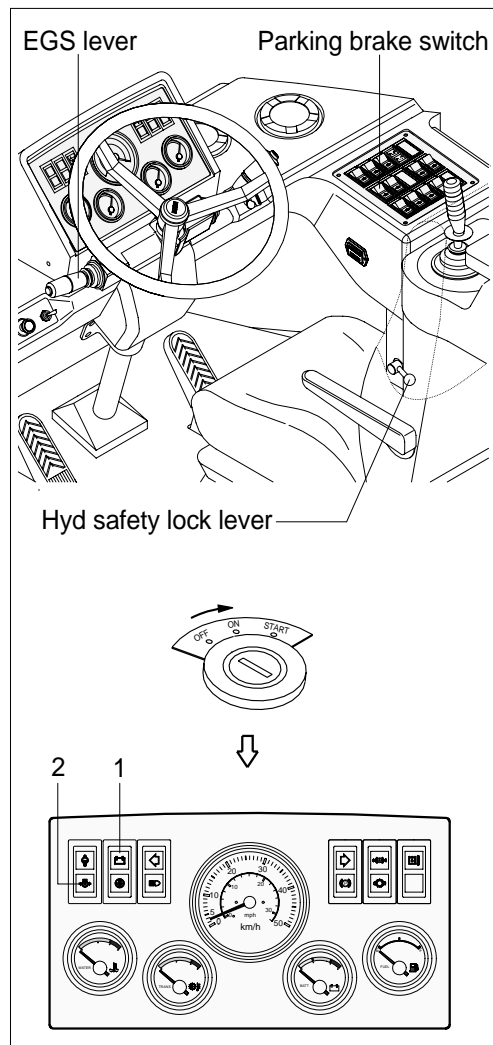


3. STARTING AND STOPPING THE ENGINE

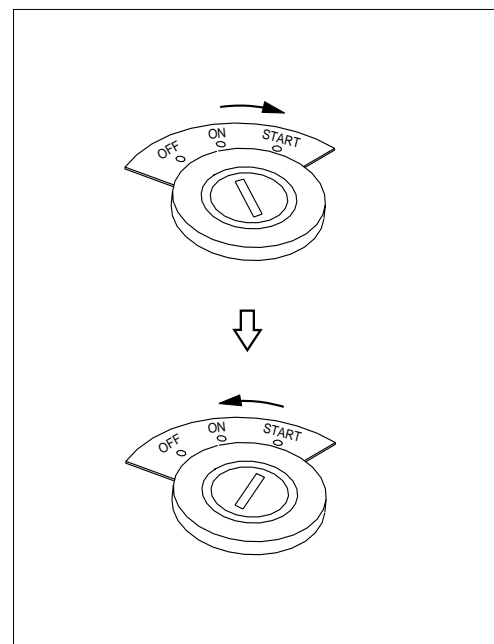
1) CHECK INDICATOR LIGHTS

- (1) Check if parking brake switch is ON.
- (2) Check if EGS 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.
 - i **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 5 seconds.
 - Charging warning lamp(1)
 - Engine oil pressure warning lamp(2)



2) STARTING ENGINE(Normal temperature)

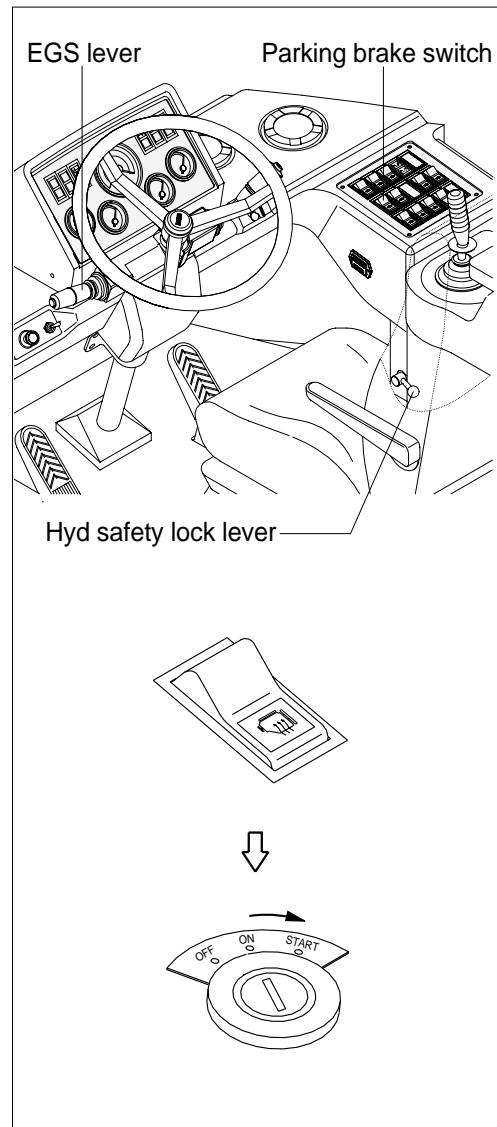
- i **Sound the horn to warn the surroundings after checking if personnel or obstacles are in the area.**
- (1) Turn the starting switch to START position to start the engine.
 - i **If the engine does not start, allow the starter to cool for about 2 minutes before attempting to start the engine again.**
- (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.

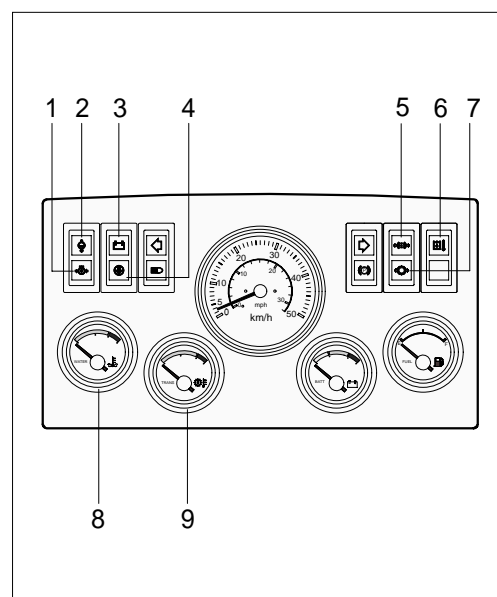
- (1) Check if the parking brake is locked(With the parking switch ON).
- (2) Check if the EGS lever is in the neutral position.
- (3) Check if the hydraulic safety lock lever is in the lock position.
- (4) Start the engine by turning the key to the START position after inject ether.
- (5) Release the key immediately after starting engine. The ignition switch will automatically return to the ON position.



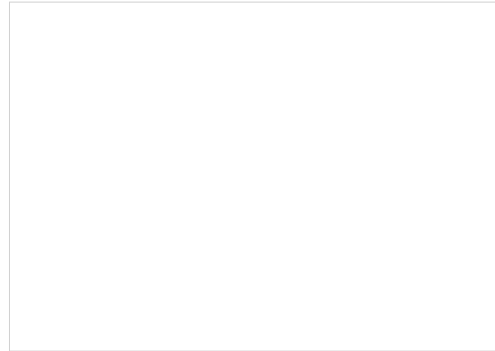
4) INSPECTION AFTER ENGINE START

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(1-7) OFF?
- (4) Check the following after warming up operation.
 - Is the indicator of water temperature gauge (8) in the green range?
 - Is the indicator of transmission oil temperature gauge(9) 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.**



6) 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 EGS lever in neutral.
 - (2) Turn the parking brake switch ON.
 - (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.

