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GPX/DPX
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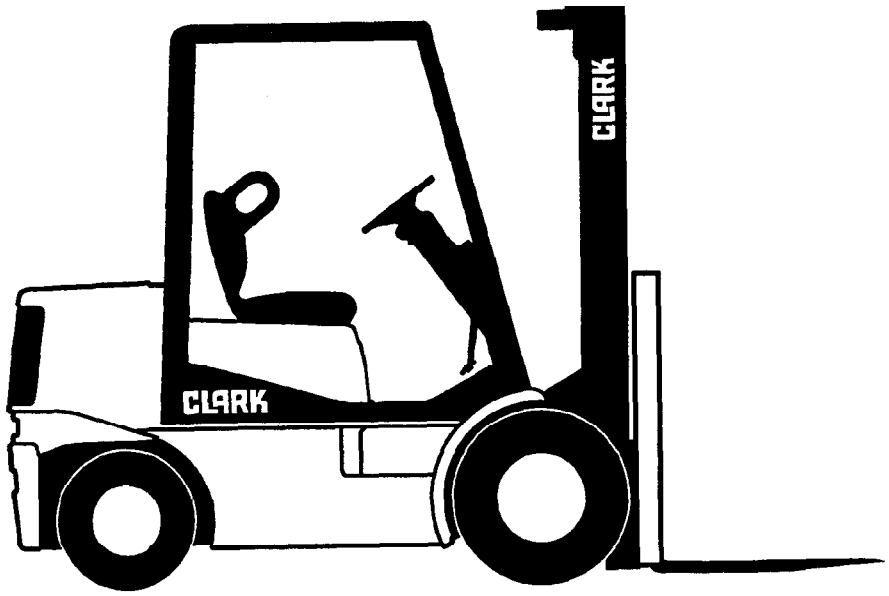

ISO 9001 CERTIFIED CLARK

CLARK Technical Publications Lexington, KY 40508

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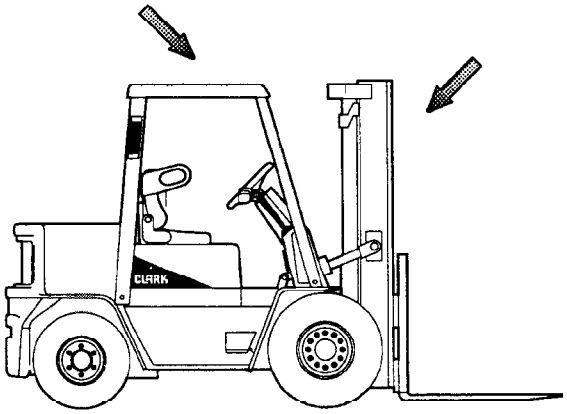
Be sure that the driver's overhead guard and any other safety devices are in place, undamaged and attached securely.



Check the overhead guard for damage. Be sure that it is properly positioned and all mounting fasteners are in place and tight.

Inspect the welds on the carriage and upright for cracks. Report any cracks noted immediately. Be sure that the mounting fasteners are in place and tight.

Inspect the upright assembly: rails, carriage rollers, lift chains, lift and tilt cylinders. Look for obvious wear and maintenance problems, damaged or missing parts. Check for any loose parts or fittings. Check for leaks, any damaged or loose rollers and rail wear (metal flaking). Carefully check the lift chains for wear, rust and corrosion, cracked or broken links, stretching, etc. Check that the lift and carriage chains are correctly adjusted to have equal tension. Check that the lift chain anchor fasteners and locking means are in place and tight.

Be sure all safety guards and chain retainers are in place and not damaged. Inspect the carriage stops and cylinder retainer bolts. Check all welded connections.

Inspect all lift line hydraulic connections for leaks. Check the lift cylinder rods for wear marks, grooves and scratches. Check the cylinder seals for leaks.

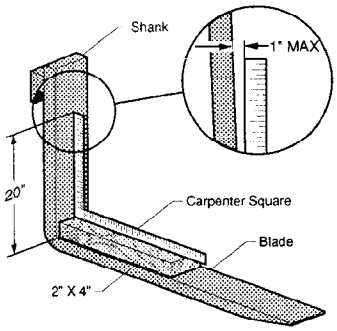
Forks

Inspect the load forks for cracks, breaks, bending and wear. The fork top surface should be level and even with each other. The height difference between both fork tips should be no more that 3% of the fork length.

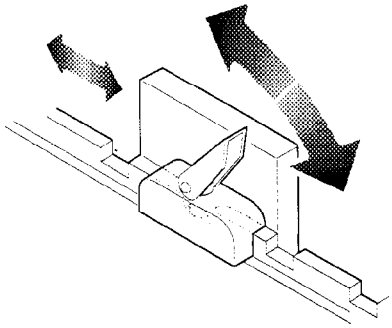
WARNING

If the fork blade at the heel is worn down by more than 10 percent, the load capacity is reduced and the fork must be replaced.

Inspect the forks for twists and bends. Put a 2" thick metal block, at least 4" wide by 24" long on the blade of the fork with the 4" surface against the blade. Put a 24" carpenters square on the top of the block and against the shank. Check the fork 20" above the blade to make sure it is not bent more than 1 inch maximum.



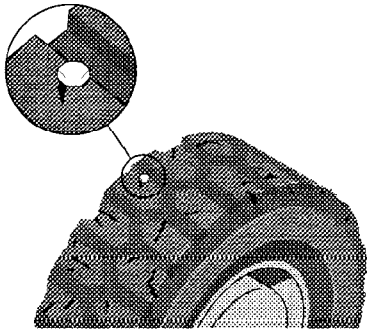
If the fork blades are obviously bent or damaged, they must be repaired or replaced before the truck is put into operation.



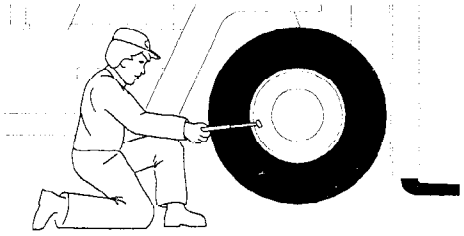
Inspect the fork locking pins for damage. Reinsert them and note whether they fit properly.

Wheels and Tires

Check the condition of the drive and steer wheels and tires. Remove objects that are embedded in the tread. Inspect the tires for excessive wear or breaks or "chunking out".



Check all wheel lug nuts or bolts to be sure none are loose or missing. Have missing bolts or lug nuts replaced and tightened to correct torque before operating truck. (See "Torque Specifications" in Group 40.)



⚠ WARNING

Check tire pressure from a position facing the tread of the tire, not the side. Use a long handled gauge to keep your body away from the side. If tires are low, do not add air. Check with a mechanic. The tire may require removal and repair. Incorrect (low) tire pressure can reduce stability of your lift truck. See Group 40, Section 2, "Specification," for proper inflation pressure.

Brake and Inching Pedal Freeplay

Press down on the brake pedal with your hand to check for freeplay. The freeplay should be approximately 0.31 inch (8mm). Adjust freeplay as described in Group 23, if necessary.

Check inching pedal freeplay as with the brake pedal, and adjust if necessary.

Functional Tests

Be sure that:

- Parking brake is applied.
- Directional control is in "N" (neutral).

Test the horn, lights and all other safety equipment and accessories. Be sure they are properly mounted and working correctly.

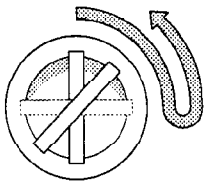
Press the horn button to check horn function. If the horn or any other part does not operate, report the failure and have it repaired before the truck is put in operation.

Now prepare to start the truck so that you can test gauges, accelerator service and parking brakes, all hydraulic controls, directional controls, and steering system. All controls must operate freely and return to neutral properly.

Key/Start Switch

A 3-position switch is standard equipment.

Check the operation of the neutral start switch by placing direction control lever in forward or reverse and turning key switch to START position. Starter must not engage until direction control lever is moved to NEUTRAL position.



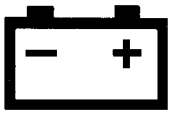
As you start the engine, check the instrument panel lights. The oil pressure and battery lights should come on when the key reaches the on position. The other lights should come on as the engine is cranking over.

To start engine, rotate the key clockwise. Release to "run" position when engine starts. The "anti-

restart" feature requires that the key be returned to the "off" position before it can again be turned to "start." If engine does not start on the first attempt, do not re-engage the starter until engine comes to a complete stop (approximately 5 seconds). After the engine starts, let it warm up until it runs evenly.

Familiarize yourself with the functions of the lights and hour meter. Check them periodically as you operate the truck.

Battery Light



When lit, indicates that battery is discharging.

Fuel Light

When lit, indicates that fuel tank is low or empty.

Engine Oil Pressure Light

When lit, indicates inadequate engine oil pressure. Lights when key/start switch is turned to "run" and "start" positions. It should go out shortly after engine starts. If light does not go out or if it comes on during truck operation, you should immediately shut down the engine until the cause is located and corrected.

Coolant Temperature Light

When lit, indicates engine coolant temperature is too high. Shut truck down until trouble can be located and corrected.

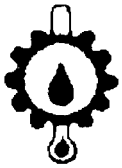
Brake Malfunction Light

When lit, indicates low pressure in the brake system. Shut the truck down until the trouble can be located and corrected.

Air Filter Restriction Light

When lit, indicates that air filter is blocked. Shut truck down and replace filter element.

Transmission Temperature Light



When lit, indicates converter oil temperature is too high. Shift to a lower range. If light stays on, shut truck down until trouble can be located and corrected.

Hydraulic Filter Restriction Light

When lit, indicates that hydraulic filter is blocked. Shut truck down and replace filter element.

Parking Brake Light

When lit, indicates that the parking brake is applied.

Hour Meter

Check the hour meter for operation with the engine running. Report any malfunction.

Write the hour meter reading on the PM report form.

Accelerator, Service Brake, Parking Brake, and Inching

1. Push the brake pedal down fully and hold. The brakes should apply before the pedal reaches the floorplate. If the pedal continues to creep downwards, report the failure immediately. DO NOT OPERATE THE TRUCK UNTIL THE BRAKES ARE REPAIRED.
2. Make sure the truck accelerates smoothly.
3. Depress the inching pedal and depress the accelerator to see if the transmission disengages properly.
4. Check the function of the parking brake. Apply and then put truck in gear and accelerate to insure that brake holds. Park the truck on a grade and apply the parking brake. The parking brake should hold a lift truck with rated load on a 15% grade.

CAUTION

Do not operate a lift truck if the service or parking brakes are not operating properly.

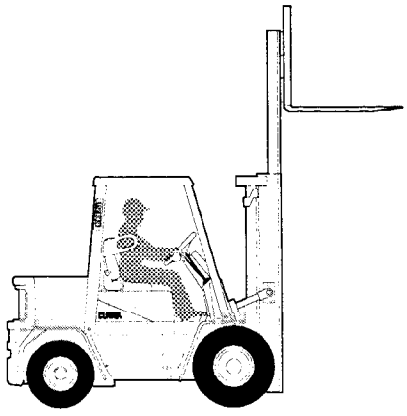
Lift Mechanisms and Controls

1. Check the function of the lift system and controls with the hydraulic pump (engine) running.
2. Pull back on the tilt control lever and hold until the upright reaches the full back tilt position. Push forward on the lever to return the upright to the vertical position. Release the lever.

CAUTION

Be sure that there is adequate overhead clearance before raising the upright.

3. Pull back on the lift control lever and raise the fork carriage to full height. Watch the upright assembly as it rises. All movements of the upright, fork carriage, and lift chains must be even and smooth, without binding or jerking. Watch for chain wobble or looseness; the chains should have equal tension and move smoothly without noticeable wobble. Release the lever.



If the maximum fork height is not reached, this indicates there is an inadequate (low) oil level in the hydraulic sump tank or severe binding within the upright.

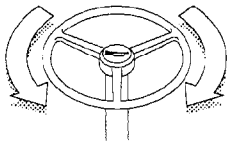
4. Push forward on the lift control lever. Watch the upright as it lowers. When the forks reach the floor, release the lever.

Auxiliary Controls

If your lift truck is equipped with an attachment, test the control lever for correct function and briefly operate the attachment.

Steering System

The steering system, steer axle and steering linkage on your truck should be inspected periodically for abnormal looseness and damage, leaking seals, etc. Also, be alert for any changes in steering action. Hard steering, excessive freeplay (looseness) or unusual sound when turning or maneuvering indicates a need for inspection or servicing.



Check the steering system by moving the steering handwheel in a full right turn and then in a full left turn. Return the handwheel (steer wheels) to the straight-ahead position. The steering system components should operate smoothly when the steering wheel is turned.

Never operate a truck which has a steering system fault.

WARNING

Fasten your seat belt before driving the truck.

Shift Control and Brakes

Check and make sure that the travel area is clear in front of the truck.

1. Push firmly on the brake pedal. Release the parking brake. Move the directional control lever from "N" (neutral) to FORWARD travel position.
2. Remove your right foot from the brake pedal and put it on the accelerator pedal. Push down until the truck moves slowly forward. Remove your foot from the accelerator pedal and push down on the brake pedal to stop the truck. The brakes should apply smoothly and equally.
3. Be sure the travel area is clear behind the truck. Put the directional control lever in the REVERSE travel position. Push down on the accelerator pedal until the truck moves slowly in the reverse direction. Remove your foot from the accelerator pedal and push down on the brake pedal to stop the truck. The brakes should apply smoothly and equally.

When you have completed the operational tests, park and leave truck according to standard shutdown procedures. Be sure to make a record of all maintenance and operating problems you find.

Under the Hood

Check fluid levels and other components within the engine compartment. Unlatch and open the hood to access the engine compartment.

CAUTION

To avoid the possibility of personal injury, never work in engine compartment with engine running except when absolutely necessary to check or make adjustments. Take extreme care to keep hands, tools and loose clothing, etc., away from fan and drive belts. Also remove watches, bracelets and rings.

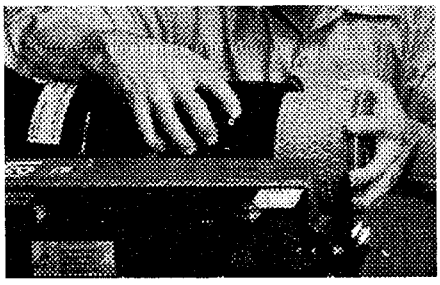
Belts and Hoses

Inspect the engine coolant hoses and fan belt(s). Look for leaking and obvious damage, worn (frayed) condition, breaks, etc., which could cause failure during operation.

Engine Air Cleaner

Check the engine air cleaner for damage and contamination (excessive dirt buildup and clogging). Check for correct mounting attachments of the air cleaner. Be sure that the air cleaner hose is securely connected (not loose or leaking). Fan or cone shaped dust deposits on tube or hose surfaces indicate a leak.

Change or service the air cleaner element every 50 to 250 operating hours, depending upon your application. Air cleaner service intervals may also be determined by the air restriction indicator.

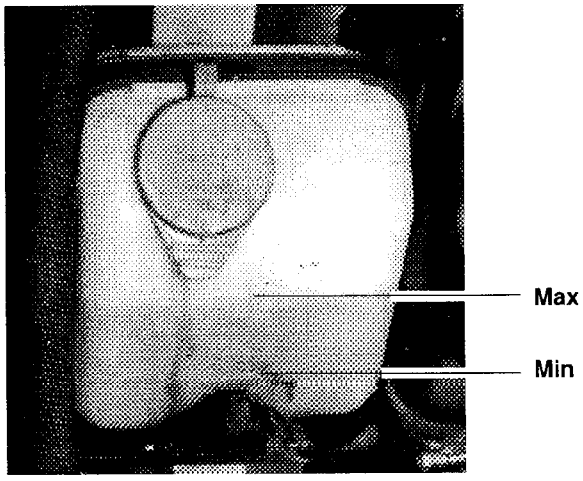


Battery

Inspect the battery for any damage, cracks, leaking condition, etc. If the terminals are corroded, clean and protect them with CLARK Battery Saver (available from your Clark dealer). If your battery has removable cell caps, check to be sure the cells are all filled. If necessary, refill with distilled water.

Engine Cooling System

Check coolant level in the coolant recovery bottle on a daily basis. The level should be between the minimum and maximum marks on the bottle when the engine is warm.



Check radiator coolant level (on a daily basis in high-cycle applications):

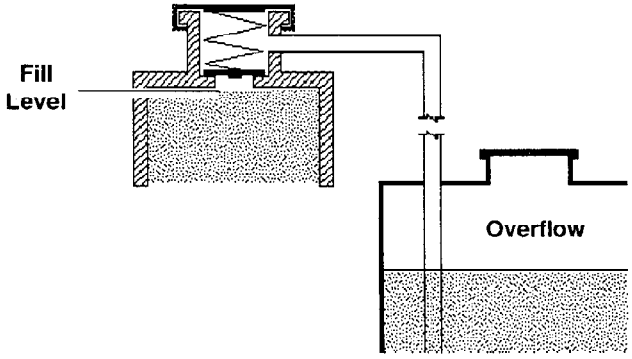
1. Remove the radiator cap, only when the engine is cold. First turn the cap slowly to release pressure that may be in the radiator. Then push the cap down fully and turn to release and remove the cap.

CAUTION

STEAM. Do not remove the radiator cap when the radiator is hot. Steam from the radiator will cause severe burns.

Never remove the radiator cap while the engine is running. Stop the engine and wait until it has cooled. Even then, use extreme care when removing the cap from the radiator. It is good safety practice to use a shop cloth to cover the radiator cap while it is being removed. Wrap the cloth around the cap and turn it slowly to the first stop. Step back while the pressure is released from the cooling system.

2. When you are sure all the pressure has been released, press down on the cap, with the cloth in place, turn and remove it. Stand clear of the radiator opening; hot coolant may splash out. Failure to follow these instructions could result in serious personal injury from hot coolant or steam blowout and/or damage to the cooling system or engine.
3. The correct FULL level is the bottom edge of the filler neck.



If level is low, add a 50/50 mixture of specified coolant and water to the correct fill level. If you have to add coolant more than once a month or if you have to add more than one quart at a time, check the cooling system for leaks.

4. Inspect the coolant for condition. Look for excessive contamination or rust or oil in the coolant solution. Check the PM time interval for need to change coolant.
5. Check condition of radiator cap rubber seal and radiator filler neck for damage. Be sure they are clean. Check overflow hose for clogging or damage.

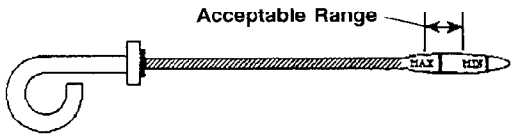
NOTICE

Your lift truck cooling system is filled with a factory-installed solution of 50% water and 50% permanent-type anti-freeze containing rust and corrosion inhibitors. You should leave it in year around. Plain water may be used only in an emergency, but replace it with the specified coolant as soon as possible to avoid damage to the system. With only water in the system, do not let the engine run hot. Do not use alcohol or methanol antifreeze.

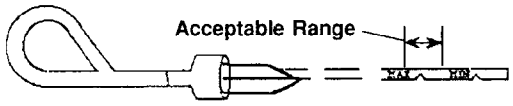
Engine Oil

With the truck level and the engine shut-down for at least 2 minutes, check the engine oil level.

Locate the engine oil dipstick (at left side of engine). Pull the dipstick out, wipe it with a clean wiper and reinsert it fully into the dipstick tube. Remove the dipstick and check oil level.



Gas/LPG/CNG Engine Oil Dipstick



Diesel Engine Oil Dipstick

It is normal to add some oil between oil changes. Keep the oil level above the ADD mark on the dipstick by adding oil as required. DO NOT OVERFILL. Use the correct oil as specified under Lubricant Specifications.

Engine Oil and Filter Change

It is recommended to:

- Drain and replace the engine crankcase oil every 50 to 250 operating hours. See NOTICE below.
- Replace the engine oil filter every oil change.
- Remove the oil pan drain plug to drain old oil, after truck has been in operation and engine (oil) is hot (at operating temperature).

NOTICE

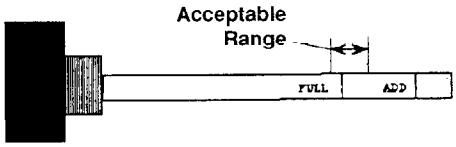
The time interval for changing engine oil will depend upon your application and operating conditions. To determine the correct schedule for your truck it is suggested that you periodically submit engine oil samples to a commercial laboratory for analysis of the condition of the oil.

Oil performance designation: To help achieve proper engine performance and durability, use only engine lubricating oils of the proper quality. These oils also help promote engine efficiency which results in improved fuel economy. A symbol has been developed by the API (American Petroleum Institute) to help you select the proper engine oil. It should be included on the oil container you purchase. For diesel engines, CLARK recommends that you use motor oil that meets API Service Classification CE/SF. CC/CD or CD/SF oils can be used in areas where CE oil is not available.

Hydraulic Sump Tank

Check the hydraulic sump tank fluid level. Correct fluid level is important for proper system operation. Low fluid level can cause pump damage. Overfilling can cause loss of fluid or lift system malfunction.

Hydraulic fluid expands as its temperature rises. Therefore, it is preferable to check the fluid level at operating temperature (after approximately 30 minutes of truck operation). To check the fluid level, first park the truck on a level surface and apply the parking brake. Put the upright in a vertical position and lower the fork carriage fully down. Pull the dipstick out, (attached to the sump breather) wipe it with a clean wiper and reinsert it. Remove dipstick and check oil level. Keep the oil level above the LOW mark on the dipstick by adding recommended hydraulic fluid only, as required. DO NOT OVERFILL.



Check the condition of the hydraulic fluid (age, color or clarity, contamination). Change (replace) the oil as necessary.

Hydraulic Fluid and Filter Change

Drain and replace the hydraulic sump fluid every 2000 operating hours.

(Severe service or adverse conditions may require more frequent fluid change). Replace the hydraulic oil filter elements at every oil change. Remove, clean, and reinstall the hydraulic and steer system suction line screens at first PM and every 500 hours thereafter. Check for leaks after installation of the filters. Also, check that the hydraulic line connections at the filter adapter are tightened correctly.

Sump Tank Breather

Remove the sump tank fill cap/breather and inspect for excessive (obvious) contamination and damage. Clean or replace the fill cap/breather, per recommended PM schedule or as required by operating conditions.

Transmission Fluid Check

Before making check, run engine until unit is at operating temperature. This is important as transmission oil temperature should be 200 degrees F and the engine water jacket should be at operating temperature