

Installation Checklist

Marine Generator Sets



KOHLER[®]
POWER SYSTEMS

Kohler Marine Generator Installation Checklist

Installation Date _____

Vessel Information:

Manufacturer: _____

Vessel location: _____

Model: _____

Fuel:

Diesel

Gasoline

Hull I.D. number: _____

Hull construction:

Fiberglass

Aluminum

Steel

Wood

Generator Set Information:

Fuel:

Diesel

Gasoline

Frequency:

60 Hz

50 Hz

Model: _____

Voltage: _____

Specification number: _____

Serial number: _____

Line amps: _____

Circuit breaker amps: _____

AC Electrical:

	YES	NO
Generator nameplate voltage matches vessel AC system voltage	<input type="checkbox"/>	<input type="checkbox"/>
Connected to a ship-to-shore switch	<input type="checkbox"/>	<input type="checkbox"/>
Connected to a main distribution box circuit breaker	<input type="checkbox"/>	<input type="checkbox"/>

DC Electrical:

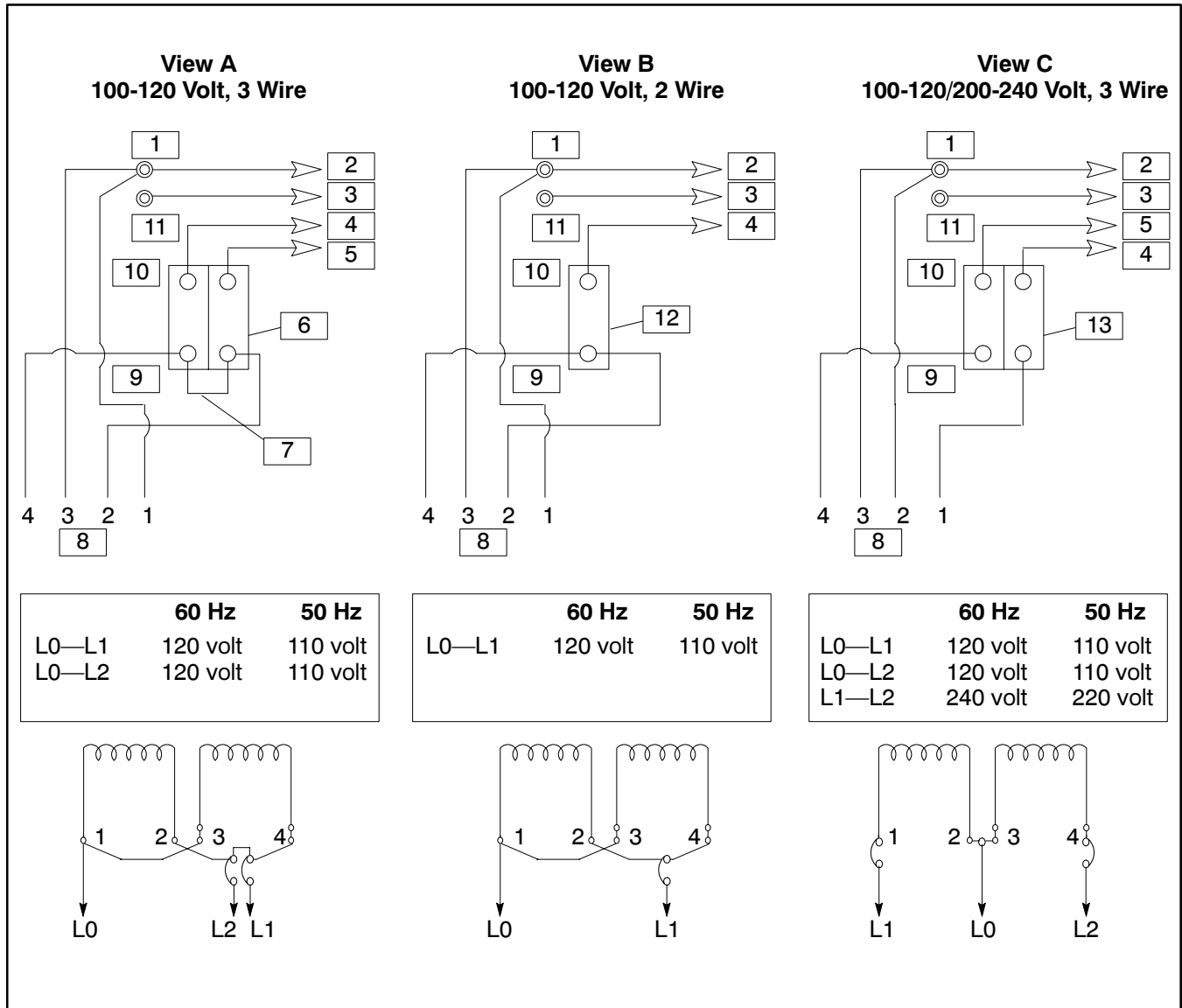
Battery type:

Gell Cell

Lead Acid

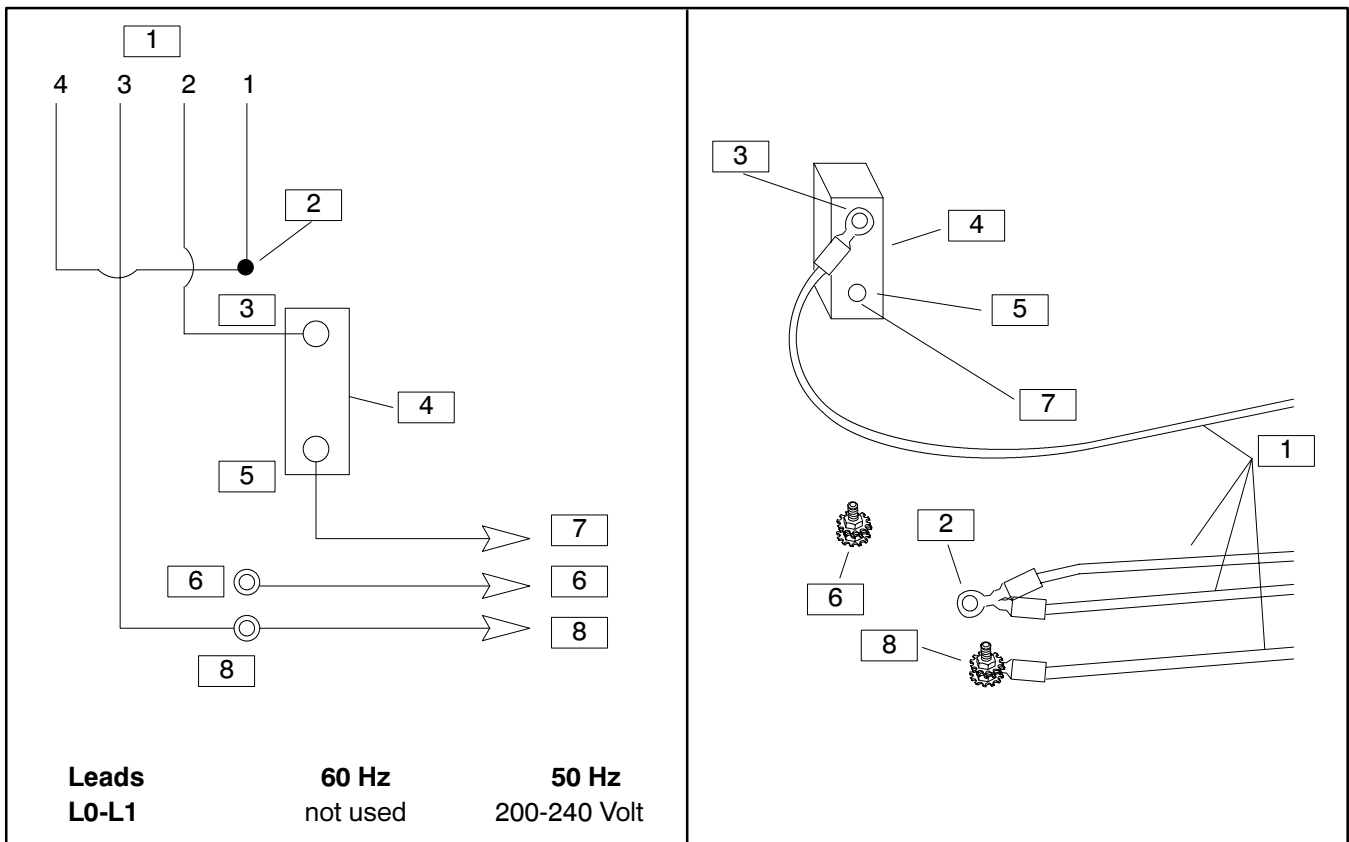
Battery cable size and length: _____

Voltage Connection:



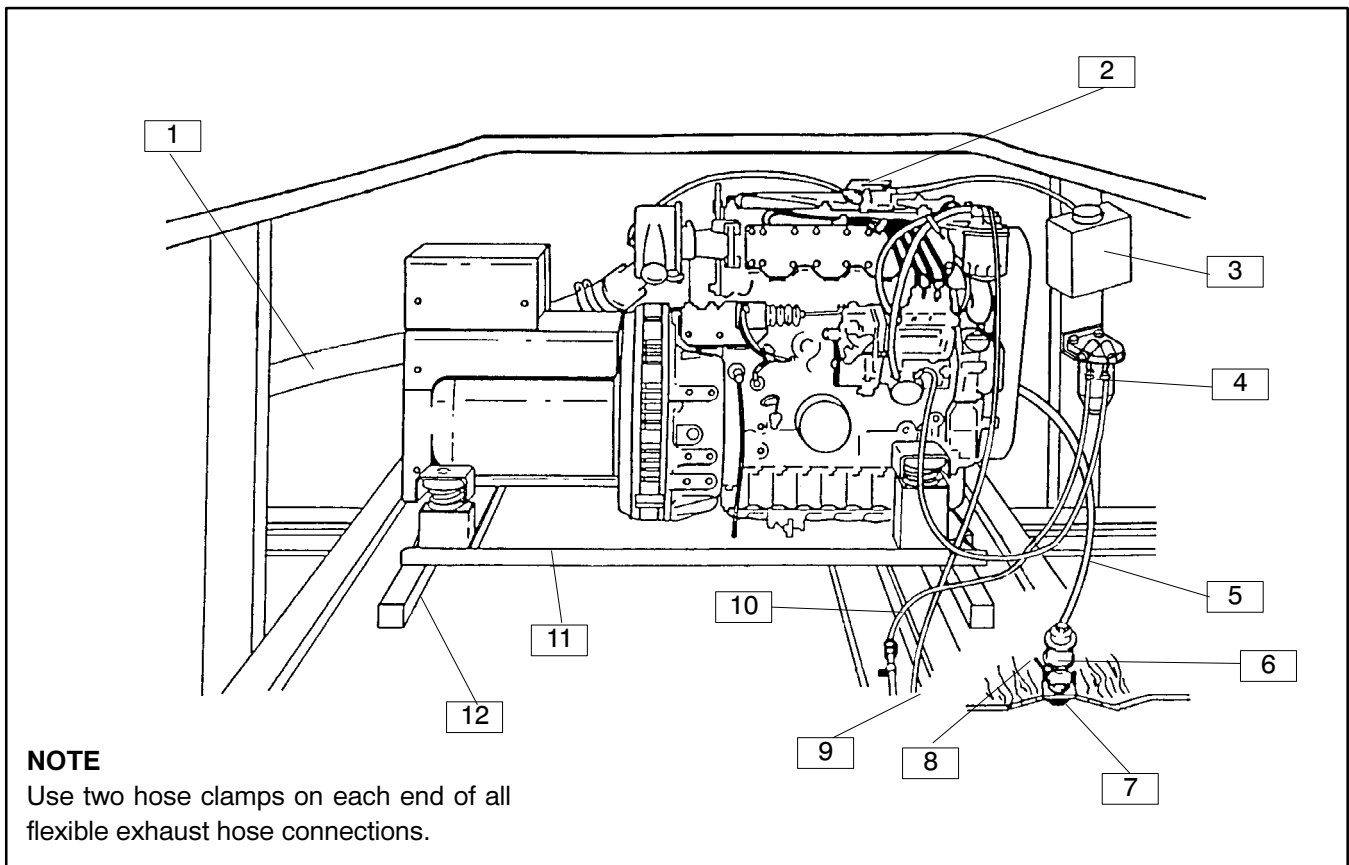
1. L0 (Neutral)
2. L0 (Neutral)
3. Ground
4. L1
5. L2
6. Factory Two-Pole or (2) 1-Pole Circuit Breakers
7. Jumper Lead
8. Stator Leads
9. Line Side
10. Load Side
11. Ground
12. One-Pole Circuit Breaker
13. Factory Two-Pole Circuit Breaker

Figure 1. Voltage Connections



1. Stator leads
2. Tape to insulate from ground
3. Line side
4. Single-pole AC circuit breaker
5. Load side
6. Ground (green) lead
7. L1 phase (black) lead
8. L0 neutral (white) lead

Figure 2. Single-Pole Circuit Breaker Mounting (200-240 Volt, 2 Wire)



1. Exhaust Line*
 2. Heat Exchanger
 3. Coolant Recovery Tank
 4. Fuel/Water Separator
 5. Raw Water Line
 6. Water Strainer*
 7. Intake Through-Hull Strainer
 8. Seacock*
 9. Fuel Return Line (diesel models only)
 10. Fuel Line*
 11. Mounting Tray
 12. Mounting Base
 13. Backfire Deflector (gasoline models only) not shown*
 14. Siphon Break (required if generator located mid to below waterline) not shown
- * Indicated components must conform to USCG regulations.

Figure 3. Typical Location and Mounting

Location:

Generator location:

- Forward
- Midship
- Aft
- Port
- Starboard

Generator position:

- Athwart
- Fore/Aft

Generator installation relative to waterline:

- Below
- Above

Location (continued):

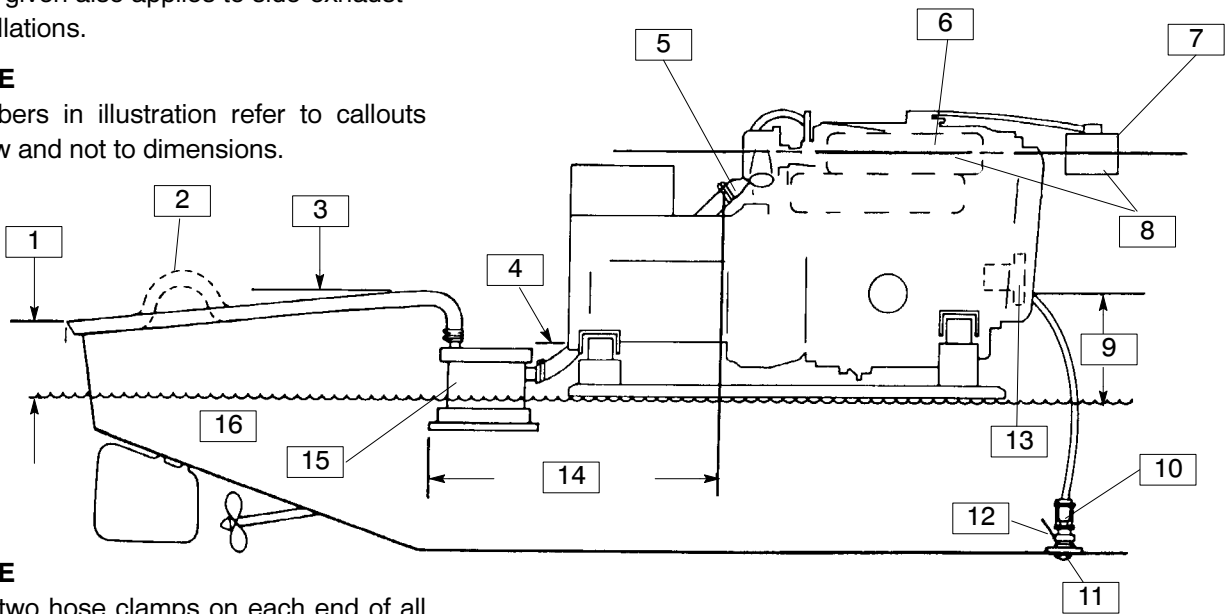
	YES	NO
Generator set has installed hushcover	<input type="checkbox"/>	<input type="checkbox"/>
Is there a minimum of 1.5 in. (3.81 cm) clearance between bulkhead and inlet/outlet housing openings	<input type="checkbox"/>	<input type="checkbox"/>
Can you access all generator set service points (oil check, filters, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Is the generator set well supported	<input type="checkbox"/>	<input type="checkbox"/>
Is the compartment well sealed	<input type="checkbox"/>	<input type="checkbox"/>
Is the generator protected from deck washdown	<input type="checkbox"/>	<input type="checkbox"/>
Does the generator set have adequate clearance on top and sides	<input type="checkbox"/>	<input type="checkbox"/>
Is the compartment well ventilated for removal of engine fumes	<input type="checkbox"/>	<input type="checkbox"/>
Is there sufficient combustion and cooling air inlet	<input type="checkbox"/>	<input type="checkbox"/>
Does the compartment have a <i>sniffer</i> device to detect carbon monoxide gases	<input type="checkbox"/>	<input type="checkbox"/>
Size of compartment inlet ventilation area: _____ sq. in.		
Size of compartment outlet ventilation area: _____ sq. in.		

NOTE

Data given also applies to side-exhaust installations.

NOTE

Numbers in illustration refer to callouts below and not to dimensions.



NOTE

Use two hose clamps on each end of all flexible exhaust hose connections.

1. 4 in. (10 cm) minimum
2. Slight lift improves silencing (keep below level of exhaust manifold outlet)
3. 0.5 in. (1.3 cm) per ft. (0.3 m)
4. Exhaust hose slope 0.5 in. (1.3 cm) per ft. (0.3 m)
5. Exhaust Mixer
6. Heat Exchanger
7. Coolant Recovery Tank
8. Locate at same height
9. 3 ft. (0.9 m) maximum
10. Water Strainer
11. Intake Strainer
12. Seacock
13. Engine-Driven Seawater Pump
14. 10 ft. (3 m) maximum
15. Silencer
16. Waterline

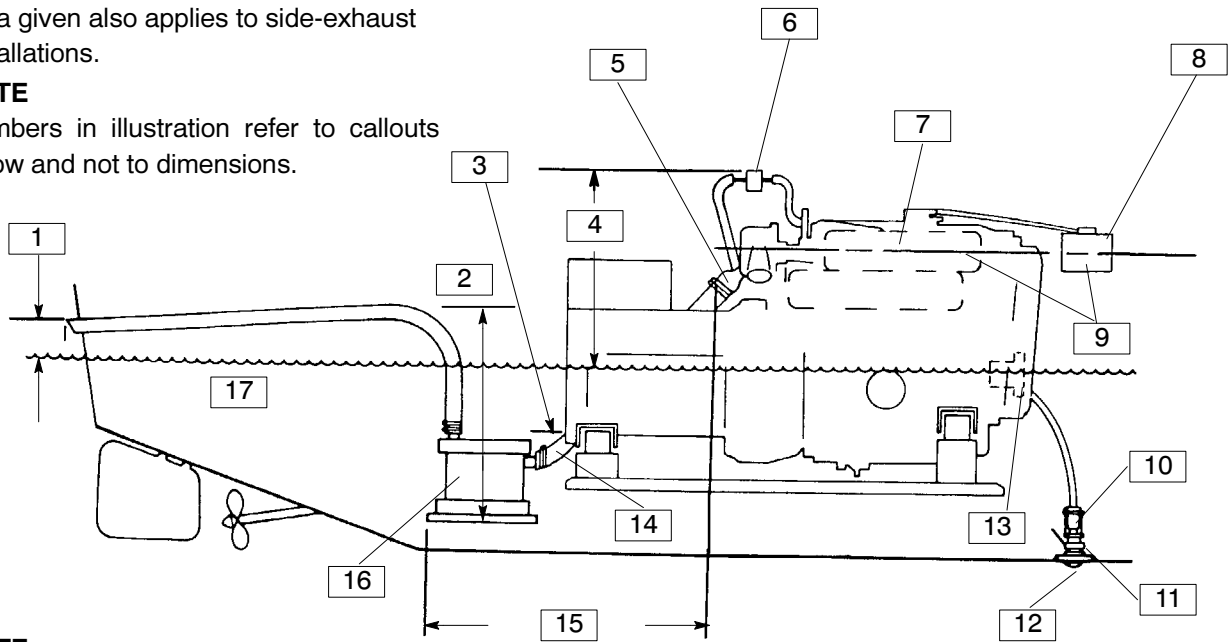
Figure 4. Typical Above Waterline Installation

NOTE

Data given also applies to side-exhaust installations.

NOTE

Numbers in illustration refer to callouts below and not to dimensions.



NOTE

Use two hose clamps on each end of all flexible exhaust hose connections.

1. 4 in. (10 cm) minimum
2. 4 ft. (1.2 m) maximum
3. Exhaust hose slope 0.5 in. (1.3 cm) per ft. (0.3 m)
4. 1 ft. (0.3 m) minimum
5. Exhaust Mixer
6. Siphon Break
7. Heat Exchanger
8. Coolant Recovery Tank
9. Locate at same height
10. Water Strainer
11. Seacock
12. Intake Strainer
13. Engine-Driven Seawater Pump
14. Install optional water lock here
15. 10 ft. (3 m) maximum
16. Silencer
17. Waterline

Figure 5. Typical Mid- and Below-Waterline Installation

Cooling System:

Type of cooling system:

- Heat exchanger
- Direct seawater
- Keel cooled

- Has intake through-hull strainer and seacock
- Is intake strainer aligned to propulsion engine intake
- Is intake screened to prevent entry of foreign objects
- Flush-mounted intake fitting
- Are slotted strainers mounted with slots parallel to direction of travel
- Is intake of a scoop or cup designed
- Is intake of a seachest designed
- Is seacock mounted to hull and accessible for operation

Seawater Strainer:

Type of seawater strainer:

- Canister
- In line

- Sufficient capacity seawater strainer
- Mounted to seacock or permanent structure
- Mounted lower than seawater pump
- Accessible for service
- Combination sea strainer, seacock, and through-hull strainer

Water Lines:

- Flexible hose from seacock to engine-driven seawater pump
- Rigid hose from seacock to flexible section prior to connection to seawater pump
- Rigid hose section is supported within 4 in. (10 cm) of the flexible section
- All piping and hose is as short and straight as possible

Hose/pipe I.D.: _____

Hose/pipe length: _____

- Has anti-siphon valve installed
- (Seawater anti-siphon valve is required if engine exhaust outlet is within 9 in. (23 cm) of the waterline when the vessel is loaded to maximum Coast Guard certified weight.)
- Anti-siphon valve is located at least 12 in. (30.5 cm) above waterline when vessel is loaded to its certified weight
- Recovery tank, if used, is securely mounted so surface level is same height as or maximum of 12 in. (30.5 cm) below level of pressure cap
- (If not using a recovery tank, do not immerse the overflow hose in bilge water)

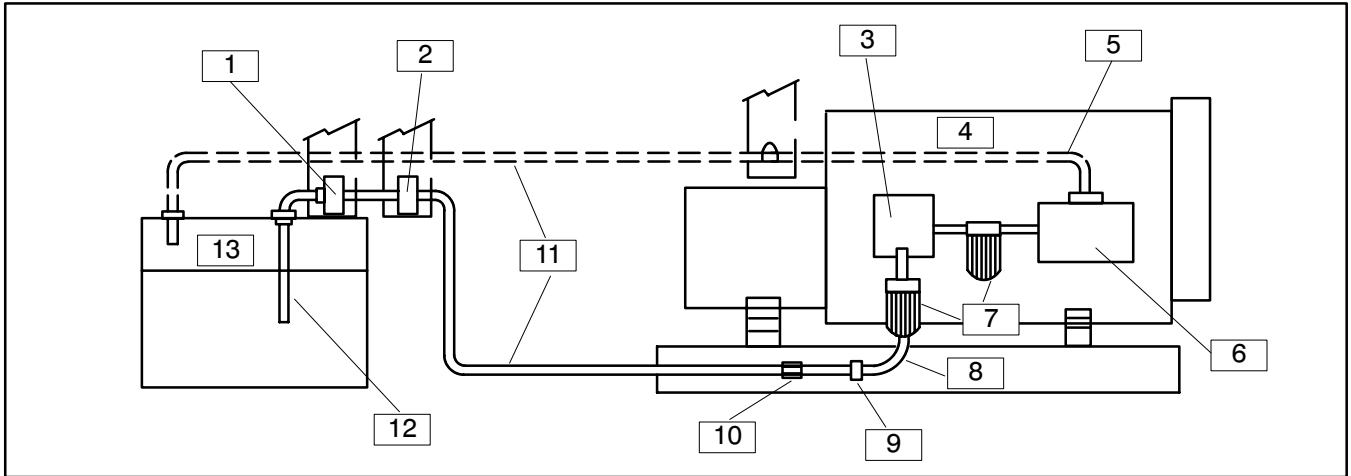
Fuel System:

Propulsion engine:

- Diesel
- Gasoline

Generator engine:

- Diesel
- Gasoline



- 1. Electric Fuel Valve
- 2. Check Valve
- 3. Fuel Lift Pump
- 4. Flexible Line
- 5. Fuel Return Line (Diesels Only)
- 6. Carburetor or Injection Pump
- 7. Filter
- 8. Flexible Fuel Line
- 9. Clamp
- 10. Support Clamp
- 11. Metallic Line
- 12. Dip Tube
- 13. Fuel Tank

Figure 6. Typical Fuel System

Fuel System (continued):

	YES	NO
Same fuel tank as main engine	<input type="checkbox"/>	<input type="checkbox"/>
Separate dip tube for fuel supply	<input type="checkbox"/>	<input type="checkbox"/>
Type of valve located at fuel tank outlet:		
Electric <input type="checkbox"/>		
Check <input type="checkbox"/>		
Separate diesel fuel return line	<input type="checkbox"/>	<input type="checkbox"/>
Water separator between tank and fuel pump	<input type="checkbox"/>	<input type="checkbox"/>
Metallic fuel line from tank to flexible hose section at generator set	<input type="checkbox"/>	<input type="checkbox"/>
Metallic section supported within 4 in. (10 cm) of its connection to flexible section	<input type="checkbox"/>	<input type="checkbox"/>
Inline fuel filters or strainers mounted to the generator set or structure	<input type="checkbox"/>	<input type="checkbox"/>
Flexible fuel section—USCG Type B1 Hose (diesel) or Type A1 Hose (gasoline)	<input type="checkbox"/>	<input type="checkbox"/>
Tight connection fittings for in and out of filters, valves, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Anti-siphon valve at fuel tank outlet (gasoline models)	<input type="checkbox"/>	<input type="checkbox"/>
Fuel tank distance from generator set: _____		
Fuel supply (and diesel return) line I.D.:		
1/4 in. <input type="checkbox"/>		
5/16 in. <input type="checkbox"/>		
3/8 in. <input type="checkbox"/>		
Fuel lift (supply to lift pump): _____ (36 in. maximum)		

Exhaust System:

Silencer type:

Tube

Canister

Silencer size: _____

	YES	NO
Installed water lock	<input type="checkbox"/>	<input type="checkbox"/>
UL marine exhaust hose used	<input type="checkbox"/>	<input type="checkbox"/>
Base of canister type is no more than 4 ft. (1.2 m) below highest point in exhaust line	<input type="checkbox"/>	<input type="checkbox"/>
Silencer output is no more than 10 horizontal ft. (3 m) from exhaust manifold outlet	<input type="checkbox"/>	<input type="checkbox"/>
Exhaust line exits craft at least 4 in. (10 cm) above waterline (fully loaded vessel)	<input type="checkbox"/>	<input type="checkbox"/>
Pitch of exhaust hose is minimum of 0.5 in. (1.3 cm) per running foot (0.3 m)	<input type="checkbox"/>	<input type="checkbox"/>
Flapper installed at transom exhaust outlet	<input type="checkbox"/>	<input type="checkbox"/>
Dual corrosion resistant clamps used on each end of flexible hose connection	<input type="checkbox"/>	<input type="checkbox"/>
Total exhaust run—manifold to transom _____ ft.		

NOTE

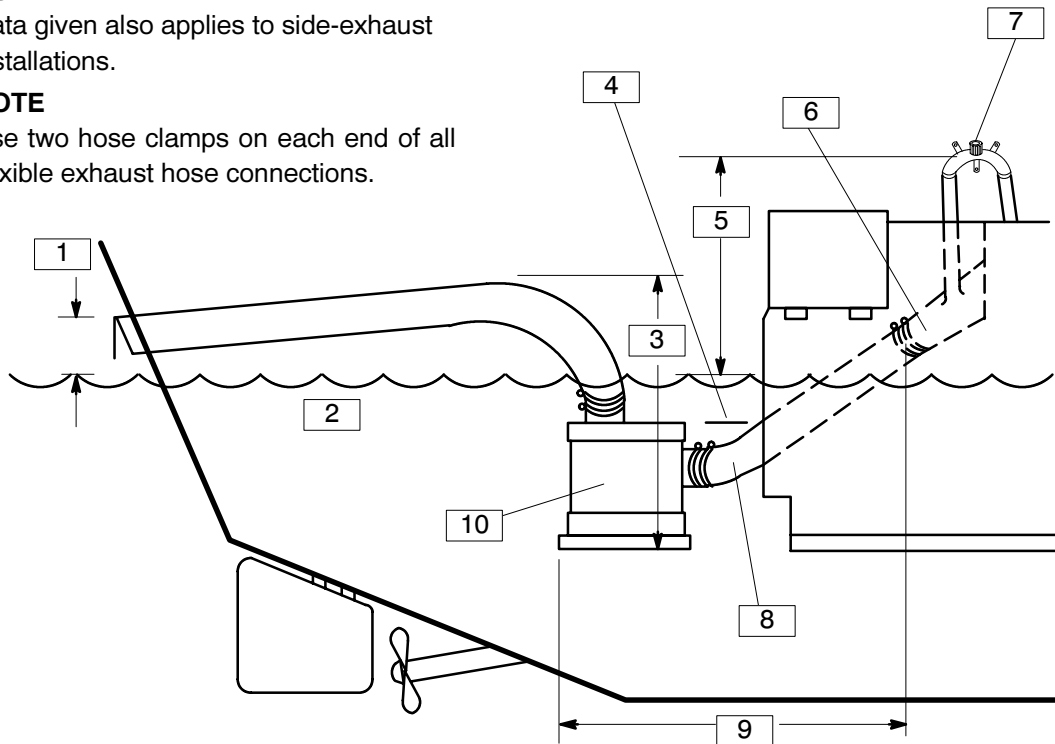
Numbers in illustration refer to callouts below and not to dimensions.

NOTE

Data given also applies to side-exhaust installations.

NOTE

Use two hose clamps on each end of all flexible exhaust hose connections.



1. 4 in. (10 cm) minimum
2. Waterline
3. 4 ft. (1.2 m) maximum.
4. Exhaust hose slope 0.5 in. (1.3 cm) per ft. (0.3 m)
5. 1 ft. (0.3 m) minimum
6. Exhaust Mixer
7. Siphon Break
8. Install optional water lock here
9. 10 ft. (3 m) maximum
10. Silencer

Figure 7. Exhaust System

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KOHLER[®] POWER SYSTEMS

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