A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: 2
Lab Hours/Week: 4
OJT Hours/Week: *

Prerequisites:
This course requires the following prerequisite
MGEM 2630 - Marine Electrical Systems (Number of Years Valid: 5)

Corequisites: None
MnTC Goals: None

This course includes various electronic fuel injection, direct fuel injection, carburetors, fuel pumps, fuel tanks, and oil injection systems. Students learn to identify, repair, or replace fuel system components. This course focuses on troubleshooting and synchronizing the carburetors and oil injection pumps to engine needs. Instruction includes classroom instruction and application of factory recommended service procedures. Learners receive hands-on instruction on shop practices and product maintenance using tried and proven methods of operation.

B. COURSE EFFECTIVE DATES: 03/06/2020 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Define fuel as a power source.
2. Identify and test fuel cells.
3. Identify and test mechanical fuel delivery systems.
4. Define carburetor theory of operation.
5. Disassemble and inspect carburetors.
6. Demonstrate diagnostic software use.
7. Perform fuel pressure testing.
8. Perform trailer service procedures.
9. Perform off season storage.

D. LEARNING OUTCOMES (General)

1. The learner will demonstrate understanding of fuel as a power source, shop safety, and fuel delivery components.
2. The learner will demonstrate understanding and servicing skills of carburetion, fuel injection, and oil injection components.
3. The learner will demonstrate EFI and DFI diagnostic procedures.
4. The learner will demonstrate preventative maintenance and off-season storage procedures.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus
G. SPECIAL INFORMATION

None noted