

3. STARTING AND STOPPING THE ENGINE

1) CHECK INDICATOR LIGHTS

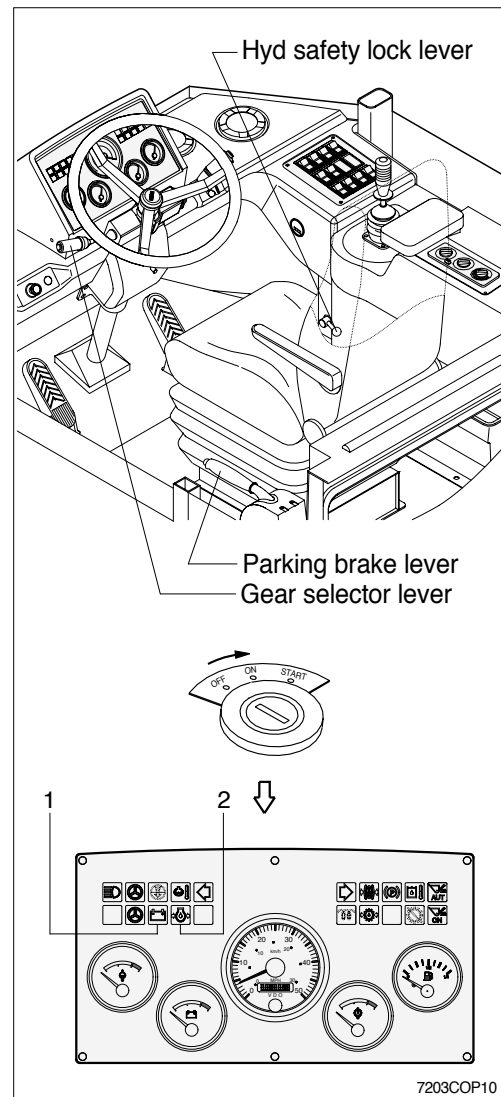
- (1) Check if parking brake is engaged.
- (2) Check if gear selector lever is in neutral position.
- (3) Check if hydraulic safety lock lever is in the lock position.
- (4) Turn the key to the ON position, and check following.

If all the lamps light ON after sounding buzzer for 3 seconds.

If the lamps do not light or the buzzer is not sounded, check disconnection of wire or electric bulb.

Only below lamps will light ON and all the other light will be turn OFF after 3 seconds.

- Charging warning lamp(1)
- Engine oil pressure warning lamp(2)



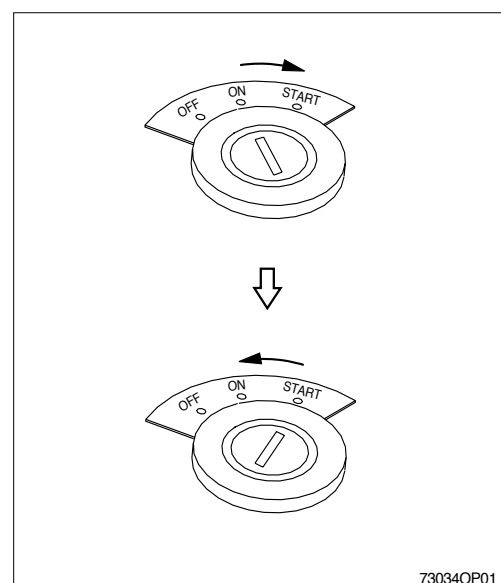
2) STARTING ENGINE(Normal temperature)

Sound the horn to warn the surroundings after checking if personnel or obstacles are in the area.

- (1) Turn the starting switch to START position to start the engine.

If the engine does not start, allow the starter to cool for about 2 minutes before attempting to start the engine again.

- (2) Release the key instantly after the engine starts to avoid possible damage to the starting motor.



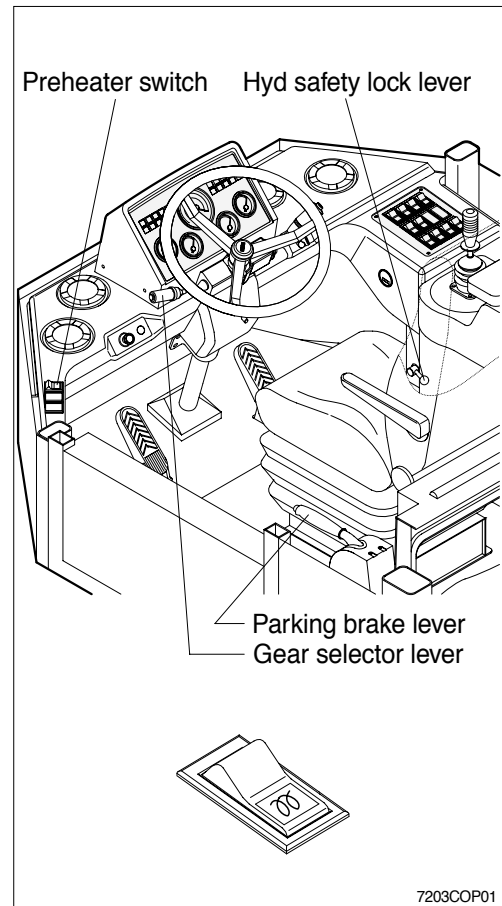
3) STARTING ENGINE IN A COLD WEATHER

Sound horn to warn surroundings after checking if there are obstacles in the area.

Replace the engine oil and fuel referring to recommended oils at page 6-10.

Fill the anti-freeze solution to the coolant as required.

- (1) Check if the parking brake is engaged.
- (2) Check if the gear selector lever is in the neutral position.
- (3) Check if the hydraulic safety lock lever is in the lock position.
- (4) Turn the key to the ON position, and the preheater switch pushed ON 10~30 seconds by preheat guide lines at page 3-11.
- (5) Turn the starting switch to START position to start the engine.
- (6) Release the key immediately after starting engine. The engine start switch key will automatically return to the ON position.



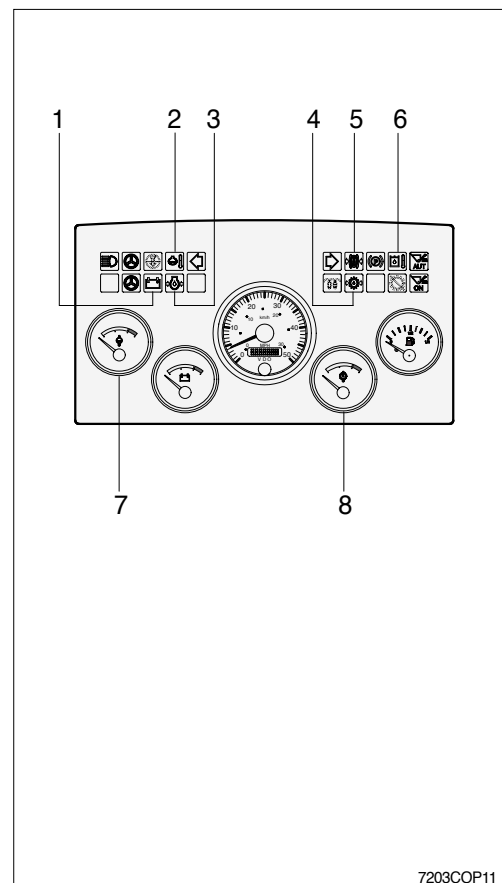
4) INSPECTION AFTER ENGINE START

Inspect and confirm the following after engine starts.

- (1) Is the level gauge of hydraulic oil tank in the normal level?
- (2) Are there leakages of oil or water?
- (3) Are all the warning lamps(1~6) OFF?
- (4) Check the following after warming up operation.
 - Is the indicator of water temperature gauge(7) in the green range?
 - Is the indicator of transmission oil temperature gauge(8) in the green range?
 - Is the engine sound and the color of exhaust gas normal?
 - Are the sound and vibration normal?

Do not increase engine speed quickly after starting, it can make damage engine or turbocharger.

If there are problems in the control panel, stop the engine immediately and correct problem as required.



5) TO STOP THE ENGINE

If the engine is abruptly stopped before it has cooled down, engine life may be greatly shortened. Consequently, do not abruptly stop the engine apart from an emergency.

In particularly if the engine has overheated, do not abruptly stop it but run it at medium speed to allow it to cool gradually, then stop it.

- (1) Place the gear selector lever in neutral.
- (2) Engage the parking brake.
- (3) Run the engine at low idling speed for about 5 minutes.
- (4) Return the key of starting switch to the OFF position.
- (5) Remove the key to prevent other people using the machine and LOCK safety lever.
- (6) Lock the cab door.

