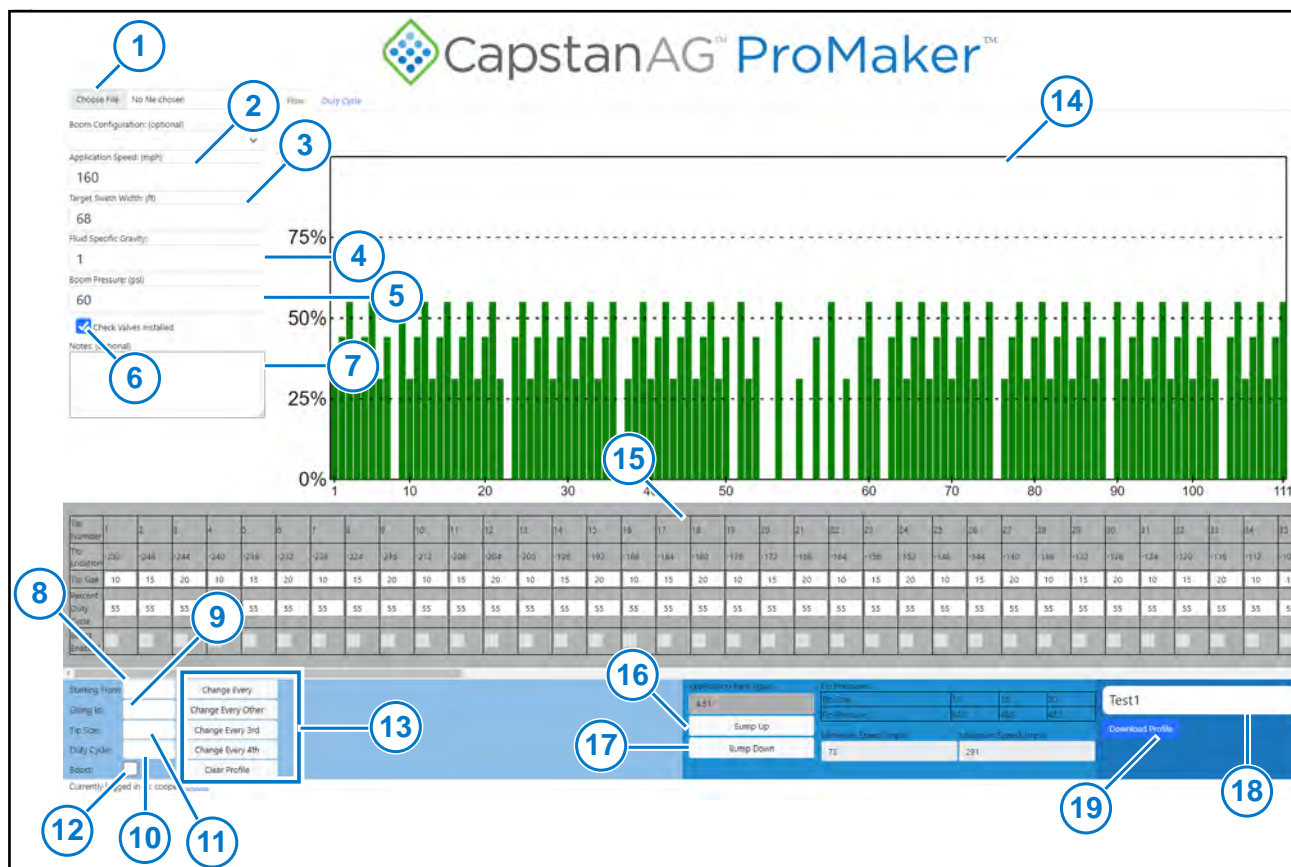
2. To reach the Profile screen, select Profile Management (Figure 10, Item 2.)

The Profile screen can also be reached by selecting **Launch ProMaker** (Figure 10, Item 3) in the box (Figure 10, Item 4) below the desired plane.



**Figure 11: Profile Management Screen**

3. The **Profile Management** screen contains a list of stored profiles, select the **Edit Profile** icon (Figure 11, Item 1) to make changes to the desired profile.



**Figure 12: Change a Profile**

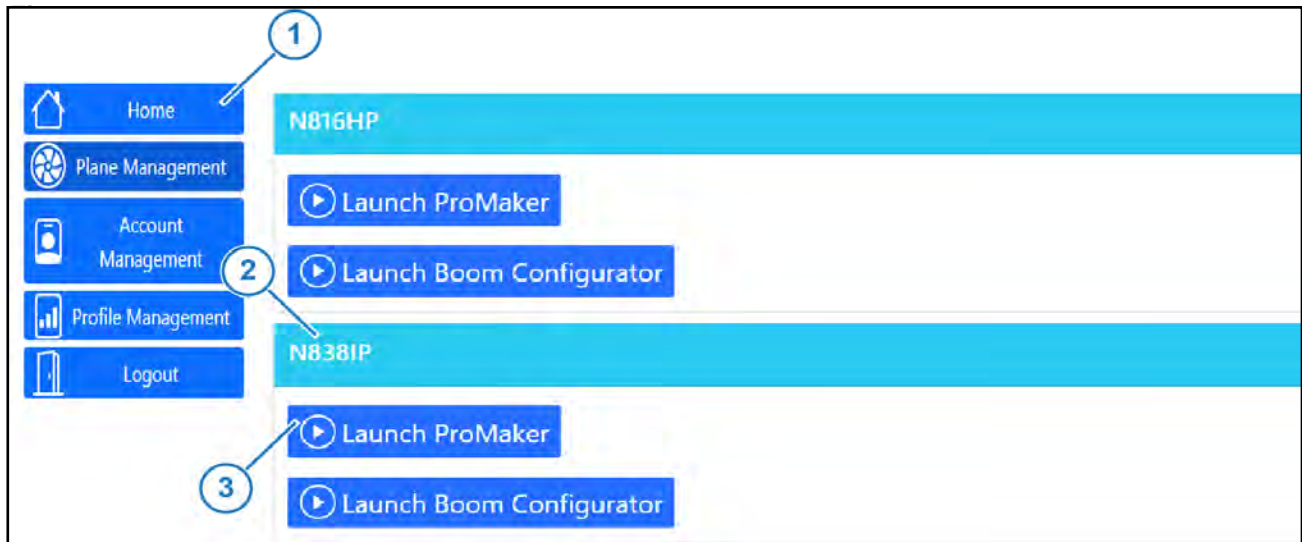
4. Choose a profile to edit.
- If **Launch ProMaker** is selected in Step 2, select **Choose File** (Figure 12, Item 1), navigate to the file location of the desired profile, and select it.
  - If the Profile screen is opened from the **Profile Management** screen in Step 3, the selected profile will already be displayed.

5. To change the application speed, click in the box (Figure 12, Item 2) below **Application Speed:** and enter the target ground speed at which the product will be applied.
6. To change the swath width, click in the box (Figure 12, Item 3) below **Target Swath Width:** and enter the target width of product application.
7. To change the fluid specific gravity, click in the box (Figure 12, Item 4) below **Fluid Specific Gravity:** and enter the information for the product you will apply.
8. To change the boom pressure, click on the box (Figure 12, Item 5) below **Boom Pressure:** and enter the target boom pressure for application.

**Note:** This value is NOT the pressure at the tips.

9. If the boom uses CapstanAG check valves, make sure to put a check mark in the box (Figure 12, Item 6) next to **Check Valves Installed**.
10. If desired, click in the box (Figure 12, Item 7) below **Notes: (optional)** and enter any additional information you want to have with this profile.
11. Add the tip size information to the profile:
  - a. Click in the box (Figure 12, Item 8) next to Starting From: and enter the starting tip number.
  - b. Click in the box (Figure 12, Item 9) next to Going to: and enter the ending tip number.
  - c. Click in the box (Figure 12, Item 10) next to Tip Size: and enter the correct tip size.
  - d. Click on the box (Figure 12, Item 11) next to Duty Cycle: and enter the value of the desired duty cycle.
  - e. If you are using boost, make sure to put a check mark in the box (Figure 12, Item 12) next to Boost.
  - f. Select which tips to change from the list (Figure 12, Item 13):
    - Change Every
    - Change Every Other
    - Change Every 3rd
    - Change Every 4th
    - Clear ProfileInformation will be added to the bar graph (Figure 11, Item 14) and the tip information table (Figure 12, Item 15).
  - g. Repeat adding the tip size information until you have all of the tip sizes for your profile added.
12. To change the application rate, select **Bump Up** (Figure 12, Item 16) or **Bump Down** (Figure 12, Item 17).
13. Click on the **Profile Name** box (Figure 12, Item 18) and enter the desired name of the profile.
14. Click **Save Profile** (Figure 12, Item 19).

## Edit a Boom Configuration

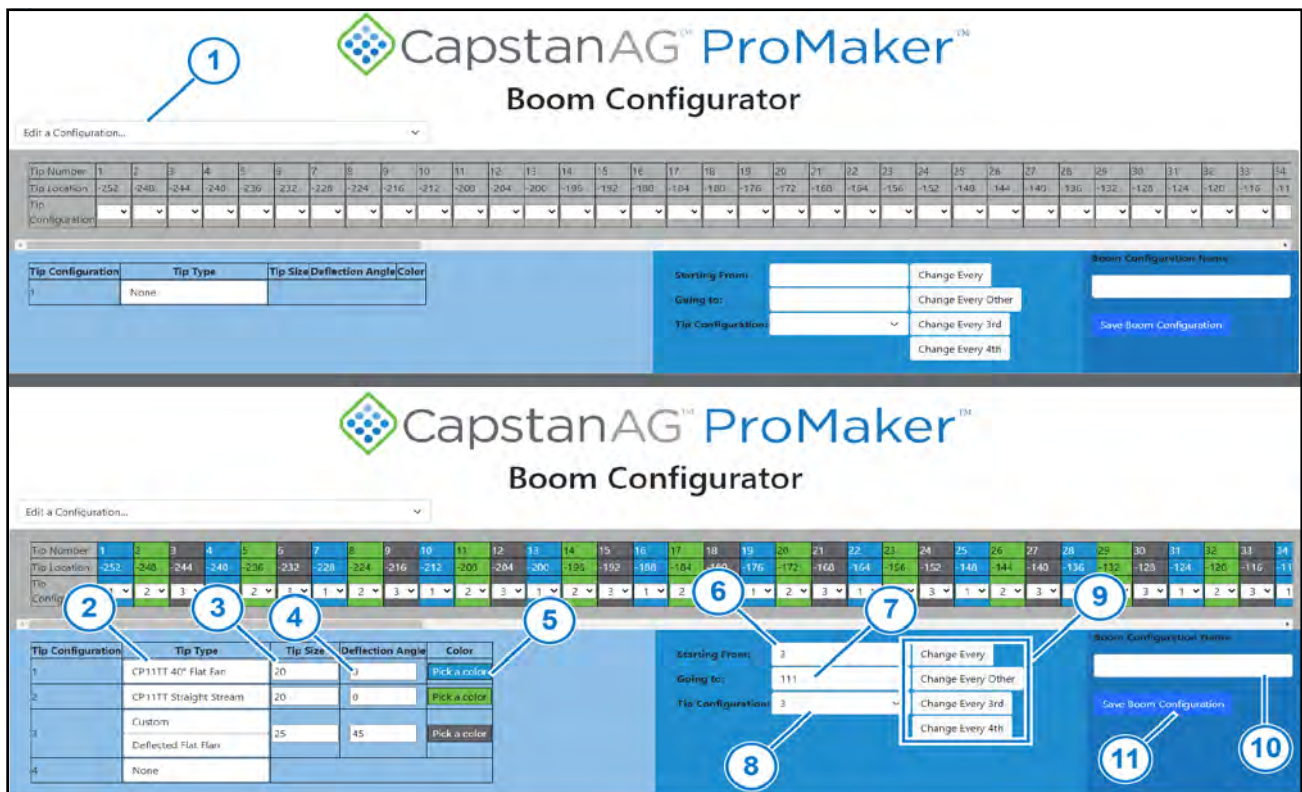


**Figure 13: Home Screen**

1. Log into your ProMaker account at <https://promaker.capstanair.com> or select **Home** (Figure 13, Item 1) from the sidebar.

If you do not have a ProMaker account, refer to [Set up a ProMaker Account](#).

2. In the box (Figure 13, Item 2) below the desired plane, select **Launch ProMaker** (Figure 13, Item 3).



**Figure 14: Boom Configurator**

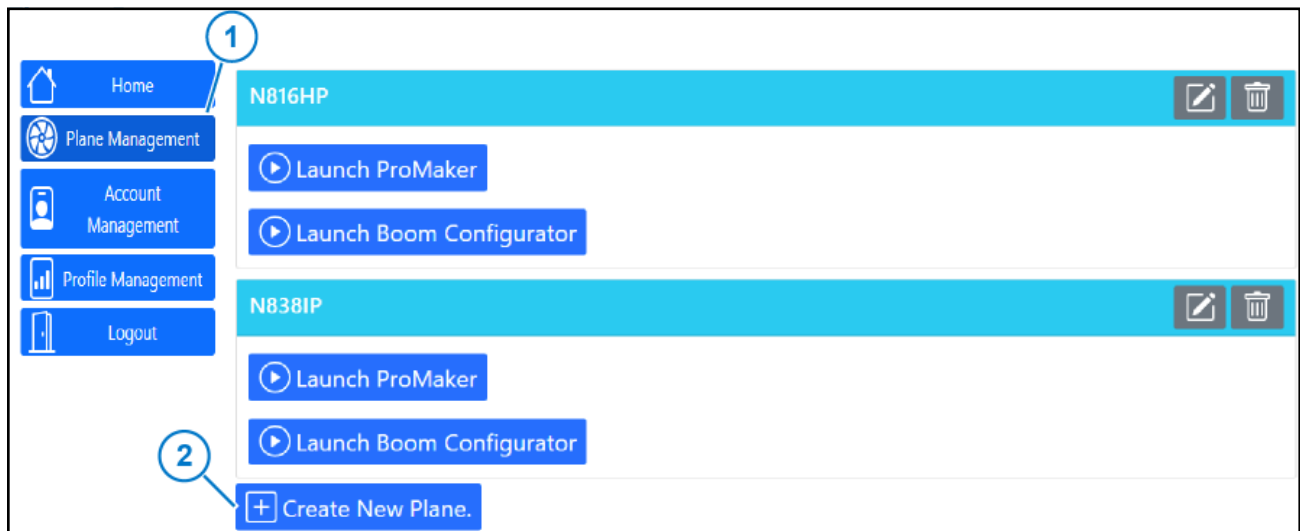
3. Select the **Edit a Configuration** box (Figure 14, Item 1).
4. Select the desired boom configuration from the list.
5. Click on the box (Figure 14, Item 2) below **Tip Type**.
6. Select the desired tip type from the list.  
Only use custom if the desired tip is not shown on the existing list.
7. Click on the box (Figure 14, Item 3) below **Tip Size**.
8. Enter the correct type size.
9. Click on the box (Figure 14, Item 4) below **Deflection Angle**.
10. Enter the correct value.
11. If desired, click on **Pick a color** (Figure 14, Item 5).
12. Pick the desired color and click anywhere outside the box that shows.
13. Repeat Steps 5 to 12 for each tip type installed on the boom.
14. After the tip configurations are made, assign the tips to the correct location on the boom.
  - a. Click in the box (Figure 14, Item 6) next to **Starting From:** and enter the starting tip number.
  - b. Click in the box (Figure 14, Item 7) next to **Going to:** and enter the ending tip number.
  - c. Click in the box (Figure 14, Item 8) next to **Tip Configuration:** and enter the correct tip configuration list on the left side of the page.
  - d. Select which tips to change from the list (Figure 14, Item 9):
    - Change Every
    - Change Every Other
    - Change Every 3rd
    - Change Every 4th
  - e. Repeat adding the tip configuration information until you have all of the information correct for your profile.  
Tip configurations can also be changed individually using the menu for each tip in the gray box.
15. Click on the **Boom Configuration Name** box (Figure 14, Item 10) and enter the desired name of the configuration.
16. Click **Save Boom Configuration** (Figure 14, Item 11).
17. You will automatically go back to the Home screen.

## Plane Management

As many planes as you need can be created by selecting Plane Management on the sidebar.

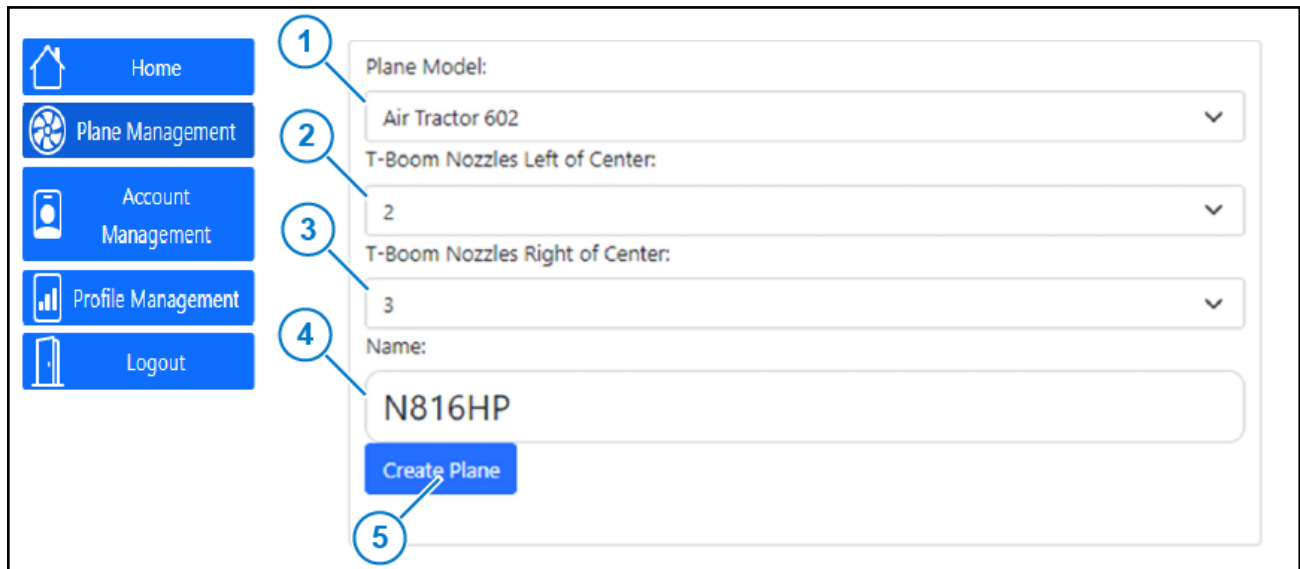
You can also edit or delete a plane from this screen.

### Create a New Plane



**Figure 15: Plane Management**

1. Select **Plane Management** (Figure 15, Item 1) from the sidebar.
2. Select **Create New Plane** (Figure 15, Item 2).

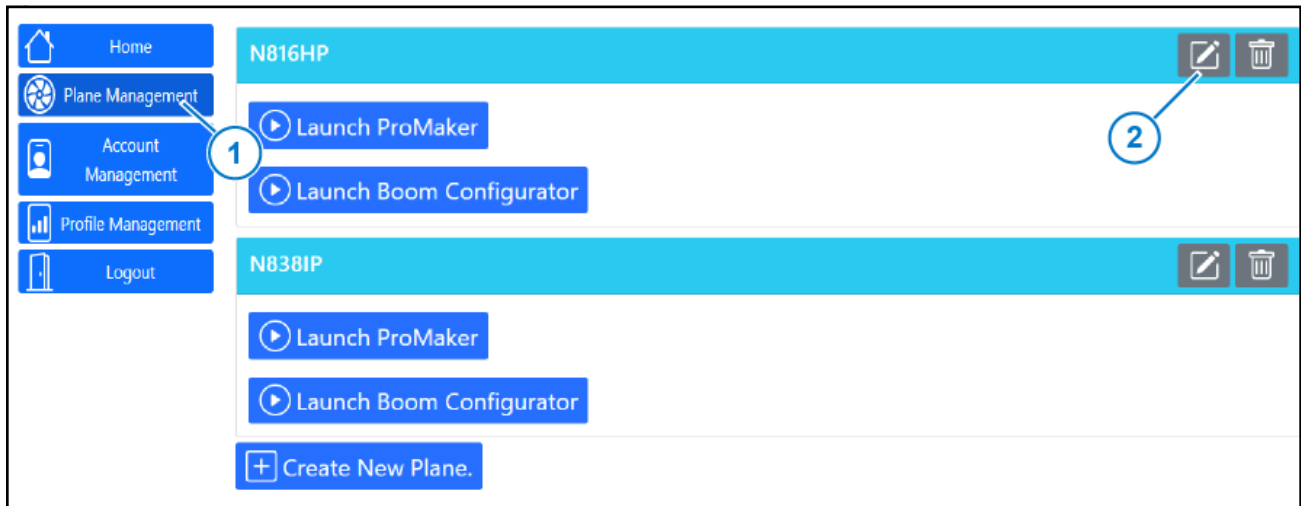


**Figure 16: New Plane Screen**

3. Select the box (Figure 16, Item 1) below **Plane Model**.
4. Select your plane model from the list.
5. Select the box (Figure 16, Item 2) below **T-Boom Nozzles Left of Center**.

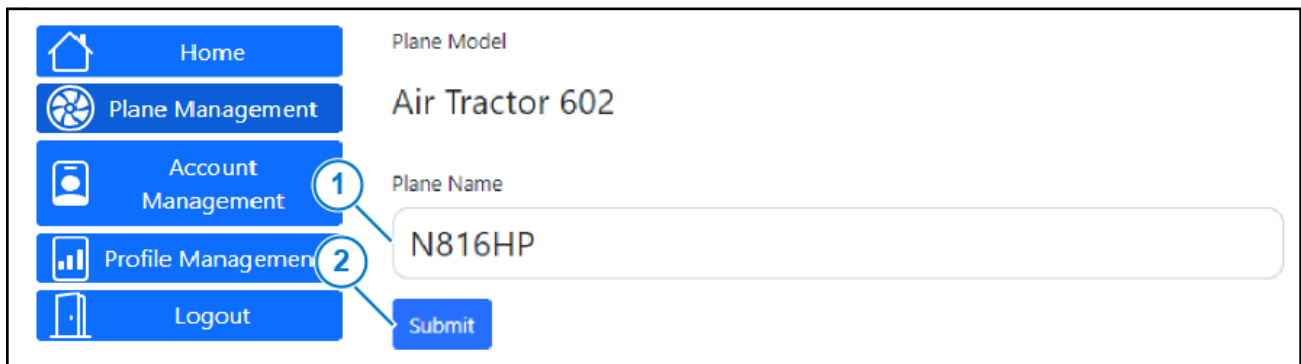
6. Select the correct value from the list.
7. Select the box (Figure 16, Item 3) below **T-Boom Nozzles Right of Center**.
8. Select the correct value from the list.
9. Select the box (Figure 16, Item 4) below **Name**.
10. Enter a name for your plane.
11. Select **Create Plane** (Figure 16, Item 5).

## Edit a Plane



**Figure 17: Plane Management**

1. Select Plane Management (Figure 17, Item 1) from the sidebar.
2. Select the Edit icon (Figure 17, Item 2) next to the desired plane.



**Figure 18: Plane Management**

3. Select the box (Figure 18, Item 1) below Plane Name.
4. Enter the desired plane name.  
Only the plane name can be changed.
5. Select Submit (Figure 18, Item 2).

Delete a Plane

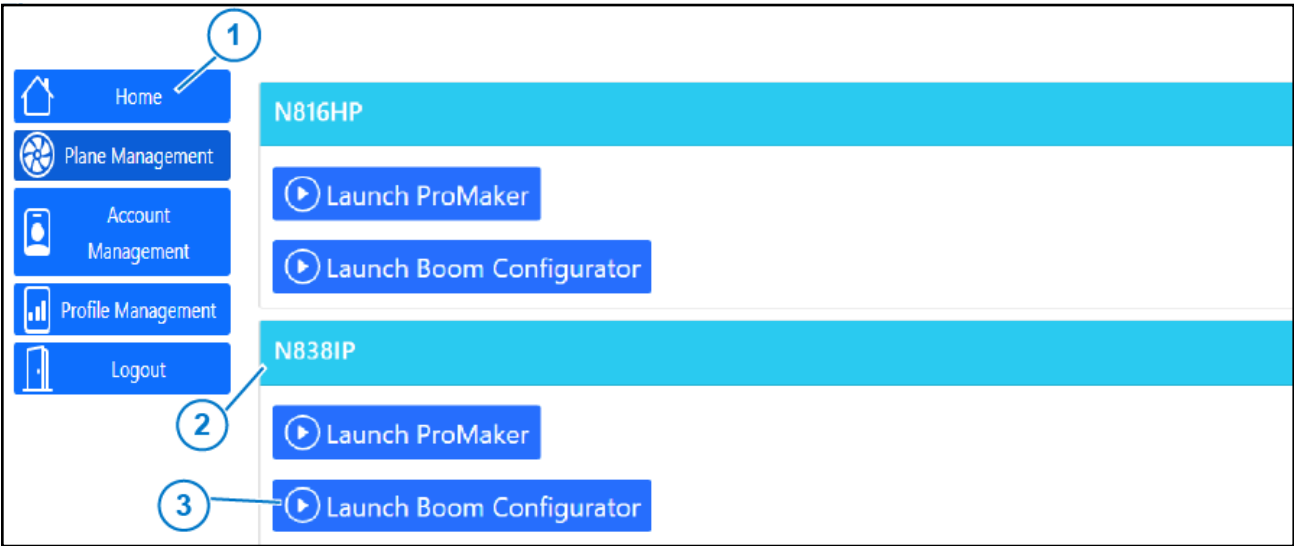


Figure 19: Plane Management

- 1. Select Plane Management (Figure 19, Item 1) from the sidebar.
- 2. Select the Delete icon (Figure 19, Item 2) next to the desired plane.

Account Management

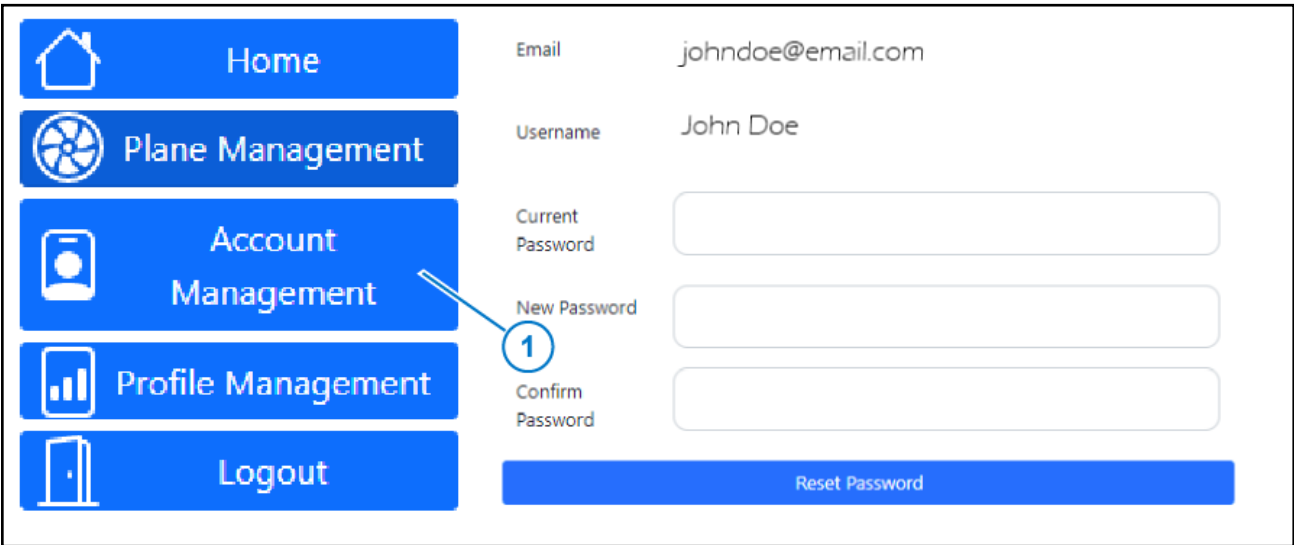
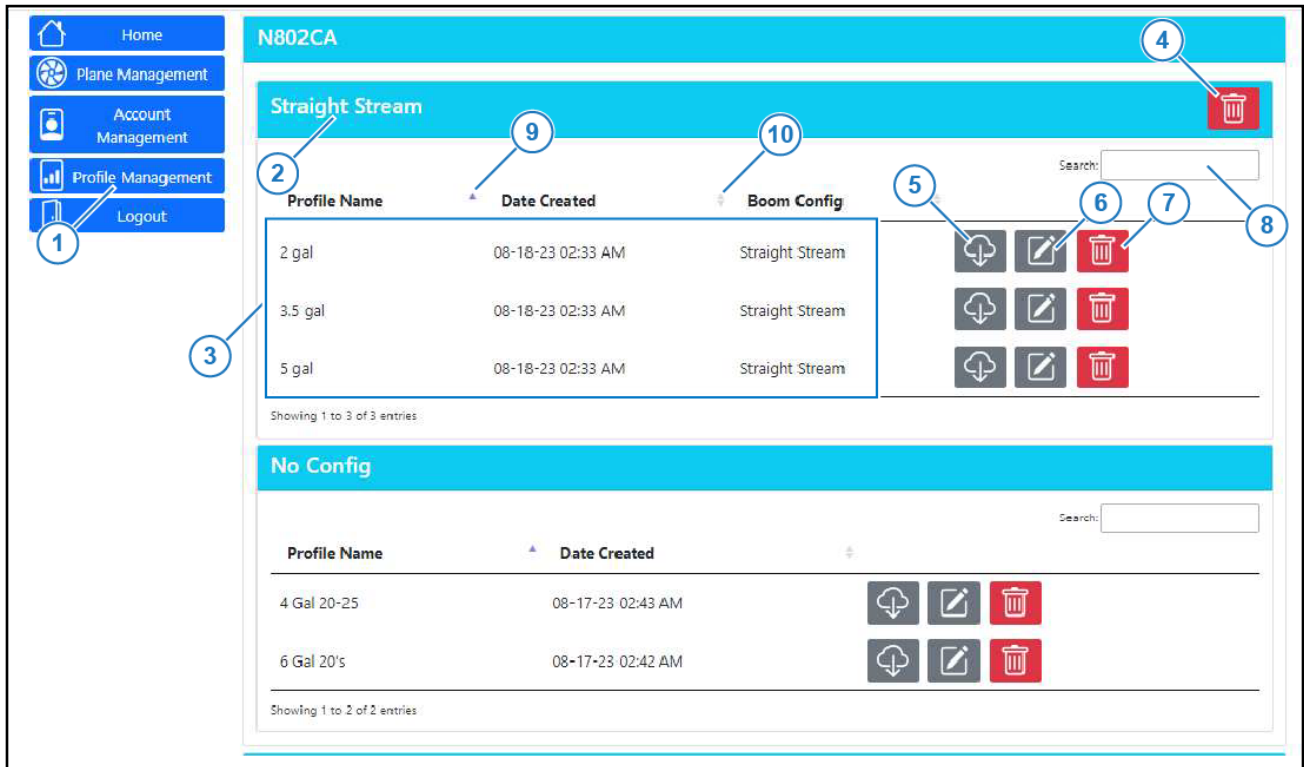


Figure 20: Plane Management

Select Account Management (Figure 20, Item 1) from the sidebar to manage your account information and change your password.

## Profile Management



The screenshot shows the 'Profile Management' interface for 'N802CA'. On the left is a sidebar with navigation links: Home, Plane Management, Account Management, Profile Management (highlighted), and Logout. The main content area is divided into two sections: 'Straight Stream' and 'No Config'. Each section contains a table of profiles with columns for Profile Name, Date Created, and Boom Config. Action icons (Download, Edit, Delete) are present for each profile. Numbered callouts indicate key features: 1. Profile Management sidebar link; 2. Profile Name column header; 3. Profile Name table data; 4. Delete icon; 5. Download icon; 6. Edit icon; 7. Delete icon; 8. Search box; 9. Sort arrow for Profile Name; 10. Sort arrow for Date Created.

Profile Name	Date Created	Boom Config
2 gal	08-18-23 02:33 AM	Straight Stream
3.5 gal	08-18-23 02:33 AM	Straight Stream
5 gal	08-18-23 02:33 AM	Straight Stream

Showing 1 to 3 of 3 entries

Profile Name	Date Created	Boom Config
4 Gal 20-25	08-17-23 02:43 AM	
6 Gal 20's	08-17-23 02:42 AM	

Showing 1 to 2 of 2 entries

**Figure 21: Profile Management**

1. Select **Profile Management** (Figure 21, Item 1) from the sidebar.
2. Any configurations that are built (Figure 21, Item 2) will show above the profile name (Figure 21, Item 3).
3. To delete a configuration, select the **Delete** icon (Figure 21, Item 4).  
**Note:** If **Delete** is selected, all of the profiles that were built with that configuration will also be deleted.
4. To download a profile, select the **Download** icon (Figure 21, Item 5).
5. To edit a profile, select the **Edit** icon (Figure 21, Item 6).
6. To delete a profile, select the **Delete** icon (Figure 21, Item 7).
7. To search for a specific profile, select the box (Figure 21, Item 8) next to **Search**.
8. Select the arrow (Figure 21, Item 9) to the right of **Profile Name** to organize the profiles alphabetically.
9. Select the arrow (Figure 21, Item 10) to the right of **Date Created** to organize the profiles by date.

## Section 3: Troubleshooting

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### Topics:

- [Troubleshooting Charts](#)

## Troubleshooting Charts

**Table 1: Troubleshooting**

Problem	Correction
Valves have been configured with duty cycles but the graph is blank	Verify the application speed, swath width, specific gravity, and boom pressure are appropriate values. If they are not appropriate values, the graph will be blank.
Unable to horizontally scroll to more valves	Verify that you can use the scrollbar at the bottom of the gray box and not the scroll bar at the bottom of the page.
Cannot enable boost on a nozzle	Verify the duty cycle for that nozzle is 0.
Cannot change the tip size for a nozzle	Make sure that you are not using a boom configuration or make a boom configuration with the desired changes.

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A decorative graphic on the left side of the page, consisting of a thick green curved line and several blue circles of different sizes, some of which are partially cut off by the edge of the page.

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