

Risk Assessment Safety Plan

I. Project information:

The Development of the HANSCycle RLT

1/12/17

Name of Project

Date of submission

Team Member	Phone Number	e-mail
Darren Beckford	305-484-7329	Dbb11c@my.fsu.edu
Nicholas Khayata	954-224-0051	Nak12@my.fsu.edu
Ali Pustelniac	786-385-3017	Agp12@my.fsu.edu
Kyle Roddenberry	850-661-6568	Mkr14b@my.fsu.edu

Faculty mentor	Phone Number	e-mail
Keith Larson	850 410-6108	larson@eng.fsu.edu

II. Project description:

The team has been tasked with using last year's project prototype to complete and perfect a working Reciprocating Lever Transmission (RLT) for a bicycle.

II. Describe steps from project initiation to completion:

Initially, the team evaluated the state of the bicycle prototype. In doing so, the team noticed that many components had failed and began to fail. The next step was to determine whether those items needed to be fixed or redesigned. Once the prototype is working properly, the team will test the bicycle to find values for power, cadence, speed and torque. Further examination of the bicycle and other possible changes will be assessed as needed.

III. Given that many accidents result from an unexpected reaction or event, go back through the steps of the project and imagine what could go wrong to make what seems to be a safe and well-regulated process turn into one that could result in an accident. (See examples)

This project has various risks associated with it. While putting bike parts together or taking them apart, the team must be careful to avoid pinch points and sharp edges. These could cause harm if ignored or if being negligent. When in the machine shop or using any of the tools all safety rules and regulations must be followed. . Once assembled, the bicycle could pose an injury if used incorrectly, or if the bike simply falls over.. The rider should proceed with caution and wear a helmet or other safety equipment to avoid injury. If the bike is to be tested on a public road or parking lot, the rider must use proper caution to avoid cars and other road hazards.

IV. Perform online research to identify any accidents that have occurred using your materials, equipment or process. State how you could avoid having this hazardous situation arise in your project.

Pinch points have caused harm to users in the past, along with sharp edges. These can often lead to cuts, bruising or possible worse conditions. Welding and machine shops machinery has also caused injury, such as burns or other lacerations due to sharp machine parts. Bicycle falls have also shown to be an issue. Riders can sometimes lose balance and hurt themselves upon falling or running into objects. Bicycle riders have also been hurt by moving vehicles or road hazards, which is why extra precaution should be taken if tested on the road.

V. For each identified hazard or “what if” situation noted above, describe one or more measures that will be taken to mitigate the hazard. (See examples of engineering controls, administrative controls, special work practices and PPE).

The users assembling the bicycle must any distractions and be cautious in order to avoid pinch points or sharp edges. Proper safety gear, including but not limited to, safety glasses and closed toed shoes will be worn in the machine shop at all times.. The rider must proceed with caution, wear a helmet, and possibly wear knee pads and elbow pads, to reduce risk of injury. When in the machine shop all safety rules and regulations must be followed.

VI. Rewrite the project steps to include all safety measures taken for each step or combination of steps. Be specific (don't just state “be careful”).

The user must use proper tools when assembling various parts of the RLT and bicycle, to avoid pinch points and sharp edges. Before using any tools in the machine shop the proper safety equipment must be worn and proper instruction must be taught by those in charge.. Before getting onto the bicycle, a helmet must be secured on the rider. If deemed necessary, elbow/knee pads can also be worn. Caution should always be taken when on a moving object.

VII. Thinking about the accidents that have occurred or that you have identified as a risk, describe emergency response procedures to use.

Depending on the type of injury, the best and most immediate form of care will be taken. Whether that be ice, a first aid kit, or calling 911 if a serious injury has occurred.

VIII. List emergency response contact information:

- Call 911 for injuries, fires or other emergency situations
- Call your department representative to report a facility concern

Name	Phone Number	Faculty or other COE emergency contact	Phone Number
KEITH LARSON	410-6108		

IX. Safety review signatures

- Faculty Review update (required for project changes and as specified by faculty mentor)
- Updated safety reviews should occur for the following reasons:
 1. Faculty requires second review by this date:
 2. Faculty requires discussion and possibly a new safety review BEFORE proceeding with step(s)
 3. An accident or unexpected event has occurred (these must be reported to the faculty, who will decide if a new safety review should be performed.
 4. Changes have been made to the project.

Team Member	Date	Faculty mentor	Date

Alison Pustelniac	1/20/17	Clw P	1/20/17
Nicholas Khayata	1/20/17	Michael [Signature]	1/20/17
Kyle Roddenberry	1/20/17	Tyler [Signature]	1/20/17
Darren Beckford	1/20/17	[Signature]	1/20/17
Faculty advisor:	Keith Larson		
Sponsor:	Gordon Hansen		

Report all accidents and near misses to faculty mentor.