Borescope Image Repository User Guide

Savvy's **borescope image repository** is a web-based service providing users a place to upload, store, label, archive and compare digital borescope images. It is available to anyone with a Savvy account, including free accounts. SavvyAnalysis, SavvyQA and SavvyMx subscribers can obtain expert interpretations of their uploaded borescope images by the Savvy analyst team.

Borescope images are stored in the borescope image repository as **image sets**. An image set is a collection of images obtained during a cylinder borescope inspection of a piston aircraft engine performed in accordance with <u>the Savvy inspection protocol</u> (11 views per cylinder.) We recommend that you view Savvy's <u>cylinder borescope inspection training video</u> to learn more about the technique for capturing these images.

An image set can be in one of three states:

- 1. In Progress The image set has been created but analysis has not been requested yet.
- 2. Analysis Requested
- 3. Report Sent The image set can no longer be edited or new images uploaded.

There are four steps in using Savvy's borescope image repository:

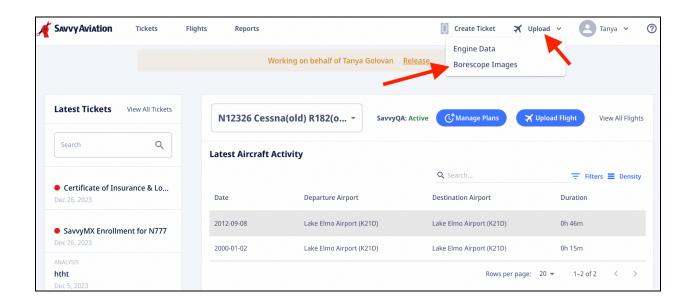
- 1. Create and name a borescope image set into which images can be uploaded.
- 2. Upload images into the image set.
- 3. Tag images to the correct cylinder and view. (If the image files have been named in accordance with Savvy's recommended file-naming convention, tagging is automatic.)
- 4. Request analysis (Available to SavvyAnalysis, SavvyQA and SavvyMx clients.)

NOTE: If you do not already have an account on the Savvy platform, you will need to create one in order to gain access to the borescope image repository. You can sign up for a free account here.

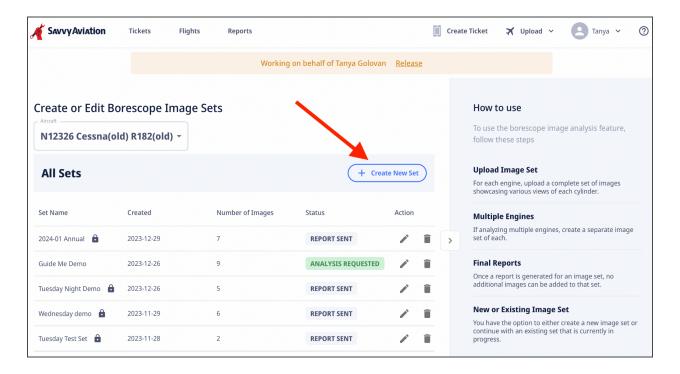
Creating a Borescope Image Set

Start at your client dashboard at https://apps.savvyaviation.com. If more than one aircraft is in your account, select one aircraft from the aircraft selector field.

From the "Upload" menu at the top of the page, select "Borescope Images."



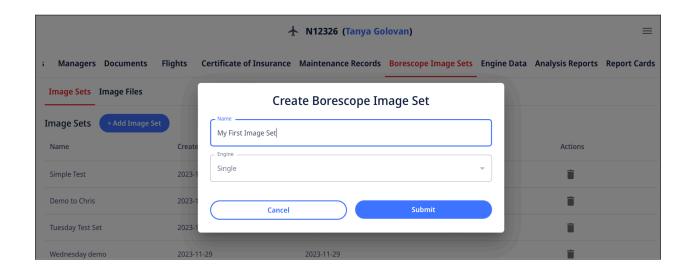
The "Borescope Image Sets" page will appear. This page lists all image sets you have previously created. You create a new image set by clicking the "+ Create New Set" button.



Choose a name for the new image set.

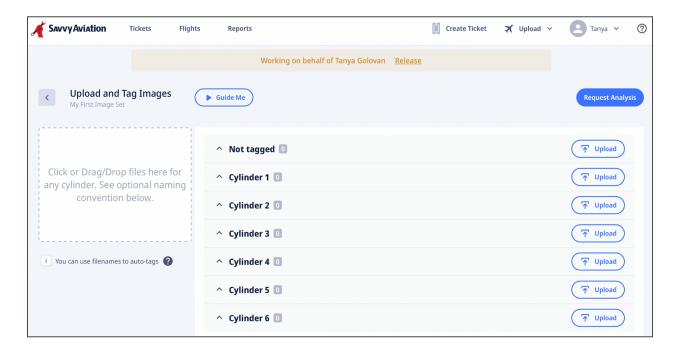
If your aircraft is twin-engine, you will create a separate image set for each engine. The "Engine" field is a dropdown menu where you can choose the engine position for eacht image set.

Click "Submit".



Uploading Images

This brings you to the "Upload and Tag Images" page.



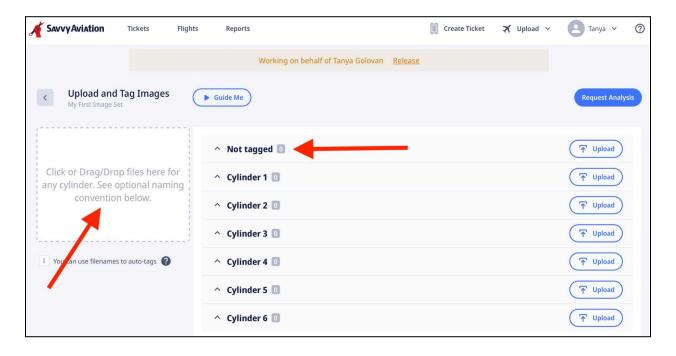
There is more than one way to upload your borescope images.

The easiest, quickest and most error-free way to upload images is to name the image files using Savvy's borescope naming convention as described in Savvy's Cylinder Borescope Inspection
Checklist. Upload the files named according to this convention by using the "Click or Drag/Drop" pane on the left side of the page. The images will be tagged to the correct cylinder numbers and views automatically during upload.

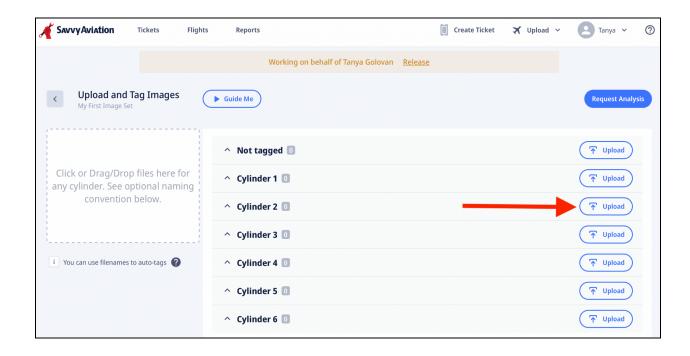
There are three other ways to upload your image files should you choose not to name them according to Savvy's file naming convention.

First, you can get step-by-step real-time guidance on uploading and tagging your images by clicking the "Guide Me" button and simply following the directions.

Second, you can upload one or more files from your computer into the "Click or Drag/Drop" pane on the left side of the page, as shown below. Files that you upload in this way will be listed in the "Not tagged" bucket on the right side of the page, and will have to be manually tagged to the correct cylinder and view later.



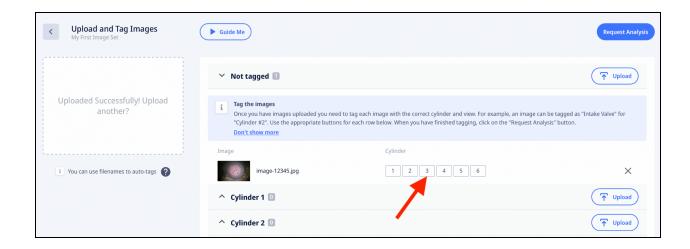
Third, you can upload images to specific cylinder buckets by selecting the "Upload" button to the right of each listed cylinder number, as shown below. Using this method will automatically tag the uploaded images to the correct cylinder number, but you'll still need to tag them to the correct view as described in the next section.



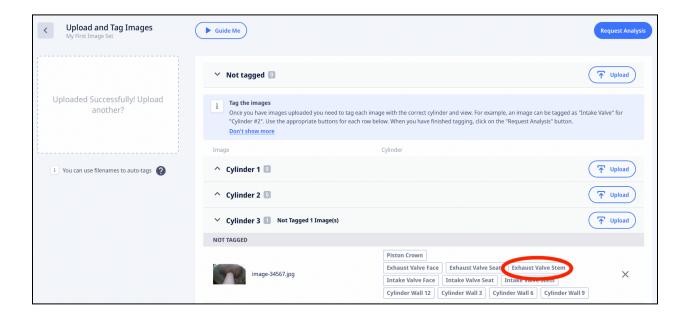
Tagging Images to the Correct Cylinder and View

"Tagging" means associating each uploaded image with the correct cylinder number and the correct view. The "view" identifies the part of the cylinder being imaged, for example "exhaust valve stem" or "piston crown." Savvy's borescope image repository supports 12 different views. (If the image files were named in accordance with Savvy's file-naming convention, then tagging was automatic.)

Let's look at an example. Below we show the "Upload and Tag Images" page after I uploaded an image using the upload pane on the left side of the page. The image was uploaded to the "Untagged" bucket. A helpful message is displayed telling us that we need to tag the image. We click the box for cylinder 3.

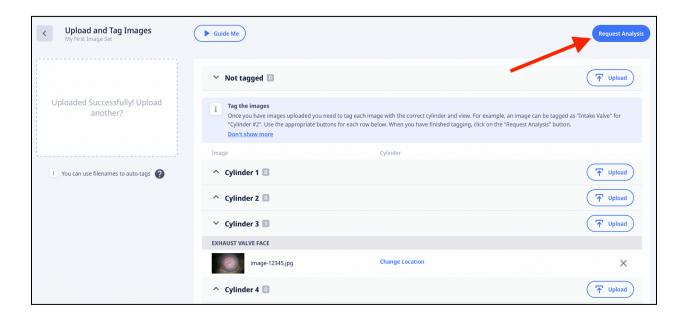


As shown below, the image has been moved to the "Cylinder 3" bucket, and you are presented with a choice of views to complete the tagging of the image. You will select "Exhaust Valve Stem."

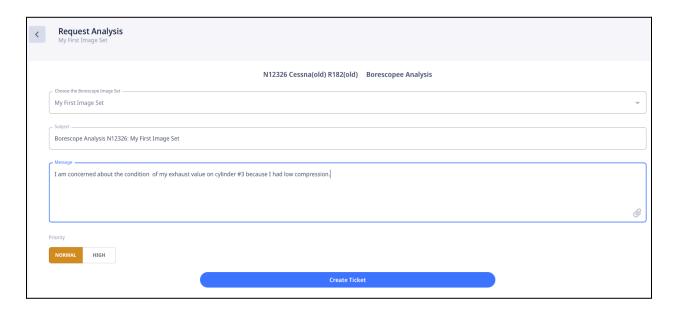


Requesting Analysis

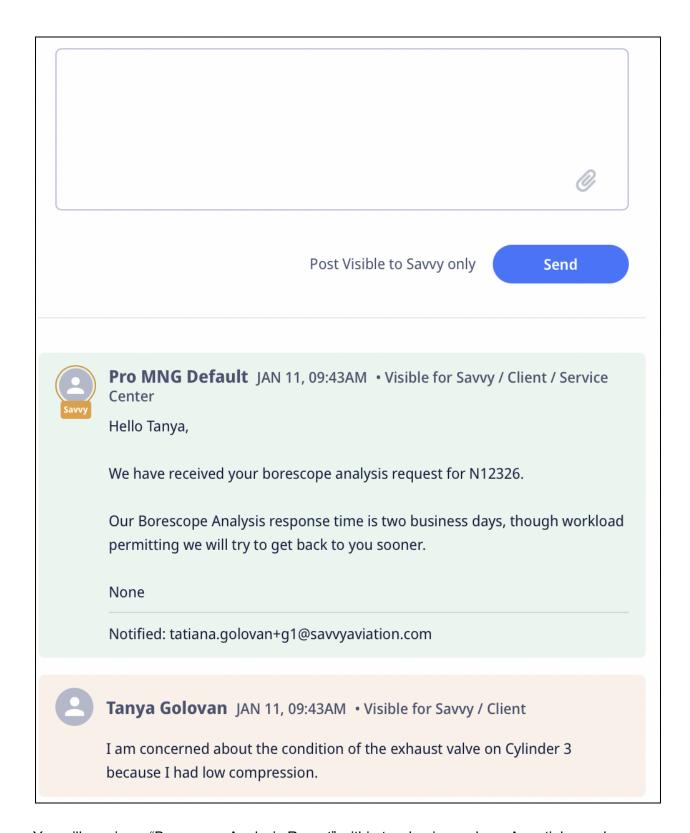
If you have an active subscription to SavvyAnalysis, SavvyQA or SavvyMx and have uploaded and tagged all of your images, you can request analysis by Savvy's expert analysts. To request analysis, click the "Request Analysis" button at the top right side of the page. If you are a SavvyFree user the button will be dimmed because analysis is not available.



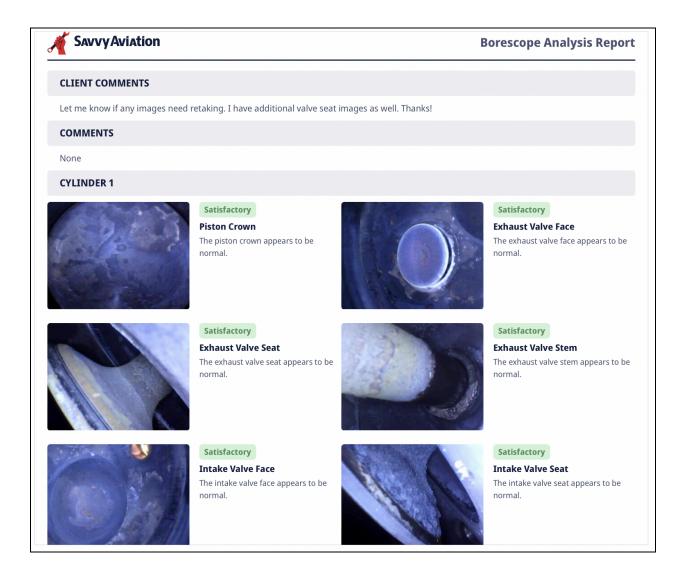
When you click on the "Request Analysis" button you will bring up the "Request Analysis" form shown below. The name of the image set and a subject will be prefilled. You can add a message to the analyst explaining any particular concerns or questions. You can also select the priority level of your request: Normal or Urgent. (Please only use the Urgent priority in rare, truly urgent situations.)



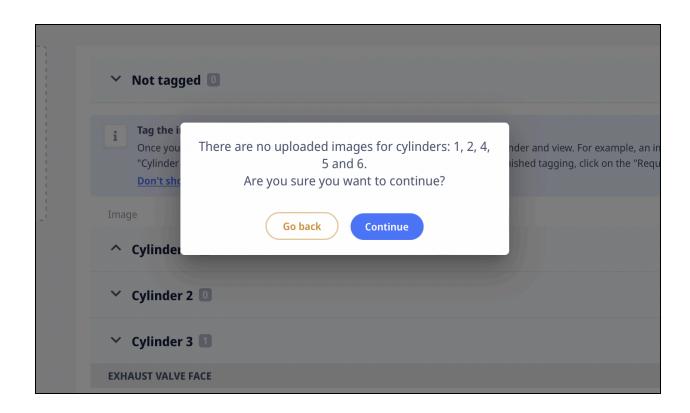
Click "Create Ticket" to proceed. As shown below, the ticket will appear confirming that your analysis request has been received.



You will receive a "Borescope Analysis Report" within two business days. A partial sample report is shown below.



If you request analysis but haven't uploaded images for all cylinders, a warning message will appear asking if you want to proceed with the analysis of what you have uploaded, or if you want to go back and upload more images. Click continue to proceed to the "Request Analysis" form.

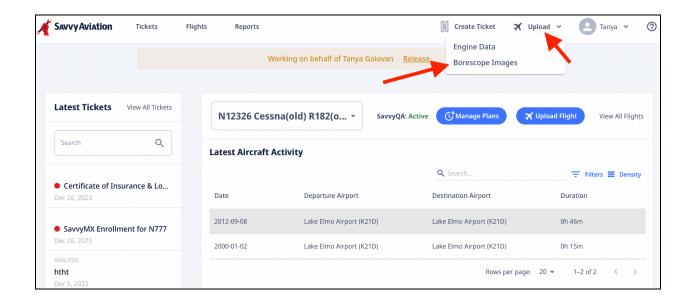


Editing the image set and adding images

Image sets can be edited and more images uploaded any time prior to completion of the report by the Savvy analyst. Once the report has been completed, the image set cannot be edited.

Start at your client dashboard at https://apps.savvyaviation.com.

From the "Upload" menu at the top of the page, select "Borescope Images."



The "Create or Edit Borescope Image Sets" page will appear. This page lists all image sets you have previously created.

To edit the images in an image set (add images or change the cylinder or view tags on images), click on the row for that image set as shown below. This will bring you to the "Upload and Tag Images" page where you can make your changes. The changes will be saved automatically.

