# Reading Assignment #1

Due September 30, 2020

Answer the following questions about Nathan Bradbury’s thesis, pages 1-31, as well as the questions pertaining to general snowmobile knowledge. The best way to get answers for the general knowledge questions is to ask an older member!

## Bradbury Questions:

1. What was the reasoning to eliminate snowmobiles from the National Parks?
2. What test was used to determine that snowmobile emissions met BAT standards? What chemical components weigh into this measurement? What is the necessary score to enter a national park? What is a perfect score?
3. What engine type did we initially compete with? What did we switch to and why?
4. What is the purpose of a tuned pipe? What sections make up the tuned pipe? (5 sections)
5. What are the different type of fuel delivery strategies talked about in the thesis? Which do we use? Why?
6. Describe stratified and homogeneous injection. Is it possible to use both in the same engine? Under what operating conditions are each used?
7. Explain several GDI systems discussed in Blair i.e. HPDI, air-assisted, etc.. What are the benefits to each, and what would work best for us?

## General Snowmobile Knowledge:

1. What brand of snowmobile do we compete with? What year is our current snowmobile? What type of engine does it have?
2. What year did we start competing? Which years did we win?
3. What are λ and ϕ? What are their typical values? Which one does the UICSC team most commonly use?
4. How did we do in the 2017 CSC? What awards did we win? What events did we excel in? What events should we improve in for next year?
5. What are some of the major projects for the 2018 CSC team? Are there any that you’re interested in? Why?
6. What websites can you visit to find more information about the UICSC team, as well more info about the competition?