



MARINE PROPULSION CONTROL

PNEUMATIC LOGIC AND CONTROL PANEL

APPLICATION

Propulsion control for vessels with fixed pitch propeller and reverse gear

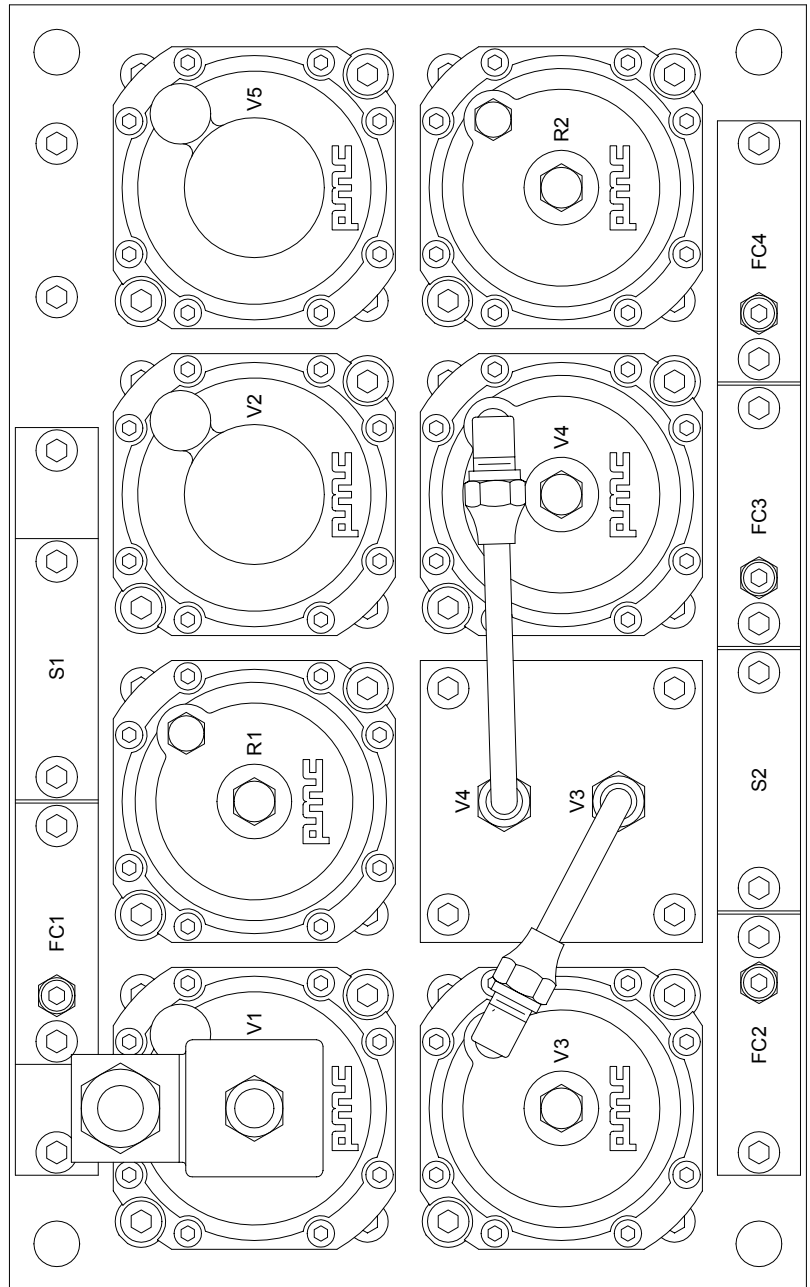
FEATURES

- Dynamic Braking
- Independantly Adjustable Power Boosts for Ahead and Astern
- Controlled Engine Acceleration
- Compact Size
- Easy Installation
- Manifold Mounted Components
- High Flow

OPTIONS

- Clutch Pressure Interlock

Type MPC-11 Control Panel



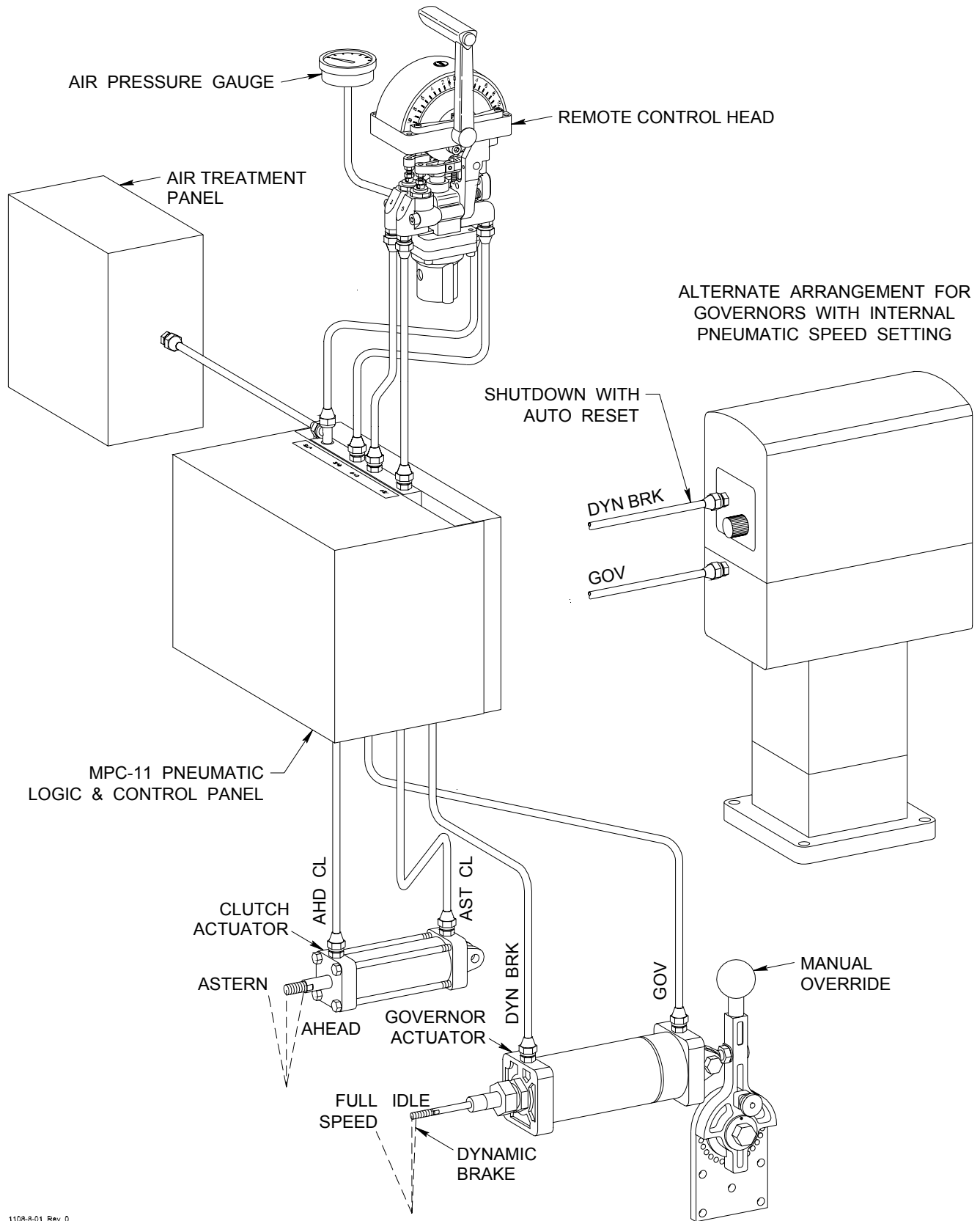
PRIME MOVER CONTROLS INC.

VANCOUVER, BC, CANADA

DESIGN MANUFACTURE AND SERVICE OF MARINE AND
INDUSTRIAL CONTROL COMPONENTS AND SYSTEMS

Electronic - Pneumatic - Hydraulic - Mechanical

Typical Dynamic Braking Propulsion Control System



Introduction

The MPC-11 pneumatic panel is a compact modular unit, designed to provide propulsion control for vessels with fixed pitch propellers, and reverse gears. It features dynamic braking and independently adjustable ahead and astern power boosts during clutch engagement. Both magnitude and duration of power boosts are adjustable.

A laminated manifold with air channels in it eliminates most of the pipe connections between the valves. Installation is fast and simple. All valves are base mounted and can be removed for servicing without disconnecting any external pipe connections.

Contact PMC for information on logic and control panels for systems with maneuvering shaft brakes.

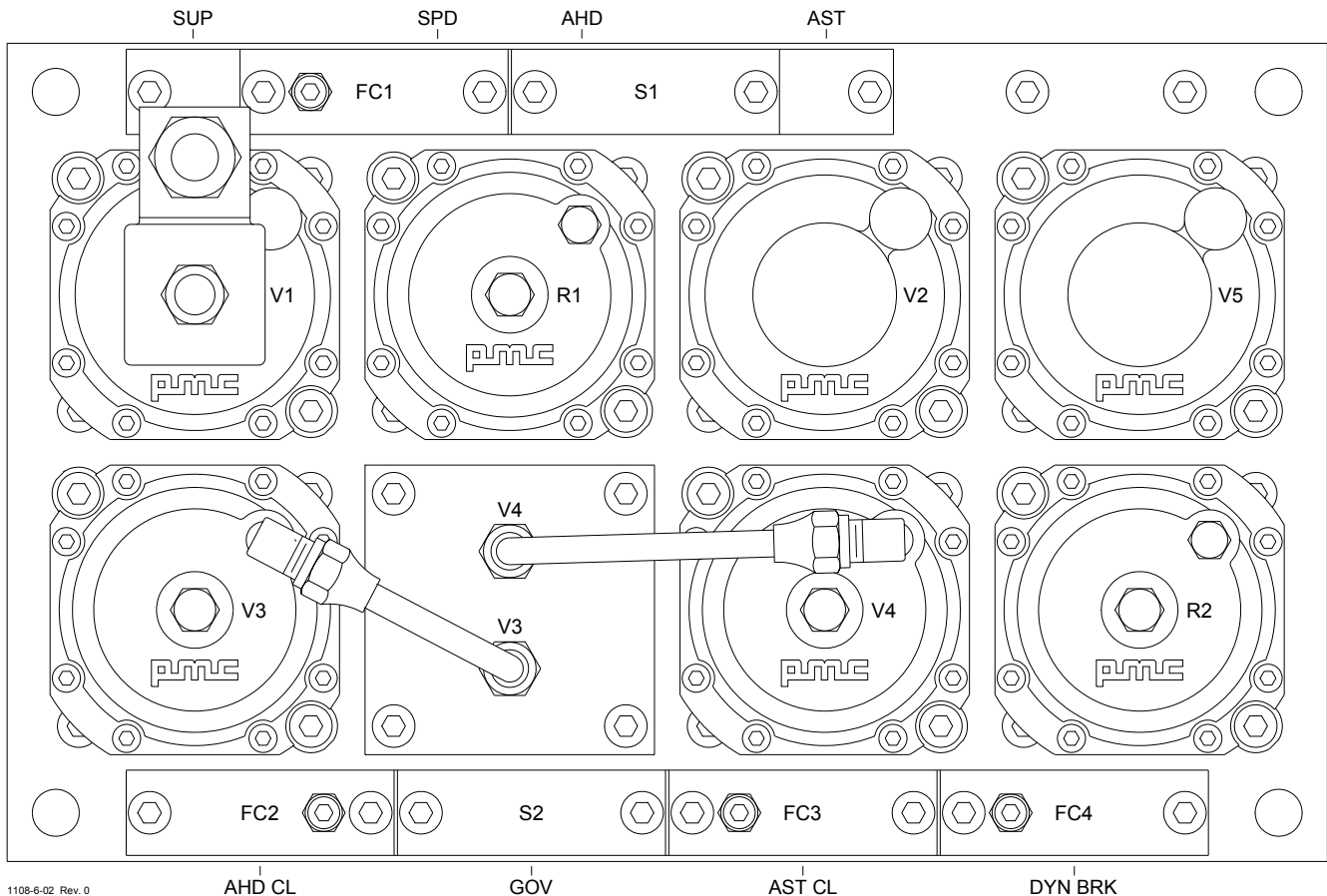
Description of Operation

The remote control head provides command signals for speed and direction. As the control head lever is moved into the first detent position in the ahead direction, the ahead clutch is engaged, while a power boost is applied to the speed setting actuator for an

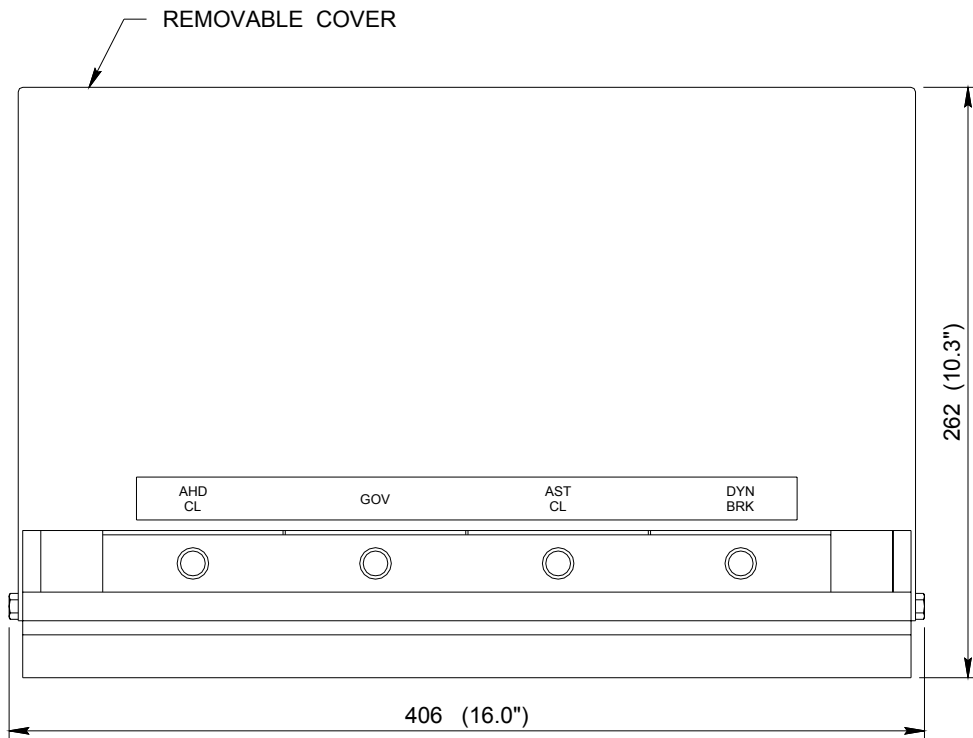
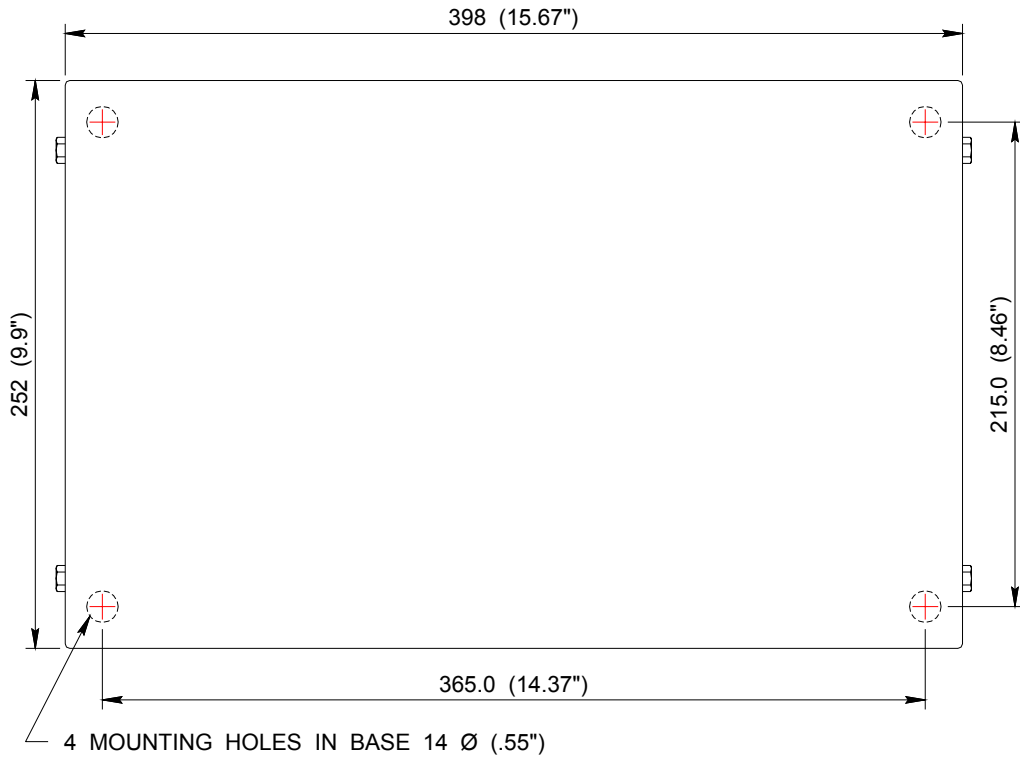
adjustable time period. As the control head lever is moved further in the ahead direction the engine speed begins to increase. The rate of increase is adjustable on the MPC-11 panel. When the propeller shaft reaches a preset speed in the ahead direction, an external speed switch enables the dynamic braking circuit.

When the control head lever is moved from ahead to astern, the engine speed setting is reduced to a speed setting slightly lower than the normal idle speed. Alternately the dynamic brake signal can be used to activate an engine shutdown assembly with auto reset. Either method maintains minimum fuel rack position during dynamic braking. The dynamic braking circuit holds the ahead clutch in until the shaft speed falls below the speed switch set point. The ahead clutch is then released and the astern clutch is engaged while the astern power boost is applied to the speed setting signal. The engine speed then increases according to the control head position.

Dynamic braking uses the engine and propeller to slow the speed of the vessel before the reversal takes place. The dynamic braking circuit only operates for ahead to astern maneuvers.



Type MPC-11 Pneumatic Logic and Control Panel Dimensions



ALL EXTERNAL PNEUMATIC CONNECTIONS ARE 1/4 - 18 NPT OR M18 X 1.5

PRIME MOVER CONTROLS INC.

3600 Gilmore Way, Burnaby, BC, Canada V5G 4R8 Tel: (604) 433-4644 FAX: (604) 433-5570

1108-1-02 Rev. 0