◆ Maintenance Schedule

As the operator, you are responsible for the performance of daily pre-start inspection. You are also responsible for those items listed under **Every 50 Hours or Weekly** to keep your forklift truck in proper working condition.

For periodic inspection and periodic change of rubber parts, however, rely on the expert knowledge of the factory-trained servicemen, and the service facilities at your Mitsubishi Forklift Truck Dealer's workshop.

Periodic inspection time intervals	Every 200 service hours or monthly, whichever comes first Every 1200 service hours or 6 months, whichever comes first Every 2400 service hours or 1 year, whichever comes first

• Every 10 Service Hours or Daily (Pre-Start), Whichever Comes First

Item	Service	Page
Damaged or faulty operation found the day before	Check	95
Oil, fuel or coolant leaks	Check	95
Lights (if equipped)	Check	95
Load backrest extension	Check	95
Tilt cylinder socket bolts	Check	96
Overhead guard	Check	96
Assist grip	Check	96
Accelerator pedal	Check	97

• Every 10 Service Hours or Daily (Pre-Start), Whichever Comes First, continued

Item	Service	Page
Brake pedal	Check	97
Parking brake lever	Check	97
Seat belt	Check	97
Seat adjustment	Check	97
Horn	Check	98
Steering wheel	Check movement	98
Amount of fuel (truck level)	Check	98
Stop lights (if equipped)	Check	98
OK monitor	Check	98
Lift chains	Check - adjust	99
Engine	Check	100
Inching pedal	Check	100
Service brakes	Check	100

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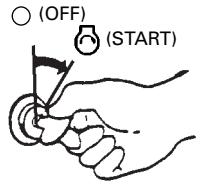
◆ Starting Gasoline Engine

⚠ CAUTION

- DO NOT leave the key in the I (ON) position when the engine is NOT running. This may cause the battery to run down and damage the ignition coil.
- DO NOT crank the engine for more than 10 seconds at any one time. This may cause damage to the starter and run down the battery.

• Engine Cold in Cool Weather

Turn the key to the ⏲ (START) position to crank the engine (no more than 10 seconds at a time).



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Release the key when the engine starts. Release the accelerator pedal if depressed for starting a warm engine.

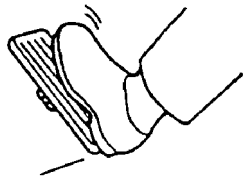


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Let the engine warm up for about 5 minutes.

• Engine Warm

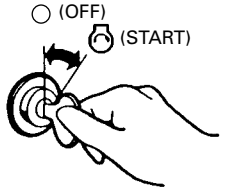
Depress the accelerator pedal more than 1/2 of its stroke and hold in this position.



100727

If the engine won't start:

Turn the key to the ○ (OFF) position and wait for about 30 seconds before recranking the engine.



100728A

If the engine won't start, see the topic, **Engine Won't Start.**

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◆ Specifications and Refill Capacities (Standard models)

Item \ Truck model			FG35	FG40	FG45	FG50	FD35	FD40	FD45	FD50
Alternator drive belt deflection – when pushed with 98 N (10 kgf) [22 lbf] pressure, mm (in.)			11 to 13 (0.4 to 0.5)							
Spark plugs	Gap, mm (in.)		1.24 (0.049)				—			
	Type		AC-DELCO #41-932				—			
Engine idling speed, rpm			700 to 750				650 to 700			
Steering wheel free-play - when measured at rim with engine idling, mm (in.)			15 to 30 (0.6 to 1.2)							
Brake pedal free-play, mm (in.)			9 to 29 (0.4 to 1.1)			2 to 14 (0.1 to 0.6)	9 to 29 (0.4 to 1.1)			2 to 14 (0.1 to 0.6)
Parking brake lever effort, N (kgf) [lbf]			250 to 290 (25 to 30) [55 to 66]							
Tire size	Front	Single	8.25 - 15 - 14 PR(I)	300 - 15 - 18 PR(I)			8.25 - 15 - 14 PR(I)	300 - 15 - 18 PR(I)		
		Dual	8.25 - 15 - 14PR(I)							
	Rear		7.00 - 12 - 12 PR(I)							
Tire pressure, kPa (kgf/cm^2) [psi] (Pneumatic)	Front single		785 (8.0) [114]	686 (7.0) [100]			785 (8.0) [114]	686 (7.0) [100]		
	Front dual		686 (7.0) [100]							
	Rear		686 (7.0) [100]			833 (8.5) [121]	686 (7.0) [100]			833 (8.5) [121]
Tightening torque for wheel nuts, N•m (kgf•m) [lbf•ft]		Front	403 (41.1) [297]			551 (56.2) [406]	403 (41.1) [297]			551 (56.2) [406]
		Rear	378 (38.5) [278]							
Lift chain elongation limit, mm (in.)/20 links			523 (20.6)		654 (25.7)		523 (20.6)		654 (25.7)	

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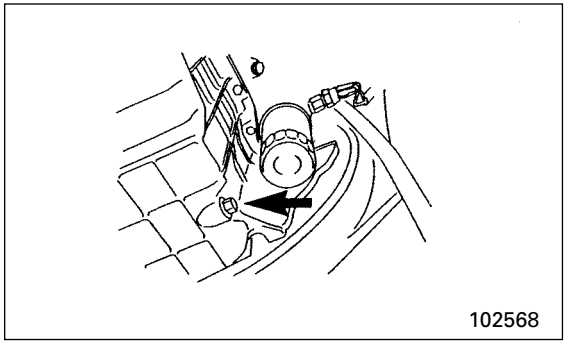
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- **Engine Crankcase – Gasoline and LP-Gas**
  Change Oil and Filter

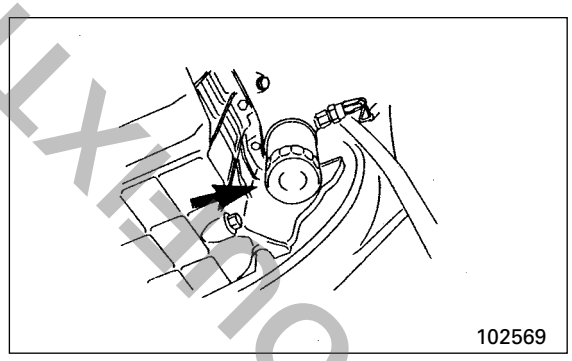
⚠ WARNING

Hot oil and components can cause serious injury. Do not allow hot oil or components to contact skin.

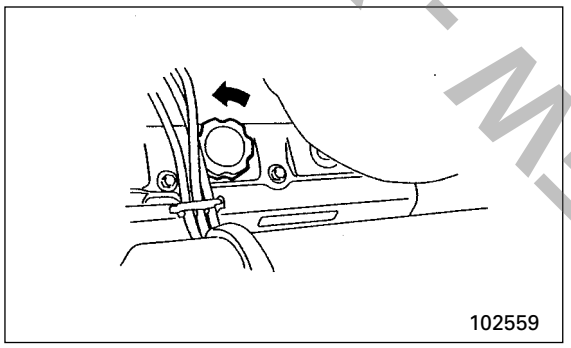
1. Operate the forklift truck a few minutes to warm the oil.
2. Park the forklift truck on a level surface with the forks lowered, parking brake applied, transmission in NEUTRAL and the engine stopped.
3. Raise the hood.
4. Remove the drain plug at the side of the engine oil pan. Allow the oil to drain. Clean and put the drain plug back in place.



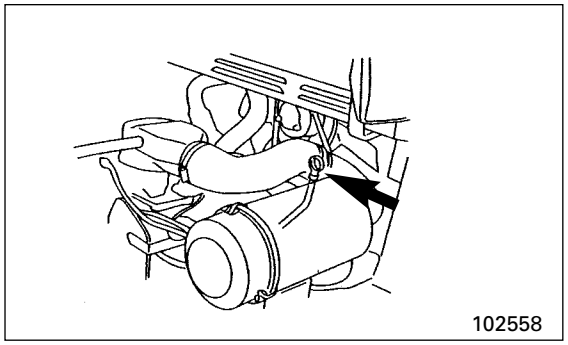
5. Remove and discard the oil filter elements.
6. Wipe the sealing surface of the oil filter element mounting base.
7. Apply a small amount of clean engine oil to each filter element gasket. Install the new filter element.

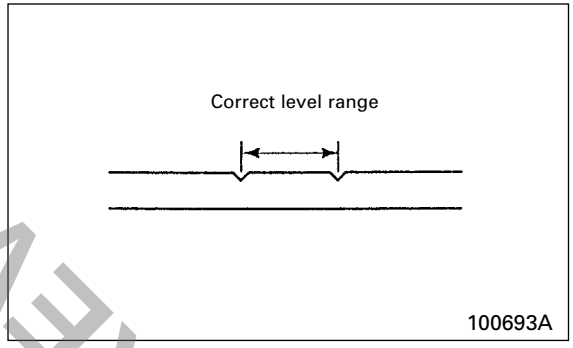


8. Fill the crankcase. See **Refill Capacities** and **Lubrication Specifications** charts.



9. Start the engine and allow the oil to fill the filter and passages.
10. Check for oil leaks.
11. Stop the engine and measure the oil level. Maintain the correct level range on the dipstick.





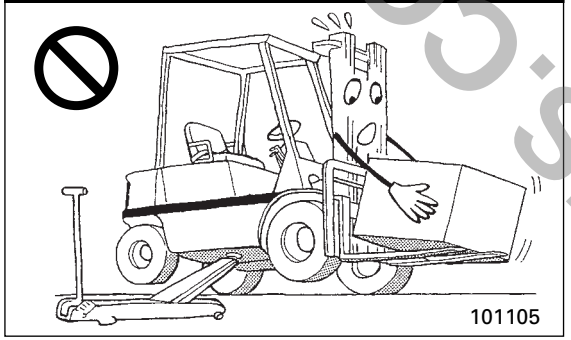
12. Close and secure the hood.

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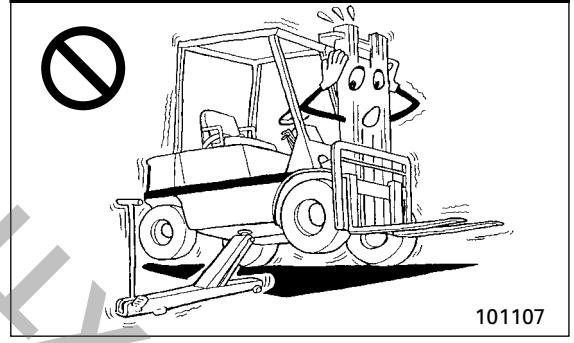
◆ Changing a Tire

⚠ WARNING



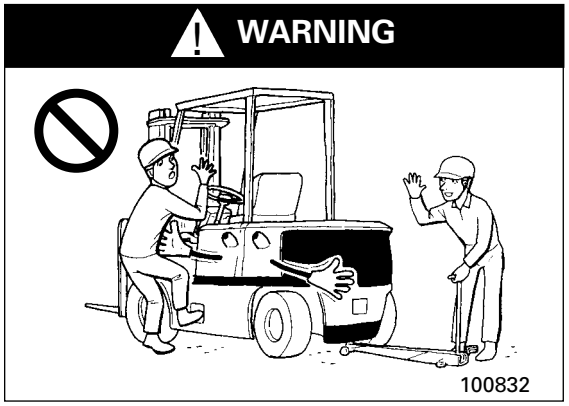
DO NOT attempt to change the tire with the truck loaded. Injury and/or damage may result.

⚠ WARNING



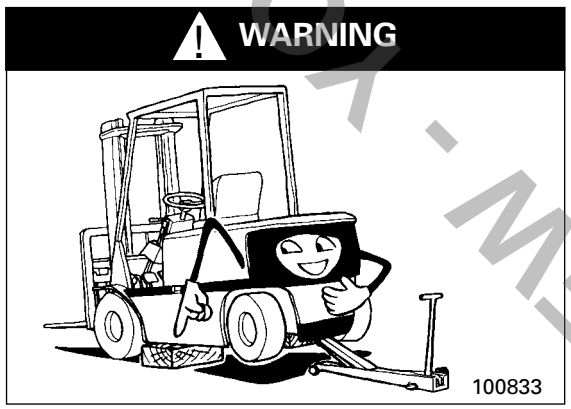
Stop raising the truck when the tire clears the ground. DO NOT raise the truck more than necessary.

⚠ WARNING



BE SURE no one is on the truck when raising the front or rear tires.

⚠ WARNING



DO NOT place any part of your body under the truck. SECURELY SUPPORT the truck with blocks after jacking it up.

⚠ WARNING

- **Make sure the replacement tire is of the same size, type and load range.**
- **Use the tire recommended by MCF.**

⚠ WARNING

- **Consult your Mitsubishi Forklift Truck Dealer for proper tire changing procedure.**
- **Changing of tire and adjustment procedure must be made by a trained mechanic or dealer personnel.**
- **Perform all maintenance in the factory with proper equipment.**

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◆ Maintenance Schedule

CHECK

Every 10 hrs. or daily
- Engine oil level
- Engine coolant level
- Hydraulic oil level
- Steering wheel
- Brake fluid level
- Tires and rims
- Wheel nuts
- Brake pedal stroke
- Horn
- Lights
- Parking brake lever
- Assist grip
- Mast, forks
- Battery electrolyte level

Every 50 hrs. or weekly
- Clean air cleaner element
- Bolts, nuts
- Alternator drive belt

Every 200 hrs. or monthly
- Differential oil level
- Powershift transmission oil level

CHANGE

- Oil fluid
- Filters

Every 200 hrs. or monthly
- Engine oil
- Engine oil filter

Every 1200 hrs. or 6 months
- Powershift transmission oil
- Differential oil
- Hydraulic tank oil filter
- Powershift transmission oil filter
- Fuel filter
- Air cleaner element
- Engine coolant

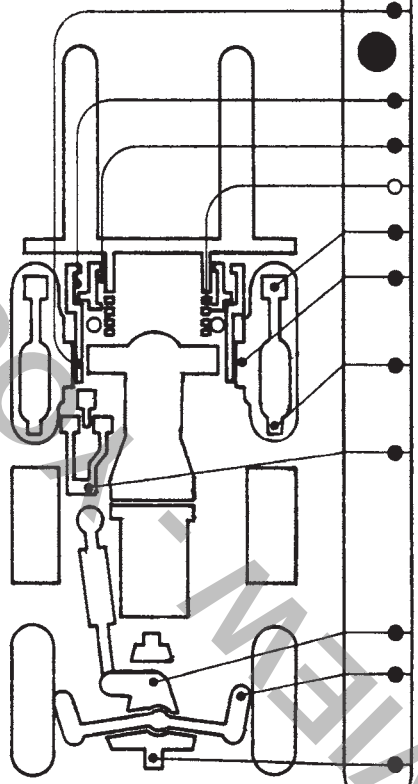
Every 2400 hrs. or 1 year
- Hydraulic oil
- Brake fluid

LUBRICATE

- Multipurpose-type grease
- Engine oil

Every 50 hrs. or weekly
- Mast supports (left and right)

Every 200 hrs. or monthly
- Mast strips, roller surfaces (left and right)
- Lift bracket side rollers (left and right)
- Lift chains (left and right)
- Tilt sockets (left and right)
- Front axle supports (left and right)
- Tilt cylinders (left and right)
- Brake pedal
- Bellcrank pin
- Kingpins (left and right)
- Rear axle center pins (front and rear)



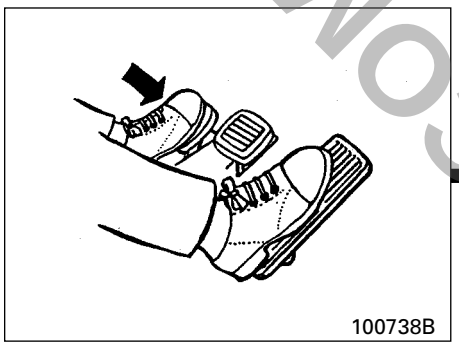
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■ Service more often in severe dust or lint conditions.

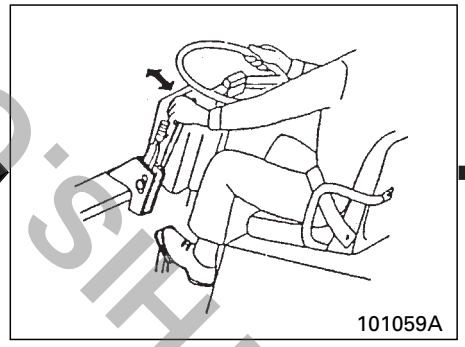
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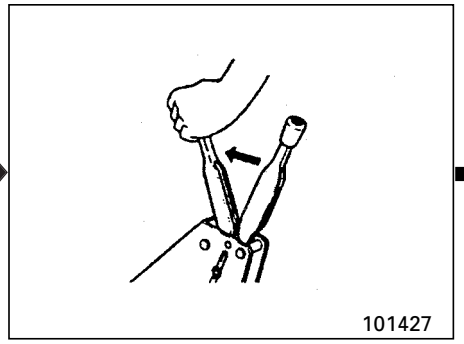
◆ Forklift Truck Operation



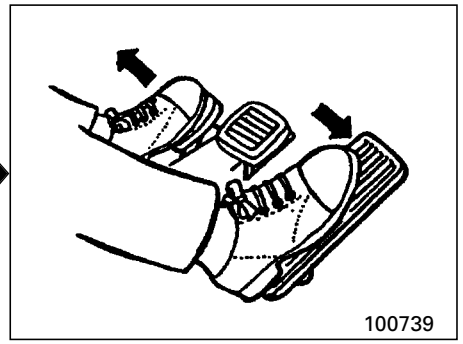
1. Depress the inching pedal all the way.



2. Move the direction lever to the FORWARD or REVERSE position.



3. Release the parking brake lever.



4. Gradually depress the accelerator pedal while releasing the inching pedal.

⚠ CAUTION

DO NOT “ride” the inching pedal. This produces a partly disengaged condition that will result in premature brake lining wear.

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◆ Refill Capacities (Approximate), liter (U.S. gal.)

Item \ Truck model			FG35	FG40	FG45	FG50	FD35	FD40	FD45	FD50
Refill capacities (approximate), litre (U.S. gal.)	Fuel tank		105 (28)		125 (33)		105 (28)		125 (33)	
	Engine cooling system — 0.65 litre (1.4 pt) reserve tank included		11 (2.9)				11.85 (3.1)			
	Engine oil	Crankcase	4.2 (1.1)				11 (2.9)			
		Oil filter	0.8 (0.2)				1 (0.3)			
		Total	5.0 (1.3)				12 (3.2)			
	Transmission		14 (3.7)			15 (4.0)	14 (3.7)			15 (4.0)
	Differential		9.1 (2.4)							
	Hydraulic tank		58.5 (15.4)		69.3 (18.3)		58.5 (15.4)		69.3 (18.3)	
	Brake fluid reservoir, cc (cu in.)		130 (7.9)							
Battery electrolyte specific gravity corrected to 20° C (68° F)			1.28							

◆ Rated Capacity and Truck Weight

Item \ Truck model		FG35	FG40	FG45	FG50	FD35	FD40	FD45	FD50
Rated capacity, kg (lb)		3500 (8000)	4000 (9000)	4500 (10000)	5000 (11000)	3500 (8000)	4000 (9000)	4500 (10000)	5000 (11000)
Truck weight, unloaded kg (lb)	Single drive tires	5300 (11700)	5600 (12300)	6200 (13700)	6700 (14700)	5300 (11700)	5700 (12600)	6200 (13700)	6700 (14900)
	Dual drive tires	5400 (11900)	5640 (12400)	6240 (13900)	6900 (15200)	5400 (11900)	5750 (12650)	6200 (13700)	6900 (15200)

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- **Hydraulic System**
  Change Return Oil Filter and Wash Strainer

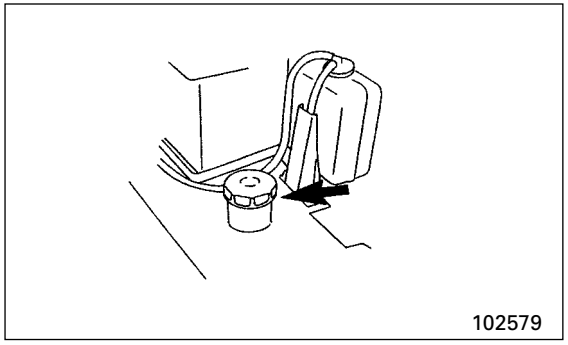
⚠ WARNING

Hot oil components can cause serious injury. Do not allow hot oil or components to contact your skin.

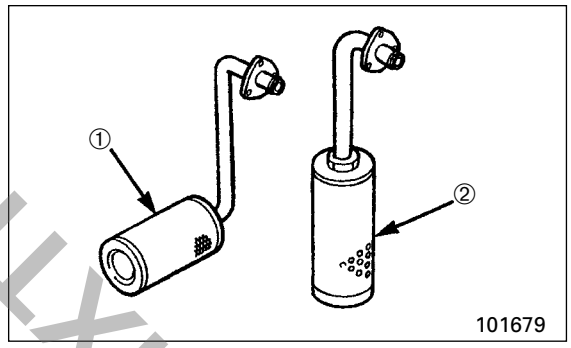
At operating temperature, the hydraulic tank is hot and can be under pressure.

Park the forklift truck with the forks lowered, parking brake applied, transmission in NEUTRAL and the engine stopped.

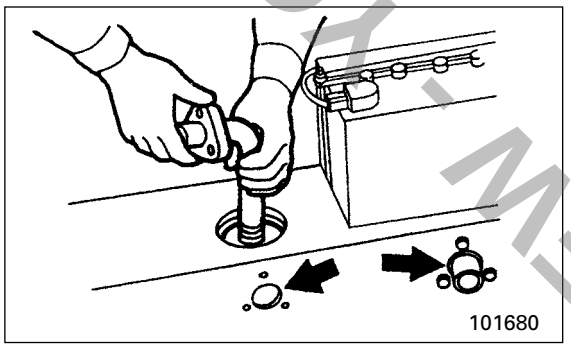
1. Raise the hood.
2. Remove the tank cover.



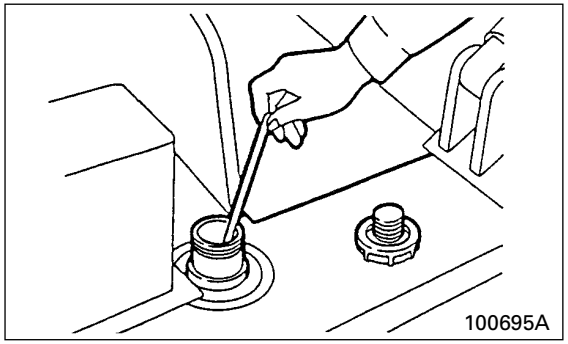
3. Remove the hose.

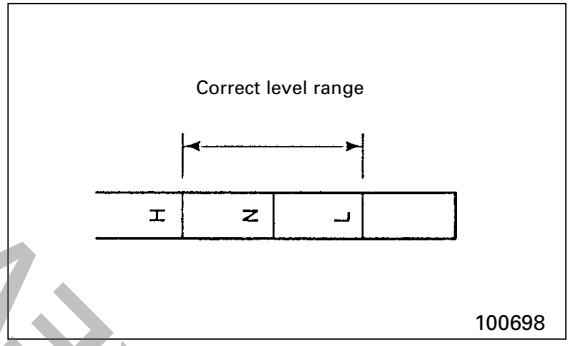


4. Remove the gasket and strainer ①.
5. Remove the gasket and return oil filter ②. Discard the filter element.



6. Clean the filter parts and replace the seal and gasket, if necessary. Install a new filter element.
7. Put the filter body assembly back in place and tighten the retaining bolt.
8. Wash the strainer in clean, nonflammable solvent.
9. Inspect the gasket and replace it, if necessary.
10. Put the strainer, gasket and cover back in place.
11. Remove the filler cap. Check the oil level.
12. Add oil, if needed, to reach the correct level range on the dipstick.

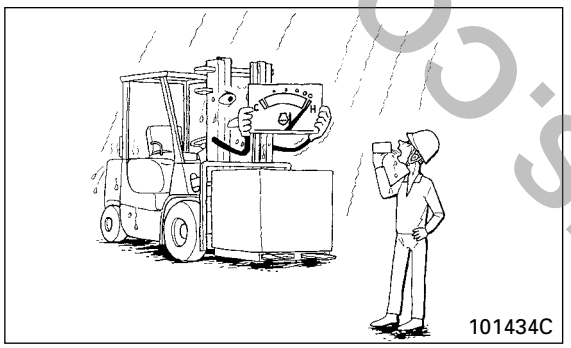




13. Put the dipstick and filler cap back in place.
14. Check for oil leaks.
15. Close and secure the hood.

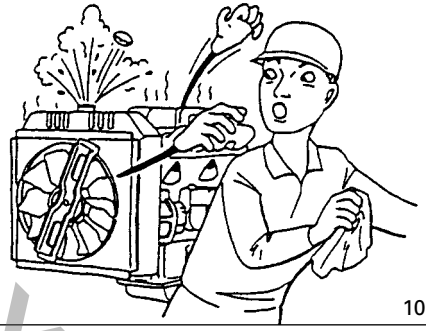
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◆ Engine Coolant Temperature Gauge Needle Moves into Red Zone



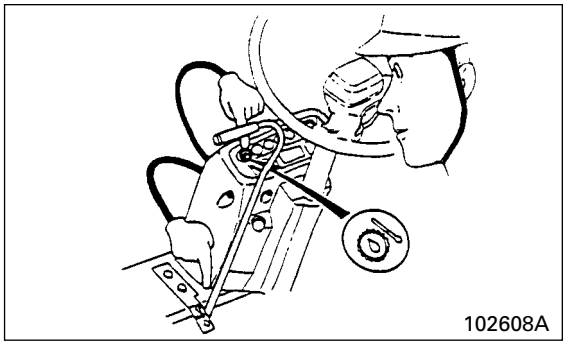
1. Park the truck in a safe area.
2. Open the engine hood to ventilate the engine compartment.
3. Allow the engine to idle for a while. DO NOT attempt to stop the engine.
4. Stop the engine after the coolant temperature gauge needle has moved into the WHITE zone.
5. Check for:
   - Lack of coolant.
   - Loose or broken fan belt.
   - Engine oil level.
   - Foreign material build-up in radiator air passages.

⚠ WARNING



- DO NOT attempt to remove the radiator filler cap if the engine is overheated. This can cause injury from scalding hot coolant or steam blowing out of the radiator.
- DO NOT add cold water to an overheated engine. This can cause damage to the engine.
- Immediately stop the engine if the fan belt is found broken.

◆ Powershift Transmission Oil Temperature Warning Light Glows



1. Park the truck in a non-traffic area.
2. Apply the parking brake. Place and lock the direction lever in the NEUTRAL position. Allow the engine to run at low idle for a while.
3. After the warning light has gone out, operate the truck again.

⚠ CAUTION

If the warning light does not go out, or if it glows often, consult your Mitsubishi Forklift Truck Dealer.

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