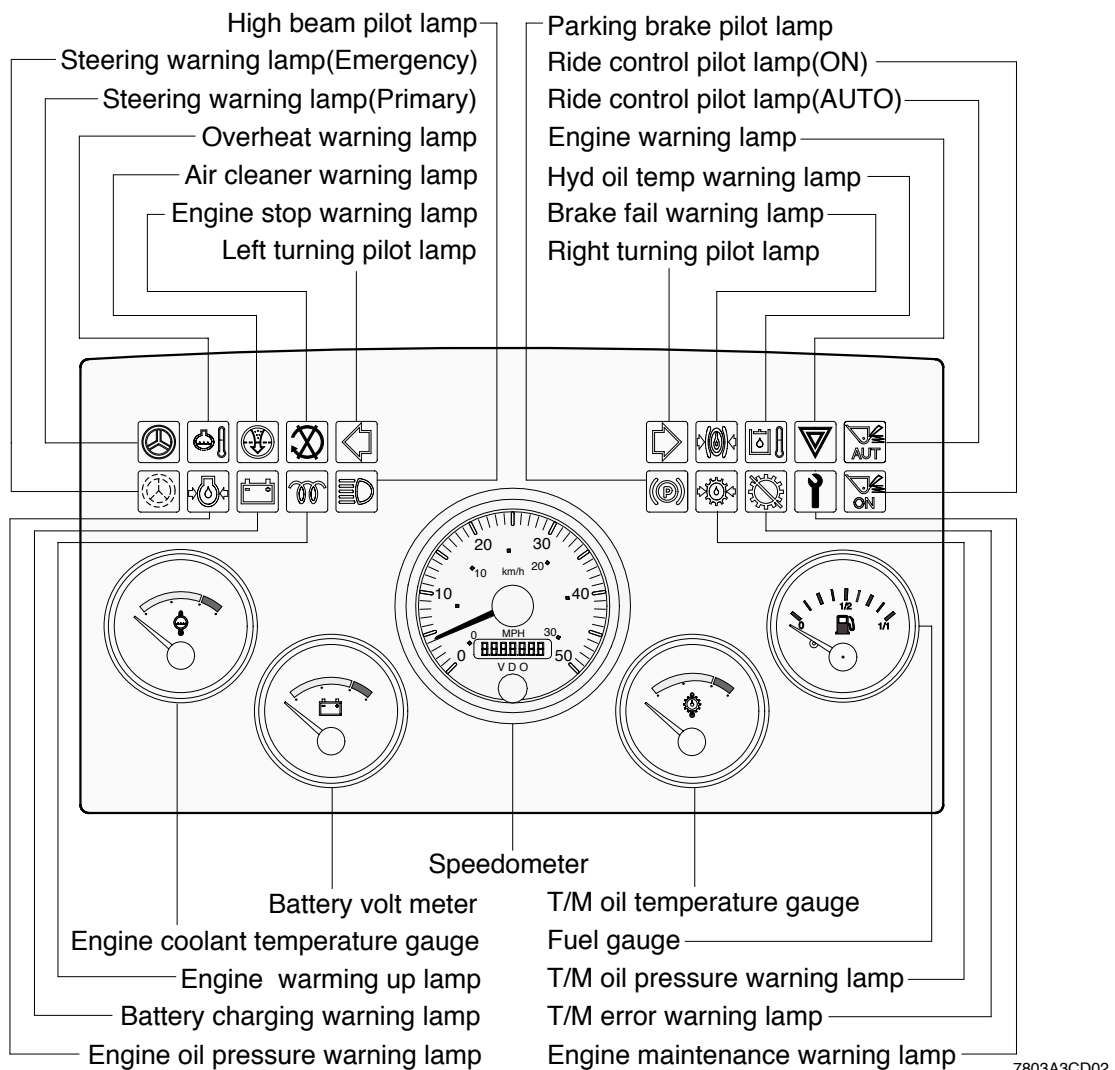


2. CLUSTER

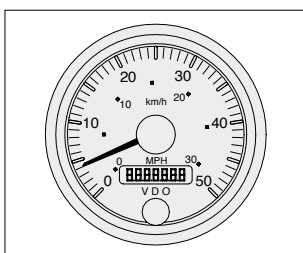
The gauges panel consists of gauges and monitors as shown below, to warn the operator in case of abnormal machine operation or conditions for the appropriate operation and inspection.

- Gauges : Indicate operating status of the machine.
- Warning lamp : Indicate abnormality of the machine.
- Pilot lamp : Indicate operating status of the machine.
- ※ **The monitor installed on this machine does not entirely guarantee the condition of the machine. Daily inspection should be performed according to chapter 6, MAINTENANCE.**
- ※ **When the monitor provides a warning immediately check the problem, and perform the required action.**



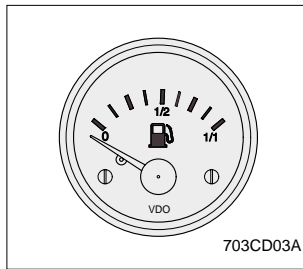
7803A3CD02

1) SPEEDOMETER



- (1) The speedometer displays the speed of machine in mph and km/h.

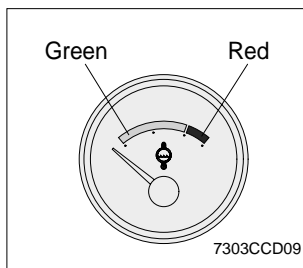
2) FUEL GAUGE



- (1) This gauge indicates the amount of fuel in the fuel tank.
- (2) Fill the fuel when the indicator moves **0** point, refuel as soon as possible to avoid running out of fuel.

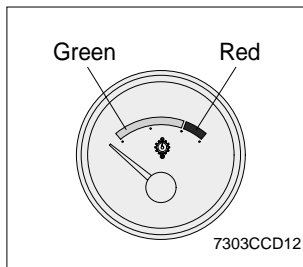
If the gauge indicates below 0 point even though the machine is on the normal condition, check the electric device as that can be caused by the poor connection of electricity or sensor.

3) ENGINE COOLANT TEMPERATURE GAUGE



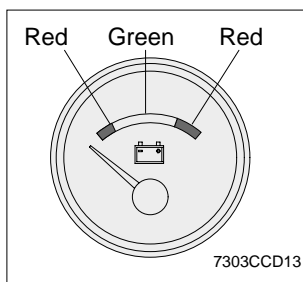
- (1) This indicates the temperature of coolant.
 - Green range : 40-105. C (104-221. F)
 - Red range : 105. C (221. F) Above
- (2) The green range indicates when operating.
- (3) Keep idling engine at low speed until the green range indicates, before operation of machine.
- (4) If the indicator is in the red range, turn OFF the engine, check the radiator and engine.

4) TRANSMISSION OIL TEMPERATURE GAUGE



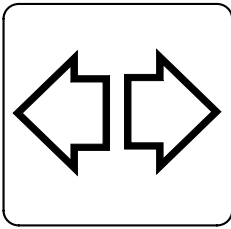
- (1) This range indicates the temperature of transmission oil.
 - Green range : 50-120. C (122-248. F)
 - Red range : 120. C (248. F) Above
- (2) The green range indicates when operating.
- (3) Keep idling engine at low speed until the green range indicates, before operation of machine.
- (4) If the indicator is in the red range, it means the transmission is overheated. Be careful that the indicator does not move into the red range.

5) BATTERY VOLT METER



- (1) This gauge indicates the voltage in the charging system when the engine is running.
- (2) If the indicator is below 20V (Red range), it means that the electricity is being discharged. If the indicator is above 28V (Red range), an unusually high voltage may damage the alternator. Check the charging system in both cases.

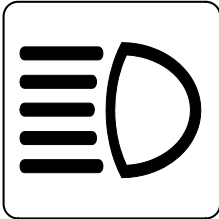
6) DIRECTION PILOT LAMP



7803ACD03

- (1) This lamp flashes when the signal indicator lever is moved.
- (2) When the lamp lights up, the alarm(50dB) sounds.

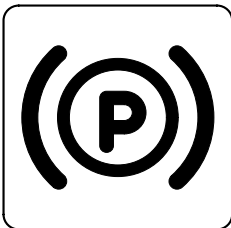
7) HIGH BEAM PILOT LAMP



7803ACD04

- (1) This lamp works when the illuminating direction is upward.
- (2) This lamp comes ON when the dimmer switch is operated, e.g., when passing another vehicle.

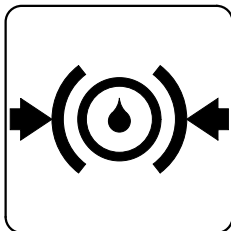
8) PARKING BRAKE PILOT LAMP



7803ACD05

- (1) When the parking brake is actuated, the lamp lights ON.
- ※ **Check the lamp is OFF before driving.**

9) BRAKE FAIL WARNING LAMP

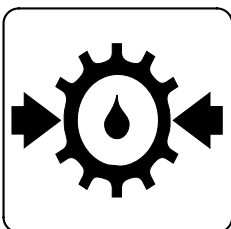


7803CD06

- (1) The lamp lights ON when the oil pressure of service brake drops below the normal range.
- (2) When the lamp is ON, stop the engine and check for its cause.

※ **Do not operate until any problems are corrected.**

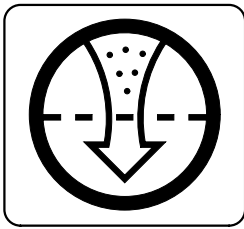
10) TRANSMISSION OIL PRESSURE WARNING LAMP



7803ACD07

- (1) The lamp lights ON when the oil pressure of the transmission drops.
- (2) When the lamp is ON, stop the engine and check the transmission system.

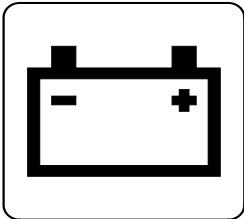
11) AIR CLEANER WARNING LAMP



7803ACD08

- (1) This lamp operates by the vacuum caused inside when the filter of air cleaner is clogged.
- (2) Check the filter and clean or replace it when the lamp is ON.

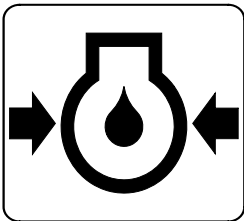
12) BATTERY CHARGING WARNING LAMP



7803A3CD09

- (1) This lamp is ON when key ON, it is turned OFF after starting the engine.
- (2) Check the battery charging circuit when this lamp comes ON, during engine operation.

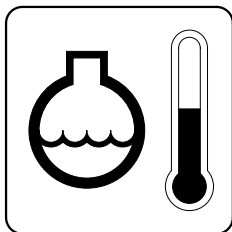
13) ENGINE OIL PRESSURE WARNING LAMP



7803A3CD10

- (1) If lamp comes ON during engine operation, shut OFF engine immediately. Check oil level.

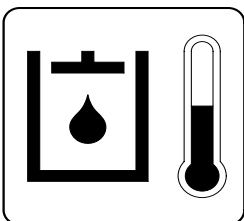
14) OVERHEAT WARNING LAMP



7803A3CD11

- (1) This lamp is turned ON when the temperature of cooling water is over the normal temperature (110°C , 230°F).
- (2) Check the cooling system when the lamp is ON.

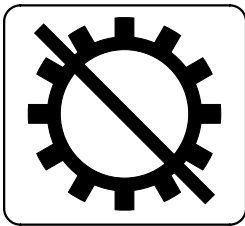
15) HYDRAULIC OIL TEMP WARNING LAMP



7803A3CD12

- (1) This warning lamp operates and the buzzer sounds when the temperature of hydraulic oil is over 105°C (221°F).
- (2) Check the hydraulic oil level when the lamp is turned ON.
- (3) Check for debris between oil cooler and radiator.

16) TRANSMISSION ERROR WARNING LAMP



7803ACD13

(1) This lamp lights ON and the transmission error display show the wrench with the error codes when a error occurs in the transmission.

(2) Immediately pull the machine to a convenient stop. Stop the engine. Investigate the cause.

- ※ **Consult a HYUNDAI dealer to investigate the cause.**
- ※ **Do not operate until the cause has been corrected.**

17) STEERING WARNING LAMP(Option)

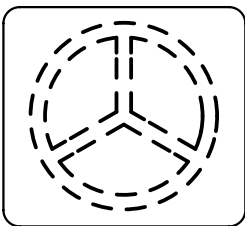


7803ACD14

(1) Primary

This lamp indicates that the primary steering has failed. when the indicators come on and the action alarm sounds, steer the machine immediately to a convenient location and stop the machine. stop the engine and investigate the cause.

- ※ **Do not operate the machine until the cause has been corrected.**



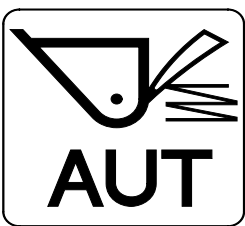
7803ACD15

(2) Emergency

This lamp indicates the the emergency steering system is active.

- ※ **Immediately pull the machine to a convenient stop and stop the engine.**
- ※ **The emergency steering system can be manually tested. Refer to page 3-12.**

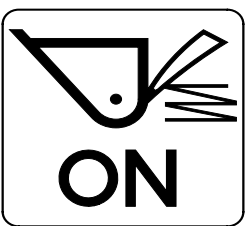
18) RIDE CONTROL PILOT LAMP(Option)



7803ACD16

(1) Auto ride control

This lamp lights ON when push in the top of the ride control switch in order to turn on the automatic ride control.

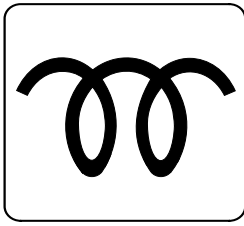


7803ACD17

(2) Ride control

This lamp lights ON when push in the bottom of the ride control switch in order to turn on the system for ride control.

19) ENGINE WARMING UP LAMP

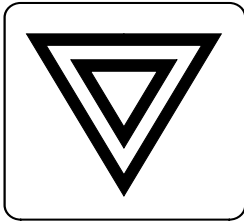


7803ACD19

- (1) This lamp lights ON when key ON, it will be ON to indicate the air grid heater is being heated.
- (2) When the lamp goes out the operator should start cranking the engine.

※ **Refer to page 4-6.**

20) ENGINE WARNING LAMP



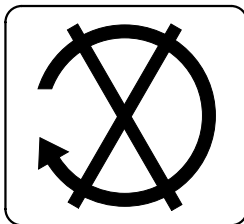
7803ACD20

- (1) This lamp lights ON during a nonfatal system error. The engine can still be run, but the fault should be corrected as soon as possible.

※ **In the diagnostic mode, the lamp will flash after the engine stop warning lamp complete the three-digit fault code.**

※ **Refer to diagnostic fault codes, page 4-3.**

21) ENGINE STOP WARNING LAMP



7803ACD18

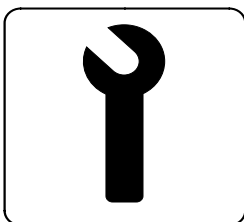
- (1) This lamp indicates that the engine needs to be shut down before permanent damage occurs to the engine.

※ **The engine should be shut off as soon as it can be shut off safely.**

※ **This lamp is also used to flash out the fault code number in the diagnostic mode.**

※ **Refer to diagnostic fault codes, page 4-3.**

22) ENGINE MAINTENANCE WARNING LAMP



7803ACD21

- (1) This lamp lights ON when it is time to change oil and perform any other simultaneous maintenance tasks.
- (2) This lamp will alert the operator of the need to change oil by flashing this lamp for approximately 12 seconds after start switch ON. The flashing sequence will be three quick flashes, followed by a pause. This flash sequence will go through five cycles in the 12 seconds period. This sequence will occur at every start switch ON until the lamp has been reset.

※ **The diagnostics switch must be in the OFF position for the flashing sequence to occur.**



※ **Resetting the engine maintenance lamp with the diagnostic switch**

The engine maintenance lamp can be reset using by following steps 1 through 6 below.

Steps ② through ④ must be done within a maximum of 30 seconds.

The diagnostics switch must be in the OFF position.

Turn ON the starting switch (engine **must not** be operating)

Diagnostics switch ON over 3 secods, then the switch OFF

Diagnostics switch ON twice more briefly within 3 seconds each

Diagnostics switch ON over 3 seconds, then the switch OFF

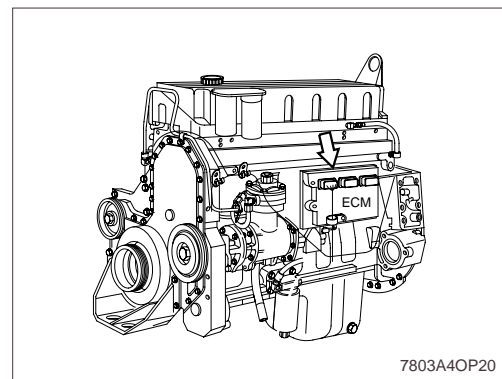
The lamp will flash three times

Turn OFF the starting switch

※ **If the engine maintenance lamp does not flash three times, the reset sequence must be performed again.**

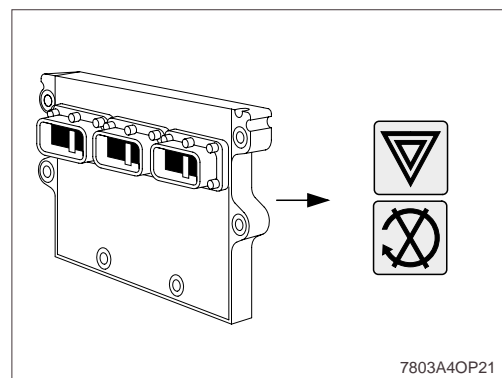
23) CHECK DIAGNOSTIC FAULT CODES

(1) The system can show and record operation irregularities that present themselves as fault codes. These codes will make troubleshooting easier. The fault codes are recorded in the **ECM**. They can be read using the two fault lamps.

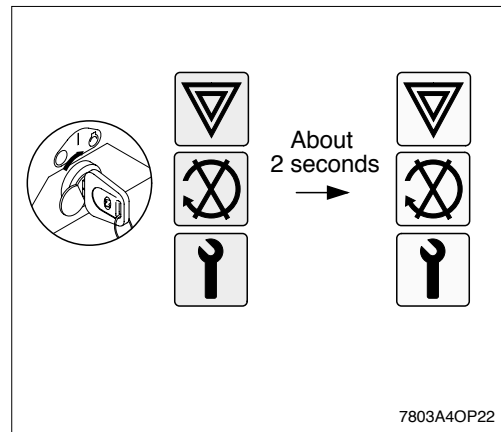


(2) Engine electronic fuel system codes

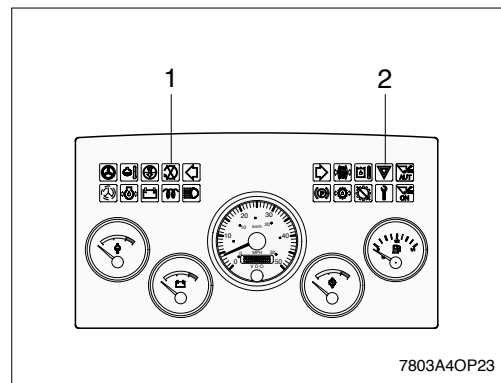
The engine electronic fuel system fault codes can be seen on the engine warning lamp and engine stop warning lamp in the cab.



- ② The engine stop warning lamp is red. The engine warning lamp is yellow. When the machine starting switch is turned ON and the diagnostic switch is OFF, all three lamps will illuminate to check their operation. The lamps will go OFF in sequence after about 2 seconds.

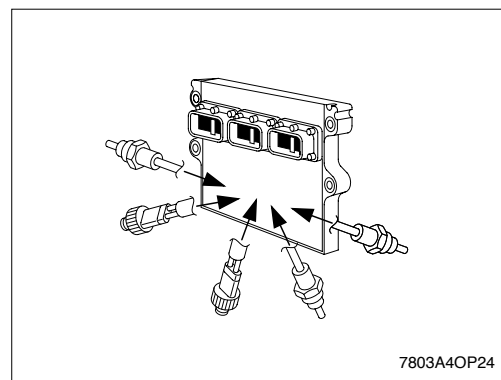


- ③ The lamps will remain OFF until a fault code is recorded. If a lamp remains ON, an active fault exists. If the engine stop warning lamp(1) is illuminated while operating, the fault can be engine disabling. The machine must be shut off as soon as it can be done in a safe manner. The machine must remain parked as long as this fault exists. If the engine warning lamp(2) is illuminated, the machine can be safely operated, but the fault must be corrected as soon as possible.

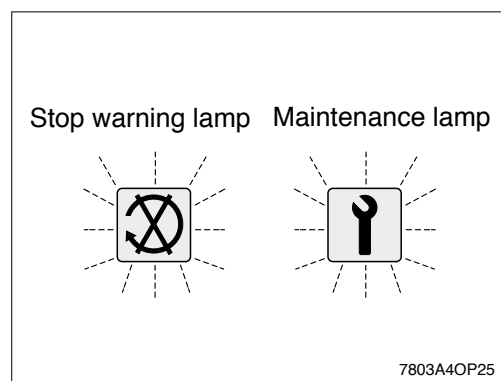


(3) Engine protection system codes

- ① The engine protection system logs separate fault codes for out-of-range conditions associated with any of the following sensors:
- Coolant temperature
 - Oil pressure
 - Intake manifold temperature.

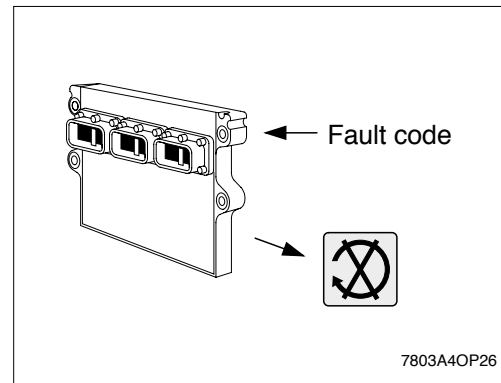


- ② This system will activate an incab warning device when an out-of-range condition occurs. The warning device is a engine stop warning lamp. This system will also activate the engine maintenance lamp(blue).

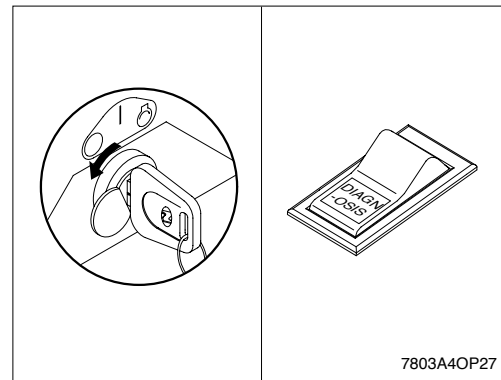


③ If the engine stop warning lamp comes ON while driving, it means a fault code has been recorded. The lamp will remain ON as long as the fault exists, and engine power and speed will gradually be reduced after 30 seconds warning.

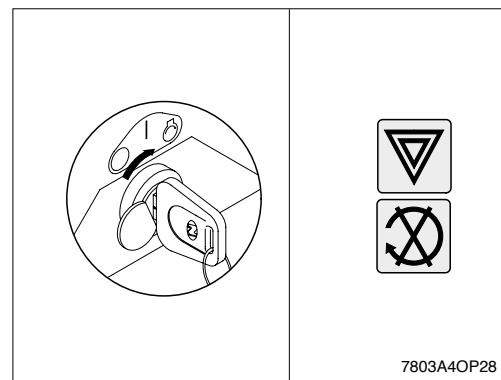
※ **The fault must be corrected as soon as possible.**



(4) Turn off the engine. To check for engine electronic fuel system and engine protection system fault codes, move the diagnostic switch to the ON position.



(5) Turn the starting switch to the ON position.
 If no active fault codes are recorded, both lights will come ON and stay on.
 If active fault codes are recorded, both lights will come ON momentarily, then begin to flash the code of the recorded faults.



(6) The fault code will flash in the following sequence:
 First, a engine warning lamp(yellow) light will flash. Then there will be a short 1-or 2-second pause after which the number of the recorded fault code will flash in engine stop lamp(red). There will be a 1- or 2-second pause between each number. When the number has finished flashing in red, a yellow light will appear again. The three-digit code will repeat in the same sequence.

