



Multi-Station Control System

A Caterpillar® Electronic Engine and Transmission Control System

Caterpillar's new Multi-Station Control

System (MSCS) provides engine and transmission control for vessels with single or dual engine applications. The "plug and run" components of the Multi-Station Control System are easy to install a maximum of eight control stations. Control of the engine and transmission can be easily transferred from one station to another. A fully redundant backup system is included to ensure propulsion system operation in the event of a failure to the primary system. In addition to the eight primary control stations, eight backup stations can be installed per vessel. Transmission shift logic contains anti-stall strategy to prevent stalling the engine during quick shifting maneuvers.

Multi-Station Control System:

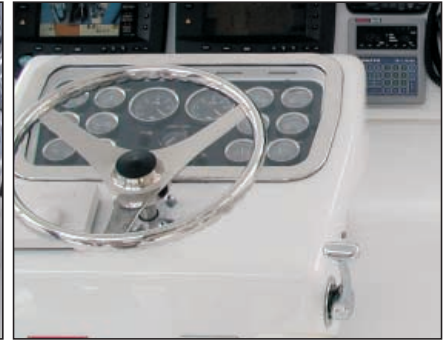
- monitors and performs operator control functions.
 - throttle control
 - ahead, neutral, astern transmission control
 - station activation and operation
 - throttle synchronization
 - slow vessel mode activation and operation
 - sync-cruise mode activation and operation
 - trolling mode activation and operation
 - transmission lockout
- identifies and reports critical vessel control parameters.
 - indicator lamps for each function
 - continual communication between control head, Powertrain Control Processor, and engine ECM
- reports failure conditions through self diagnostics.
 - Marine Power Display diagnostic windows
 - Cat Electronic Technician



Integrated Control Head



Slim Line Control Head



Side Mounted Control Head

Multi-Station Control System Components

MSCS components are designed to support control functions with three different control heads. The **Slim Line Control Head** is designed to be used in conjunction with a separate **Button Panel**. The Slim Line Control Head must be connected to the **Control Station Processor** to interface with the **Powertrain Control Processor**.

The **Side Mounted Control Head** is designed for sport fishing vessels and must be installed with the same components as the Slim Line Control Head.

The **Integrated Control Head** incorporates the button panel and provides all functions in one unit. The Integrated Control Head is connected directly to the Powertrain Control Processor.

The **Backup Panel** provides secondary control if the primary control station is disabled. The backup Panel has a protected enable switch and a station activation button to transfer control of throttle and

transmission. The electronic components for the Backup Panel are totally separate and isolated from those of the other control stations.

Marine Power Display provides full function capability for the Multi-Station Control System. The Control System Information screen displays the status of MSCS settings and allows the operator to change the programmable parameters. Marine Power Display also shows an MSCS function status bar, diagnostic windows, and engine speed display for sync cruise mode.

The MSCS components are capable of withstanding the harsh marine environment whether in a closed or open station or in the engine room. Components are fully functional from -40°C to +85°C (-40°F to +185°F). Operating power supply range is between 9 and 36 volts DC. The nominal system voltage is 12V or 24V DC with reverse polarity protection.

Dimensions

COMPONENT	Length (mm)	Width (mm)	Height (mm)
Marine Power Display	229	148	61
Integrated Control Head	152	136	170
Backup Panel	150	132	115
Powertrain Control Processor	435	246	78
Electric Troll Processor	150	125	50
Control Station Processor	268	150	70
Button Panel	106	106	60