



Standard information

Diesel engine-driven hydraulic power units (HPUs) provide reliable power for hydraulic systems in various industrial, construction, and agricultural applications. However, improper use can lead to accidents, equipment damage, and downtime. This manual outlines essential safety protocols for operation, maintenance, and troubleshooting.

General Safety Precautions

Pre-Operation Inspection:

- Check for fuel leaks or damage to fuel lines.
- Inspect the hydraulic hoses, fittings, and connections for signs of wear or leaks.
- Verify all safety guards and covers are in place and secure.
- Confirm fluid levels (fuel, oil, hydraulic fluid, and coolant) are within recommended ranges.

Personnel Training:

- Operators must be trained in the use of diesel engine-driven HPUs and hydraulic systems.

Environmental Awareness:

- Ensure the unit is positioned on stable, level ground.
- Avoid operating in poorly ventilated areas to prevent carbon monoxide build up.
- Maintain a safe distance from flammable materials.



Operating Guidelines

Start up Procedures:

- Check that all valves are in the neutral position.
- Verify that the emergency stop switch is functional and accessible.
- Follow the manufacturer's instructions for priming and starting the diesel engine.
- Allow the engine to warm up before applying load.

Operating the Hydraulic System:

- Gradually engage the hydraulic system to prevent sudden pressure surges.
- Monitor pressure gauges to ensure operation within safe limits.
- Avoid operating the unit at maximum capacity for extended periods.

Shutdown Procedures:

- Release all hydraulic pressure by returning controls to the neutral position.
- Gradually decrease engine speed before turning it off.

Refuelling:

- Turn off the engine and allow it to cool before refuelling.
- Use only clean, recommended fuel types.
- Avoid overfilling and immediately clean any spills.

Prohibited Practices



- Do not operate with damaged or malfunctioning safety systems.
- Avoid tampering with pressure settings or safety interlocks.
- Never bypass fuel system filters or safety guards.
- Do not leave the unit unattended while in operation.



Maintenance Safety

Daily Checks:

- Inspect for loose bolts, leaks, and unusual vibrations or noises.
- Check the air filter for debris or blockages.
- Verify that all safety labels are visible and intact.

Scheduled Maintenance:

- Change engine oil, hydraulic fluid, and filters as per the manufacturer's schedule.
- Inspect and replace worn or damaged hydraulic hoses and fittings.
- Test the emergency stop system and safety interlocks regularly.
- Clean the cooling system and ensure adequate airflow.

Storage

- Store in a dry, well-ventilated area, protected from extreme weather.
- Drain fuel and hydraulic fluids if storing for an extended period.

Emergency Procedures

Hydraulic Failure:

- Shut off the engine immediately.
- Use a spill kit to contain leaks and avoid contact with skin.
- Replace damaged components before resuming operation.

Engine Fire:

- Use a fire extinguisher rated for Class B (flammable liquids) fires.
- Do not attempt to extinguish a fire while the fuel system is pressurized.
- Evacuate the area and contact emergency services if necessary.

Pressure Build-Up:

- Never attempt to release pressure manually; use the designated release mechanism.
- Avoid standing near pressurized lines during troubleshooting.