HAWAI‘I COMMUNITY COLLEGE
PROGRAM ANNUAL REVIEW (APR)

Diesel Mechanics

Date November 2017

Review Period
July 1, 2016 to June 30, 2017

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Program/Unit Review at Hawai‘i Community College is a shared governance responsibility related to strategic planning and quality assurance. Annual and 3-year Comprehensive Reviews are important planning tools for the College’s budget process. This ongoing systematic assessment process supports achievement of Program/Unit and Institutional Outcomes. Evaluated through a college-wide procedure, all completed Program/Unit Reviews are available to the College and community at large to enhance communication and public accountability. Please see http://hawaii.hawaii.edu/files/program-unit-review/

Please remember that this review should be written in a professional manner. Mahalo.

PART 1: PROGRAM DATA AND ACTIVITIES

Program Description (required by UH System)

Provide the short description as listed in the current catalog.	This program prepares the student for employment as a skilled tradesperson who troubleshoots, maintains, and repairs various types of diesel engines, trucks, tractors, boats, and other heavy equipment.

Comprehensive Review information (required by UH System)

Provide the year and URL for the location of this program's last Comprehensive Review on the HawCC Program/Unit Review website: http://hawaii.hawaii.edu/files/program-unit-review/	
Year	2016
URL	Diesel Mechanics - (DIMC)
Provide a short summary of the CERC's evaluation and recommendations from the program's last Comprehensive Review. Discuss any significant changes to the program that were aligned with those recommendations but are not discussed elsewhere in this report.	In the CERC evaluation from the last Comprehensive Review, 2012-15, it was recommended that the program work on three main areas. The program needs to seriously address its overall achievement of its program learning outcomes, the program needs to provide a more comprehensive discussion of its assessments, and the program should reconsider its approach to planning for improvement. The program has been working on explaining the success of achieving the students learning outcomes and their alignments to the program learning outcomes by writing more comprehensive assessment reports in general. In writing the assessment reports, the program has learned that although the students are learning at the level expected, the more detailed reports, rubrics and lab-task sheets that are now being used, show a more overall broad picture of the areas that students are weak in. Also, the lab-task sheets and rubrics assist the students by more clearly defining what is expected of them. The learning outcomes in these more comprehensive assessments are clearly defined leaving less room for any possible confusion in student expectations. The program has also been re-wording the CLOs and re-aligning the CLOs, PLOs and ILOs so that the assessment results are more clear and make it easier to see where there is room for improvement and where the program meets the program learning outcomes.

	In planning for improvement, we intend to use what we learned from these more comprehensive assessments and to continue to use lab-task sheets and rubrics to score them.

ARPD Data: Analysis of Quantitative Indicators (required by UH System)
Program data can be found on the ARPD website: http://www.hawaii.edu/offices/cc/arpd/

Please attach a copy of the program's data tables and submit with this Annual Program Review (APR).

a) **If you will be submitting the APR in hard copy, print and staple a copy of the data tables to the submission; the icon to print the data tables is on the upper right side, just above the data tables.**
OR
b) **If you will be submitting the APR in digital form (WORD or PDF), attach a PDF copy of the data tables along with the digital submission; the icon to download the data tables as a PDF is in the upper right of the screen, just above the data tables.**

Analyze the program's ARPD data for the review period. Describe, discuss, and provide context for the data, including the program's health scores in the following categories:	
Demand	Our demand indicator shows the program to be "cautionary" with only 3 new and replacement positions in the county. As we stated in our last Program Comprehensive 3-Year Review AY 2012-13, AY 2013-14, AY 2014-15, and in our Program Annual Review Report AY 2015-16, we would track our graduates work placement and current employment to show that there are more employment opportunities in the county overall than the ARPD data shows, giving us a truer number and a better Health Call. In tracking our previous graduates of SP.2016, we found that that there were 14 jobs available for our students locally, one student took a job that was not local, one student transferred to a four-year degree program and there are only four students that are not confirmed. This shows that the four that were reported for the AY 15-16 Annual Report data is incorrect. This information is not current and does not pertain to this AY16-17 data, but is mentioned here to show the significant difference of the four reported available jobs to the actual fourteen jobs known available and filled by our graduates, and to show that this seems to be an on-going trend. The Diesel Mechanics Program had no graduating

	students for Spring 2016 because it is a two-year program, but there are five students who were been placed in diesel mechanic employment positions locally and with the recommendation from the instructor while attending their first year of school. The current industry need for mechanics is high, and employers are willing to hire part-time workers that are still in school to fill this need. The current *New & Replacement Positions (County Prorated) data that pertains to this report is three. The instructor has also been asked to recommend one mechanic for Mauna Loa Macademia Nut, two for Kona Trans, and one for a position in Guam at Morrico Equipment, one for a position at DMS Diesel in Hilo, and one for a position at Hawthorne Caterpillar in Oahu. This information supports that there is currently a high demand for diesel mechanics both locally and abroad and the number is already higher than the reported three. We will have a better idea of what the actual number is once our students graduate and they can confidently seek employment. We will continue to track the employment of our students after graduation to verify this demand and to show that it is most likely that the demand indicator is not "cautionary" but in fact "healthy."
Efficiency done	The efficiency indicator for DIMC is "healthy" and the program has a 100% fill rate. The majors to FTE BOR Appointed Faculty is 1. Majors to FTE BOR Appointed Faculty is 20.5. In a program with a mandated enrollment capacity, the second method on the rubric is used to determine health score. According to the rubric, if the *Majors to FTE BOR Appointed Faculty is 15-35, the program is healthy. The DIMC program FTE BOR Appointed Faculty is 20.5. The second way to determine the health call for mandated enrollment capacity programs is if the capacity is 75% or better. We forecast that the enrollment will continue to be high and our fill rate will stay above 75%.
Effectiveness	The effectiveness score of DIMC has been rated "cautionary." In comparing our health score to that of last year's, our completion rate is still at 100%, and lines #19 and #19a (persistence Fall to Spring & Fall to Fall) percentages have increased 3%. There is only one change year's data, in the "Unduplicated Degrees/Certificates Awarded," line #20, the number of degrees awarded is 2 instead of 20. This is a two-year program and every other year we will not see graduates unless they are finishing related courses late. The program will continue to be rated "cautionary" every other year even when it is actually "healthy" because it is a two-year program.

	The number of degrees awarded has gone up significantly in the past four years, (see line 20 under Effectiveness Indicator). The instructor has tracked the students work load and courses that students take from the first semester they began the program in order to ensure that there was no confusion as to graduation requirements. Although the effectiveness score of DIMC has been rated "cautionary" because it is a two year program, the program has zero withdraws and 100% completion of "C" or better in the program's courses. There is also a 100% graduation rate with data showing one transfer. We will continue to track our graduates work placement and current employment as well as their continuing education and/or other endeavors.
Overall Health	The overall health of the program, although "cautionary," is believed to be "healthy." The demand indicator is flawed and we know that there are more than three jobs available to our graduates, which would give the program a "healthy" score for this indicator. The efficiency indictor is "healthy," and the effectiveness indicator is cautionary and believed to be healthy. The effectiveness indicator was deemed "cautionary" due to not having graduates. This health call is also flawed in that we are a two-year program and there were no graduates in AY16-17. All of the scores in the effectiveness area have increased except the *Unduplicated Degrees/Certificate Awarded because of being a two-year program. * Please see the Demand Indicator and the Effectiveness Indicator sections above.
Distance Education done	N/A We do not teach distance education.
Perkins Core Indicators (if applicable)	For the 2016-17 year, the Perkins Core Indicator 1P1, the Technical Skills Attainment was met with a score of 100.00. As stated in the AY 15-16 Annual Report, this benchmark will only be possible to meet every other year because we are a two-year program. The data for this indicator is from the 2015-16 year when we had a graduating class. The Perkins Core Indicator 2P1 Completion was met with a score of 100.00. As stated above, this data is from the 2015-16 year when we had a graduating class. Every other year data will show that we do not meet 1P1 because every other year the students will be half way through their required courses.

	For the Perkins Core Indicator 3P1, Student Retention or Transfer, the data was pulled from the 2015-16 year and shows that we did not meet with a score of 30.00. The goal was 81.00. This data is coming from the 2015-16 year when we did not have any graduates. We should actually have zero for the retention of students, and zero for the transfer of students because we are a two-year terminal program. The reason that the score is not 00.00 is because there were nine Hawaii Community College students who were not in the program but declared themselves as Diesel Mechanic Majors. If you take the nine students that were not in the program and divide by 2.7 (number of students out of those nine that retained or transferred), you will see the 30.00 retention score that was given the program. Every other year, this indicator should be 00.00, but because there are students that declare Diesel Mechanics as their major and are not in the program, we will continue to see skewed data that incorporates these students and instead, every other year we will see a low number that does not meet our goal. For the Perkins Core Indicator 4P1, Student Placement, the data was taken from the 2015-16 year and shows that we did not meet with a score of 00.00. The goal was 63.87. This data is from the 2014-15 year when the program did not have a graduating class. We do meet the 4P1 indicator every other year when our students graduate. If we looked at student placement for the 2016-17 year when the students graduated, it would show that there were 14 available local jobs that our 14 of our 19 students were placed in for a score of 73.68. We are currently tracking our students work placement and employment and will continue to do so in order to have accurate numbers for all of the future Program Annual Review Reports. For the Perkins Core Indicator 5P1Nontraditional Participation, the goal was 22.00 and the actual was 0.00. The goal for the Perkins Core Indicator 5P2, Nontraditional Completion, was also 22.00 and was also not met with 00.00. The Perkins Core Indicator 5P1 and 5P2 Nontraditional Participation and Nontraditional Completion have always been a challenge and we are currently emphasizing recruitment of non-traditional students by going to job fairs and talking to non-traditional students. We have also hired a permanent female APT in Fall 2016 and she is active in encouraging prospective non-traditional students to visit our booth/display, to ask questions or to examine diesel engines on the various outings that do to promote our program. We will continue to look for opportunities to recruit non-traditional students to our program.

Performance Funding Indicators (if applicable)	N/A
What else is relevant to understanding the program's data? Describe any trends, internal/external factors, strengths and/or challenge that can help the reader understand the program's data but are not discussed above.	The program continues to assist the Model Homes Project. In the AY 16-17, we did repairs on various machinery used for the project such as the backhoe, the Bobcat, and the excavator. We look forward to continually assisting the Model Homes Project The DIMC program class size has continued to be at full capacity rate and the diesel mechanics field continues to grow. There is a consistent waitlist to get into the program. There is also significant growth on the Big Island, creating a need for industrial mechanics. The current trend is that there is a need for skilled mechanics. Even though the Diesel Mechanics Program graduates are entry-level, there is more opportunity than in the past for apprenticeship positions in industrial work places such as Macadamia Nut Factory, Bacon Universal, Kona Trans, Conens, Suisan, Hawthorne Caterpillar Pacific and R&D Diesel. The instructor will continue to track the students' work places and current employment so that we have an accurate account of some of the program's data that is negatively affected such as the Demand Indicator, and the Perkins Core Indicator 4P1. There is a current trend among industry where acknowledgment for the need of more skilled mechanics has been voiced by industry. With technology constantly advancing, and industry growing, employers are looking for mechanics that are enthusiastic and willing to learn more about the latest technologies. There is discussion of creating more training and apprenticeship opportunities for graduates and students and the concession that it is worth paying higher wages for these more skilled mechanics. The instructor has been meeting with industry and discussing different ways to create more training to meet industry standards. There is also a need for CDL drivers on Big Island. The program is optimistic about the awarding of the driving simulator through the Perkins Grant. This driving simulator will allow students' knowledge of the mechanics of a truck to

	be taken to another level by driving the truck and seeing, hearing, and feeling the mechanics in motion. There is discussion of the requirements for the CDL license and how good drivers make diesel mechanics' jobs easier and keep the roads safer in general. Incorporating the simulated driving of a diesel truck into our curriculum will allow the students to fully understand the importance of their mechanic work and takes this knowledge full circle. Technology is continuing to change and the instructor continues to meet with industry to discuss these changes. It is the instructor's goal to acquire up to date and green equipment technologies so that we maintain a reputation for graduating capable students. The equipment in the shop is not completely up to industry standards as is the consensus with the Advisory Council. It is also the consensus of the Advisory Council that we should research green technologies and incorporate them into our curriculum. We are always investigating ways in which we can re-use parts and create green equipment and/or be creative in acquiring equipment that is green. The volunteer lecturer for DIMC 55 in Spring 2017 (who was a paid lecturer in Spring 2016) and the instructor were able to, with assistance from the students, fabricate a stainless steel barrel for oil recycling. A stand was made from scrap metal that the students sanded, painted, and with minimal monies, attached hoses and valves. The barrel was polished and a pump and filter added so that oil can be re-used, saving the program money on oil and teaching green technologies. The program is currently looking to continue to take on these types of creative projects to show the importance of green technologies as well as demonstrate the advantages of being resourceful. It is our goal to produce graduates who are familiar with and embrace these new technologies that have an impact on the island that we live on as well as producing graduates with the knowledge that this industry is constantly changing. Our graduates need to be flexible in their careers and ready for the on-going changes ahead of them. Successful graduates will be enthusiastic about the on-going learning required in their line of work.

PROGRAM ACTIVITIES

Report and discuss all major actions and activities that occurred in the program during the review period, including the program's meaningful accomplishments and successes. Also discuss the challenges or obstacles the program faced in supporting student success and explain what the program did to address those challenges.

For example, discuss:

- Changes to the program's curriculum due to course additions, deletions, modifications (CRC, Fast Track, GE-designations), and re-sequencing;
- New certificates/degrees;
- Personnel and/or position additions and/or losses;
- Other changes to the program's operations or services to students.

In Spring 2017, the following changes were submitted to the Curriculum Review Committee:

1. The program added two courses and deleted four courses so that DIMC 30 and 33 are now DIMC 130, and DIMC 50 and 55 are now DIMC 150.
2. The courses DIMC 20, and 40 have been re-named to DIMC 140 and 150.
3. The CLO's for DIMC 120,130,140, and 150 were re-sequenced and re-written.
4. The new CLOs were aligned to the PLOs.
5. The PLOs were aligned to the new ILOs.

Laulima website:

The instructor is happy with the use of the Laulima website and the ease of showing the power points as well as student access. The students now have 24/7 access to the materials that they need for class/exams. The program will continue to investigate software and programs and work on updating materials continually so that it is easily accessible and available to students.

Hiring of Personnel:

The program was able to hire the "Casual Hire" as a permanent APT in Summer 2016.

Math QM120T Requirement:

The program has received positive feedback from students about the QM120T Math course that is now being taught in the portable adjacent to the AMT building, which is very close and convenient for the students in parking and in time management.

Equipment:

1. The program has received the new Snap-On sand blaster and it is used often by students when cleaning parts and allows for more time wrenching and less time cleaning parts.

2. The program is in need of up-to-date technologies, equipment and tools such as an ISX Engine, a green parts washer and a mobile column lift.

3. The program is in need of replacing and/or fixing broken equipment such as the 75 ton Arbor Press and the 10 ton hydraulic body jacks.

4. The purchase of a driving simulator was approved by the Perkins Grant funding.

PROGRAM WEBSITE

Has the program recently reviewed its website? Please check the box below that best applies and follow through as needed to keep the program's website up-to-date.

☐ Program faculty/staff have reviewed the website in the past six months, no changes needed.

☐ Program faculty/staff reviewed the website in the past six months and submitted a change request to the College's webmaster on _____ (date).

☐ Program faculty/staff recently reviewed the website as a part of the annual program review process, found that revisions are needed, and will submit a change request to College's webmaster in a timely manner.

Please note that requests for revisions to program websites must be submitted directly to the College's webmaster at
http://hawaii.hawaii.edu/web-developer

PART 2: PROGRAM ACTION PLAN

AY17-18 ACTION PLAN

Provide a detailed narrative discussion of the program's overall action plan for AY17-18, based on analysis of the Program's AY16-17 data and the overall results of course learning outcomes assessments conducted during the AY16-17 review period.
This Action Plan should identify the program's specific goals and objectives for AY17-18, and must provide benchmarks or timelines for achieving <u>each</u> goal.

1. The program will edit and re-write every rubric for each of the assessments so that they are streamlined and the expectations are easily understood, are clear, and are consistent. In editing the rubrics, the performance task-sheets will also need to be modified for our assessments. We will make sure that the lab-task sheets and rubrics "fit" each other. We plan to have templates for the rubrics and the performance lab-task sheets finished by the end of summer 2018 and will be working on them as we finish our last Closing the Loop assessments. In having a template for the rubrics and lab-task sheets, the program will continue to work with the Institutional Assessment Coordinator to ensure that the lab-task sheets and the rubrics are accurate and clear.

2. The oil reclaimer was put together and tested, and in the process, the pump broke. It is the goal to acquire a new pump and have the reclaimer working by Summer 2018.

3. A plan for the use of the driving simulator will be made and a discussion with industry will be scheduled to plan the best way to go about making the driving simulator the most useful to our students.

ACTION ITEMS TO ACCOMPLISH ACTION PLAN

For <u>each</u> Action Item below, describe the strategies, tactics, initiatives, innovations, activities, etc., that the program plans to implement in order to accomplish the goals described in the Action Plan above.
For <u>each</u> Action Item below, discuss how implementing this action will help lead to improvements in student learning and their attainment of the program's learning outcomes (PLOs).

Action Item 1: REVISING/EDITING ALL RUBRICS & LAB-TASK SHEETS

In revising and editing the rubrics and the performance task sheets for our courses, the desired students' learning outcomes will be more easily understood by the Advisory Council, which will then support the program by enabling communication which will clearly outline the needs of our students and whether they are meeting the goals of the program and industry and if the goals themselves support each other. In making the assessments more streamlined and consistent, they will serve as a template that can be used for any new performance assessment in the future that might be added to the course or put in place of an older assessment. If curriculum is changed, changes to the rubrics or new rubrics can be made easily that reflect the established standard. Also, creative, innovative and new assignments, even if temporary, can be assessed within the same standards and without having to start from scratch. The student learning outcomes and how they are aligned with the PLOs will be clearly defined in the new rubrics and lab-task sheets and in giving the students the rubrics ahead of time, they will clearly know the expectations of the assignment.

Action Item 2: OIL RECLIAMER

This tool will help develop students' ideas on the importance of and benefits of green technologies. In order to produce effective graduates, the program is always trying to go "green" and educate students on the appropriate and mindful uses of various chemicals, solvents and lubricants that are used in the shop. With the help of the students, the instructor and the lecturer and the APT were able to refurbish a used aluminum tank and make the oil reclaimer. The oil reclaimer will be up and working in Summer 2018 so that the students can apply "green" technologies.

Action Item 3: DRIVING SIMULATOR

The program is in the beginning stages of devising a plan for the optimal use of the driving simulator. In order to benefit the students the most, but not take time away from the current curriculum, the program plans to meet with industry and decide the most advantageous way to incorporate the driving simulator into the program for student use.

RESOURCE IMPLICATIONS

NOTE: General "budget asks" are included in the 3-year Comprehensive Review. Budget asks for the following three categories only may be included in the APR: 1) health and safety needs, 2) emergency needs, and/or 3) necessary needs to become compliant with Federal/State laws/regulations.

Provide a brief statement about any implications of or challenges due to the program's current operating resources.

The operating budget has not increased since the original formula was developed and implemented in the late 1990's. All of our resource costs have increased with inflation over the years but we still have to manage with the same budget.
It is safe to say, that a typical diesel part from the 1990s has increased in price at least 50% when compared to today's prices. The program is always creatively looking for ways to acquire monies such as donations. We are also mindful of what we do not use and try to refurbish and recycle parts as often as possible.

BUDGET ASKS

For budget ask in the allowed categories (see above):	
Describe the needed item(s) in detail.	No budget requests at this time
Include estimated cost(s) and timeline(s) for procurement.	
Explain how the item(s) aligns with one or more of the strategic initiatives of 2015-2021 Strategic Directions: http://hawaii.hawaii.edu/sites/default/files/docs/strategic-	

plan/hawcc-strategic-directions-2015-2021.pdf	

PART 3: LEARNING OUTCOMES ASSESSMENTS

For all parts of this section, please provide information based on CLO (course learning outcomes) or PLO (program learning outcomes) assessments conducted in AY16-17.

Evidence of Industry Validation and Participation in Assessment (for CTE programs only)
Provide documentation that the program has submitted evidence and achieved certification or accreditation (if applicable) from an organization granting certification/accreditation in the program's industry/profession. If the program/degree/certificate does not have a certifying body, you must submit evidence of the program's advisory committee's/board's recommendations for, approval of, and/or participation in the program's assessment(s).
Please attach copy of industry validation for the year under review.

Courses Assessed

List all program courses assessed during AY16-17, including Initial and "Closing the Loop" assessments.			
Assessed Course Alpha, No., & Title	**Semester assessed**	**CLOs assessed (CLO#s)**	**PLO alignment (PLO#s)**
N/A	N/A	N/A	N/A
"Closing the Loop" Assessed Course Alpha, No., & Title	**Semester assessed**	**CLOs assessed (CLO#s)**	**PLO alignment (PLO#s)**
DIMC 20 Introduction to Diesel Engines	Fall 2016	CLO: 1 CLO: 2 CLO: 3 CLO: 4	PLOs: 1,2,3,4,5 PLO: 2 PLOs: 1,2,3,4,5 PLOs: 1,2,4,5,
DIMC 30 Introduction to Electrical Systems	Spring 2017	CLO: 1 CLO: 2 CLO: 3 CLO: 4 CLO: 5	PLO: 1 PLO: 3 PLO: 2 PLO: 3 PLO: 5
DIMC 33	Spring 2017	CLO: 1 CLO: 2 CLO: 3	PLOs: 2,4 PLO: 3 PLO: 1

Introduction to Fuel Systems		CLO: 4	PLO: 5

Assessment Strategies

For each course assessed in AY16-17 listed above, provide a brief description of the assessment strategy, including:

- a description of the type of student work or activity assessed (e.g., research paper, lab report, hula performance, etc.);
- a description of how student artefacts were selected for assessment (e.g., the assessment included summative assignments from all students in the course, OR a sample of students' summative assignments was randomly selected for assessment based on a representative percentage of students in each section of the course);
- a brief discussion of the assessment rubric/scoring guide and the criteria/categories and standards used in the assessment.

Course Alpha/#: DIMC 20
Introduction to Diesel Engines

1. A summative final ASE style written exam was given to each student and graded using a percentage so that each question was worth one point. This exam was given at the end of the semester and included the most pertinent engine information that was covered throughout the semester. The standard passing score for this assessment was 75% or higher.

2. Sixteen of the nineteen students were assessed in their ability to inspect, remove and then reinstall a flywheel. A lab-task sheet was given to each group of four students. The instructor graded the lab-task sheets with a rubric. Although this assessment was not part of the initial assessment plan in Fall 2014, the instructor has decided that the rubrics and the task sheets are helpful in evaluating the students' progress as well as in helping the students have a clear understanding of the requirements for the task which was assigned and how their performance was to be scored. The lab-task sheet contained the proper steps for the assignment and students checked off, filled out specifications, and drew diagrams of the work that they performed. The rubric scored each student individually in their participation and understanding of the assignment.

3. In using the same performance rubric to establish proficiency ratings for the DIMC 20 course taught in Fall 2014, twenty students were assessed in their abilities to overhaul a diesel engine. The assessment was chosen for its pertinence to the work required in industry. The assessment was scored using a rubric showing "Proficient," "Developing Proficiency," and "Not Proficient." These assessments enabled us to see that our students have the competency and the entry level soft skills necessary in order for them to work in the industry.

Course Alpha/#: DIMC 30

Introduction to Electrical Systems

1. A "soft-skills" assessment that was scored with a rubric. The assessment was chosen for its pertinence to the work required in industry. The rubric had five soft-skill categories, preparedness, communication, attitude & teamwork & cultural sensitivity, attention to task and quality of work. The standard for this assessment was that 75% of the students would meet developing proficiency.

   2/3. The instructor used a rubric for each student to score each of the two different lab-task sheets that were given to the students at the end of the semester. One lab-task for the performance test, "Electric Meter Service," and one lab-task sheet for the performance test, "Battery Maintenance Service." The students worked in groups of 3 or 4 and were scored as a group using a rubric for each performance test. The goal for the results of both performance tasks were that 80% of the students would meet the benchmark. In calculating the results, it was found that 96% of the students met the expectation for the Battery Maintenance performance assessment and that 88% met expectations for the Electrical Meter performance assessment. A combined score of both performance assessments shows that 92% of the students met the goal.

Course Alpha/#: DIMC 33

Introduction to Fuel Systems

1. A "soft-skills" assessment that was scored with a rubric. The assessment was chosen for its pertinence to the work required in industry. The rubric had five soft-skill categories, preparedness, communication, attitude & teamwork & cultural sensitivity, attention to task and quality of work. The standard for this assessment was that 75% of the students would meet developing proficiency.

2. The instructor used a rubric for each student to score a lab-task for the performance test, "Fuel Filter Service." The students worked in groups of 3 or 4 and were scored as a group using the rubric for the performance test. The goal for the results of the performance task was that 80% of the students would meet the benchmark. In calculating the results, it was found that 92% of the students met the expectation.

Expected Levels of Achievement

For each course assessed in AY16-17 listed above, state the standard (benchmark, goal) for student success for each CLO assessed AND the percentage of students expected to meet that standard for each CLO.

Example: "CLO#1: The standard for student success is that students will answer 80% of the questions on the final exam related to CLO#1 correctly. The expectation is that 85% of students will meet this standard for CLO#1."

Example: "CLO#4: The standard for student success is that students will be able to perform skills associated with CLO#4 with 80% proficiency. The expectation is that 75% of students will meet this standard for CLO#4."

Assessed Course Alpha, No., & Title	**Assessed CLO#**	**Standard for Success**	**% of Students Expected to Meet Standard**
DIMC 20 Introduction to Diesel Engines	1. Final written exam CLOs: 2 & 3 2. Performance assessment-Flywheel CLOs: 1,2,3 3. Soft-skills CLOs: 1,2,3,4	1. 85% of the students would receive a score of 75% or higher 2. 80% of the students would meet the proficient or skilled level 3. 75% of the students would achieve Developing Proficiency	1. 18 out of the 19 students received 75% or higher, or 95% of the students 2. 100% of the 16 students were skilled or proficient, 3. 100% of the students showed Developing Proficiency or higher
DIMC 30 Introduction to Electrical Systems	1. Soft-skills CLOs: 1,2,3,4,5 2. Electric Meter performance assessment CLOs: 1,2,4,5 3. Battery Maintenance	1. 75% of the students will meet the benchmark 2. 80% of the students would meet the benchmark	1. 75% of the students met the benchmark 2. that 88% of the students met the expectation 3. that 96% of the students met the expectation

	performance assessment CLOs: 1,2,4,5	3. 80% of the students would meet the benchmark	
DIMC 33 Introduction to Fuel Systems	1. Soft-skills CLOs: 1,2,3,4 2. Fuel Filter performance assessment CLOs: 1,2,3,4	1. 75% of the students will meet the bench mark 2. 80% of the students would meet the entry-level benchmark	1. 75% of the students met expectations 2. 92% of the students met the goal with a score of 75% or higher

Results of Course Assessments

For each course assessed in AY16-17 listed above, provide:

- **a statement of the quantitative results;**
- **a brief narrative analysis of those results.**

Course Alpha/#:

DIMC 20

Introduction to Diesel Engines

1. The results were that 18 out of the 19 students received 75% or higher, or 95% of the students. Only 4 of the 19 students received less than 80%, the lowest score being 73%. The assessment of the results also shows that a total of 75% of the students received an 80% or higher on the final written exam; this was higher than the instructor anticipated. The overall average for the final written exam was 86%.

2. In this evaluation, the instructor found that 100% of the 16 students were skilled or proficient, and 0% were found not skilled or not proficient. In scoring all nineteen students, 84% were found to be proficient or skilled. The instructor had anticipated that 80% of the students would meet the proficient or skilled level. These results show us that our students are able to perform the lab task assigned with the basic entry-level skills needed to enter industry.

3. In calculating the results for the DIMC 20 course taught in Spring 2016, 0% of the students showed Not Proficient, 100% of the students showed Developing Proficiency

or higher, and an actual 68% of the students showed Proficient which is above the acceptable standard for entry-level positions in industry. These results show us that our students have the competence and the entry level soft skills necessary in order for them to work in the industry.

Course Alpha/#: DIMC 30
Introduction to Electrical Systems

1. The instructor calculated the results for every student in DIMC 30 in Spring 2017, and concluded that the 75% of the students met the goal. In this assessment, the instructor first gave the rubric to the students and allowed the students to self-evaluate their own skills. The overall score that the students gave themselves was an 81% score, meeting the goal.
2. In calculating the results, it was found that 96% of the students met the expectation for the Battery Maintenance performance assessment and that 88% met expectations for the Electrical Meter performance assessment. A combined score of both performance assessments shows that 92% of the students met the goal.
3. In calculating the results, it was found that 96% of the students met the expectation for the Battery Maintenance performance assessment and that 88% met expectations for the Electrical Meter performance assessment. A combined score of both performance assessments shows that 92% of the students met the goal.

Course Alpha/#: DIMC 33
Introduction to Fuel Systems

1. The results show that 75% of the students met expectations. Based on the results of the initial assessment and this follow-up assessment, we have concluded that 95% of the students met our initial assessment goal, and 75% of the students met our follow-up assessment goals. This assessment shows that our students have desired employability soft-skills needed to enter the workforce. The soft-skills are the most important set of skills in order for students to be successful in the workforce. The Advisory Council has noted that the ability to follow instructions and a desire to learn are the most important skills to have and what employers are looking for when hiring.

2. In calculating the results, it was found that 92% of the students met the goal with a score of 75% or higher. The instructor also scored each student individually in the performance assessment in order to compare them to the group results to discern if the scores were accurate and found a 1% difference. Individual scores were 1% higher than the group scores. assessment shows that our students are proficient in a complete fuel filter service on a diesel truck.

Other Comments

Include any additional information that will help clarify the program's course assessment results, successes and challenges.

We will continue to give written exams and performance assessments throughout the semester. Although the students sometimes struggle with the book work for the course, it is evident by their performance in the shop/lab setting that the level of understanding for the required tasks is adequate and at the students meet the developing proficiency benchmark that is necessary in order to work in the industry. We find that our students excel in the hands-on learning side of the curriculum.

We can conclude that the students' achievements in learning the course learning outcomes are adequate and that the students, over-all, have the attitude and work ethics, as well as the entry-level knowledge of the fundamental skills, required for employment in the diesel mechanics industry. It is evident in examining the results of the assessments that the student learning outcomes are being met and reflect the actual skill levels of our students, and that with the clear alignments to the assessments, it is evident that the Program Learning Outcomes are being met as well.

Discuss, if relevant, a summary of student survey results, CCSSE, e-CAFE, graduate-leaver surveys, special evaluations, or other assessment instruments that are not discussed elsewhere in this report.

The results of the e-Cafe for the Fall 2016 and Spring 2017 semesters were positive. Mostly the students commented that they enjoyed the hands-on learning, and interactive assignments, the variety of the type of jobs that they got to work on, and the instructor's knowledge. When asked if there were any suggestions for improvement, the students said they would like to be able to work on newer engines, use newer/accurate tools, have more projects and have a full-time teacher's aide. In addressing these suggestions, we find that we agree with the suggestions to acquire newer engines and tools. We will note that there is usually an array of projects going on at all times so maybe some students don't have the initiative to start a project when they first enter the program. These were first and second semester cohort responses and students might not have been completely comfortable in the shop their first and second semesters. A full-time "teacher's aide" has been hired in the Summer of 2017. It is difficult to give students the one on one that would be ideal for their learning, but with the help of the APT, and the familiarity of the shop as the students enter their third and fourth semesters, hopefully these suggestions will be addressed.

Next Steps – ASSESSMENT ACTION PLAN for AY17-18

Describe the program's intended next steps to improve student learning, based on the program's overall AY16-17 assessment results. Include any specific strategies, tactics, activities or plans for improvement to program or course curriculum or instructional strategies, or changes in program or course assessment practices.
The program will work with the Assessment Coordinator in streamlining and organizing assessment rubrics so that they are consistent and accurately reflect student achievement of the CLOs. The rubrics will also be edited so they are concise and subjective, eliminating broad terms such as "good" and record actual student scores in the results sections. *Please see Action Plan #1 above for the editing of all rubrics and lab-task sheets.* Fall 17: DIMC 40 CTL Spring 18: DIMC 50 CTL, DIMC 55 CTL

PART 4: ADDITIONAL DATA

Cost Per SSH (to be provided by Admin)

Please provide the following values used to determine the total fund amount and the cost per SSH for your program:

General Funds = $_____
Federal Funds = $_____
Other Funds = $_____
Tuition and Fees = $_____

External Data*

If your program utilizes external licensures, enter:

Number sitting for an exam _____
Number passed _____

*This section applies to NURS only.

AY 16-17 Student job Placement

student	Employer(s)	position
1. T***	Puna Rock & Diamond Rock	Industrial maintenance/mechanic
2. K***	Puna Rentals	Industrial maintenance/mechanic
3. J***	Hualalai Resorts	Industrial maintenance/mechanic
4. J***	R&D Diesel	Diesel Mechanic
5. D***	R&D Diesel	Diesel Mechanic
6. C***	Orchid Island Hauling and Rentals	Diesel Mechanic
7. W***	Aka Mai Machining	Machining and industrial maintenance
8. K***	O'Riley's Auto Parts	Parts person
9. K***	O'Riley's Auto Parts	Parts person
10. H***		
11. D***		
12. M***		
13. B***		
14. J***		
15. R***		
16. S***		
17.		
18.		
19.		

Hawaii Community College
2017 Instructional Annual Report of Program Data
Diesel Mechanics Technology

Part I: Program Quantitative Indicators

Overall Program Health: Cautionary

Majors Included: DISL Program CIP: 47.0605

Demand Indicators		Program Year			Demand Health Call
		14-15	15-16	16-17	
1	New & Replacement Positions (State)	31	34	27	Cautionary
2	*New & Replacement Positions (County Prorated)	4	4	3	
3	Number of Majors	27	29	21	
3a	Number of Majors Native Hawaiian	13	16	13	
3b	Fall Full-Time	86%	67%	86%	
3c	Fall Part-Time	14%	33%	14%	
3d	Fall Part-Time who are Full-Time in System	0%	0%	0%	
3e	Spring Full-Time	92%	79%	100%	
3f	Spring Part-Time	8%	21%	0%	
3g	Spring Part-Time who are Full-Time in System	0%	0%	0%	
4	SSH Program Majors in Program Classes	480	480	456	
5	SSH Non-Majors in Program Classes	0	0	0	
6	SSH in All Program Classes	480	480	456	
7	FTE Enrollment in Program Classes	16	16	15	
8	Total Number of Classes Taught	3	3	3	

Efficiency Indicators		Program Year			Efficiency Health Call
		14-15	15-16	16-17	
9	Average Class Size	20	20	19	Healthy
10	*Fill Rate	100%	100%	100%	
11	FTE BOR Appointed Faculty	1	1	1	
12	*Majors to FTE BOR Appointed Faculty	27	29	20.5	
13	Majors to Analytic FTE Faculty	30.4	32.6	23.1	
13a	Analytic FTE Faculty	0.9	0.9	0.9	
14	Overall Program Budget Allocation	$124,690	Not Yet Reported	Not Yet Reported	
14a	General Funded Budget Allocation	$82,209	Not Yet Reported	Not Yet Reported	
14b	Special/Federal Budget Allocation	$0	Not Yet Reported	Not Yet Reported	
14c	Tuition and Fees	$42,481	Not Yet Reported	Not Yet Reported	
15	Cost per SSH	$260	Not Yet Reported	Not Yet Reported	
16	Number of Low-Enrolled (<10) Classes	0	0	0	

*Data element used in health call calculation

Last Updated: October 29, 2017

	Effectiveness Indicators	Program Year			Effectiveness Health Call
		14-15	15-16	16-17	
17	Successful Completion (Equivalent C or Higher)	100%	100%	100%	
18	Withdrawals (Grade = W)	0	0	0	
19	*Persistence Fall to Spring	85.7%	83.3%	86.3%	
19a	Persistence Fall to Fall	78.5%	31.5%	86.3%	
20	*Unduplicated Degrees/Certificates Awarded	0	20	2	
20a	Degrees Awarded	0	0	0	
20b	Certificates of Achievement Awarded	0	0	2	Cautionary
20c	Advanced Professional Certificates Awarded	0	0	0	
20d	Other Certificates Awarded	0	0	0	
21	External Licensing Exams Passed	Not Reported	N/A	N/A	
22	Transfers to UH 4-yr	0	0	1	
22a	Transfers with credential from program	0	0	1	
22b	Transfers without credential from program	0	0	0	

	Distance Education: Completely On-line Classes	Program Year		
		14-15	15-16	16-17
23	Number of Distance Education Classes Taught	0	0	0
24	Enrollments Distance Education Classes	N/A	N/A	N/A
25	Fill Rate	N/A	N/A	N/A
26	Successful Completion (Equivalent C or Higher)	N/A	N/A	N/A
27	Withdrawals (Grade = W)	N/A	N/A	N/A
28	Persistence (Fall to Spring Not Limited to Distance Education)	N/A	N/A	N/A

	Perkins IV Core Indicators 2015-2016	Goal	Actual	Met
29	1P1 Technical Skills Attainment	92.00	100.00	Met
30	2P1 Completion	51.00	100.00	Met
31	3P1 Student Retention or Transfer	81.00	30.00	Not Met
32	4P1 Student Placement	63.87	0.00	Not Met
33	5P1 Nontraditional Participation	22.00	0.00	Not Met
34	5P2 Nontraditional Completion	22.00	0.00	Not Met

	Performance Measures	Program Year		
		14-15	15-16	16-17
35	Number of Degrees and Certificates	0	32	2
36	Number of Degrees and Certificates Native Hawaiian	0	16	2
37	Number of Degrees and Certificates STEM	Not STEM	Not STEM	Not STEM
38	Number of Pell Recipients[1]	23	18	0
39	Number of Transfers to UH 4-yr	0	0	1

*Data element used in health call calculation

Last Updated: October 29, 2017

[1]PY 16-17; Pell recipients graduates not majors

Hawaii Community College
Annual CTE Program Advisory Council Meeting
February 16th, 2017
4:00pm-6:00pm

Present: Mitchell Soares, Dennis Rose
Excused: Eugene Lyman, Sam Gray, Lloyd Tsue, Noel Foronda
Note taker: Jennifer Siemon

Call to Order: Mitchell Soares called the meeting to order at 4:15 pm

AGENDA

1. Introductions
2. Mitch welcomes Dennis and thanks him for coming.

Changes

3. Mitch and Dennis talk about the restructuring of the courses a few years back from 28 modules to 6. Mitch explains why the changes were made and that the curriculum is still the same.
4. Mitch discusses the desire to block DIMC 30 and 33 and DIMC 50 and 55, but explains why he has to wait until this cohort has graduated.
5. The English 102 and the Math QM120T requirements are discussed and Mitch explains why they were added.
6. Mitch explains that there is a new driver's license requirement for students that are 18 years or older.
7. Mitch explains that he would like to change the course numbers to be at the 100 level. For example, DIMC 20 might be DIMC 120 and DIMC 30 might be DIMC 130. Mitch explains that he will wait to do this for when his current class graduates in SP 2018.
8. Discussion of the changes since the sugar cane industry closed and the impact on the jobs available.
9. Mitch tells Dennis that there is talk about a possible add to curriculum for a

forklift certification. Dennis tells Mitch that his wife looked into being able to certify people and has all the books, CDs and resources on how to obtain credentials to certify. He agrees that is would be a good addition for students to have the forklift certification.

10. Dennis asks how the new APT is working out- jokingly, because the new APT is the current note taker. Mitch says the paperwork that gets done by the APT is very helpful. Dennis agrees that paperwork is difficult to get his “guys” to do at the shop.

11. Mitch tells Dennis that we are still waiting for the new driving simulator to arrive and that Kelvin from Helco will teach the new OCET CDL course. He explains that we are going to help OCET as much as possible, possibly using one of our trucks. A discussion takes place about the need for CDL drivers on big island.

Assessment:

12. Mitch hands out the **assessment results** for the DIMC 30 and 33 courses from 2015 and explains that we will close the loop SP. 2017, this semester. Mitch reads both results reports aloud and explains how the students are 95% proficient in the assessment results. The conclusion is that the students are competent at the assessment tasks given and that no weaknesses were found in 2015. The Advisory Council is told that the assessment can be found on the school web page under “Assessment” and “Program/Unit Review” at the bottom of the first page in the black area.
13. **Assessment lab-task sheets and rubrics** are discussed. Mitch explains that the assessments have be revised for the SP. 2017 assessment that is coming up and shows Dennis the lab-task sheets that students will use to complete the tasks that they will be given. Dennis makes suggestions for small edits on the lab-task sheets that have to do with the proper use of a

voltmeter. Mitch agrees, and a discussion starts about the different types of voltmeters and the best way to teach the use of voltmeters to students. Dennis talks about diodes and .5 voltage drop. Mitch explains that each step of the lab task sheet is first gone over in class and he references the text and shows students where to find the information if they have questions on voltage and battery load tests when they work on the task sheets in the lab. The fuel lab task sheet is discussed. Dennis does not make suggestions for improvement. Discussion of fuel filters ensues bout the dos and don'ts of changing an oil filter. Discussion of rubrics that were used for the assessments begins, and Mitch explains how they are used as a measuring tool, and that "meets proficiency" is adequate for industry standards. Dennis looks over the rubrics.

14. **Course Learning Outcomes** are discussed for the assessments done, (DIMC 20 and the DIMC 30 and 33 which will be closed this semester) and Dennis verifies that they are appropriate for the program. Mitch reads aloud the DIMC CLOs and verifies with Dennis that they meet industry standards. Mitch explains to Dennis the new ILOs that we have and gives him a copy of all the ILOs. Mitch explains to Dennis that we are currently re-aligning all of the CLO's to PLOs, and that we will align all the PLOs to the ILOs afterwards. The Hawaii Community College Catalog 2016-2017 is referenced so that we can go over the **Program Learning Outcomes** on page 71.
15. Mitch goes over the **Annual and Comprehensive reviews.** Discussion of why the Overall Program Health is addressed as "Cautionary" with the following indicators to meet the cautionary demand health call:

a. **Demand indicator** = "Unhealthy" – Dennis and Mitch talk about how this data is incorrect. Mitch explains how every student that wanted to find employment who graduated, 17 out of 20, are now working in the field, 15 out of those 17 are local. Of the other three students, one transferred to a 4 year program at UH Hilo, and the other two never intended to find employment

upon graduation. That means that 15 jobs were available locally for students upon graduation, the demand indicator says that there were only 4. Since graduation, Mitch has tried to find placement for 2 more positions that are available. When he called former students, they were all working. We also have a current student working one day a week when not in school on Fridays. He will be hired full-time upon graduation. That shows 18 jobs total were available. This would make our demand indicator "Healthy" if the data were correct. Dennis agrees that the amount of jobs for Diesel Mechanics is going up and tells Mitch he is looking for a Service Writer, and asks Mitch if he knows someone.

b. **Efficiency indicator** = "Healthy" because Diesel Mechanics Program has a 100% fill rate and 29 to 1 on student to faculty ratio. Mitch explains to Dennis that this ratio is incorrect in that we may have 29 majors, but 19 students physically in class. The ratio needs to be 15 to 1, so even though data is skewed, we are still healthy in this score as well.

c. **Effectiveness indicator** = "Healthy" because the program has 83.3% Persistence Spring to Fall.

16. Discussion of **graduates** and their work ethics and attitudes begins. Dennis explains that the main thing is that they want to learn. Mitch shows Dennis a rubric that we use to score the attitudes and motivation of the students.

Trends in Industry

17. Dennis and Mitch discuss the graduates attitudes and jobs available to them. It is the consensus that there are a lot of jobs available in the Diesel Mechanics field right now, more than since the sugar plantations closed.
18. Dennis asks Mitch about the code readers he has and is shocked when Mitch tells him that he only has two Caterpillar code readers and one other, but not for the Cummins because it broke being 11 years old.

Dennis says that he knows someone that might be able to donate an ISX Cummins electronic engine.

19. Dennis explains how he is going to possibly merge with another Diesel Mechanic on Maui who will specialize in generators while he specializes in the Cummins side. Dennis explains that the training involved to do the generators is done on the mainland and this possible new partner has the certifications to do this.
20. Dennis talks about how sometimes it is less expensive for companies to send for one of his guys to repair a piece of diesel equipment in Oahu then it is for the companies there to hire someone locally because Oahu Diesel Mechanics charge so much more.
21. Mitch mentions a “Green” parts washer and Dennis agrees that it is a good idea to go “Green.” He says that this tool will and allow for more time to focus on teaching and the current tasks the students are working on and eliminate the amount of time spent on cleaning.
22. Dennis explains how microbes eat oil (hydrocarbons) and the waste is CO2, and that is the kind of “Green” solvent that he uses in the shop. The microbes, or “bugs” as Dennis calls them, eat the hydrocarbons and this solvent , besides being “Green” is easier on the hands. Dennis says that he goes through (2) five gallon buckets of microbes that he adds to the solvent every six months and that he gets it from Napa.
23. Dennis tells Mitch of a guy who rebuilds forklifts in Hawi. He says that they pretty much just get a tune-up and paint job and re-sold and he would not recommend buying one. He said that it is necessary for his shop to have the 6 top hard rubber wheels. Mitch explains that we have the 3 ton forklift and the program is thinking of purchasing a new forklift for the certification in forklift operation that will possibly be incorporated into the curriculum in the near future. Dennis agrees that this will be useful for the program.
24. Mitch explains to Dennis the “G” account, inflation, and how the prices of parts and resources has gone up, but not the amount of money given to

the program per student for about 20 years. Dennis tells Mitch that he was overhauling a C engine and that the price in 2000 was half as much as the price in 2017. A conversation ensues about the budget and price of parts and how expensive they are compared to just a few years ago.

25. Dennis also explains that the costs of gases for welding have gone up because there is no more pressure testing here in Hawaii, and that everything has to get sent to the mainland to get pressure tested. This makes costs more than double when you send a container out and back from the mainland. He says it is a shame we don't do it here and talks about how Hawaii prices are a lot higher than the mainland's.

Scoring Rubric: DIMC 20 **Date:**_____

Competency	Proficient	Developing Proficiency	Not Proficient
Preparedness (includes appropriate dress) (CLO 1)	Student is in proper attire and ready to start immediately.	The student is in proper attire and ready to start 75% of the time or better.	Student is in proper attire and/or ready to start less than 75% of the time.
Response to supervision and communication (CLO 1)	Student is willing to learn and accept feedback and constructive criticism, eagerly follows through; listens to others, asks questions or makes appropriate suggestions.	The student is willing to accept feedback and constructive criticism, follows through; listens to others, asks questions or makes appropriate suggestions 75% of the time or more.	The student is willing to accept feedback and constructive criticism, follows through; listens to others, asks questions or makes appropriate suggestions less than 75% of the time.
Attitude, teamwork, and cultural sensitivity (CLO 1, 5)	Student is positive, even-tempered, eager to work, doesn't complain, and demonstrates respect for classmates, and works collaboratively with others.	The student is positive, even-tempered, eager to work, doesn't complain, respects classmates and works collaboratively with others 75% of the time or better.	The student is positive, even-tempered, eager to work, doesn't complain, respects classmates and works collaboratively with others less than 75% of the time.
Attention to Task (CLO 1)	Student stays on task for the entire class with minimal supervision, is self-motivated	The student stays on task for the entire class with minimal supervision and is self-motivated 75% of the time or more.	The student stays on task with minimal supervision and is self-motivated less than75% of the time
Quality of Work (CLO 1, 2, 3, 4, 5)	The student makes few mistakes, and when does, independently, spots and corrects mistakes.	The student makes few mistakes and requires help spotting errors 25% of the time or less.	The student displays inconsistent quality in his/her work and requires help spotting errors 75% of the time or more.

Name of Student:_____ Name of Evaluator:_____

Student Signature:_____

DIESEL MECHANICS LAB TASK SHEET DIMC 20
Engine Flywheel Housing

Group #_____
Group Members:

_____ _____

_____ _____

I. TASK – DIMC20

To: Disassemble, inspect, clean and align engine flywheel housing.

II. MATERIALS & TOOLS REQUIRED

A. Proper services manual or PC based software for proper procedures and specification references.
B. A barring tool, torque wrench, dial indicator, and OEM indicator attachment.

III. TASK – STEPS

☐ A. Inspect the flywheel housing – to determine reusability

☐ B. Remove the flywheel housing and reference the proper OEM service manual or software for proper removal, installation and alignment.

☐ C. Reinstall flywheel housing and measure and record alignment.

Draw two separate diagrams of the flywheel housing with bore and face alignment measurements.

1. BORE	2. FACE

Bore Concentricity Worksheet

9 o'clock = _____
3 o'clock = _____
6 0'clock = _____
12 0'clock = _____

Face Worksheet

12 o'clock = 0 dial indicator_____
3 o'clock = _____
6 o'clock = _____
9 o'clock = _____

☐ D. What is the TIR for your bell housing ? _____
What is the TIR specification for the housing?_____

☐ E. Re-align housing to meet specifications / rebore dowel pin holes if required.

IV. TASK – DIMC 20 ASSEMSENT

A. Obtain assessment of your task by your instructor or instructor assistant.

INSTRUCTOR/ASSITANT ASSESSMENT:

☐ SKILL LEVEL 1 – meets expectations

☐ SKILL LEVEL 2 – does not meet expectations

Instructor/Assistant signature: _____

Date:_____

DIMC 20

Scoring Rubric Flywheel Task Sheet

DISSASSEBLY AND ASSEMBLY OF ENGINE FLYWHEEL **Date:**

Skills	Skilled (4)	Limited Skill (2)
Tools Selected And Usage	Competent use of multiple tools demonstrated 75% of the time or better.	Used the tools correctly less than 75% of the time.
Procedures	Correct procedures/steps used and competence demonstrated 75% of time or better.	Correct procedures/steps and competence demonstrated less than 75% of time.
Subject Knowledge	Understanding of material and ability to draw a diagram and label all parts of the flywheel housing with bore and face alignment measurements that 75% accurate.	Understanding of material and ability to draw a diagram and label all parts of the flywheel housing with bore and face alignment measurements with less than 75% accuracy.
Findings	Correct TIR independently demonstrated with accuracy of 75% or higher.	Correct TIR demonstrated with assistance of instructor or less than 75% accuracy.

Evaluator's Name:_____

Student's Name:_____

Student's Signature:_____

DIESEL MECHANICS LAB TASK SHEET DIMC 30
Battery Maintenance Service

Group #_____
Group Members:

_____ _____

_____ _____

I. TASK – DIMC 30

To: Perform a battery maintenance service.

II. MATERIALS & TOOLS REQUIRED

A. Proper safety attire, (face shield and gloves)
B. A hydrometer or refractometer and load test unit carbon pile.
C. DMM meter
D. Text book for references

III. TASK – STEP

☐ A. Visually inspect battery and cables. (Reference text for inspection points).

☐ B. Perform a state of charge test using a hydrometer or refractometer and list:

*cell #1_____specific gravity reading

*cell #2_____specific gravity reading

*cell #3_____specific gravity reading

*cell #4_____specific gravity reading

*cell #5_____specific gravity reading

*cell #6_____specific gravity reading

☐ C. Perform a battery load test. **note: Open circuit voltage must be 12.6 volts or more. Reference textbook for proper steps in load tester. Load test at ½ CCA Rating for 15 seconds.

☐ D. record load test results: _____ volts.

IV. TASK – DIMC 30 ASSESSMENT

A. Obtain assessment of your task by your instructor or instructor assistant.

INSTRUCTOR/ASSITANT ASSESSMENT:

☐ SKILL LEVEL 1 – meets expectations

☐ SKILL LEVEL 2 – does not meet expectations

Instructor/Assistant signature: _____

Date:_____

DIESEL MECHANICS LAB TASK SHEET DIMC 30
Electrical Meter Service (DMM or DVOM)

Group #_____
Group Members:

_____ _____

_____ _____

I. TASK – DIMC 30

To: properly use a DMM or DVOM to test components and circuits.

II. MATERIALS & TOOLS REQUIRED

A. DMM or DVOM (digital volt OHM meter).

B. Electrical components for a lab testing.

C. Test book for reference.

III. TASK – STEP

☐ A. Familiarize yourself with your DMM or DVOM –display push buttons, rotary switch, input terminals, and symbols.

☐ B. Test the following components or circuits:

Component to be tested	Meter symbol	Meter reading value
Shop battery		
Shop wall output (110 volts)		
Diode		
Resistor		
Current draw of two 1157 bulbs in series		

IV. TASK – DIMC 30 ASSESSMENT

A. Obtain assessment of your task by your instructor or instructor assistant.

INSTRUCTOR/ASSITANT ASSESSMENT:

☐ SKILL LEVEL 1 – meets expectations

☐ SKILL LEVEL 2 – does not meet expectations

Instructor/Assistant signature: _____

Date:_____

Employability/Safety/Communication Skills Rubric for Assessment DIMC 30

Student's Name: _____ Evaluator's Name: _____

Signature: _____ Date: _____

	Meets Expectations	Does Not Meet Expectations
Preparedness (includes appropriate dress) **CLO 1,4**	Always in proper attire and ready to start immediately	Inconsistently or seldom in proper attire and ready to start
Response to supervision and communication **CLOs 1,2,4,5**	Is willing to learn and accept feedback and constructive criticism, eagerly follows through; listens to others, asks questions or makes appropriate suggestions	Demonstrates unwillingness to learn and accept feedback. Does not interact with the instructor in a positive way.
Attitude, teamwork, and cultural sensitivity **CLOs 1,5**	Is positive, even-tempered, eager to work, doesn't complain Demonstrates respect for classmates, and works collaboratively with others	Displays moodiness or a negative attitude. Reluctant to take part in activities. Has a negative attitude toward some or all of classmates. Does not function effectively in a team.
Attention to Task **CLOs 1,2,3,4,5**	Can stay on task for the entire class with minimal supervision, is self motivated	Can stay on task for most of the class with minimal prompts, is mostly self motivated
Quality of Work **CLO 4**	Makes few mistakes, independently able to spot and correct	Displays inconsistent quality; rarely spots errors

Score and comments:

Employability/Safety/Communication Skills Rubric for Assessment DIMC 33

Student's Name: _____ Evaluator's Name: _____

Signature: _____ Date: _____

	Meets Expectations	Does Not Meet Expectations
Preparedness (includes appropriate dress) **CLOs 1,3**	Always in proper attire and ready to start immediately	Inconsistently or seldom in proper attire and ready to start
Response to supervision and communication **CLOs 1,2,4**	Is willing to learn and accept feedback and constructive criticism, eagerly follows through; listens to others, asks questions or makes appropriate suggestions	Demonstrates unwillingness to learn and accept feedback. Does not interact with the instructor in a positive way.
Attitude, teamwork, and cultural sensitivity **CLOs 1,4**	Is positive, even-tempered, eager to work, doesn't complain Demonstrates respect for classmates, and works collaboratively with others	Displays moodiness or a negative attitude. Reluctant to take part in activities. Has a negative attitude toward some or all of classmates. Does not function effectively in a team.
Attention to Task **CLOs 1,2,3,4**	Can stay on task for the entire class with minimal supervision, is self- motivated	Can stay on task for most of the class with minimal prompts, is mostly self- motivated
Quality of Work **CLO 3**	Makes few mistakes, independently able to spot and correct	Displays inconsistent quality; rarely spots errors

Score and comments:

Lab-Task Sheet -Skills Rubric for Assessment DIMC 30 Battery Maintenance Service

Student's Name: _____ Evaluator's Name: _____

Signature: _____ Date: _____

	Meets Expectations	Does Not Meet Expectations
Proper use and selection of tools and materials required **CLOs 1,4**	Demonstrates appropriate use and selection of proper tools and materials 75% of time or better.	Demonstrates appropriate use and selection of proper tools and materials less than 75% of time.
Steps were done in proper order **CLOs 2,4,5**	Steps were done in proper order at least 75% of the time.	Steps were done in proper order less than 75% of the time.
Results/diagnostics were accurate **CLOs 2,4**	Results/diagnostics are at least 75% accurate.	Results/diagnostics are less than 75% accurate.
Results/diagnostics were accurately recorded and/or communicated to instructor and fellow classmates **CLOs 2,5**	Results/diagnostics were recorded accurately 75% of time or better.	Results/diagnostics were recorded accurately 74% of time or less.
Assignment was finished and turned in on time **CLO 5**	Assignment was complete and turned in on time.	Assignment was not complete and/or not turned in on time.

Score and comments:

Lab-Task Sheet -Skills Rubric for Assessment DIMC 30 Electric Meter Service

Student's Name: _____ Evaluator's Name: _____

Signature: _____ Date: _____

	Meets Expectations	Does Not Meet Expectations
Proper use and selection of tools and materials required **CLOs 1,4**	Demonstrates appropriate use and selection of proper tools and materials 75% of time or better.	Demonstrates appropriate use and selection of proper tools and materials less than 75% of the time.
Steps were done in proper order **CLOs 2,4,5**	Steps were done in proper order at least75% of the time.	Steps were done in proper order less than 75% of the time.
Results/diagnostics were accurate **CLOs 2,4**	Results/diagnostics are at least 75% accurate.	Results/diagnostics are less than 75% accurate.
Results/diagnostics were accurately recorded and/or communicated to instructor and fellow classmates **CLOs 2,5**	Results/diagnostics were recorded accurately 75% of the time or better.	Results/diagnostics were recorded accurately less than 75% of the time.
Assignment was finished and turned in on time **CLO 5**	Assignment was complete and turned in on time.	Assignment was not completely finished and/or not turned in on time.

Score and comments:

Lab-Task Sheet -Skills Rubric for Assessment DIMC 33 Fuel Filter Service

Student's Name: _____ Evaluator's Name: _____

Signature: _____ Date: _____

	Meets Expectations	Does Not Meet Expectations
Proper use and selection of tools and materials required **CLOs 1,4**	Demonstrates appropriate use and selection of proper tools and materials 75% of time or better.	Demonstrates appropriate use and selection of proper tools and materials 74% of time or less.
Steps were done in proper order **CLO 5**	Steps were mostly done in proper order with 75% accuracy or better.	Demonstrates appropriate use and selection of proper tools and materials 74% of time or less.
Results/diagnostics were accurate **CLO 2**	Results/diagnostics are at least 75% accurate.	Results/diagnostics are at less 75% accurate.
Results/diagnostics were accurately recorded and/or communicated to instructor and fellow classmates **CLOs 3,5**	Results/diagnostics were recorded with at least 75% accuracy.	Results/diagnostics were recorded with less than 75% accuracy.
Assignment was finished and turned in on time **CLO 5**	Assignment was completely finished and turned in on time.	Assignment was not completely finished and/or not turned in on time.

Score and comments:

DIESEL MECHANICS LAB TASK SHEET DIMC 33
Fuel Filter service

Group #_____

Group Members:

_____ _____

_____ _____

I. TASK – DIMC 33

To: Properly service a diesel fuel system's filters. **note: most systems have more than one filter, therefore, check whole system, fuel tank to injector pump.

II. MATERIALS & TOOLS REQUIRED

A. Fuel filter wrench. (spin-on type filter)

B. Clean oil pan

C. New fuel filters

D. Clean, filtered diesel fuel to fill fuel filter if required.

III. TASK – STEP

☐ A. Inspect and clean area around filters before service.

☐ B. Drain filters if possible, into clean pan, check for water and rubbish drain.

☐ C. Remove filter and inspect (look for rubbish, rust water, dirt, etc.

☐ D. Install new filter – fill with filtered fuel, lube oil ring of spin-on type

☐ E. Draw a diagram below of the fuel system that you have been assigned, fuel tank to fuel injectors:

IV. TASK – DIMC 33 ASSESSMENT

A. Obtain assessment of your task by your instructor or instructor assistant.

INSTRUCTOR/ASSITANT ASSESSMENT:

☐ SKILL LEVEL 1 – meets expectations

☐ SKILL LEVEL 2 – does not meet expectations

Instructor/Assistant signature: _____

Date: _____