



Diesel Installation Manual

4000 Series



TSL 4068

WARNING

READ AND UNDERSTAND ALL SAFETY PRECAUTIONS AND WARNINGS MENTIONED IN THIS MANUAL. IMPROPER OPERATION OR MAINTENANCE PROCEDURE COULD RESULT IN A SERIOUS ACCIDENT OR DAMAGE TO THE EQUIPMENT CAUSING INJURY OR DEATH. NON-COMPLIANCE WITH THESE INSTRUCTIONS MAY INVALIDATE THE GUARANTEE OFFERED WITH THE ENGINE.

MAKE QUITE CERTAIN THE ENGINE CANNOT BE STARTED IN ANY WAY BEFORE UNDERTAKING ANY MAINTENANCE PARTICULARLY IN THE CASE OF AUTOMATICALLY STARTING GENERATING SETS.

The information contained within this publication provides installation data for all 4000 Series Diesel Engines produced by Perkins Engines (Stafford) Ltd for industrial applications. This data supersedes the information given in the Installation Manual Publication No. TL68.

THE PURPOSE OF THIS INSTALLATION MANUAL IS TO PROVIDE THE USER WITH SOUND GENERAL INFORMATION FOR INSTALLING AN ENGINE/GENERATING SET WITHIN AN ENGINE ROOM FACILITY. IT IS FOR GUIDANCE AND ASSISTANCE IN THE APPLICATION OF AN ENGINE WITH RECOMMENDATIONS FOR CORRECT AND SAFE PROCEDURE. PERKINS ENGINES (STAFFORD) LIMITED CANNOT ACCEPT ANY LIABILITY WHATSOEVER FOR PROBLEMS ARISING AS A RESULT OF FOLLOWING RECOMMENDATIONS IN THIS MANUAL.

It is essential that all relevant safety precautions are adhered to both with regards to machinery and personal protection. Safety symbols refer to **Safety Precautions insert**.

The information contained within the manual is based on such information as was available at the time of going to print. In line with Perkins Engines (Stafford) Limited policy of continual development and improvement, information may change at any time without notice. The user should therefore ensure that before commencing any work, he has the latest information available.

Users are respectfully advised that it is their responsibility to employ competent persons to carry out any installation work in the interests of good practice and safety.

It is essential that the utmost care is taken with the application, installation and operation of any diesel engines due to their potentially dangerous nature.

Careful reference should also be made to other Perkins Engines (Stafford) Limited literature, in particular the Product Information Folder and Engine Operation Manuals.

Should you require further assistance in installing the engine/generating set, the following may be contacted:-

- Applications Department
- Service Department

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SAFETY PRECAUTIONS

For safe and reliable operation of the engine it is essential that the recommended procedures as outlined in the manual are adhered to, and where necessary the special tools are used. Improper operation or maintenance procedures are dangerous and could result in injury or death.

The operator should check before operation that all the basic safety precautions have been carried out to avoid an accident occurring.

Read and understand all safety precautions and warnings before operating or servicing the engine.

The safety precautions that must be adhered to when operating the engine or carrying out service work are listed below under separate headings together with the relative symbols:

| | | |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ensure guards are fitted |  | (a) over exposed rotating parts (b) over exposed hot surfaces (c) over exposed air intakes (d) over exposed belts (e) over live electrical terminals, high and low tension |
| Ensure protection equipment: for hands, ears, eyes, feet etc. |      | (a) (1) is worn when using inhibitors (b) (1) is worn when using anti-freeze (c) (1) is worn when taking pressure cap off radiator or heat exchanger filler (d) (5) is worn when working on or underneath engine (e) (3) is worn when using air pressure line (f) (1) is worn when changing lubricating oil/filter (g) (2) is worn when working in enclosed engine room (h) (1) is worn when changing electrolyte in battery (i) (4) is worn always when working on the engine |
| No smoking or naked flame |  | (a) when checking battery electrolyte (b) when working in engine room (c) when operating or servicing engine |
| Fuel/oil pipes |  | (a) check for leaks (b) check for spilt oil (clean up) (c) always use barrier cream on hands |
| Gas/air pipes |  | (a) check for gas/air mixture leaks (b) never run gas engine with failed pressure disc (c) that gas line and valves meet local safety standards (d) that the gas line pressure is correct |
| Shutdown equipment |  | (a) for stopping engine in case of over speed, high water temperature or low oil pressure should be provided (b) for heat sensors, methane and smoke detectors should be provided (if applicable) (c) test that protection system is working correctly (d) Always be in a position to stop engine (even remotely) |
| Start up |  | (a) disconnect battery or any other means in case of accidental start up when working on engine (b) never start engine with governor linkage disconnected (c) do not hold stop lever in run position when starting engine (d) always hold stop lever in stop position when cranking only |
| Electrical equipment |  | (a) check that electrics are earthed to local safety standards (b) disconnect electrical supply to water jacket heater (if fitted) before working on engine (c) take care against electric shocks (d) Never re-adjust settings of electronic equipment without reference to Operation Manual |