Start/Stop Procedure

Starting the engine

NOTICE

Read the entire Operators Manual before operating the baler.

Before starting the engine, check the engine oil level. Only operate the engine when the oil level is between the high and low marks on the dipstick. Engine damage may occur if there is too much or not enough oil.

1. Attach the baler to the tractor.
2. Raise the pick up.
3. Place the throttle in the idle position.
4. Check that the clutch is disengaged - lever away from the engine (see Figure 2).

⚠ WARNING

Make sure that everyone is clear of the baler before starting the engine or engaging the PTO clutch. Serious injury or death could result from unexpected movement.

Do not use ether or any starting fluid for starting the engine, or severe damage will occur.

When starting the engine after a long storage (of more than 3 months), activate the starter by turning the key to "RUN" for about 10 seconds to allow oil to reach every engine part. See below for complete startup instructions.

See Figure 1 for locations of the key, run and crank positions referenced in the following steps.

1. Set the fuel shutoff valve to the "ON" position.
2. Insert the key into the key switch.
3. Turn the key to the "RUN" position and hold it there until the heater indicator turns off.
4. Turn the key to "CRANK" position and the engine should start. Release the key immediately when the engine starts.
5. Check to see that the oil pressure lamp and charge lamp are off. If the lamps are still on, immediately stop the engine and determine the cause. (See "Checks during operation.")

Note: If the oil pressure lamp stays on after the engine starts and runs, shut the engine off immediately and check the following:

- **Is there enough oil in the engine?**
- **Does the engine oil have dirt in it?**
- **Is the wiring faulty?**

If the oil pressure lamp stays lit and is not resolved by checking these items, contact your local Kubota dealer for service.

Figure 1. Engine Control Box

6. Warm up the engine at medium speed without load.

Important: If the engine does not catch or start in 10 seconds after the starter switch is set at "CRANK," wait for another 30 seconds and then begin the engine starting sequence again. Do not allow the starter motor to run continuoulsy for more then 20 seconds.

Note: This engine is sensitive to battery amperage, and will not start if the battery is not sufficiently charged.

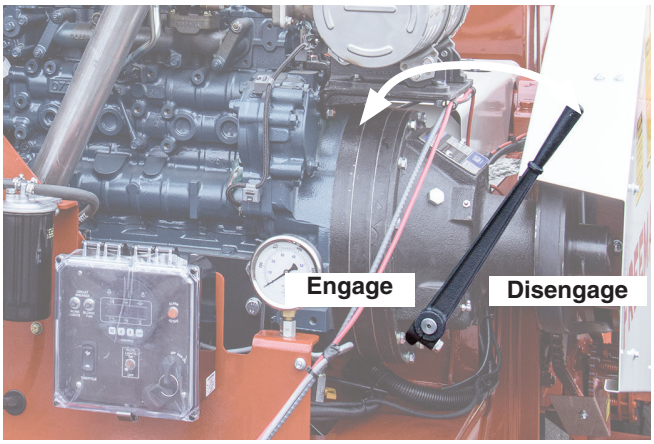

Figure 2. PTO Clutch Lever (370 Shown)

Stopping the engine

1. Run the engine under idling conditions. Allow the engine to idle for 5 minutes before shutting it off after a full load operation. Failure to do so may lead to turbo-charger trouble.
2. Turn the engine key to the OFF position.
3. Remove the key after the engine stops.

Checks during operation

While running, make the following checks to see that all parts are working correctly.

Radiator cooling water (coolant)

⚠ WARNING

To avoid personal injury or death:

Do not remove radiator cap until cooolant temperature is well below its boiling point. Then loosen cap slightly to the stop position to relieve any pressure before removing cap completely.

Overheating

If the coolant temperature warning lights up, or if steam or coolant does not stop squirting from the radiator overflow pipe, turn off the load and keep the engine idling for at least 5 minutes to let it cool down gradually. Then stop the engine and inspect the following:

- Is there any coolant leak?
- Is there any obstruction around the cooling air inlet or outlet?
- Is there any dirt or dust between radiator fins and tube?
- Is the fan belt too loose?
- Is the radiator water pipe clogged?

Oil pressure lamp

The lamp lights to warn the operator that the engine oil pressure has dropped below the prescribed level. If this happens during operation, or stays lit even after the engine is accelerated more than 1,000 rpm, immediately stop the engine and check the engine oil level.

Charge lamp

The charge lamp lights to warn the operator the battery charge is low during running or there is no alternator output while running. It is normal to have the charge lamp on when the key is on and the engine is not running. If the charge lamp is on during running check the following:

- Broken cable
- Poor connection to the alternator terminal
- Fan belt too loose, or damaged

Fuel

⚠ WARNING

Fluids escaping from pinholes may be invisible. Never use hands to search for suspected leaks. Use a piece of cardboard or wood. If injured by escaping fluid, see a medical doctor at once. This fluid can produce gangrene or a severe allergic reacation.

Check for leaks from fuel pipes. Use eye, face and hand protection and any necessary appropriate personal protective equipment and clothing.

Do not run the fuel tank level too low or completely out of fuel. You may experience improper engine running and/or a diagnostic trouble code error in the engine control. Engine bleeding may be necessary if air enters the fuel system. (See Checking fuel level in Daily checks in the maintenance section.)

Exhaust color

White exhaust may come out. In most cases, this is caused by water vapor and will disappear when the temperature rises.

Stop the engine immediately if:

- The engine suddenly slows down or accelerates.
- Unusual noises occur.
- Exhaust fumes suddenly become very dark.
- The oil pressure lamp comes on.
- The engine warning lamp comes on.
- Continuous large or abnormal quantitites of white smoke.

Air flow sensor

Air cleaner-mounted type

Use only specified air cleaner and element. Unspecified ones cause the air flow sensor to malfunction and to lose its full performance.

Inlet hose pipe-mounted type

Be careful to install the air flow sensor on the pipe going the correct direction.

Do not change the direction and insertion angle of the hoses before and after the pipe. Wrong direction causes the air flow sensor to malfunction and to lose its full performance.

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