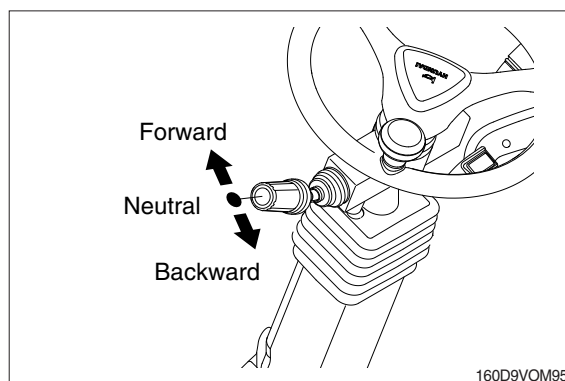


10. TESTING AND ADJUSTING

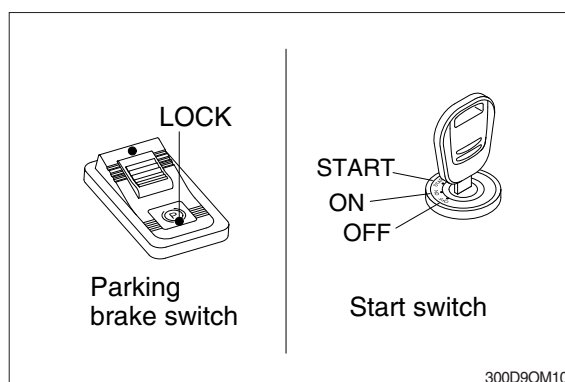
1. ENGINE SYSTEM

1) EASE OF STARTING, NOISE

- (1) Set gear selector lever at NEUTRAL.

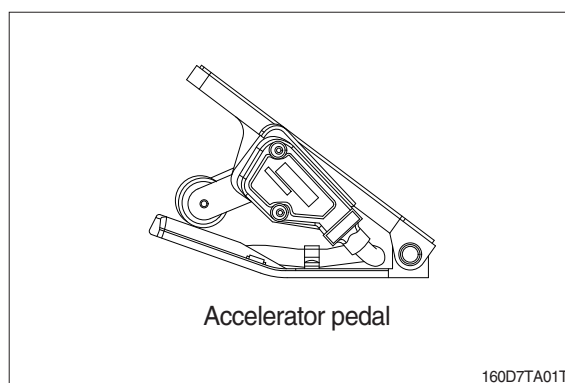


- (2) Put the parking brake switch in LOCK position.
 - (3) Turn ON start switch, automatically heating operated.
 - (4) When preheater pilot lamp goes out, turn start switch to START, and start engine.
- ※ **When engine starts, check if it starts smoothly, and if it makes any abnormal noise.**



2) IDLING

- (1) After warming up engine, run at idling.
- (2) Check that engine maintains steady, smooth rotation without gasping, abnormal noise, abnormal explosions, or irregular vibration.
- (3) Check that idling speed is within specified range.
- (4) Idle rpm : SEE 8. SPECIFICATION



3) WHEN ACCELERATOR PEDAL IS DEPRESSED

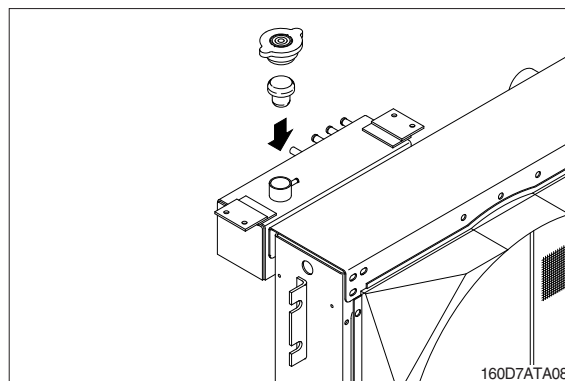
- (1) Check that accelerator pedal does not catch when depressed.
- (2) Check that engine speed increases in accordance with amount pedal is depressed.
- (3) When doing this, check that engine speed changes without gasping, abnormal noise, abnormal explosions, or irregular vibration.
- (4) Check that exhaust gas is colorless when the engine is idling, and a thin black color when accelerator pedal is depressed.
- (5) Max speed : SEE SECTION 8. SPECIFICATIONS

4) SURGE TANK CAP

- (1) Push pressure regulator spring with finger and check that tension is correct.
- (2) Pull negative pressure valve, and check that it is closed when released.
- (3) If packing is damaged, replace whole radiator cap assembly.

⚠ While the coolant in the radiator is retained hot temperature, do not open the surge tank cap.

It will gush out the hot water and someone might get scalded or severe injured.



5) FUEL FILTER (DIESEL)

- (1) The fuel filter cartridge cannot be inspected from the outside, so replace it periodically (refer to SECTION 7. MAINTENANCE AND LUBRICATION).
- (2) Always use HYUNDAI Forklift genuine parts when replacing the element.
- (3) After replacing the element, run the engine and check for oil leakage from the filter mount.

6) ENGINE OIL

- (1) Check oil level with dipstick and add oil if necessary.
- (2) Check oil for discoloration or deterioration. Change oil if discolored or deteriorated.
- (3) Engine oil quantity
 - 120/130D-9V : 11 ℓ (2.94 U.S.gallons)
 - 160D-9V : 14.2 ℓ (3.8 U.S.gallons)

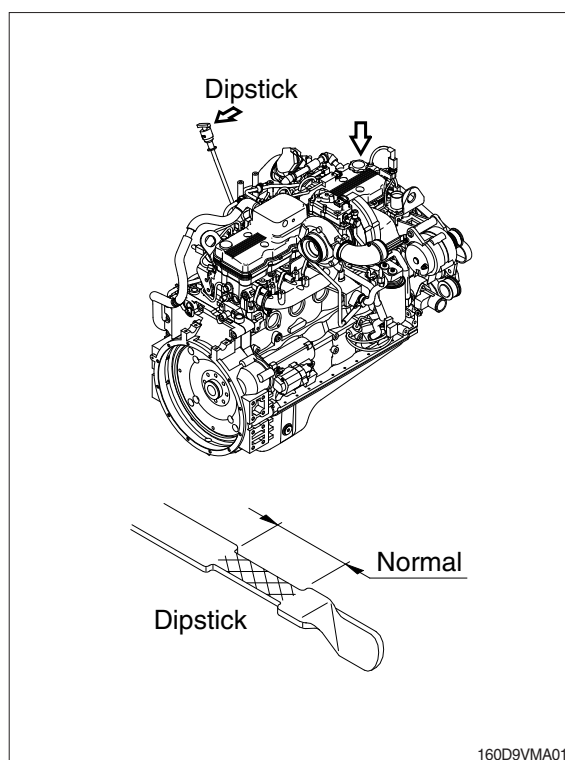
7) ENGINE OIL FILTER

The condition of the oil filter cartridge cannot be inspected from the outside so replace the engine oil filter (refer to section 7. Maintenance and lubrication).

Use a filter wrench and remove the whole cartridge assembly.

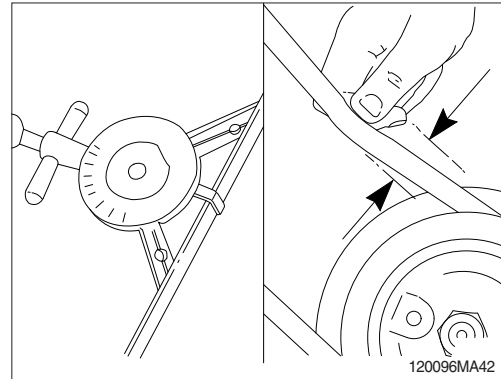
⚠ If a spilt oil on the engine is left as it is after replacing the engine oil filter, there is dangerous material for a fire.

Make sure that the spilt oil is wiped thoroughly away.



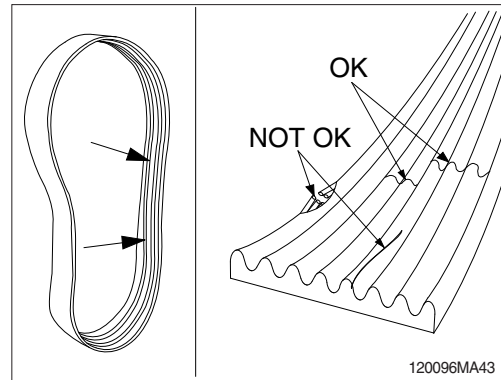
8) CHECK FAN BELT TENSION

- (1) A deflection method can be used to check belt tension by applying 11 kgf (25 lbf) force between the pulleys on V-belts. If the deflection is more than one belt thickness per foot of pulley center distance, the belt tension must be adjusted.



- (2) Inspect the fan belt for damage.

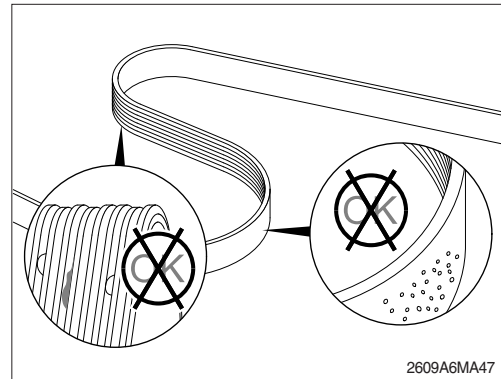
- ① Transverse (across the belt) cracks are acceptable.
- ② Longitudinal (direction of belt ribs) cracks that intersect with transverse cracks are not acceptable.



- ③ Inspect the belt

- Embedded debris
- Uneven/excessive rib wear
- Exposed belt cords
- Glazing (high heat)

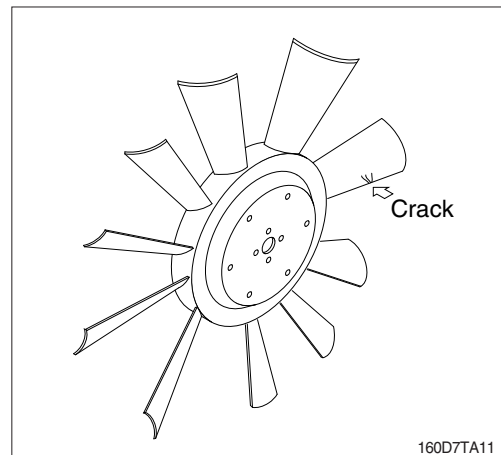
- ※ If any of the above conditions are present, the belt is unacceptable for reuse and must be replaced.



9) FAN

Move fan backwards and forwards by hand to check for looseness.

Tighten mounting bolt with a spanner.



2. DRIVE SYSTEM

1) GEAR SELECTOR LEVER

(1) Neutral starting

Engine can be started only when the gear selector lever is in neutral position.

(2) Shifting forward/reverse

① Forward

Push the lever forward then forward solenoid valve operates and oil comes to forward clutch thus the truck will run forward.

② Reverse

Pull the lever backward then reverse solenoid valve operates and oil comes to reverse clutch thus the truck will run backward.

2) OIL LEAKAGE

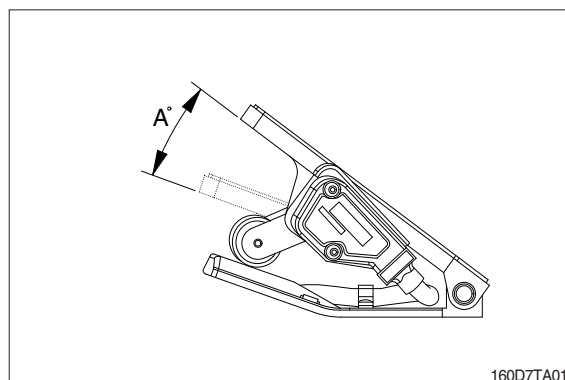
Check that there is no oil leakage from torque converter, transmission or control valve. If oil oozes out and forms drops, replace packing.

3) ADJUSTMENT OF PEDAL

(1) Accelerator pedal

Pedal operating range is "A". If the range is differ much from specification, replace the pedal immediately.

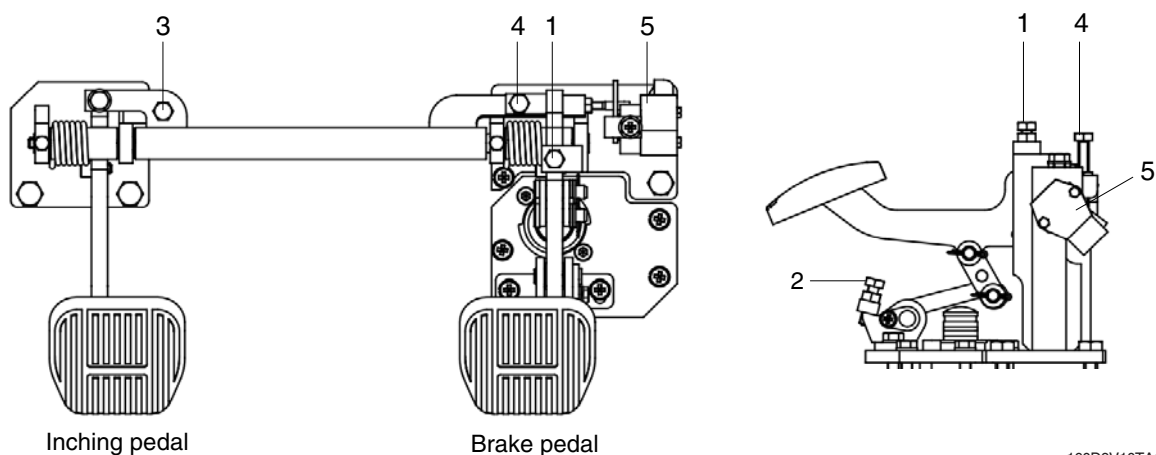
· Operating angle(A) : $17.5 \pm 2^\circ$



160D7TA01

(2) Brake and inching pedal

① Structure



160D9V10TA10

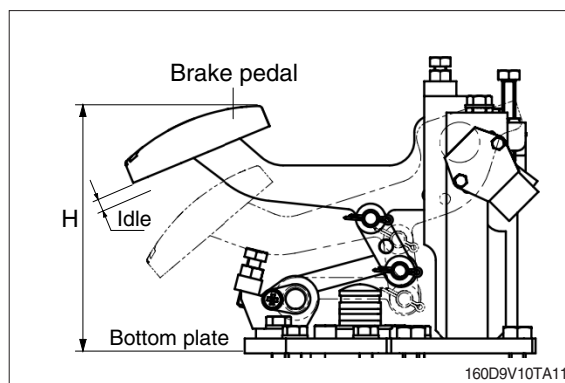
- | | | | | | |
|---|-------------------------|---|--------------------------------------|---|----------------|
| 1 | Brake stopper bolt | 3 | Inching stopper bolt | 5 | Inching sensor |
| 2 | Brake stroke limit bolt | 4 | Brake & inching pedal interlock bolt | | |

② Brake pedal

- Adjust height adjusting bolt (1) so that pedal height is "H".
- When the brake pedal reaches end-stroke, adjust the bolt (2) at that point. Then return the pedal back to its original position, release the bolt (2) 2 turns to the left, and fix it with a nut.

Unit : mm

| H | Idle |
|-------|------|
| 149±1 | - |



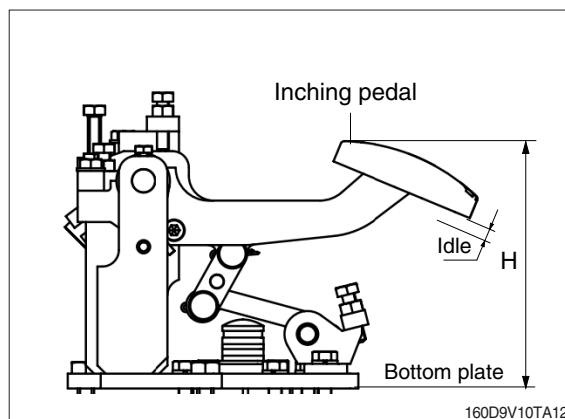
160D9V10TA11

③ Inching pedal

- Adjust inching stopper bolt (3) so that pedal height is "H".
- Adjust rod of inching cable so that inching pedal play is idle stroke when pedal height is "H".
- Adjust the brake and inching pedal interlock bolt (4) so that brake pedal interconnects with inching pedal at inching pedal stroke "P".

Unit : mm

| H | P | Idle |
|-------|---|------|
| 149±1 | 7 | 0 |

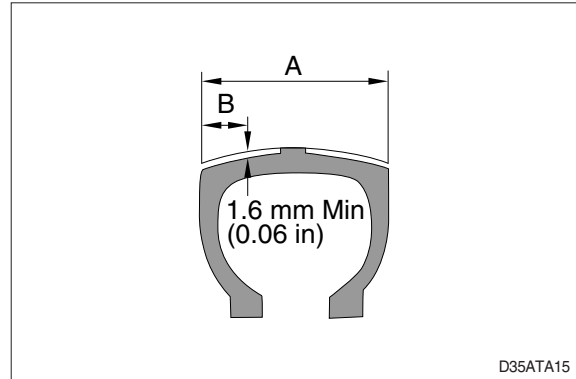


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3. TRAVEL SYSTEM

1) TIRES

- (1) Check tire pressure using tire gauge : SEE page 5-3 CHECK BEFORE STARTING ENGINE.
- (2) Check visually for cracks and damage to tread and side wall. If crack or damage is serious, replace tire.
- (3) Wear
Measure tread of pneumatic tires (tires with air). Depth of tread must be at least 1.6 mm (0.06 in) at point 1/4 across width of tread. $A/B \div 4$.
- (4) Check tire visually for uneven wear, stepped wear or any other abnormal wear. Check also for pieces stuck in tire.



2) HUB NUTS

Use wrench to check for loose hub nuts.

Tighten any loose hub nuts to specified tightening torque : SEE SECTION 8. SPECIFICATIONS

3) RIM SIDE RING

Check rim side ring for deformation or cracks. Check visually or use crack detection method.

· Rear rim connecting nut torque : SEE SECTION 8. SPECIFICATIONS

4) STEERING AXLE

- (1) Push axle in from one side or measure front to rear clearance with feeler gauge. Check that clearance is within 2mm. If clearance is more than 2mm, insert shim to reduce clearance to within 0.7 mm.
· Mounting bolt torque : SEE SECTION 8. SPECIFICATIONS
- (2) Measure clearance between center pin and bushing. Check that clearance is within 0.5 mm (0.02 in) and that there is an oil groove on the bushing.

5) DRIVE AXLE

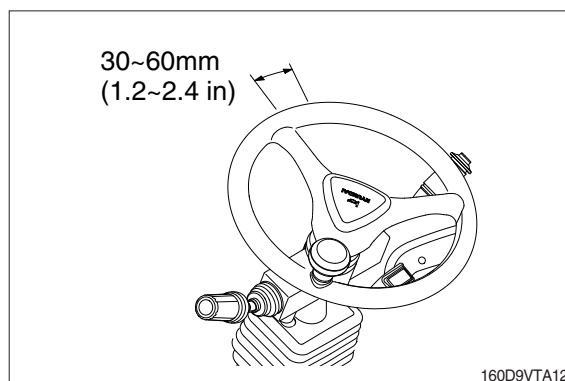
Check that there is no deformation or crack around mounting bolts of front axle and main frame and at welds. Check visually or use crack detection method.

Mounting bolt torque : SEE SECTION 8. SPECIFICATIONS

4. STEERING SYSTEM

1) STEERING WHEEL

Set rear wheels facing straight forward, then turn steering wheel to left and right. Measure range of steering wheel movement before rear wheel starts to move. Range should be 30 ~ 60 mm at rim of steering wheel. If play is too large, adjust at gearbox. Test steering wheel play with engine at idling.



2) KNUCKLE

Check knuckle visually or use crack detection method. If the knuckle is bent, the tire wear is uneven, so check tire wear.

3) STEERING AXLE

- (1) Put camber gauge in contact with hub and measure camber. If camber is not within $1 \pm 0.5^\circ$, rear axle is bent.
- (2) Ask assistant to drive truck at minimum turning radius.
- (3) Fit bar and a piece of chalk at outside edge of counterweight to mark line of turning radius.
- (4) If minimum turning radius is not within ± 100 mm (± 4 in) of specified value, adjust turning angle stopper bolt.