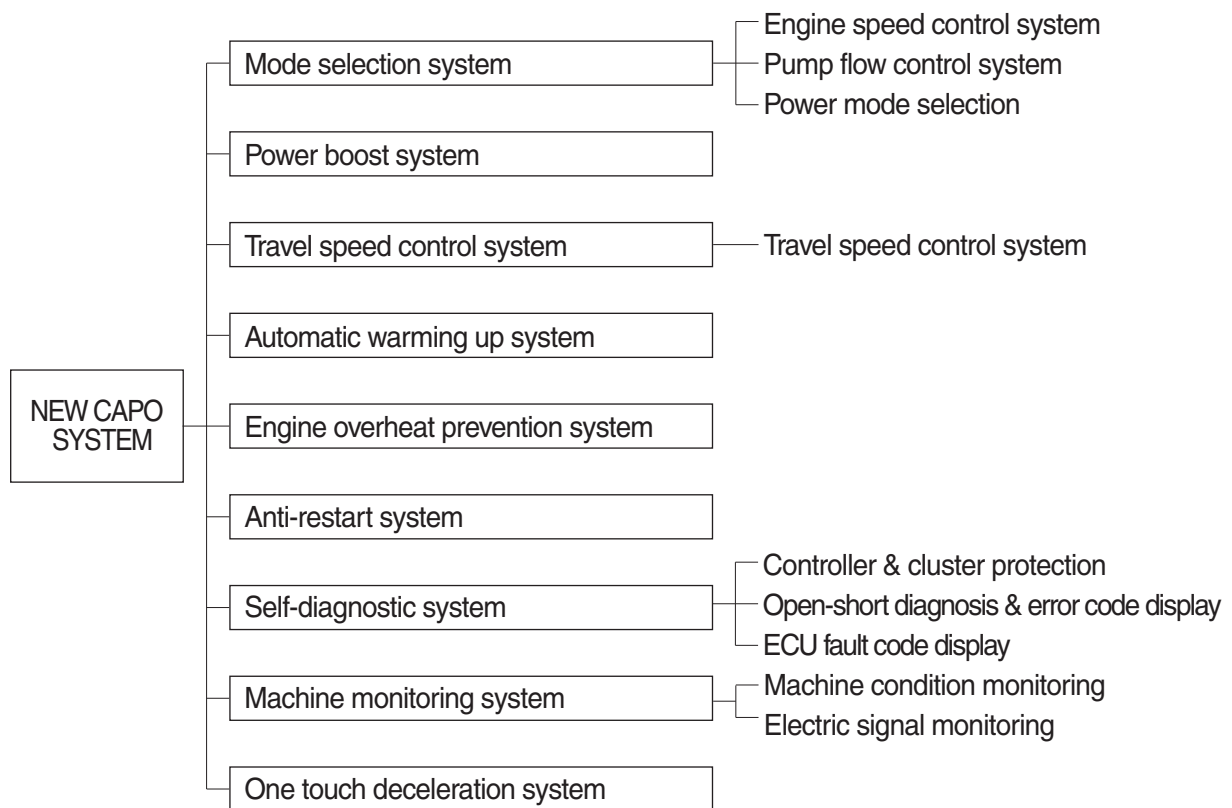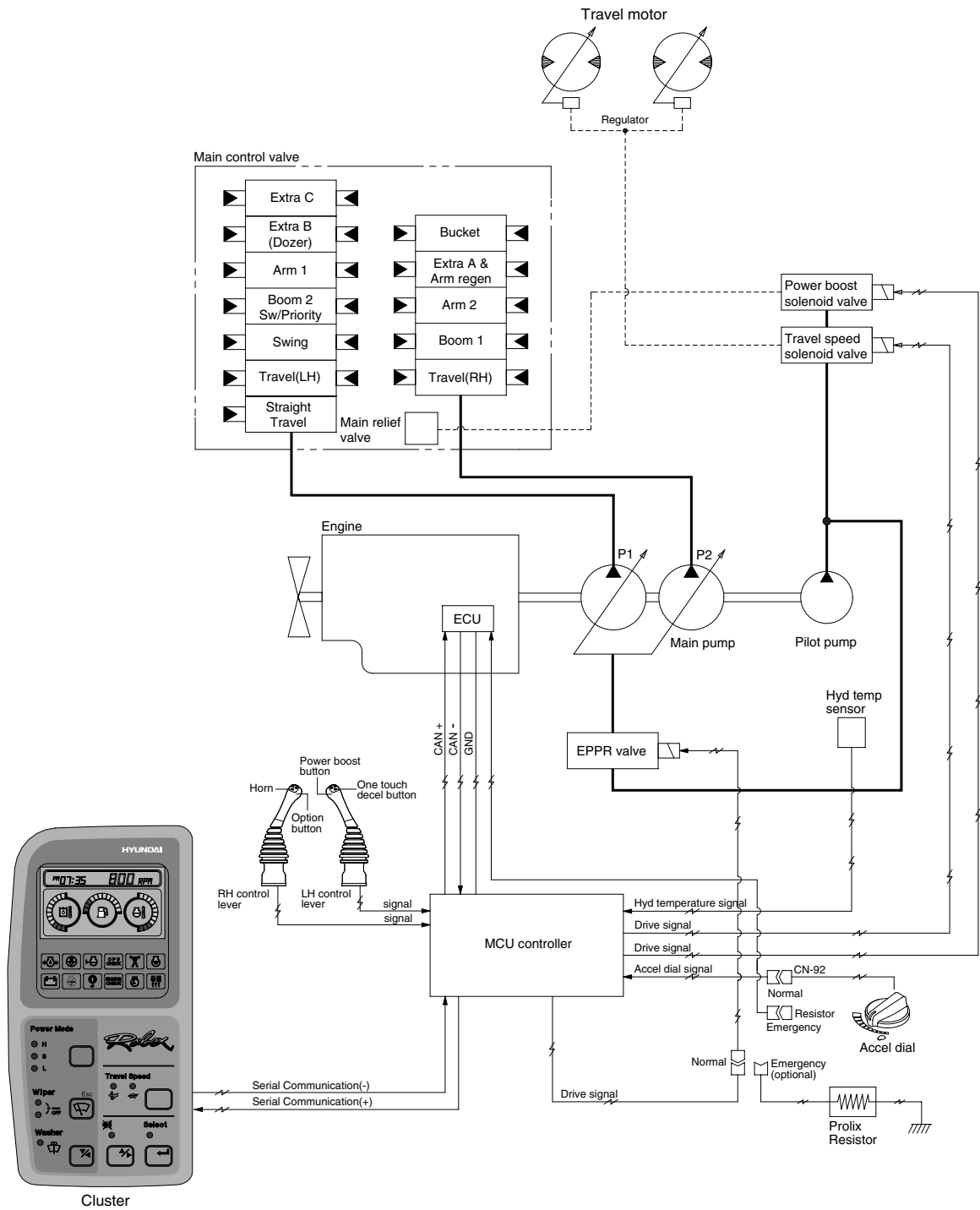## GROUP 1 OUTLINE

The NEW CAPO(Computer Aided Power Optimization) system controls engine and pump mutual power at an optimum and less fuel consuming state for the selected work by mode selection, one touch deceleration, power boost function, etc. It monitors machine conditions, for instance, engine speed, coolant temperature, hydraulic oil temperature, and hydraulic oil pressure, etc.

It consists of a MCU controller, a cluster, an accel actuator, an EPPR valve, and other components. The MCU controller, and the cluster protect themselves from over-current and high voltage input, and diagnose malfunctions caused by short or open circuit in electric system, and display error codes on the cluster.

```
                                                        ┌─ Engine speed control system
                        ┌─ Mode selection system ──────┼─ Pump flow control system
                        │                                └─ Power mode selection
                        │
                        ├─ Power boost system
                        │
                        ├─ Travel speed control system ─── Travel speed control system
                        │
                        ├─ Automatic warming up system
   NEW CAPO             │
   SYSTEM ──────────────┼─ Engine overheat prevention system
                        │
                        ├─ Anti-restart system
                        │                                ┌─ Controller & cluster protection
                        ├─ Self-diagnostic system ──────┼─ Open-short diagnosis & error code display
                        │                                └─ ECU fault code display
                        │                                ┌─ Machine condition monitoring
                        ├─ Machine monitoring system ────┤
                        │                                └─ Electric signal monitoring
                        └─ One touch deceleration system
```

SYSTEM DIAGRAM

Travel motor

Regulator

Main control valve

Extra C	
Extra B (Dozer)	Bucket
Arm 1	Extra A & Arm regen
Boom 2 Sw/Priority	Arm 2
Swing	Boom 1
Travel(LH)	Travel(RH)
Straight Travel	Main relief valve

Power boost solenoid valve

Travel speed solenoid valve

Engine

ECU

P1 P2

Main pump Pilot pump

Hyd temp sensor

CAN +
CAN -
GND

EPPR valve

Power boost button
Horn
Option button
One touch decel button

RH control lever LH control lever

signal
signal

MCU controller

Hyd temperature signal
Drive signal
Drive signal
Accel dial signal

CN-92
Normal
Resistor
Emergency

Accel dial

Normal Emergency (optional)

HYUNDAI

PM01:35 800 RPM

Power Mode
H
S
L

Wiper
Esc
Washer
Travel Speed
Select

Serial Communication(-)
Serial Communication(+)

Drive signal

Prolix Resistor

Cluster

1107A5MS01

5-2