

## INDUSTRIAL DIESEL ENGINE

### KUBOTA 03-M SERIES (3-cylinder)

# D1503-M-E3B



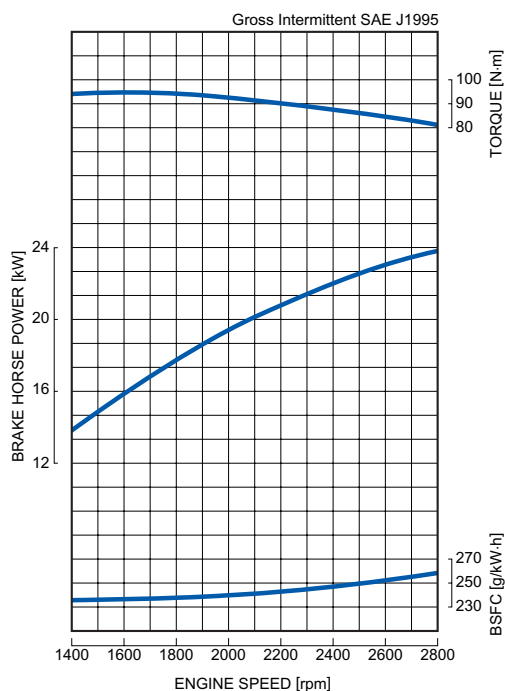
## RATED POWER

**23.8kW@2800rpm**



Photograph may show non-standard equipment.

## PERFORMANCE CURVE



## FEATURES and BENEFITS

### Emissions

- The D1503-M engine complies with EPA Interim Tier 4 emissions regulations that are effective through the end of 2012. This engine also complies with EU Stage IIIA requirements that are effective through 2012 and beyond in the European market.

### Durable Power

- The Kubota 03-M Series is well recognized for industrial applications. With numerous features such as a built-in solenoid, low fan position, and single side serviceability, this engine offers excellent performance characteristics and application flexibility.
- The cooling water passages between the cylinder bores, using Kubota's original casting technology as a countermeasure against heat load of high power density, provides both superior endurance and reliable engine characteristics.
- The D1503-M engine offers a seamless transition from Tier 2 to Interim Tier 4 by maintaining the same footprint and hard mounting points with only slight performance changes from the Tier 2 engine.

### Clean and Quiet Power

- Kubota's original E-TVCS (Three Vortex Combustion System) has been improved. The airflow, combustion chamber and piston recess were optimized to provide a 50% lower particulate matter (PM) level, the same stringent level as above the 37kW class (EPA Interim Tier 4 Option 1).
- The half-float valve cover and MoS<sub>2</sub> coated pistons lower noise levels by 1.0-2.0 dBA over conventional diesel engines and provide reduced transmitted vibration from the valve area for better noise characteristics.

### Option

- The Kubota 03-M Series engines offer side power take-off(PTO), in response to the trend of increasing hydraulic control devices in industrial machines. It is possible to install a hydraulic pump at two side PTO locations.

### GENERAL SPECIFICATION

|                               |           |                                       |
|-------------------------------|-----------|---------------------------------------|
| Model                         |           | <b>D1503-M-E3B</b>                    |
| Emission Regulation           |           | Interim Tier 4 / Stage III A          |
| Type                          |           | Vertical 4-cycle Liquid Cooled Diesel |
| Number of Cylinders           |           | 3                                     |
| Bore                          | mm (in)   | 83 (3.27)                             |
| Stroke                        | mm (in)   | 92.4 (3.64)                           |
| Displacement                  | L (cu.in) | 1.499 (91.47)                         |
| Combustion System             |           | IDI                                   |
| Intake System                 |           | Naturally Aspirated                   |
| Maximum Speed                 | rpm       | 2800                                  |
| Output:<br>Gross Intermittent | kW        | 23.8                                  |
|                               | hp        | 31.9                                  |
|                               | ps        | 32.4                                  |
| Direction of Rotation         |           | Counterclockwise Viewed on Flywheel   |
| Oil Pan Capacity              | L (gal)   | 5.6 (1.48) [US] / 7.0 (1.85) [EU]     |
| Starter Capacity              | V-kW      | 12-1.4                                |
| Alternator Capacity           | V-A       | 12-40                                 |
| Length                        | mm (in)   | 572.1 (22.5)                          |
| Width                         | mm (in)   | 499.0 (19.6)                          |
| Height (1)                    | mm (in)   | 643.0 (25.3) [US] / 679.5 (26.8) [EU] |
| Height (2)                    | mm (in)   | 229.3 (9.0) [US] / 266.0 (10.5) [EU]  |
| Dry Weight                    | kg (lb)   | 148.0 (326.3)                         |

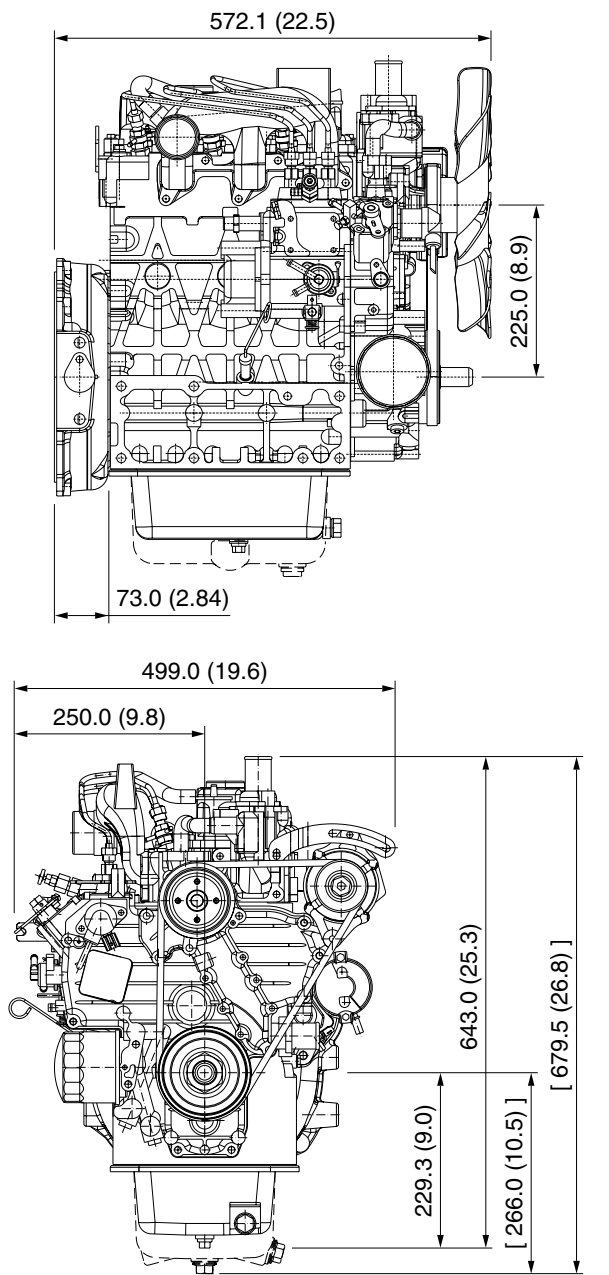
\*Specification is subject to change without notice.

\*Output: Gross Intermittent SAE J1995

\*Dry weight is according to Kubota's standard specification.

When specification varies, the weight will vary accordingly.

### DIMENSIONS



\*[ ] EU spec



### KUBOTA Corporation

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## INDUSTRIAL DIESEL ENGINE

### KUBOTA 03-M SERIES (3-cylinder)

# D1703-M-E3B



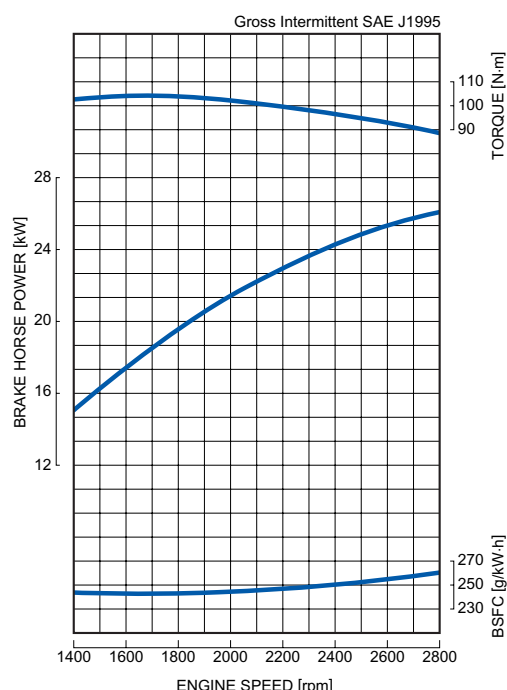
## RATED POWER

**26.1kW@2800rpm**



Photograph may show non-standard equipment.

## PERFORMANCE CURVE



## FEATURES and BENEFITS

### Emissions

- The D1703-M engine complies with EPA Interim Tier 4 emissions regulations that are effective through the end of 2012. This engine also complies with EU Stage IIIA requirements that are effective through 2012 and beyond in the European market.

### Durable Power

- The Kubota 03-M Series is well recognized for industrial applications. With numerous features such as a built-in solenoid, low fan position, and single side serviceability, this engine offers excellent performance characteristics and application flexibility.
- The cooling water passages between the cylinder bores, using Kubota's original casting technology as a countermeasure against heat load of high power density, provides both superior endurance and reliable engine characteristics.
- The D1703-M engine offers a seamless transition from Tier 2 to Interim Tier 4 by maintaining the same footprint and hard mounting points with only slight performance changes from the Tier 2 engine.

### Clean and Quiet Power

- Kubota's original E-TVCS (Three Vortex Combustion System) has been improved. The airflow, combustion chamber and piston recess were optimized to provide a 50% lower particulate matter (PM) level, the same stringent level as above the 37kW class (EPA Interim Tier 4 Option 1).
- The half-float valve cover and MoS<sub>2</sub> coated pistons lower noise levels by 1.0-2.0 dBA over conventional diesel engines and provide reduced transmitted vibration from the valve area for better noise characteristics.

### Option

- The Kubota 03-M Series engines offer side power take-off(PTO), in response to the trend of increasing hydraulic control devices in industrial machines. It is possible to install a hydraulic pump at two side PTO locations.

### GENERAL SPECIFICATION

|                               |           |                                       |
|-------------------------------|-----------|---------------------------------------|
| Model                         |           | <b>D1703-M-E3B</b>                    |
| Emission Regulation           |           | Interim Tier 4 / Stage III A          |
| Type                          |           | Vertical 4-cycle Liquid Cooled Diesel |
| Number of Cylinders           |           | 3                                     |
| Bore                          | mm (in)   | 87 (3.43)                             |
| Stroke                        | mm (in)   | 92.4 (3.64)                           |
| Displacement                  | L (cu.in) | 1.647 (100.5)                         |
| Combustion System             |           | IDI                                   |
| Intake System                 |           | Naturally Aspirated                   |
| Maximum Speed                 | rpm       | 2800                                  |
| Output:<br>Gross Intermittent | kW        | 26.1                                  |
|                               | hp        | 35.0                                  |
|                               | ps        | 35.5                                  |
| Direction of Rotation         |           | Counterclockwise Viewed on Flywheel   |
| Oil Pan Capacity              | L (gal)   | 5.6 (1.48) [US] / 7.0 (1.85) [EU]     |
| Starter Capacity              | V-kW      | 12-1.4                                |
| Alternator Capacity           | V-A       | 12-40                                 |
| Length                        | mm (in)   | 572.1 (22.5)                          |
| Width                         | mm (in)   | 499.0 (19.6)                          |
| Height (1)                    | mm (in)   | 643.0 (25.3) [US] / 679.5 (26.8) [EU] |
| Height (2)                    | mm (in)   | 229.3 (9.0) [US] / 266.0 (10.5) [EU]  |
| Dry Weight                    | kg (lb)   | 148.0 (326.3)                         |

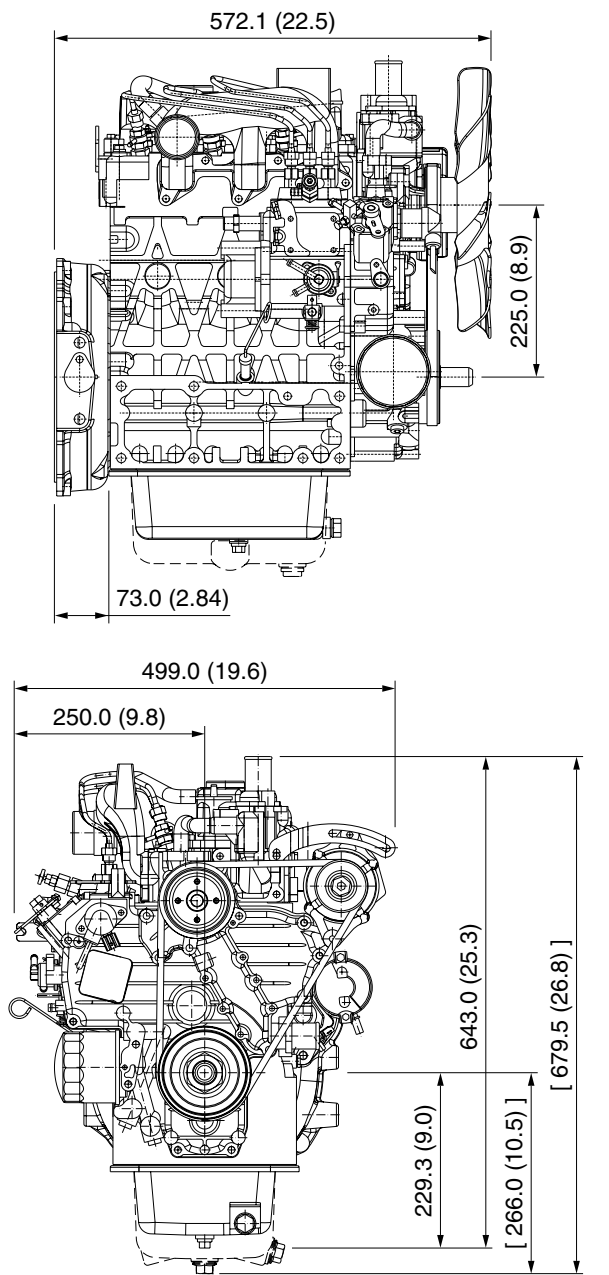
\*Specification is subject to change without notice.

\*Output: Gross Intermittent SAE J1995

\*Dry weight is according to Kubota's standard specification.

When specification varies, the weight will vary accordingly.

### DIMENSIONS



\*[ ] EU spec



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## INDUSTRIAL DIESEL ENGINE

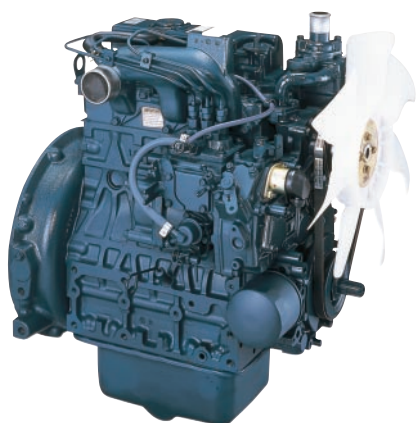
### KUBOTA 03-M SERIES (3-cylinder)

# D1803-M-E3B



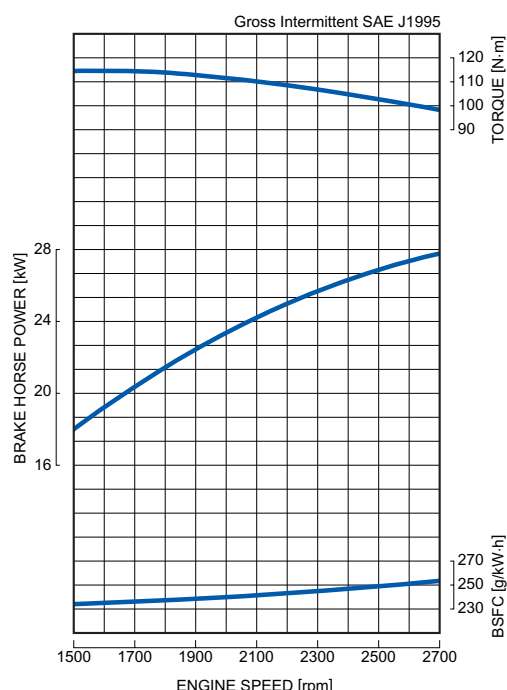
## RATED POWER

**27.9kW@2700rpm**



Photograph may show non-standard equipment.

## PERFORMANCE CURVE



## FEATURES and BENEFITS

### Emissions

- The D1803-M engine complies with EPA Interim Tier 4 emissions regulations that are effective through the end of 2012. This engine also complies with EU Stage IIIA requirements that are effective through 2012 and beyond in the European market.

### Durable Power

- The Kubota 03-M Series is well recognized for industrial applications. With numerous features such as a built-in solenoid, low fan position, and single side serviceability, this engine offers excellent performance characteristics and application flexibility.
- The cooling water passages between the cylinder bores, using Kubota's original casting technology as a countermeasure against heat load of high power density, provides both superior endurance and reliable engine characteristics.
- The D1803-M engine offers a seamless transition from Tier 2 to Interim Tier 4 by maintaining the same footprint and hard mounting points with only slight performance changes from the Tier 2 engine.

### Clean and Quiet Power

- Kubota's original E-TVCS (Three Vortex Combustion System) has been improved. The airflow, combustion chamber and piston recess were optimized to provide a 50% lower particulate matter (PM) level, the same stringent level as above the 37kW class (EPA Interim Tier 4 Option 1).
- The half-float valve cover and MoS<sub>2</sub> coated pistons lower noise levels by 1.0-2.0 dBA over conventional diesel engines and provide reduced transmitted vibration from the valve area for better noise characteristics.

### Option

- The Kubota 03-M Series engines offer side power take-off(PTO), in response to the trend of increasing hydraulic control devices in industrial machines. It is possible to install a hydraulic pump at two side PTO locations.
- A Direct Injection engine is also available.

### GENERAL SPECIFICATION

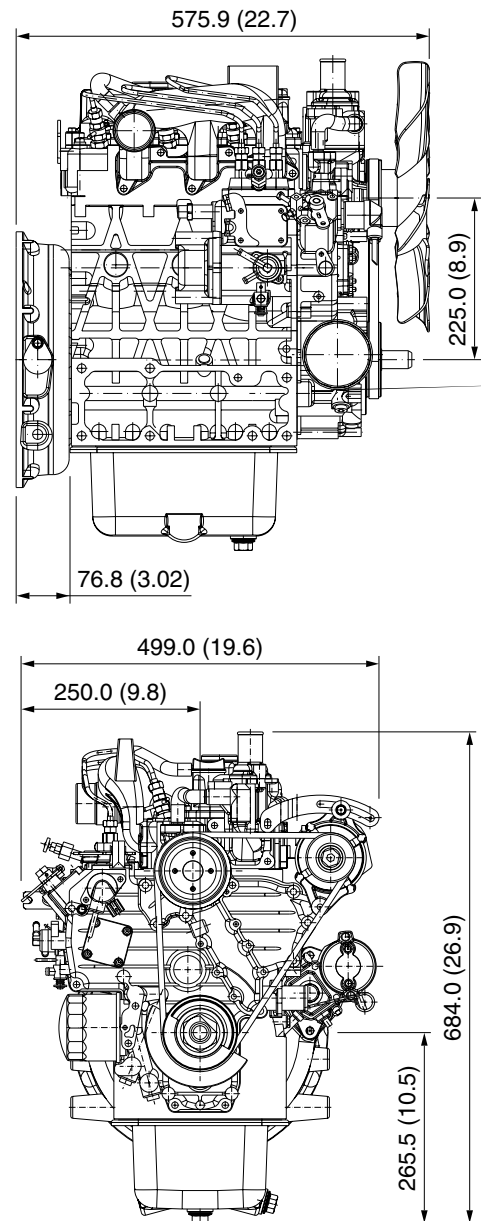
|                               |           |                                       |
|-------------------------------|-----------|---------------------------------------|
| Model                         |           | <b>D1803-M-E3B</b>                    |
| Emission Regulation           |           | Interim Tier 4 / Stage III A          |
| Type                          |           | Vertical 4-cycle Liquid Cooled Diesel |
| Number of Cylinders           |           | 3                                     |
| Bore                          | mm (in)   | 87 (3.43)                             |
| Stroke                        | mm (in)   | 102.4 (4.03)                          |
| Displacement                  | L (cu.in) | 1.826 (111.4)                         |
| Combustion System             |           | IDI                                   |
| Intake System                 |           | Naturally Aspirated                   |
| Maximum Speed                 | rpm       | 2700                                  |
| Output:<br>Gross Intermittent | kW        | 27.9                                  |
|                               | hp        | 37.4                                  |
|                               | ps        | 37.9                                  |
| Direction of Rotation         |           | Counterclockwise Viewed on Flywheel   |
| Oil Pan Capacity              | L (gal)   | 7.0 (1.85)                            |
| Starter Capacity              | V-kW      | 12-2.0                                |
| Alternator Capacity           | V-A       | 12-40                                 |
| Length                        | mm (in)   | 575.9 (22.7)                          |
| Width                         | mm (in)   | 499.0 (19.6)                          |
| Height (1)                    | mm (in)   | 684.0 (26.9)                          |
| Height (2)                    | mm (in)   | 265.5 (10.5)                          |
| Dry Weight                    | kg (lb)   | 151.0 (332.9)                         |

\*Specification is subject to change without notice.

\*Output: Gross Intermittent SAE J1995

\*Dry weight is according to Kubota's standard specification.  
When specification varies, the weight will vary accordingly.

### DIMENSIONS



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## INDUSTRIAL DIESEL ENGINE

### KUBOTA 03-M SERIES (4-cylinder)

# V2203-M-E3B



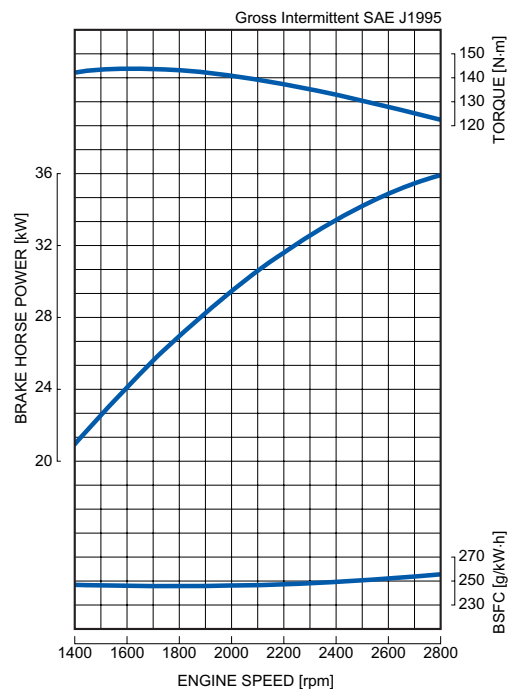
## RATED POWER

**35.9kW@2800rpm**



Photograph may show non-standard equipment.

## PERFORMANCE CURVE



## FEATURES and BENEFITS

### Emissions

- The V2203-M engine complies with EPA Interim Tier 4 emissions regulations that are effective through the end of 2012. This engine also complies with EU Stage IIIA requirements that are effective through 2012 and beyond in the European market.

### Durable Power

- The Kubota 03-M Series is well recognized for industrial applications. With numerous features such as a built-in solenoid, low fan position, and single side serviceability, this engine offers excellent performance characteristics and application flexibility.
- The cooling water passages between the cylinder bores, using Kubota's original casting technology as a countermeasure against heat load of high power density, provides both superior endurance and reliable engine characteristics.
- The V2203-M engine offers a seamless transition from Tier 2 to Interim Tier 4 by maintaining the same footprint and hard mounting points with only slight performance changes from the Tier 2 engine.

### Clean and Quiet Power

- Kubota's original E-TVCS (Three Vortex Combustion System) has been improved. The airflow, combustion chamber and piston recess were optimized to provide a 50% lower particulate matter (PM) level, the same stringent level as above the 37kW class (EPA Interim Tier 4 Option 1).
- The half-float valve cover and MoS<sub>2</sub> coated pistons lower noise levels by 1.0-2.0 dBA over conventional diesel engines and provide reduced transmitted vibration from the valve area for better noise characteristics.

### Option

- The Kubota 03-M Series engines offer side power take-off(PTO), in response to the trend of increasing hydraulic control devices in industrial machines. It is possible to install a hydraulic pump at two side PTO locations.

### GENERAL SPECIFICATION

|                               |           |                                       |
|-------------------------------|-----------|---------------------------------------|
| Model                         |           | <b>V2203-M-E3B</b>                    |
| Emission Regulation           |           | Interim Tier 4 / Stage III A          |
| Type                          |           | Vertical 4-cycle Liquid Cooled Diesel |
| Number of Cylinders           |           | 4                                     |
| Bore                          | mm (in)   | 87 (3.43)                             |
| Stroke                        | mm (in)   | 92.4 (3.64)                           |
| Displacement                  | L (cu.in) | 2.197 (134.1)                         |
| Combustion System             |           | IDI                                   |
| Intake System                 |           | Naturally Aspirated                   |
| Maximum Speed                 | rpm       | 2800                                  |
| Output:<br>Gross Intermittent | kW        | 35.9                                  |
|                               | hp        | 48.1                                  |
|                               | ps        | 48.8                                  |
| Direction of Rotation         |           | Counterclockwise Viewed on Flywheel   |
| Oil Pan Capacity              | L (gal)   | 7.6 (2.01) [US] / 9.5 (2.51) [EU]     |
| Starter Capacity              | V-kW      | 12-1.4                                |
| Alternator Capacity           | V-A       | 12-40                                 |
| Length                        | mm (in)   | 667.1 (26.3)                          |
| Width                         | mm (in)   | 499.0 (19.6)                          |
| Height (1)                    | mm (in)   | 633.5 (24.9) [US] / 679.0 (26.7) [EU] |
| Height (2)                    | mm (in)   | 220.0 (8.7) [US] / 265.5 (10.5) [EU]  |
| Dry Weight                    | kg (lb)   | 180.0 (396.9)                         |

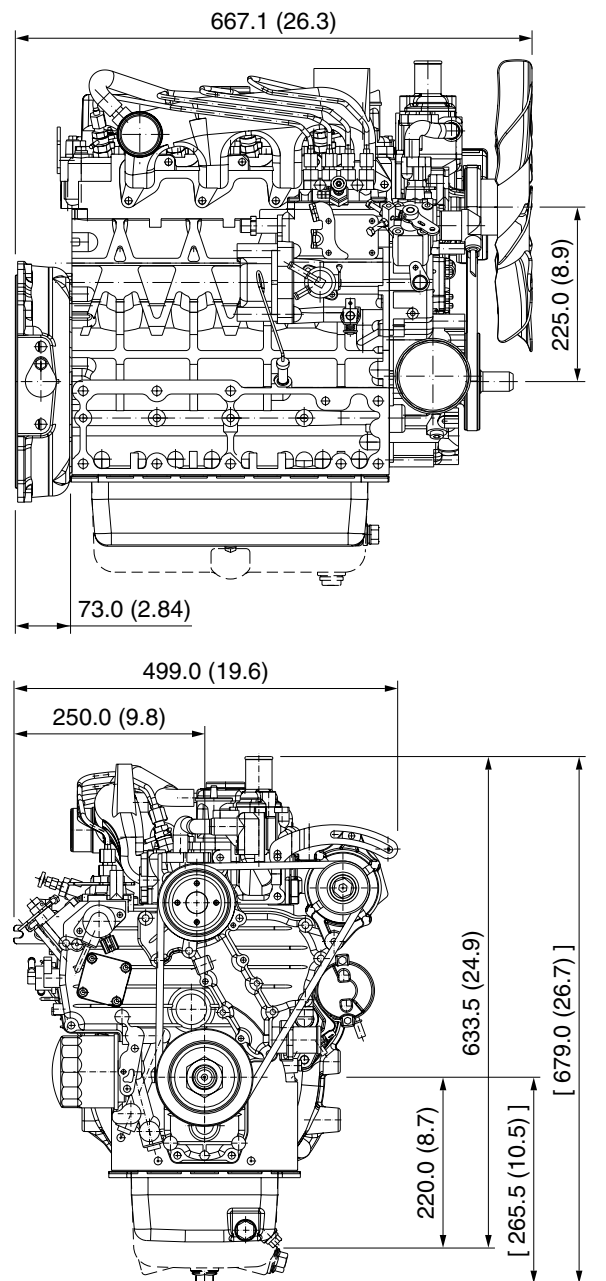
\*Specification is subject to change without notice.

\*Output: Gross Intermittent SAE J1995

\*Dry weight is according to Kubota's standard specification.

When specification varies, the weight will vary accordingly.

### DIMENSIONS



\*[ ] EU spec



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## INDUSTRIAL DIESEL ENGINE

### KUBOTA 03-M SERIES (4-cylinder)

# V2403-M-E3B



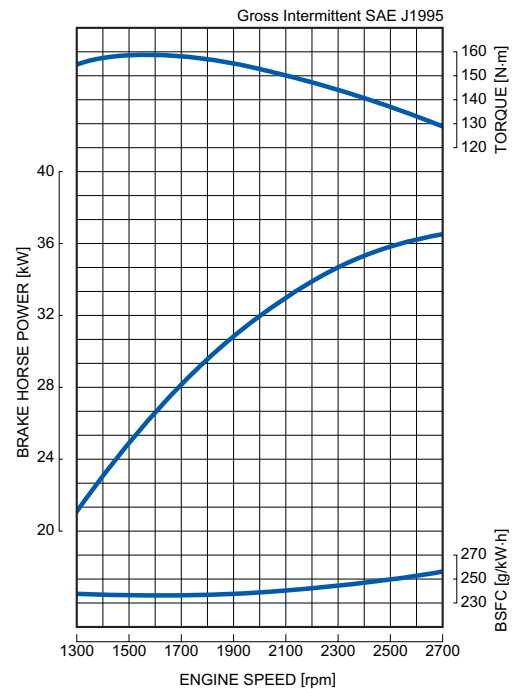
## RATED POWER

**36.5kW@2700rpm**



Photograph may show non-standard equipment.

## PERFORMANCE CURVE



## FEATURES and BENEFITS

### Emissions

- The V2403-M naturally aspirated engine complies with EPA Interim Tier 4 emissions regulations that are effective through the end of 2012. This engine also complies with EU Stage IIIA requirements that are effective through 2012 and beyond in the European market.

### Durable Power

- The Kubota 03-M Series is well recognized for industrial applications. With numerous features such as a built-in solenoid, low fan position, and single side serviceability, this engine offers excellent performance characteristics and application flexibility.
- The cooling water passages between the cylinder bores, using Kubota's original casting technology as a countermeasure against heat load of high power density, provides both superior endurance and reliable engine characteristics.
- The V2403-M NA engine offers a seamless transition from Tier 2 to Interim Tier 4 by maintaining the same footprint and hard mounting points with only slight performance changes from the Tier 2 engine.

### Clean and Quiet Power

- Kubota's original E-TVCS (Three Vortex Combustion System) has been improved. The airflow, combustion chamber and piston recess were optimized to provide a 50% lower particulate matter (PM) level, the same stringent level as above the 37kW class (EPA Interim Tier 4 Option 1).
- The half-float valve cover and MoS<sub>2</sub> coated pistons lower noise levels by 1.0-2.0 dBA over conventional diesel engines and provide reduced transmitted vibration from the valve area for better noise characteristics.

### Option

- The Kubota 03-M Series engines offer side power take-off (PTO), in response to the trend of increasing hydraulic control devices in industrial machines. It is possible to install a hydraulic pump at two side PTO locations.
- A Direct Injection engine is also available.

## GENERAL SPECIFICATION

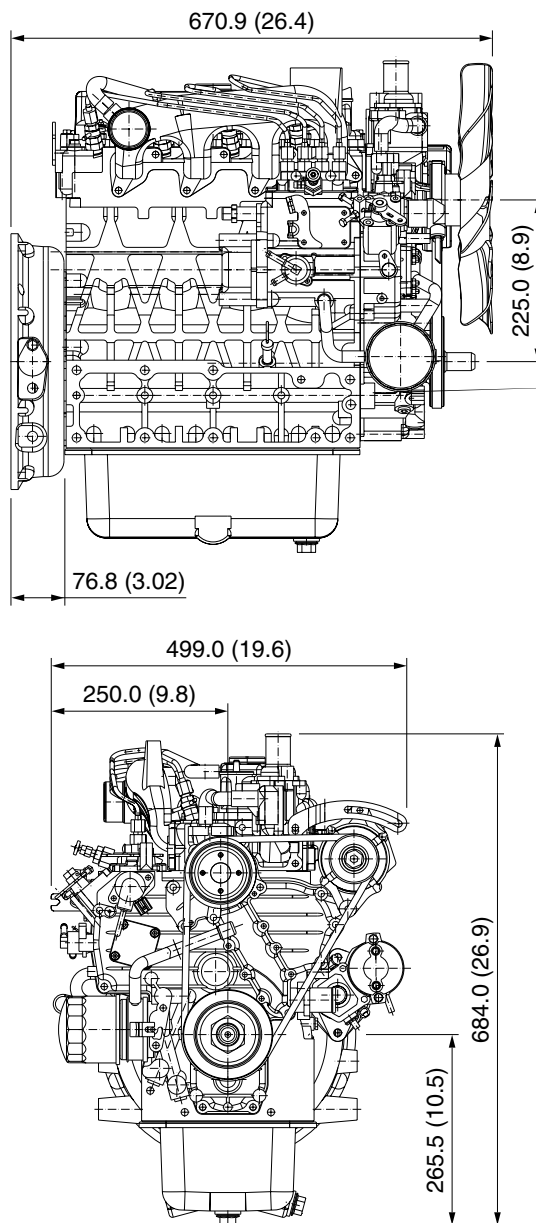
|                               |           |                                       |
|-------------------------------|-----------|---------------------------------------|
| Model                         |           | <b>V2403-M-E3B</b>                    |
| Emission Regulation           |           | Interim Tier 4 / Stage III A          |
| Type                          |           | Vertical 4-cycle Liquid Cooled Diesel |
| Number of Cylinders           |           | 4                                     |
| Bore                          | mm (in)   | 87 (3.43)                             |
| Stroke                        | mm (in)   | 102.4 (4.03)                          |
| Displacement                  | L (cu.in) | 2.434 (148.5)                         |
| Combustion System             |           | IDI                                   |
| Intake System                 |           | Naturally Aspirated                   |
| Maximum Speed                 | rpm       | 2700                                  |
| Output:<br>Gross Intermittent | kW        | 36.5                                  |
|                               | hp        | 48.9                                  |
|                               | ps        | 49.6                                  |
| Direction of Rotation         |           | Counterclockwise Viewed on Flywheel   |
| Oil Pan Capacity              | L (gal)   | 9.5 (2.51)                            |
| Starter Capacity              | V-kW      | 12-2.0                                |
| Alternator Capacity           | V-A       | 12-40                                 |
| Length                        | mm (in)   | 670.9 (26.4)                          |
| Width                         | mm (in)   | 499.0 (19.6)                          |
| Height (1)                    | mm (in)   | 684.0 (26.9)                          |
| Height (2)                    | mm (in)   | 265.5 (10.5)                          |
| Dry Weight                    | kg (lb)   | 184.0 (405.7)                         |

\*Specification is subject to change without notice.

\*Output: Gross Intermittent SAE J1995

\*Dry weight is according to Kubota's standard specification.  
When specification varies, the weight will vary accordingly.

## DIMENSIONS



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## INDUSTRIAL DIESEL ENGINE

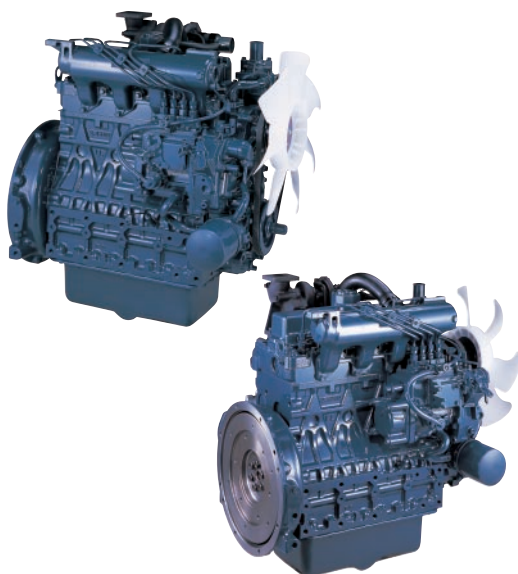
### KUBOTA 03-M SERIES (4-cylinder)

# V2403-M-T-E3B



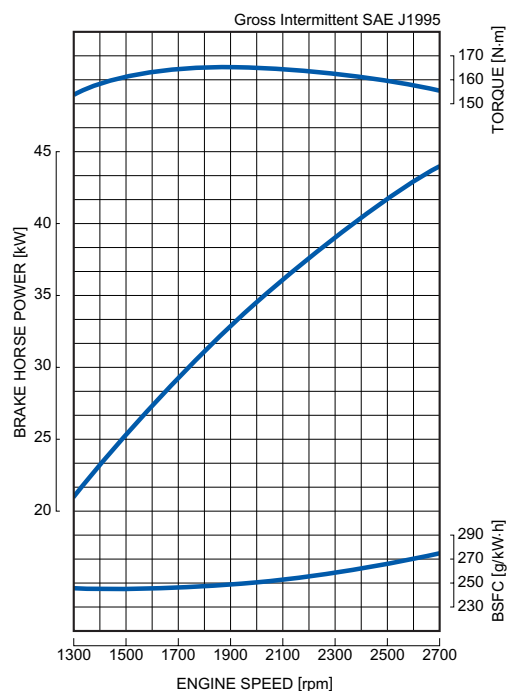
## RATED POWER

**44.0kW@2700rpm**



Photographs may show non-standard equipment.

## PERFORMANCE CURVE



## FEATURES and BENEFITS

### Emissions

- The V2403-M Turbocharged engine complies with EPA Interim Tier 4 (Option1) emissions regulations, which are the most stringent in this class. This engine also complies with EU Stage IIIA requirements. It offers the benefit of one year longer validity than Tier 3. Therefore, this engine is good through the end of 2012 in both the North American and European markets, which would save engineering resources for the future emission regulations.
- Utilizing the low NOx characteristics of IDI engines, the V2403-M-T engine complies with the latest emissions regulations without any devices.

### Durable Power

- The Kubota V2403-M-T engine is a new high power density engine that delivers the highest output within the Kubota 03-M Series.
- By expanding the bore and stroke, Kubota increased engine displacement. The cooling water passages between the cylinder bores, using Kubota's original casting technology as a countermeasure against high heat load provides both superior endurance and reliable engine characteristics.
- With numerous features such as a built-in solenoid, low fan position, and single side serviceability, this engine offers excellent performance characteristics and application flexibility.

### Clean and Quiet Power

- Kubota's original E-TVCS (Three Vortex Combustion System) has been improved. The airflow, combustion chamber and piston recess were optimized to provide a 25% lower particulate matter (PM) level, resulting in a better condition compared to engines that only meet EPA Tier 3 regulations in this class.
- The half-float valve cover and MoS<sub>2</sub> coated pistons, which reduce noise levels and provide reduced transmitted vibration from the valve area for better noise characteristics are also adopted.

### Option

- The Kubota 03-M Series engines offer side power take-off (PTO), in response to the trend of increasing hydraulic control devices in industrial machines. It is possible to install a hydraulic pump at two side PTO locations.

## GENERAL SPECIFICATION

|                               |           |                                       |
|-------------------------------|-----------|---------------------------------------|
| Model                         |           | <b>V2403-M-T-E3B</b>                  |
| Emission Regulation           |           | Interim Tier 4 / Stage III A          |
| Type                          |           | Vertical 4-cycle Liquid Cooled Diesel |
| Number of Cylinders           |           | 4                                     |
| Bore                          | mm (in)   | 87 (3.43)                             |
| Stroke                        | mm (in)   | 102.4 (4.03)                          |
| Displacement                  | L (cu.in) | 2.434 (148.5)                         |
| Combustion System             |           | IDI                                   |
| Intake System                 |           | Turbocharged                          |
| Maximum Speed                 | rpm       | 2700                                  |
| Output:<br>Gross Intermittent | kW        | 44.0                                  |
|                               | hp        | 59.0                                  |
|                               | ps        | 59.8                                  |
| Direction of Rotation         |           | Counterclockwise Viewed on Flywheel   |
| Oil Pan Capacity              | L (gal)   | 9.5 (2.51)                            |
| Starter Capacity              | V-kW      | 12-2.0                                |
| Alternator Capacity           | V-A       | 12-40                                 |
| Length                        | mm (in)   | 670.9 (26.4)                          |
| Width                         | mm (in)   | 499.0 (19.6)                          |
| Height (1)                    | mm (in)   | 724.6 (28.5)                          |
| Height (2)                    | mm (in)   | 265.5 (10.5)                          |
| Dry Weight                    | kg (lb)   | 188.0 (414.5)                         |

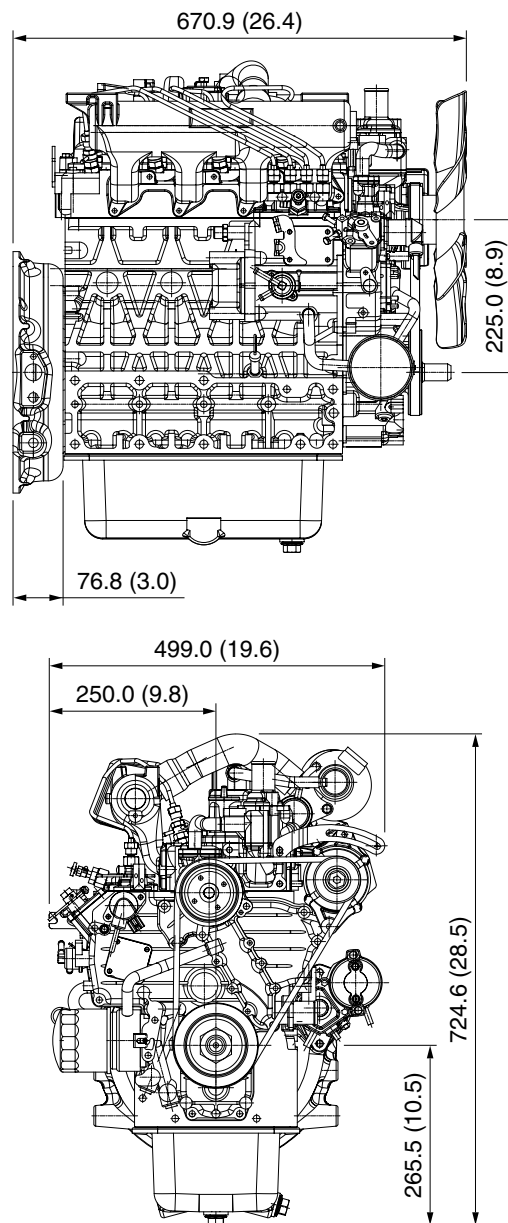
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\*Output: Gross Intermittent SAE J1995

\*Dry weight is according to Kubota's standard specification.

When specification varies, the weight will vary accordingly.

## DIMENSIONS



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