# Perkins series
# P10D5
***50 Hz @ 1500rpm,3-phase/4-wiring***

## 1 Standards & Conditions

### Design Standards

The designs and the productions are in conformity with:

- Conformite Europeenne (CE)
- China Compulsory Certification (CCC)
- TLC Quality Certification (TLC)
- ISO8528-1995
- GB/T2820-1997

### Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25℃ to 45℃. The coolant heater is needed when the temperature is below 5℃
- Humidity: Less than 80%.
- Altitude: Below one thousand (1000) meters above sea Level.

### Factory Inspection

- Inspection items.
- Protection devices working test.
- Starting ability in normal temperature.
- 50% rated power load moment capability.
- Voltage deviation and speed variation: 0%, 25%, 50%, 75%, 100%, 110% Load.

### Painting Process

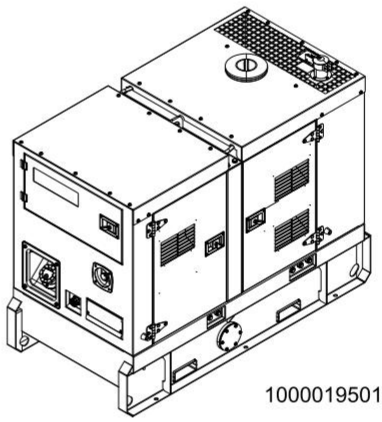
- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

## 2 General Features

- Perkins engine 403D-11G
- Close coupled to a Leroy Somer alternator LSA42.2VS0
- Microprocessor control module PLC-702
- NADER main circuit breaker: 3-Phase 16A
- Rotate speed governor: Mechanical governor
- Excitation system: Self excited shunt
- A.V.R model: R250
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 1x12V sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50℃ radiator
- Oil pump on the engine
- Steel base frame with forkslots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 8 hours running
- Drain points for fuel tank
- Operation Manual / Parts List/ Specifications

## 3 Equipment Specification

### General technical data

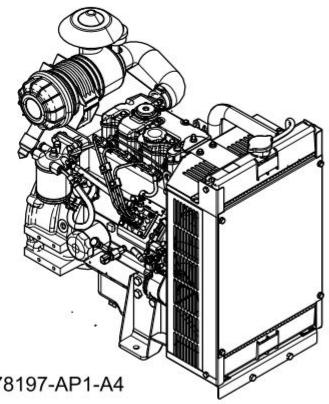


1000019501-AP1-B7

Model.....P10D5
Structure type.....RS
Tank capacity.....90L
Dry weigh.....621kg
Noise level @7m.....60dBA
Dimensions L×W×H.....1632x800x1200mm
Standby Power.....11kVA/9kW
Prime Power.....10kVA/8kW

| Voltage | 380V | 400V | 415V | 440V |
|---|---|---|---|---|
| Ampere | 15.2A | 14.4A | 13.9A | 13.1A |

## Diesel Engine

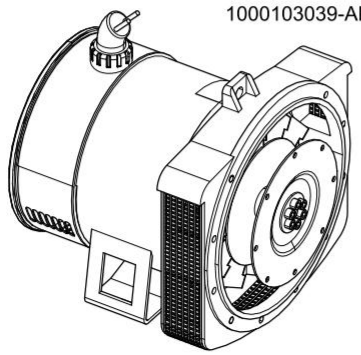


1000078197-AP1-A4

| | |
|---|---|
| Engine Manufacturer/Brand | Perkins |
| Engine Model | 403D-11G |
| Dimensions L×W×H | 776×449×700mm |
| Dry Weigh (approx.) | 129.2kg |
| Number of Cylinders | 3 |
| Bore | 77mm |
| Stroke | 81mm |
| Displacement | 1.13L |
| Compression Ratio | 23 |
| Type of Injection | Indirect injection |
| Intake System | Natural aspirated |
| Intake Resistance | ≦6.4kPa |
| Cooling System | Water cooled |
| Fan | Pusher |
| Battery Voltage | 12V |
| Type of Fuel | EPA2D 89.330-96/CEC RF-06-99 |
| Type of Oil | API-CH-4/ ACEA E5 |
| Oil Capacity | 4.9L |
| Type of Coolant | Glycol mixture |
| Coolant Capacity | 5.2L |
| Back Pressure | ≦10.2kPa |
| Standby Power | 9.5kW |
| Continuous Power | 8.6kW |
| Fuel Consumption(100%load) | 252g/kWh |

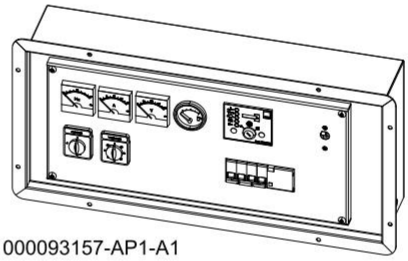
## Alternator

1000103039-AP1-A1



| | |
|---|---|
| Alternator Manufacturer/Brand | Leroy Somer |
| Alternator Model | LSA42.2VS0 |
| Exciter | Brushless |
| Cooling Fan | Cast alloy aluminum |
| Windings | 100% copper |
| Insulation Class | H |
| Winding Pitch | 2/3 |
| Terminals | 12 |
| Drip Proof | IP23 |
| Altitude | ≤1000m |
| Overspeed | 2250rpm |
| Air Flow | 0.15m³/s |
| Voltage Regulation | ±0.5% |
| Total harmonic TGH / THC | < 4% |
| Telephone Interference | THF<2%;TIF<50 |

## PLC-702 Control System



1000093157-AP1-A1

PLC-702 key manual start module is a manual engine control module designed to control the engine via a key switch and push buttons on the front panel. The module is used to start and stop the engine and indicate fault conditions, automatically shutting down the engine and giving a true first up fault condition of an engine failure.

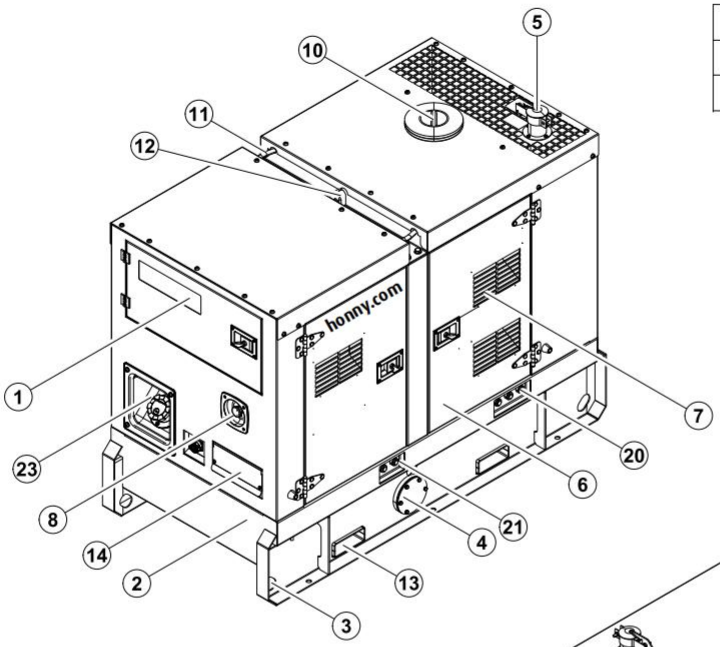
**Standard Control Function**

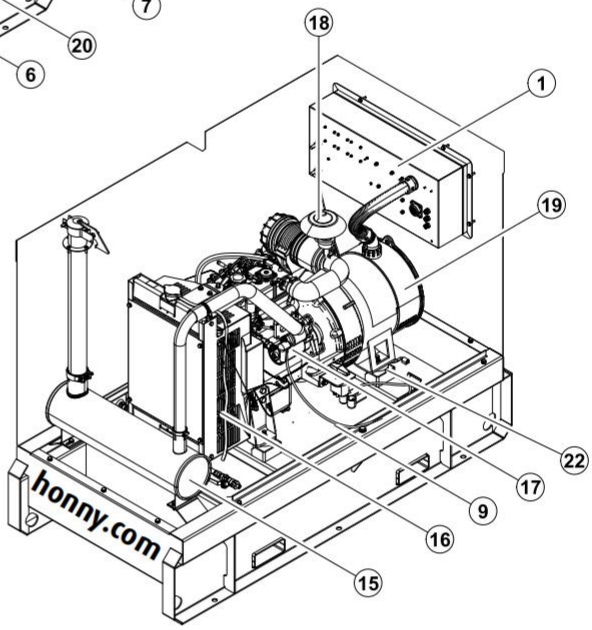
- Manual Engine Control Module
- Low Oil Pressure
- High Engine Temperature
- Auxiliary Shutdown
- Overspeed Protection
- Protection hold-off timer
- Charge Failure warning

## 4 Overall Dimensions

1000019501-DR1-B7

| | |
|---|---|
| Dry weight | 621kg |
| Fuel tank capacity | 90L |
| Dimensions L x W x H | 1632x800x1200mm |




(12) Lifting lug
(11) Roping lug
(10) Coolant inlet
(9) Fuel tank
(8) Emergency stop switch
(7) Air inlet
(6) Access door
(5) Exhaust gas outlet
(4) Fuel drain
(3) Tie down
(2) Base frame
(1) Control cabinet
(23) Fuel inlet
(22) Vibration isolator
(21) External fuel inlet/return hose fitting
(20) Coolant/Oil drain hose fitting
(19) Alternator
(18) Air cleaner
(17) Engine
(16) Radiator
(15) Muffler
(14) Cable trench
(13) Fork lift channel