July 8, 2022

| Item No. | Qty. | Description |
|---|---|---|
| 1. | 1 | 45 KW/KVA, 240/120V, 1 phase, 3 wire diesel |

Generator - Kohler Model 50R0ZJ
Age – Approximately 22 years old
Usage – 1,740 hours

Pick up location:
Vasoli Electric
1430 Ulmer Avenue
Oreland PA 19075

Anticipated availability date: 12/15/2022

# Model: 50ROZJ

# KOHLER POWER SYSTEMS

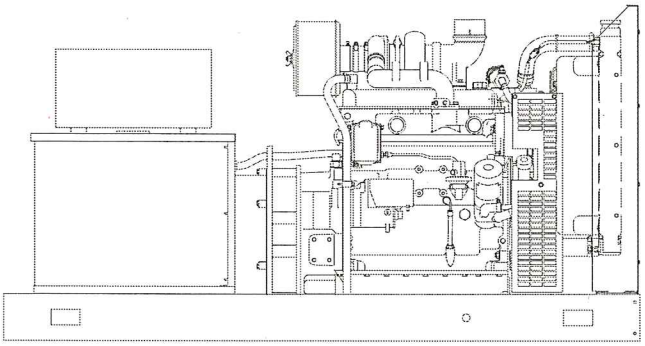
190-600 V

4 Cycle Diesel

ISO 9001 KOHLER GENERATORS INTERNATIONALLY REGISTERED

## Ratings Range

| | | 60 Hz | 50 Hz |
|---|---|---|---|
| **Standby:** | **kW** | 49–55 | 40–45 |
| | **kVA** | 49–69 | 40–56 |
| **Prime:** | **kW** | 45–50 | 35–41 |
| | **kVA** | 45–63 | 36–51 |



## Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The generator set accepts rated load in one step.
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are also available.
- Generator features:
  - Kohler's unique Fast-Response™ excitation system delivers the fastest voltage response in the industry.
  - The brushless, rotating-field generator has broadrange reconnectability.
  - Kohler's permanent magnet-excited generator (PMG) provides superior short-circuit capability.
- Other features:
  - Controllers are available for all applications. See controller features inside.
  - The low coolant level shutdown prevents overheating.
  - Integral vibration isolation eliminates the need for under-unit vibration spring isolators.

## Generator Ratings

KOHLER 50ROZJ81

JOHN DEERE 4039TF

| Generator | Voltage | Ph | Hz | 130°C Rise Standby Rating kW/kVA | 130°C Rise Standby Rating Amps | 105°C Rise Prime Rating kW/kVA | 105°C Rise Prime Rating Amps |
|---|---|---|---|---|---|---|---|
| 4P8 | 120/208 | 3 | 60 | 55/69 | 191 | 50/63 | 174 |
| | 120/240 | 3 | 60 | 55/69 | 165 | 50/63 | 151 |
| * → | 120/240 | 1 | 60 | 49/49 | 204 | 45/45 | 188 |
| | 127/220 | 3 | 60 | 55/69 | 180 | 50/63 | 164 |
| | 139/240 | 3 | 60 | 55/69 | 165 | 50/63 | 151 |
| | 220/380 | 3 | 60 | 55/69 | 104 | 50/63 | 95 |
| | 277/480 | 3 | 60 | 55/69 | 83 | 50/63 | 75 |
| | 347/600 | 3 | 60 | 50/63 | 60 | 45/56 | 54 |
| | 110/190 | 3 | 50 | 42/53 | 161 | 38/48 | 145 |
| | 110/220 | 3 | 50 | 45/56 | 147 | 41/51 | 135 |
| | 110/220 | 1 | 50 | 40/40 | 182 | 36/36 | 164 |
| | 115/200 | 3 | 50 | 41/51 | 147 | 37/46 | 134 |
| | 120/208 | 3 | 50 | 40/50 | 139 | 35/44 | 122 |
| | 220/380 | 3 | 50 | 42/53 | 81 | 38/48 | 72 |
| | 230/400 | 3 | 50 | 41/41 | 74 | 37/46 | 67 |
| | 240/416 | 3 | 50 | 40/50 | 69 | 35/44 | 61 |

RATINGS: All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor. *Standby Ratings:* Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. *Prime Power Ratings:* Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. For limited running time and base load ratings, consult the factory. Obtain the technical information bulletin (TIB-101) on ratings guidelines for the complete ratings definitions. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. GENERAL GUIDELINES FOR DERATION: *ALTITUDE:* Derate 1.5% per 305 m (1000 ft.) elevation above 2013 m (6600 ft.) up to 3050 m (10000 ft.). *TEMPERATURE:* Derate 0.5% per 5.5°C (10°F) temperature above 40°C (104°F).

# Alternator Specifications

| Specifications | Generator |
|---|---|
| Manufacturer | Kohler |
| Type | 4-Pole, Rotating Field |
| Exciter type | Brushless, Permanent-Magnet |
| Leads: quantity, type | 12, Reconnectable |
| Voltage regulator | Solid State, Volts/Hz |
| Insulation: | NEMA MG1 |
| Material | Class H |
| Temperature rise | 130°C, Standby |
| Bearing: quantity, type | 1, Sealed |
| Coupling | Flexible Disc |
| Amortisseur windings | Full |
| Voltage regulation, no-load to full-load | ±2% |
| Unbalanced load capability | 100% of Rated Standby Current |
| One-step load acceptance | 100% of Rating |
| Peak motor starting kVA: | (35% dip for voltages below) |
| 480 V, 380 V 4P8 (12 lead) | 210 (60 Hz), 145 (50 Hz) |

- Complies with NEMA MG1, IEEE, and ANSI standards for temperature rise and motor starting.
- Sustains short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustains short-circuit current enabling downstream circuit breakers to trip without collapsing the generator field.
- Self-ventilation, dripproof construction.
- Provides dependability and long life from vacuum-impregnated windings with fungus-resistant epoxy varnish.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.
- Solid-state, volts-per-hertz voltage regulator with ±2% no-load to full-load regulation.
- Fast-Response™ brushless alternator with brushless exciter for excellent load response.

# Application Data

## Engine

| Engine Specifications | 60 Hz | 50 Hz |
|---|---|---|
| Manufacturer | John Deere | |
| Engine: model, type | 4039T, 4-Cycle, Turbocharged | |
| Cylinder arrangement | 4 Inline | |
| Displacement, L (cu. in.) | 3.92 (239) | |
| Bore and stroke, mm (in.) | 106.5 x 110 (4.19 x 4.33) | |
| Compression ratio | 17.8:1 | |
| Piston speed, m/sec. (ft./min.) | 6.6 (1300) | 5.5 (1082) |
| Main bearings: quantity, type | 5, Replaceable Insert | |
| Rated rpm | 1800 | 1500 |
| Max. power at rated rpm, kWm (BHP) | 76 (102) | 63 (85) |
| Cylinder head material | Cast Iron | |
| Crankshaft material | Forged Steel | |
| Valve material: | | |
| Intake | Chromium-Silicon Steel | |
| Exhaust | Stainless Steel | |
| Governor: type, make/model | Mechanical, Stanadyne/DM4 | |
| Frequency regulation, no-load to full-load | 3–5% | |
| Frequency regulation, steady state | ±0.33% (mech. governor) ±0.25% (elec. isoch. gov.) | |
| Frequency | Field-Convertible | |
| Air cleaner type, all models | Dry | |

## Exhaust

| Exhaust System | 60 Hz | 50 Hz |
|---|---|---|
| Exhaust flow at rated kW, $m^3$/min. (cfm) | 12.9 (455) | 10.8 (380) |
| Exhaust temperature at rated kW, dry exhaust, °C (°F) | 516 (960) | 541 (1005) |
| Maximum allowable back pressure, kPa (in. Hg) | 7.5 (2.2) | |
| Exhaust outlet size at engine hookup, mm (in.) | 101.6 (4) | |

## Engine Electrical

| Engine Electrical System | 60 Hz | 50 Hz |
|---|---|---|
| Battery charging alternator: | | |
| Ground (negative/positive) | Negative | |
| Volts (DC) | 12 | |
| Ampere rating | 65 | |
| Starter motor rated voltage (DC) | 12 | |
| Battery, recommended cold cranking amps (CCA): | | |
| Quantity, CCA rating | 1, 640 | |
| Battery voltage (DC) | 12 | |

## Fuel

| Fuel System | 60 Hz | 50 Hz |
|---|---|---|
| Fuel supply line, min. ID, mm (in.) | 8 (0.31) | |
| Fuel return line, min. ID, mm (in.) | 6 (0.25) | |
| Max. lift, engine-driven fuel pump, m (ft.) | 0.9 (3.0) | |
| Max. fuel flow, Lph (gph) | 112 (29.7) | 109 (28.7) |
| Fuel prime pump | Manual | |
| Fuel filter | 1, Final | |
| Recommended fuel | #2 Diesel | |

## Lubrication

| Lubricating System | 60 Hz | 50 Hz |
|---|---|---|
| Type | Full Pressure | |
| Oil pan capacity, L (qt.) | 12.2 (13) | |
| Oil pan capacity with filter, L (qt.) | 13.2 (14) | |
| Oil filter: quantity, type | 1, Cartridge | |
| Oil cooler | Water-Cooled | |

# Application Data

## Cooling (Standard Radiator)

| Cooling System | 60 Hz | 50 Hz |
|---|---|---|
| Ambient temperature, °C (°F) | 50 (122) | |
| Engine jacket water capacity, L (gal.) | 7.6 (2) | |
| Radiator system capacity, including engine, L (gal.) | 18 (4.8) | |
| Engine jacket water flow, Lpm (gpm) | 148 (39) | 121 (32) |
| Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.) | 38.5 (2160) | 30.9 (1760) |
| Water pump type | Centrifugal | |
| Fan diameter, including blades, mm (in.) | 483 (19) | |
| Fan, kWm (HP) | 3.6 (4.8) | 2.1 (2.8) |
| Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. $H_2O$) | 0.125 (0.5) | |

## Cooling (Optional Systems)

| Remote Radiator System * | 60 Hz | 50 Hz |
|---|---|---|
| Exhaust manifold type | Dry | |
| Connection sizes: | | |
| Water inlet, mm (in.) | 48 (1.88) ID Hose | |
| Water outlet, mm (in.) | 38 (1.50) ID Hose | |
| Static head allowable above engine, kPa (ft. $H_2O$) | 63 (21) | |

| City Water Cooling (CWC) System | 60 Hz | 50 Hz |
|---|---|---|
| Exhaust manifold type | Dry | |
| Connection sizes: | | |
| Water inlet, in. | 0.5 NPT | |
| Water outlet, in. | 0.5 NPT | |

* Contact your local distributor for cooling system options and specifications based on your specific application.

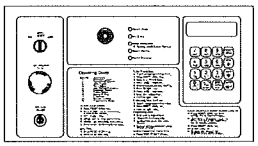
## Operation Requirements

| Air Requirements | 60 Hz | 50 Hz |
|---|---|---|
| Radiator-cooled cooling air, $m^3$/min. (scfm)† | 156 (5500) | 125 (4400) |
| Cooling air required for gen. set when equipped with CWC or remote radiator, based on 14°C (25°F) rise and ambient temp. of 29°C (85°F), $m^3$/min. (cfm) | 76 (2700) | 59 (2100) |
| Combustion air, $m^3$/min. (cfm) | 5.1 (180) | 3.8 (135) |
| Heat rejected to ambient air: | | |
| Engine, kW (Btu/min.) | 13.2 (750) | 9.5 (540) |
| Generator, kW (Btu/min.) | 7.6 (430) | 6.5 (370) |

† Air density = 1.20 kg/$m^3$ (0.075 lbm/$ft^3$)

| Fuel Consumption | 60 Hz | 50 Hz |
|---|---|---|
| Diesel, Lph (gph) at % load | Standby | Prime |
| 100% | 16.3 (4.3) | 11.7 (3.1) |
| 75% | 12.1 (3.2) | 9.8 (2.6) |
| 50% | 8.7 (2.3) | 7.2 (1.9) |
| 25% | 6.1 (1.6) | 4.5 (1.2) |

# Controllers



## Available Controllers

**Decision-Maker™ 340 Controller**
Audiovisual annunciation with NFPA 110 Level 1 capability.
Programmable microprocessor logic and digital display features.
12- or 24-volt engine electrical system capability.
Remote start, prime power, remote annunciation, and remote communication options.

**Decision-Maker™ 3+, 16-Light Controller**
Audiovisual annunciation with NFPA 110 Level 1 capability.
Microprocessor logic, AC meters, and engine gauge features.
12- or 24-volt engine electrical system capability.
Remote start, prime power, and remote annunciation options.

**Decision-Maker™ 3+, 7-Light Controller**
Audiovisual annunciation with NFPA 110 Level 2 capability.
Microprocessor logic, AC meters, and engine gauge features.
12- or 24-volt engine electrical system capability.
Remote start, prime power, and remote annunciation options.

**Decision-Maker™ 1 Controller**
Single-light annunciation and basic controls with NFPA capability.
Relay logic features included with three controller options: standard, standard with engine gauges, and expanded with AC meters and engine gauges.
12-volt engine electrical system capability only.
Remote or automatic start options.

**Manual Controller**
Single-light annunciation and basic control functions.
Relay logic with AC meters and engine gauge features.
Prime power and mobile application design.
12-volt engine electrical system capability only.

**Engine Gauge Box Controller for Paralleling Switchgear**
Generator set-to-switchgear interface for paralleling switchgear applications.
Engine gauges and emergency stop switch features.
12- or 24-volt engine electrical system capability.

Note: See the respective controller spec sheet for additional controller features and accessories.

# Standard Features and Accessories

## Additional Standard Features

- Battery Rack and Cables
- Integral Vibration Isolation
- Oil Drain Extension
- Operation and Installation Literature
- Permanent Magnet-Excited Generator (PMG)

## Accessories

**Enclosed Unit**

- ☐ Exhaust Silencer, Critical (kit: PA-352662)
- ☐ Exhaust Silencer, Industrial (kit: PA-324467)
- ☐ Silencer Mounting Kit for Housing
- ☐ Sound Shield Enclosure
- ☐ Tail Pipe and Rain Cap Kit
- ☐ Weather Housing

**Open Unit**

- ☐ Exhaust Silencer, Critical (kits: PA-324468, PA-352663)
- ☐ Exhaust Silencer, Industrial (kits: PA-324469, PA-324472)
- ☐ Flexible Exhaust Connector, Stainless Steel

**Cooling System**

- ☑ Block Heater
- ☐ City Water Cooling
- ☐ Radiator Duct Flange
- ☐ Remote Radiator Cooling

**Fuel System**

- ☐ Auxiliary Fuel Pump
- ☐ Day Tanks
- ☐ Flexible Fuel Lines
- ☐ Fuel Pressure Gauge
- ☑ Subbase Fuel Tanks

**Electrical System**

- ☐ Battery
- ☐ Battery Charger, Equalize/Float Type
- ☐ Battery Heater

**Engine and Generator**

- ☐ Air Cleaner, Heavy Duty
- ☐ Air Cleaner Restriction Indicator
- ☐ Bus Bar Kits
- ☐ CSA Certification
- ☐ Current Transformer Kit
- ☐ Electronic Isochronous Governor (±0.25% freq. reg. steady state)
- ☐ Generator Strip Heater
- ☐ Line Circuit Breaker (NEMA type 1 enclosure)
- ☐ Line Circuit Breaker with Shunt Trip (NEMA type 1 enclosure)
- ☐ NFPA 110 Literature
- ☐ Optional Generators
- ☐ Rated Power Factor Testing
- ☐ Rodent Guards
- ☐ Safeguard Breaker
- ☐ Skid End Caps
- ☐ Voltage Regulation, 1%
- ☐ Voltage Regulator Sensing, Three-Phase

**Paralleling System**

- ☐ Load-Sharing Module
- ☐ Reactive Droop Compensator
- ☐ Remote Speed Adjust Potentiometer/Electronic Governor
- ☐ Voltage Adjust Potentiometer
- ☐ Voltage Regulator Relocation Kit

**Maintenance**

- ☐ General Maintenance Literature Kit
- ☐ Maintenance Kit (includes standard air, oil, and fuel filters)
- ☐ Overhaul Literature Kit
- ☐ Production Literature Kit

**Controller (Decision-Maker™ 340 and Decision-Maker™ 3+)**

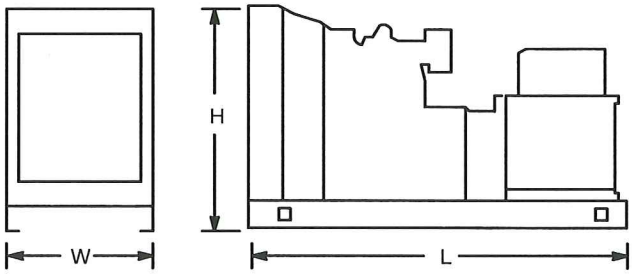
- ☐ Common Failure Relay Kit
- ☐ Communication Products and PC Software (Decision-Maker™ 340 controller only)
- ☐ Controller Cable, 12 m (40 ft.)
- ☐ Customer Connection Kit
- ☐ Dry Contact Kit (isolated alarm)
- ☐ Engine Prealarm Sender Kit
- ☐ Prime Power Switch
- ☐ Remote Annunciator Panel
- ☐ Remote Audiovisual Alarm Panel
- ☐ Remote Emergency Stop Kit
- ☐ Run Relay Kit

**Miscellaneous Accessories**

- ☐ _____
- ☐ _____
- ☐ _____

## Weights and Dimensions

| | |
|---|---|
| Overall Size, L x W x H, mm (in.): | 2083 x 737 x 1093 (82.00 x 29.00 x 43.03) |
| Weight (radiator model), wet, kg (lb.): | 823 (1815) |




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

**DISTRIBUTED BY:**

## Sound Enclosure and Subbase Fuel Tank Specifications (continued)

| Fuel Tank Capacity, L (gal.) | Est. Fuel Supply Hours at 60 Hz with Full Load, Nominal/Actual | Enclosure and Subbase Fuel Tank | | | | | Fuel Tank Height, mm (in.) | Sound Pressure Level at 60 Hz with Full Load, dB(A) § |
|---|---|---|---|---|---|---|---|---|
| | | Max. Dimensions, mm (in.) | | | Max. Weight, kg (lb.) * | | | |
| | | Length | Width ‡ | Height | With Steel Enclosure | With Aluminum Enclosure | | |
| **40REOZK with IBC Seismic Certification and State Code Fuel Tank †** | | | | | | | | |
| 541 (142) | 24/38 | 2896 (114.0) | 1070 (42.1) | 1787 (70.4) | 1525 (3362) | 1423 (3137) | 432 (17) | 64 |
| 898 (237) | 48/64 | | | 2015 (79.4) | 1658 (3656) | 1556 (3431) | 660 (26) | |
| 1057 (279) | 72/75 | | | 2137 (83.4) | 1717 (3787) | 1615 (3562) | 782 (30) | |
| 1520 (401) | 96/108 | | | 2269 (89.4) | 1836 (4049) | 1734 (3824) | 914 (36) | |
| **50REOZK** | | | | | | | | |
| No Tank | 0 | 2320 (91.3) | 1070 (42.1) | 1465 (57.7) | 1074 (2369) | 972 (2144) | 0 (0) | 64 |
| 505 (133) | 24/29 | | | 1838 (72.4) | 1354 (2987) | 1252 (2762) | 483 (19) | |
| 868 (229) | 48/50 | | | 2142 (84.4) | 1453 (3205) | 1351 (2980) | 787 (31) | |
| 1527 (403) | 72/88 | 2896 (114.0) | | 2269 (89.4) | 1596 (3521) | 1494 (3296) | 914 (36) | |
| **50REOZK with IBC Seismic Certification and State Code Fuel Tank †** | | | | | | | | |
| 541 (142) | 24/31 | 2896 (114.0) | 1070 (42.1) | 1787 (70.4) | 1540 (3396) | 1438 (3171) | 432 (17) | 64 |
| 898 (237) | 48/52 | | | 2015 (79.4) | 1673 (3690) | 1571 (3465) | 660 (26) | |
| 1520 (401) | 72/87 | | | 2269 (89.4) | 1851 (4083) | 1749 (3858) | 914 (36) | |
| 2028 (535) | 96/116 | 4020 (158.3) | | | 2052 (4525) | 1950 (4300) | | |
| **60REOZK** | | | | | | | | |
| No Tank | 0 | 2320 (91.3) | 1070 (42.1) | 1465 (57.7) | 1113 (2455) | 1011 (2230) | 0 (0) | 65 |
| 505 (133) | 24/25 | | | 1838 (72.4) | 1393 (3073) | 1291 (2848) | 483 (19) | |
| 1043 (275) | 48/51 | | | 2244 (88.4) | 1529 (3373) | 1427 (3148) | 889 (35) | |
| 1527 (403) | 72/75 | 2896 (114.0) | | 2269 (89.4) | 1635 (3607) | 1533 (3382) | 914 (36) | |
| **60REOZK with IBC Seismic Certification and State Code Fuel Tank †** | | | | | | | | |
| 541 (142) | 24/26 | 2896 (114.0) | 1070 (42.1) | 1787 (70.4) | 1579 (3482) | 1453 (3205) | 432 (17) | 65 |
| 1057 (279) | 48/52 | | | 2117 (83.4) | 1771 (3907) | 1669 (3682) | 762 (30) | |
| 1520 (401) | 72/74 | | | 2269 (89.4) | 1890 (4169) | 1788 (3944) | 914 (36) | |
| 2028 (535) | 96/99 | 4020 (158.3) | | | 2091 (4611) | 1989 (4386) | | |

**Note:** Data in table is for reference only, refer to the respective ADV drawings for details.

* Max. weight includes the generator set (wet) using the largest alternator option, enclosure with acoustic insulation added, silencer, and tank (no fuel).

† State code fuel tank specifications (height and weight) do not include I-beam option.

‡ Width dimension shown includes rubber door stops.

§ Log average sound pressure level of 8 measured positions around the perimeter of the unit at a distance of 7 m (23 ft). Refer to TIB-114 for details.

## Subbase Fuel Tank Specifications (No Enclosure)

| Fuel Tank Capacity, L (gal.) | Est. Fuel Supply Hours at 60 Hz with Full Load, Nominal/Actual | Subbase Fuel Tank * | | | |
|---|---|---|---|---|---|
| | | Max. Dimensions, mm (in.) | | | Max. Weight, kg (lb.) |
| | | Length | Width | Height | |
| **15REOZK** | | | | | |
| 301 (80) | 48/53 | 1935 (76.2) | 810 (31.9) | 432 (17) | 208 (459) |
| 465 (123) | 72/82 | | | 635 (25) | 266 (586) |
| **15REOZK with IBC Seismic Certification and State Code Fuel Tank †** | | | | | |
| 330 (87) | 48/58 | 2575 (101.4) | 810 (31.9) | 356 (14) | 347 (765) |
| 476 (126) | 72/84 | | | 483 (19) | 411 (906) |
| 638 (168) | 96/112 | | | 610 (24) | 479 (1055) |
| **20REOZK** | | | | | |
| 301 (80) | 24/38 | 1935 (76.2) | 810 (31.9) | 432 (17) | 208 (459) |
| 465 (123) | 48/58 | | | 635 (25) | 266 (586) |
| 622 (164) | 72/78 | | | 813 (32) | 315 (695) |
| **20REOZK with IBC Seismic Certification and State Code Fuel Tank †** | | | | | |
| 330 (87) | 24/41 | 2575 (101.4) | 810 (31.9) | 356 (14) | 347 (765) |
| 476 (126) | 48/60 | | | 483 (19) | 411 (906) |
| 638 (168) | 72/80 | | | 610 (24) | 479 (1055) |
| 838 (221) | 96/105 | | | 762 (30) | 560 (1235) |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EMERGENCY STOP ONLY
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KOHLER POWER SYSTEM
FAST RESPONSE