

## Marine Generator Set

### Engine Features

- Diesel fueled
- Certified by the Environmental Protection Agency (EPA) to conform to Tier III marine auxiliary standards
- Three cylinder
- Four cycle
- Closed cooling system
- Heat exchanger
- Lifting eye

### Generator Features

- Remote start 12-pin connector
- Class H insulation
- Multivoltage adjustability
- 60/50 Hz capability
- Voltage regulation of  $\pm 1.0\%$
- Radio suppression

## Generator Weights and Dimensions

|                  | Without<br>Sound Shield | With<br>Sound Shield |
|------------------|-------------------------|----------------------|
| Weight, kg (lb.) |                         |                      |
| Wet              | 185 (407)               | 222 (490)            |
| Dry              | 181 (398)               | 218 (481)            |
| Length, mm (in.) | 743 (29.26)             | 780 (30.71)          |
| Width, mm (in.)  | 448 (17.65)             | 528 (20.79)          |
| Height, mm (in.) | 536 (21.12)             | 559 (22.01)          |

## Generator Ratings

| Model Series | Voltage | Hz | 25° C (77° F) | 25° C (77° F) | Ph |
|--------------|---------|----|---------------|---------------|----|
|              |         |    | Amps          | kW/kVA        |    |
| 6EKOD        | 120     | 60 | 50.0          | 6/6           | 1  |
|              | 120/240 | 60 | 50.0/25.0     | 6/6           | 1  |
| 5EFKOD       | 115/230 | 50 | 43.4/21.7     | 5/5           | 1  |
|              | 230     | 50 | 21.7          | 5/5           | 1  |
|              | 240     | 50 | 20.8          | 5/5           | 1  |

RATINGS: Marine continuous ratings per ISO 3046, ISO 8528-1, and Kohler ISO rating guideline 2.14. Obtain technical information bulletin (TIB-101) on ratings guidelines for complete ratings definitions.

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SmartCraft™ is a trademark of Mercury Marine, a division of Brunswick Corporation.

## ADC IId Advanced Digital Control Features

- Designed for today's most sophisticated electronics
- Easy to read 12 x 2 LCD alpha-numeric display
- Compact, integrally mounted control
- Sealed connectors for maximum corrosion protection
- SAE J1939, SmartCraft™, NMEA 2000 selectable CANbus outputs
- Remote monitoring of fault conditions
- Pushbutton dial for configuration and adjustment
- Programmed crank cycle

## Optional Accessories

- Aluminum sound shield
- Remote digital gauge (2 or 3 inch)
- Siphon break
- Circuit breakers

# Application Data

## Engine

| Engine Specifications                     | 60 Hz                        | 50 Hz |
|---|------------------------------|-------|
| Type                                      | 4 cycle, naturally aspirated |       |
| Cylinder, quantity                        | 3                            |       |
| Displacement, L (cu. in.)                 | 1.028 (62.7)                 |       |
| Bore and stroke, mm (in.)                 | 75 x 77.6 (2.95 x 3.05)      |       |
| Compression ratio                         | 24.5:1                       |       |
| Combustion system                         | Indirect injection           |       |
| Rated rpm                                 | 1800                         | 1500  |
| Max. power at rated rpm, HP               | 10.1                         | 8.4   |
| Governor, type                            | Mechanical                   |       |
| Frequency regulation, mechanical governor |                              |       |
| No load to full load (droop) . . . . .    | 5%                           |       |
| Steady state . . . . .                    | ±0.7%                        |       |
| Angular operation                         |                              |       |
| Instant (1 min.) . . . . .                | 35°                          |       |
| Intermittent (30 min.) . . . . .          | 25°                          |       |

## Engine Electrical

| Engine Electrical System        | 60 Hz         | 50 Hz |
|---------------------------------|---------------|-------|
| Battery, voltage                | 12 volt       |       |
| Battery charging module         | 10-amp        |       |
| Battery, minimum recommendation | 650 CCA @ 0°F |       |
| Starter motor                   | 2.5 kW, 12 V  |       |

## Cooling

| Cooling System   | 60 Hz                             | 50 Hz      |
|--|-----------------------------------|------------|
| Capacity, L (qt.), approx.   | 3 (3.2)                           |            |
| Heat exchanger type  | 2.5 in. dia. x 2 pass             |            |
| Seawater pump type   | Belt-driven,<br>10-blade impeller |            |
| Heat rejected to cooling water at rated kW, wet exhaust, kW (Btu/min.) | 10.9 (622)                        | 9.5 (540)  |
| Engine water pump flow, Lpm (gpm)                                      | 21.6 (5.7)                        | 21.2 (5.6) |
| Seawater pump flow, Lpm (gpm)  | 28.4 (7.5)                        | 24.6 (6.5) |

## Fuel

| Fuel System                            | 60 Hz     | 50 Hz |
|--|-----------|-------|
| Fuel shutoff solenoid                  | Electric  |       |
| Fuel pump                              | Electric  |       |
| Maximum recommended fuel lift, m (ft.) | 0.9 (3.0) |       |

## Lubrication

| Lubricating System                    | 60 Hz                   | 50 Hz |
|---------------------------------------|-------------------------|-------|
| Oil pan capacity with filter, L (qt.) | 2.5 (2.6)               |       |
| Oil pump type                         | Pressure, trochoid pump |       |

## Operation Requirements

| Air Requirements  | 60 Hz       | 50 Hz      |
|---|-------------|------------|
| Engine combustion air requirements, L/min. (cfm)              | 849 (30)    | 707 (25)   |
| Generator cooling requirements, L/min. (cfm)                  | 5097 (180)  | 4247 (150) |
| Max. air intake restriction, in. (mm) H <sub>2</sub> O        | 10 (250)    |            |
| Exhaust flow, m <sup>3</sup> /min. (cfm)                      | 1.4 (50)    | 1.2 (41)   |
| Exhaust temp., °C (°F) at full load                           | 271 (520)   | 260 (500)  |
| Max. allowed exhaust back pressure, kPa (mm H <sub>2</sub> O) | 14.2 (1444) |            |

| Fuel Consumption                   | 60 Hz     | 50 Hz     |
|------------------------------------|-----------|-----------|
| <b>Diesel, Lph (gph) at % load</b> |           |           |
| 100%                               | 2.3 (0.6) | 1.9 (0.5) |
| 75%                                | 1.9 (0.5) | 1.5 (0.4) |
| 50%                                | 1.5 (0.4) | 1.1 (0.3) |
| 25%                                | 1.1 (0.3) | 1.1 (0.3) |

**Note:** The fuel consumption of the 60 Hz model is based on 6EKOD and the fuel consumption of the 50 Hz model is based on 5EFKOD.

## Engine Features

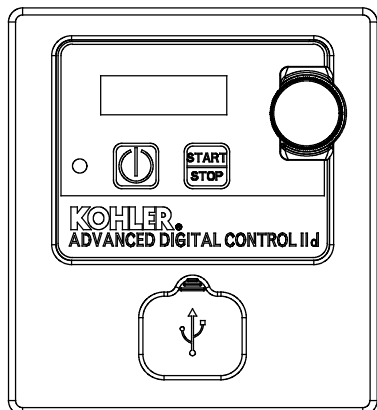
- Switchable between 50 and 60 Hz
- Low oil pressure shutdown
- High engine temperature shutdown
- Low seawater pressure shutdown
- Vibromount
- Belt guard
- Disposable oil filter
- Oil drain valve
- Programmed glow plug circuit for cold starting
- Disposable fuel filter

## Generator Features

- Static excited, rotating field design permits power to be obtained from stationary leads.
- Rotor and stator are vacuum impregnated and coated with high-bond epoxy varnish. Varnish helps prevent corrosion in high-humidity areas.
- Rotors are dynamically balanced to minimize vibration.
- Copper windings ensure minimal heat buildup. Insulation meets NEMA standards for class H insulation.
- Direct connected to the engine, the generator has sealed precision ball bearings with a precision-machined steel sleeve in the end bracket to prevent shaft misalignment and extend bearing life.
- Mounted on a drip-proof tray.
- Equipped with a four-lead reconnectable stator.

# Application Data

## Advanced Digital Control IId Features



### Controller Features:

- Integrated genset control & voltage regulation
- Selectable Smartcraft™ V1.0, NMEA 2000, & SAE J1939 outputs
- Hybrid voltage regulation
- USB interface
  - Ease of uploading and downloading software
  - Historical and diagnostic information
  - Real time diagnostics
  - Front-face accessible
  - SiteTech™ compatible for setting changes
- Metering capabilities
- NXP microprocessor with 512 KB Flash and 60 KB RAM
- 179 x 126 x 47 mm (7.1 x 5.0 x 1.9 in.) dimension
- Programmed preheat for cold starts

### Display Type/Features:

- 12 character x 2 line LCD display
- Temperature range (-20 to 70° C)
- Displays:
  - Runtime hours
  - Crank cycle status
  - Generator status
  - Warnings
  - Faults
  - Diagnostics
  - Setup parameters
  - Software version
- Maintenance minder (customer programmable)
- 2-button keypad: Single power momentary and Start/Stop
- Standard non-membrane switch overlay
- Rotary encoder knob with pushbutton features:
  - Voltage
  - Gain
  - V/Hz adjustment
- Controller configuration
- Tri-color LED indicator displays system ready, warning, and fault status

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## Accessories

### Sound Shield

Provides for highly effective silencing, ease of access for engine/generator servicing, low maintenance, excellent durability, and safety. The sound shield's customer connection panel includes connections for the following:

- Battery (positive and negative)
- Equipment ground
- Fuel inlet and return
- Seawater inlet
- Water-cooled exhaust outlet
- Oil drain
- Customer load lead access
- Customer interface

### Siphon Break

Mandatory kit on generators installed below the waterline. Prevents the siphoning of flotation water into the engine.

### Line Circuit Breakers

Protect the generator from extreme overload.

### Ship-to-Shore Switch

Allows immediate switching to Kohler® generator set power or shore power protecting the electrical system from the possibility of simultaneous connection of both power sources.

### Remote Digital Gauges

Allows starting/stopping from a location remote from the generator set.

- 3 in. gauge for J1939  
Requires a 76.2 mm (3 in.) dia. hole for mounting.
- 2 in. gauge for Smartcraft™  
Requires a 50.8 mm (2 in.) dia. hole for mounting.

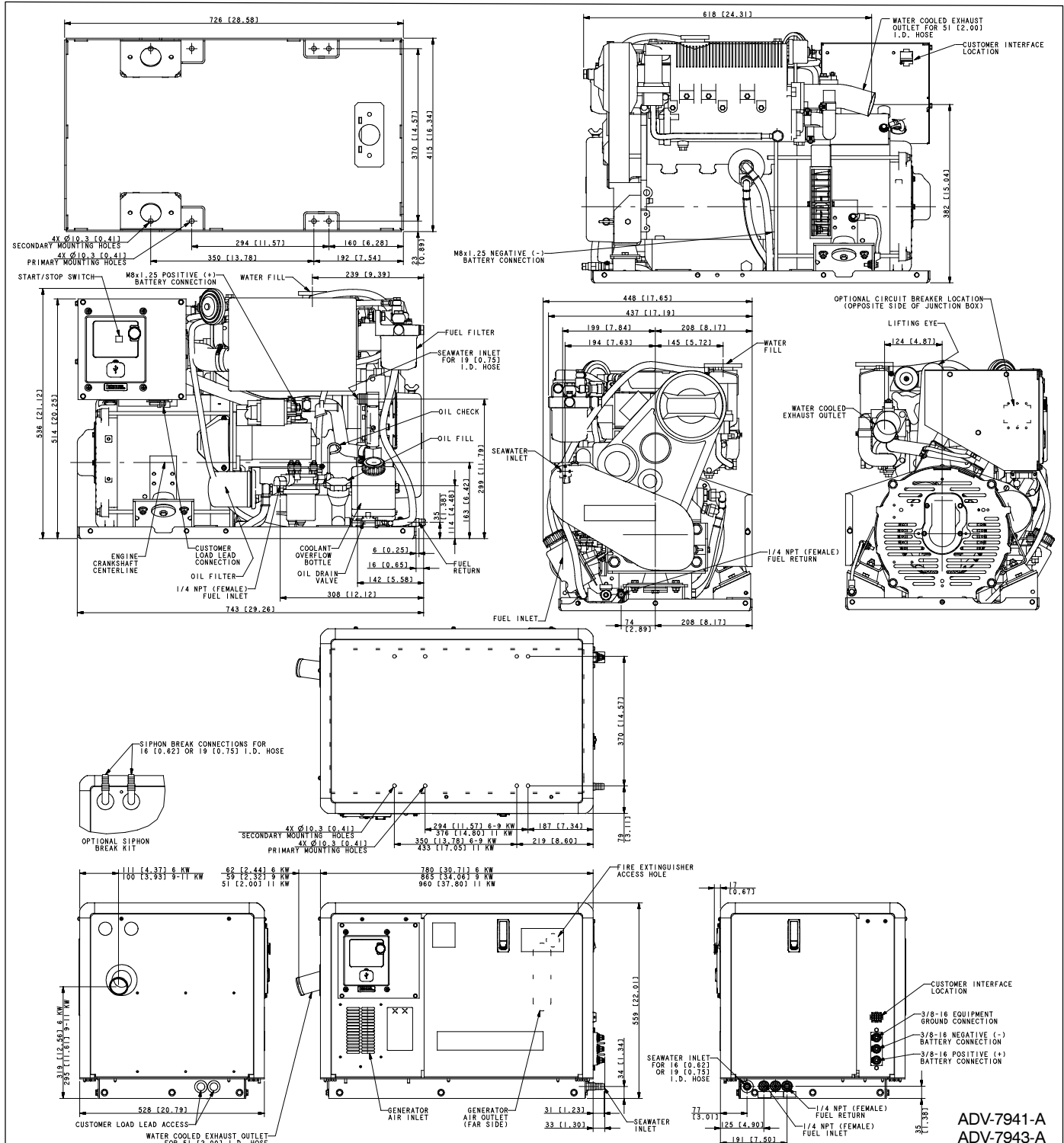
### Remote Connection/Extension Harness

Provides wiring between the remote digital gauge and the ADC connector. Extension limited to a total of four kits and 23 m (75 ft.). Available in 4.6 m (15 ft.) and 7.6 m (25 ft.) lengths.

### 12-Inch Remote Wiring Harness

Equipped with a 12-pin connector on one end that connects to the standard customer interface connector. Equipped on the other end with leads for connection to customer-supplied wiring.

# KOHLER<sup>®</sup> POWER SYSTEMS



ADV-7941-A  
ADV-7943-A

**DISTRIBUTED BY:**



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NOTE: Dimensions in [ ] are inch equivalents.

NOTE: This drawing is provided for reference only and is not intended for installation planning. Contact your local distributor for more detailed information.

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