

## I. IDENTIFICATION DATA

<b>Thesis name:</b>	<b>Powertrain System Integration for Mini-Excavator</b>
<b>Author's name:</b>	<b>Gagan Raikwaparn</b>
<b>Type of thesis :</b>	master
<b>Faculty/Institute:</b>	Faculty of Mechanical Engineering (FME)
<b>Department:</b>	Department of Automotive, Combustion Engines and Railway Engineering
<b>Thesis supervisor:</b>	Ing. Vít Doleček, Ph.D.
<b>Supervisor's department:</b>	CTU in Prague – FME, Department of Automotive, Combustion Engines and Railway Engineering

## II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b>	<b>ordinarily challenging</b>
<i>Evaluation of thesis difficulty of assignment.</i>	
Diploma thesis assignment was focused on engine version exchange in existing mini excavator. The first part of the work was focused on build-in of new engine type with minimal components modification. The second part was focused on design and simulation evaluation of modified air intake system and modified cooling system.	

<b>Satisfaction of assignment</b>	<b>fulfilled</b>
<i>Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.</i>	
The assignment was fulfilled completely.	

<b>Activity and independence when creating final thesis</b>	<b>D - satisfactory.</b>
<i>Assess that student had positive approach, time limits were met, conception was regularly consulted and was well prepared for consultations. Assess student's ability to work independently.</i>	
According to assessment from student's supervisor in Doosan Bobcat Mr.Smejkal, students' autonomy and performance was satisfactory. The technical initiative and analyzing capacity was at very good level.	

<b>Technical level</b>	<b>B - very good.</b>
<i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.</i>	
Technical level of the work is very good. Student used simplified equations for preliminary evaluation of used design solution. Student then created detailed model of cooling system for final design evaluation. He used also this model for cooling fan selection.	

<b>Formal and language level, scope of thesis</b>	<b>B - very good.</b>
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
Typographical arrangement of the work is on good level. The work contained only 42 pages and it is quite brief for diploma thesis. The work contains some typing errors and grammar mistakes.	

<b>Selection of sources, citation correctness</b>	<b>C - good.</b>
<i>Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and in accordance with citation convention and standards.</i>	
Literature research and bibliography of used sources is according to citation norm. Nevertheless, bibliography is quite brief and contains a lot of online sources like Wikipedia, which could contain mistakes.	

<b>Additional commentary and evaluation</b>
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## SUPERVISOR'S OPINION OF FINAL THESIS

*Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.*

I evaluate this diploma thesis according to attached evaluation form from Doosan Bobcat EMEA.

### III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

*Summarize thesis aspects that swayed your final evaluation.*

I evaluate handed thesis with classification grade **C - good**.

Date: **28.1.2019**

Signature:



## ASSESSMENT OF INTERNSHIP

Host organisation	Doosan Bobcat EMEA
Dates of internship	15.11.2017 – 28.2.2019
Name of the intern	Gagan Raikwaparn

### EVALUATION

Criteria	Excellent / Professional	Very good	Good	Satisfactory	Sufficient/ Need improvement	Failed / Unsatisfactory
<b>Professional skills</b>						
Technical initiative			x			
Autonomy				x		
Performance				x		
Leadership				x		
Analysing capacity		x				
<b>Interpersonal skills</b>						
Adaptability			x			
Team work			x			
Communication skills				x		
<b>Internship report</b>						
Technical content		x				
Content			x			
Practical application for host organisation		x				

### Overall appreciation

Gagan is able to analyse problem and propose solution. He has a good ability to prepare calculation in excel and presentation in powerpoint. He he works on cooling system calculation in Kuli. He need to imprive design in 3d software.

In case of available position, would you consider employing this student?

YES

NO

Name of the supervisor: **Petr Smejkal**

Date: **21.012019**

Title/Position: **Engineering Group Leader**

Signature: