

Date	Group	No.	Page
11.2003	100	002	1(5)

General Safety Practices
General
VN, VHD

General Safety Practices

The following information covers General Safety Practices for components included in group 100, Service and Maintenance.

There is no substitute for common sense and careful practices in the workplace. Improper practices or carelessness can cause burns, cuts, mutilation, asphyxiation, or other bodily injury or death.

This information contains general safety precautions and guidelines that must be followed to reduce risk to personal safety. Special safety precautions are listed in specific procedures when they apply.

Read and understand all of the safety precautions and guidelines before performing any repair.

Contents:

- "General Safety Practices" page 2
- "Preventive Maintenance" page 3
- "Engines and Engine Compartment Checks" page 4
- "Front Wheel Hubs" page 5
- "Function Check of Parking Heater" page 5
- "Driveshaft" page 5
- "Test Driving" page 5

General

General Safety Practices

DANGER

Never operate a diesel engine in an area where hydrocarbon vapors (gasoline for example) are present or are suspected to be present. Hydrocarbon vapors can enter the air intake and make the engine overspeed, causing severe damage and/or explosion or fire. Serious personal injury or death can occur.

DANGER

Before working on a vehicle, set the parking brakes, place the transmission in neutral, and block the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.

DANGER

When entering and exiting the cab, use caution. Always have a firm hand hold and/or stable foot position before transferring weight to that position. Do not carry anything when entering or exiting. Make sure the soles of your shoes and the cab steps are free from dirt, grease, oil or moisture before using the steps. Failure to do so can result in a fall, and serious personal injury or death may occur.

DANGER

If using a jack and/or jack stands, choose proper fault-free equipment. Failure to do so can result in equipment failures and personal injury or death may occur.

DANGER

When operating a vehicle on streets and highways during data collecting procedure, it is mandatory to have a second person drive while a technician collects the data. Inattention to driving may cause an accident and injury or death.

WARNING

Clean up fuel spills immediately. Fuel leaked or spilled onto hot surfaces or electrical components can cause a fire with potential for serious personal injury.

WARNING

Always wear appropriate eye protection to prevent the risk of eye injury due to contact with debris or fluids.

WARNING

Serious burns can result from contact with hot axle, engine, or transmission oil. Take precautions when draining the oil. Wear gloves and let the engine cool down before draining.

WARNING

HOT ENGINE! Keep yourself and your test equipment clear of all moving or hot engine parts. A hot engine can cause serious burns or can permanently damage test equipment.

WARNING

Never remove the cap on the expansion tank while the engine is still hot. Wait until the coolant temperature is below 50° C (120° F). Scalding steam and fluid under pressure may escape and cause serious personal injuries.

Note: During the Preventive Maintenance inspection, check the condition of warning labels on the vehicle. If a label is damaged or defaced to the point where the message cannot be read, note on the inspection form to have it replaced.

Preventive Maintenance

DANGER

Never work under or around a vehicle unless it is supported on Jack stands of adequate rating. Failure to use adequate jack stands can result in the vehicle falling, which can cause serious personal injury or death.

DANGER

Before working on a vehicle, set the parking brakes, place the transmission in neutral, and block the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.

DANGER

When operating a tractor bobtail without a trailer or on slippery roads, the engine brake switch must be in the "OFF" position. Failure to follow these instructions can result in loss of vehicle control and serious personal injury or death.

WARNING

HOT ENGINE! Keep yourself and your test equipment clear of all moving parts or hot engine parts and/or fluids. A hot engine and/or fluids can cause burns or can permanently damage test equipment.

WARNING

Do not remove the coolant fill cap (or cap on the expansion tank) until coolant temperature is less than 120 °F (50 °C). Otherwise, scalding steam or fluid may escape under pressure, which can cause serious injury.

WARNING

Do not work near the fan with the engine running or the ignition in the ON position. The engine fan can engage at any time without warning. Anyone near the fan when it turns on could be seriously injured.

CAUTION

Most rear differentials have a large screw and nut protruding from the housing. The screw and nut hold the thrust plate shoe against the ring gear and are not to be confused with the fill/level plug.

CAUTION

DO NOT mix synthetic oils with petroleum based oils. Mixing synthetic oils with petroleum based oils can cause component failure and/or component damage.

CAUTION

The vehicle must never be driven with air springs deflated. The air suspension parts can be damaged if springs are not properly inflated.

Engines and Engine Compartment Checks

DANGER

Ensure that the engine cannot be started while working around the fan area. Failure to do so may result in serious personal injury or death.

WARNING

HOT ENGINE! Keep yourself and your test equipment clear of all moving parts or hot engine parts and/or fluids. A hot engine and/or fluids can cause burns.

WARNING

Take precautions when draining the oil. Wear gloves and let the engine cool down before draining. Serious burns can result from contact with a hot engine or hot engine oil.

Check Coolant Freeze Protection and Coolant Level

WARNING

Do not remove the cap to the coolant surge tank while the engine and radiator are still hot. Scalding fluid and steam may be blown out under pressure if the cap is removed too soon.

CAUTION

Adding unknown additives may put the engine at risk of failure. There are many aftermarket oil additives that claim improved performance if added to the engine oil. Each oil type recommended already contains additives that have been tested by a collaboration with engine and oil manufacturers.

CAUTION

Texaco Long life coolant is colored red for identification purposes, so as not to mistake it for conventional, green coolant. Long life coolant will test as out of additives (SCA), but SCA should not be added.

CAUTION

Transmission oil heat exchanger should be installed when using PTO continuously over 15 minutes at a time or with a continuous power output over 55 kW (75 hp). Without heat exchanger, the oil can overheat and transmission damage may follow.

CAUTION

Use only the engine manufacturer's oil filter for replacement. Use of an oil filter not built to specification could result in severe damage to bearings, crankshaft, etc. as a result of unfiltered oil entering the lubrication system.

CAUTION

During operation, the pump must always be filled with oil. Otherwise, damage to the pump will result.

CAUTION

Do not use a wrench or other object to apply leverage when inspecting sockets. Applying leverage can give skewed results, and damage components.

CAUTION

Do not set free stroke shorter than specifications. If free stroke is too short, linings can drag and damage the brake.

Front Wheel Hubs

DANGER

Failure to keep wheel bearings properly adjusted can result in accelerated tire wear, poor handling, and in extreme cases, wheel separation from the hub or from the spindle resulting in loss of vehicle control and serious personal injury or death.

Function Check of Parking Heater

DANGER

Check the heater and ensure that the exhaust is not blocked or leaking. Fumes from the exhaust can cause personal injury or death.

Driveshaft

DANGER

Failure to correctly grease the driveshaft U-joints or slip-joints can lead to component failure which can result in separation of the driveshaft from the vehicle. A separated driveshaft can result in major component damage and loss of vehicle control, and can cause serious personal injury or death.

Test Driving

DANGER

To do the brake test safely, make sure there are no other vehicles within 300 yards when testing, or perform the test in a off-road area where there is no traffic. Performing brake test in traffic may lead to an accident, personal injury or death.

DANGER

When operating a tractor bobtail without a trailer or on slippery roads, the engine brake switch must be in the "OFF" position. Failure to follow these instructions can result in loss of vehicle control and serious personal injury or death.