

Yanmar 4tnv88 diesel engine specs

yanmar 4tnv88 diesel engine specs The Yanmar 4TNV88 diesel engine stands out as a reliable, efficient, and powerful power unit widely used across various industrial, agricultural, and construction applications. Known for its durability and fuel efficiency, the 4TNV88 is a part of Yanmar's renowned line of compact and high-performance diesel engines. This article provides a comprehensive overview of the Yanmar 4TNV88 diesel engine specs, detailing its technical features, performance parameters, and key characteristics to help users, technicians, and enthusiasts understand what makes this engine a preferred choice in its class.

Overview of the Yanmar 4TNV88 Diesel Engine

The Yanmar 4TNV88 is a four-cylinder, water-cooled diesel engine designed for versatility and dependable operation. It is part of Yanmar's 2.8-liter engine family, known for excellent fuel efficiency, low emissions, and robust construction. The 4TNV88 is often used in compact construction equipment, agricultural machinery, generators, and other industrial applications. Key features include: - Compact design for easy installation - Low noise and vibration levels - High torque output at low RPM - Excellent fuel economy - Long service intervals and ease of maintenance Understanding its specifications helps in selecting the right application, performing maintenance, and ensuring optimal performance.

Technical Specifications of the Yanmar 4TNV88

Engine Type and Configuration

- Type: 4-cylinder, 4-stroke diesel engine - Configuration: Vertical inline - Cooling System: Water-cooled - Fuel System: Direct injection

Displacement and Bore/Stroke

- Displacement: 2.8 liters (2783 cc) - Bore: 88 mm - Stroke: 100 mm

Power and Torque Output

- Rated Power: Typically ranges from 24.4 kW to 30.9 kW (33 hp to 42 hp) depending on specific model and application - Peak Power: Up to 33.5 kW (45 hp) - Rated RPM: Usually around 2200 to 2500 RPM - Maximum Torque: Approximately 141 Nm (104 lb-ft) at 1800-2000 RPM

Performance and Efficiency

- Fuel Consumption: Approximately 210 g/kWh under standard load - Specific Fuel Consumption: Around 0.25 kg/kWh - Idle Speed: ~800 RPM

Lubrication and Cooling

- Lubrication System: Wet sump - Cooling System: Thermostat-controlled water cooling with radiator compatibility - Oil Capacity: About 4-5 liters

Dimensions and Weight

- Length: Varies by model, typically around 700-800 mm - Width: Approximately 400-500 mm - Height: Around 600-700 mm - Dry Weight: Approximately 250-300 kg, depending on configuration

Additional Technical Features

Emission Standards

- Complies with Tier 4 Final (EPA) and Stage V (EU) emission regulations in modern versions - Incorporates turbocharging and intercooling for improved emissions and efficiency

Starting System

- Type: Electric starter motor - Battery Requirement: 12V system, typically 1.2 kW starter motor

Accessories and Compatibility

- Compatible with various transmission and drive systems - Designed for easy integration with hydraulic systems, PTO, and other attachments

Performance Characteristics and Benefits

Reliability and Durability

Yanmar engines are renowned for their longevity, and the 4TNV88 is no exception. Its robust construction ensures minimal downtime and extended service life, even under demanding conditions.

Fuel Efficiency

Thanks to advanced fuel injection technology and optimized combustion chambers, the 4TNV88 offers excellent fuel economy, reducing operational costs over its lifespan.

Ease of Maintenance

Design features like accessible filters, straightforward oil changes, and modular components make maintenance simple, saving time and labor costs.

Low Emissions

Modern versions of the engine are designed to meet strict environmental standards, making them suitable for applications requiring low emissions and sustainable operation.

Applications of the Yanmar 4TNV88 Engine

The versatility of the Yanmar 4TNV88 engine makes it suitable for a wide range of applications: 1. Construction Equipment: Mini excavators, skid steer loaders, compactors 2. Agricultural Machinery: Tractors, harvesters, irrigation pumps 3. Generators: Standby and prime power generators 4. Industrial Equipment: Compressors,

pumps, and material handling machines 5. Marine Applications: Small boats and watercraft (with appropriate modifications)

Maintenance Tips for Optimal Performance

- Regularly check and replace engine oil and filters - Keep radiator and cooling system clean to prevent overheating - Monitor fuel quality and replace filters as needed - Inspect belts, hoses, and electrical connections periodically - Follow manufacturer guidelines for service intervals and parts replacement

Conclusion

The Yanmar 4TNV88 diesel engine offers a compelling combination of power, efficiency, and reliability. Its technical specifications reflect a well-engineered power unit capable of handling demanding industrial and agricultural tasks with ease. Whether used in compact construction equipment, agricultural machinery, or power generation, the 4TNV88 stands out as a versatile and durable engine choice. Understanding its detailed specs helps operators and technicians optimize its performance, ensure longevity, and meet operational requirements effectively. For anyone considering a dependable diesel engine for their equipment, the Yanmar 4TNV88 is a proven option that balances performance with cost-efficiency, backed by Yanmar's reputation for quality and innovation.

Yanmar 4TNV88 Diesel Engine Specs: An In-Depth Analysis of Power, Performance, and Applications

The Yanmar 4TNV88 diesel engine specs represent a robust and reliable power unit renowned within the agricultural, industrial, and marine sectors. As a component of Yanmar's extensive lineup of compact and efficient engines, the 4TNV88 stands out for its durability, fuel efficiency, and versatile performance. Whether you're a machinery operator, mechanic, or enthusiast seeking comprehensive technical insights, understanding the nuances of the 4TNV88's specifications is crucial for optimal application and maintenance.

Introduction to the Yanmar 4TNV88 Diesel Engine

Yanmar, a leader in diesel engine technology since 1912, has built a reputation on producing engines that combine innovation, reliability, and efficiency. The 4TNV88 model is a four-cylinder, naturally aspirated diesel engine designed primarily for small to medium-sized applications, including compact construction equipment, agricultural machinery, and marine vessels.

This engine exemplifies Yanmar's commitment to clean combustion, fuel economy, and long service life. Its specifications are tailored to meet the demands of various industries, ensuring it can deliver consistent performance under diverse operational conditions.

Overview of Key Features

Before diving into the detailed specs, it's helpful to understand the core features that define the Yanmar 4TNV88:

1. Configuration: 4-cylinder, inline
2. Aspiration: Naturally aspirated
3. Fuel System: Direct injection
4. Cooling System: Water-cooled
5. Lubrication: Forced lubrication with oil filtration
6. Engine Management: Mechanical or electronic options depending on application

These core features support the engine's reputation for simplicity, durability, and efficiency.

Detailed Technical Specifications

1. Engine Displacement and Mechanical Data

The engine displacement is a foundational spec that impacts power output, fuel consumption, and overall efficiency.

1. Displacement: 1.353 liters (or approximately 82.5 cubic inches)
2. Number of cylinders: 4
3. Cylinder bore: 80 mm (3.15 inches)
4. Piston stroke: 88 mm (3.46 inches)
5. Bore x stroke ratio: Slightly under-square design (bore < stroke), favoring torque

1. Power Output and Performance Metrics

Understanding the engine's power ratings is essential for matching it to your machinery or project.

1. Maximum Power: Approximately 25.8 HP (19.2 kW) at 2,600 RPM
2. Maximum Torque: Around 71.7 Nm (52.9 lb-ft) at 1,600 RPM
3. Rated RPM: 2,600 RPM (for maximum power), with a typical operating range between 1,200 – 2,600 RPM

Note: Power figures may vary slightly depending on regional emissions standards and specific engine configurations.

1. Fuel System and Consumption

Efficiency and fuel economy are key benefits of the Yanmar 4TNV88.

1. Fuel System: Direct injection ensures precise fuel delivery, improving combustion efficiency
2. Fuel Consumption: Approximate fuel consumption is 0.24 – 0.28 liters per horsepower per hour, depending on load and operating conditions
3. Fuel Type: Diesel with a cetane rating of at least 45

1. Cooling and Lubrication

Proper cooling and lubrication are essential for engine longevity.

1. Cooling System: Water-cooled with a thermostatic control for optimal operating temperature
2. Cooling Capacity: Adequate to maintain temperatures within recommended limits during continuous operation
3. Lubrication System: Forced splash or pressure lubrication with a high-quality oil filter

1. Dimensions and Weight

Size and weight impact installation and operational flexibility.

1. Engine Length: Approximately 720 mm (28.3 inches)
2. Width: About 520 mm (20.5 inches)
3. Height: Around 700 mm (27.6 inches)
4. Dry Weight: Approximately 250 kg (551 lbs)

Additional Technical Details

1. Emissions and Compliance

Yanmar engines are designed with emissions standards in mind.

1. Emissions Standard: Complies with Tier 4 Final / Stage IIIB depending on model and region
2. Exhaust After-treatment: Some configurations include DOC (Diesel Oxidation Catalyst) or DOC + DPF (Diesel Particulate Filter)

1. Mounting and Compatibility

1. Mounting Points: Designed for standard industrial mounting brackets
2. Flywheel and PTO: Compatible with common attachments and drive systems

Applications of the Yanmar 4TNV88

Given its specifications, the Yanmar 4TNV88 is suited to a range of applications:

1. Agricultural Machinery

1. Compact tractors
2. Harvesters
3. Irrigation pumps

1. Construction Equipment

1. Mini excavators
2. Compact loaders
3. Concrete mixers

1. Marine Applications

1. Small boats
2. Marine generators

1. Industrial Use

1. Compressors
2. Generators
3. Small-scale processing equipment

Maintenance and Performance Tips

To maximize the lifespan and efficiency of the Yanmar 4TNV88, consider the following:

1. Regular Oil Changes: Every 100-200 hours or as recommended
2. Coolant Checks: Ensure proper water levels and radiator cleanliness
3. Fuel Filter Replacement: Every 250 hours or as needed to prevent clogging
4. Air Filter Maintenance: Keeps combustion efficient
5. Periodic Inspection: Check for leaks, corrosion, or worn parts

Adhering to the manufacturer's service schedule is crucial for consistent performance.

Conclusion

The Yanmar 4TNV88 diesel engine specs highlight a compact yet powerful engine designed to meet diverse operational needs with reliability and efficiency. Its balanced combination of power output, fuel economy, and durability makes it a preferred choice across multiple industries. Whether powering agricultural equipment, construction machinery, or marine vessels, the 4TNV88 exemplifies Yanmar's commitment to quality engineering.

Understanding its detailed specifications allows users and technicians to optimize performance, plan maintenance, and ensure compatibility with various applications. As with any engine, proper care and adherence to recommended operational parameters will extend its service life and ensure consistent, reliable operation for years to come.

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Organization is another understated advantage of digital libraries. Files can be categorized, labeled, backed up, and retrieved instantly. Readers can build long-term collections without physical clutter. When information is organized effectively, it becomes easier to revisit ideas and build upon previous learning.

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Digital literacy naturally develops through regular interaction with digital resources. Learning how to evaluate sources, manage information, and use reading tools responsibly is now a vital skill. Engaging with *Yanmar 4tnv88 Diesel Engine Specs* in digital form helps users build these competencies through practical experience.

Perhaps the most meaningful change lies in how digital access influences attitudes toward learning. When information is easy to obtain, curiosity feels encouraged rather than inconvenient. Readers are more willing to explore new topics, revisit familiar ideas, and continue learning over time.

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In conclusion, the ability to download *Yanmar 4tnv88 Diesel Engine Specs* reflects a broader transformation in how knowledge is shared and experienced. Digital access offers convenience, affordability, functionality, and ethical distribution, making learning more inclusive and practical. When used responsibly, *Yanmar 4tnv88 Diesel Engine Specs* becomes more than a digital book—it becomes a trusted resource for reflection, growth, and continuous intellectual development in an ever-changing world.

Questions & Answers About yanmar 4tnv88 diesel engine specs

No	Question	Answer
1	What is the horsepower rating of the Yanmar 4TNV88 diesel engine?	The Yanmar 4TNV88 diesel engine typically produces around 49.3 horsepower (36.8 kW) at 2600 RPM.
2	What are the main specifications of the Yanmar 4TNV88 engine in terms of displacement and bore x stroke?	The Yanmar 4TNV88 has a displacement of approximately 2.17 liters, with a bore and stroke of 86 mm x 88 mm.
3	What is the fuel consumption rate of the Yanmar 4TNV88 diesel engine?	Under standard operating conditions, the Yanmar 4TNV88 consumes approximately 2.2 liters of diesel per hour at rated power.
4	What are the cooling and lubrication system specifications for the Yanmar 4TNV88?	The engine uses a water-cooled system with a forced circulation pump, and it features a splash and pressure lubrication system to ensure optimal performance.
5	Is the Yanmar 4TNV88 engine suitable for agricultural and industrial applications?	Yes, the Yanmar 4TNV88 is widely used in agricultural machinery, generators, and industrial equipment due to its reliable performance and compact design.
6	What are the dimensions and weight of the Yanmar 4TNV88 engine?	The engine measures approximately 1,200 mm in length, 700 mm in width, and 1,000 mm in height, with a weight of around 250 kg, making it suitable for various equipment installations.

Yanmar 4tnv88, diesel engine specifications, 4tnv88 engine power, 4tnv88 engine torque, Yanmar 4tnv88 dimensions, 4tnv88 fuel consumption, Yanmar 4tnv88 maintenance, 4tnv88 engine cooling system, Yanmar 4tnv88 emissions, 4tnv88 engine applications

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While security is important, excessive restrictions can negatively impact user experience. Overly strict settings

may prevent legitimate users from reading, printing, or annotating documents. When distributing Yanmar 4tnv88 Diesel Engine Specs, it is important to balance protection with accessibility based on the document's purpose and audience.

For public educational or informational materials, lighter security settings may be more appropriate. For confidential or proprietary content, stronger restrictions help reduce misuse and unauthorized distribution.

Protecting sensitive information in PDFs

PDFs often contain personal, financial, or confidential information. Before sharing, it is essential to review content carefully. Removing hidden metadata, comments, or revision history helps prevent accidental disclosure. When handling Yanmar 4tnv88 Diesel Engine Specs, ensuring that only intended information is included improves data security.

Redaction tools provide a secure way to permanently remove sensitive text or images. Proper redaction ensures that removed information cannot be recovered, unlike simple visual masking techniques.

Digital signatures and document authenticity

Digital signatures help verify document authenticity and integrity. A signed PDF confirms that the content has not been altered since signing and identifies the signer. Applying digital signatures to Yanmar 4tnv88 Diesel Engine Specs adds a layer of trust, especially for official or legal documents.

Digital signatures are widely used in contracts, certifications, and formal documentation. They help recipients verify that the document is legitimate and originates from a trusted source.

Copyright basics for PDF documents

Copyright law protects original works, including text, images, and designs found in PDF documents. When creating or distributing Yanmar 4tnv88 Diesel Engine Specs, it is important to understand who owns the rights and how the content may be used. Copyright applies automatically upon creation, even if no explicit notice is included.

Using copyrighted material without permission may result in legal consequences. This includes copying, redistributing, or modifying content beyond permitted use. Understanding copyright boundaries helps prevent unintentional violations.

Licensing and permitted use

Licenses define how content may be used, shared, or modified. Some PDFs are distributed under specific licenses that allow reuse with conditions, such as attribution or non-commercial use. Reviewing license terms associated with Yanmar 4tnv88 Diesel Engine Specs ensures compliance with usage rights.

Creative Commons licenses, for example, provide flexible usage options while protecting creator rights. Knowing which license applies helps users understand what actions are allowed or restricted.

Fair use and educational exceptions

In some jurisdictions, fair use or educational exceptions allow limited use of copyrighted material without permission. These exceptions typically apply to purposes such as teaching, research, criticism, or commentary. However, fair use is context-dependent and not guaranteed.

When using Yanmar 4tnv88 Diesel Engine Specs in educational settings, it is important to ensure that usage falls within legal guidelines. Providing proper attribution and limiting distribution reduces legal risk.

Attribution and proper citation

Providing clear attribution respects intellectual property and supports ethical content use. When referencing or incorporating external material into Yanmar 4tnv88 Diesel Engine Specs, proper citation acknowledges original creators and sources.

Clear attribution also improves credibility and transparency, especially in academic and professional documents. Including references and source information supports responsible information sharing.

Avoiding plagiarism in PDF content

Plagiarism occurs when content is presented as original without proper acknowledgment. This applies to text, images, charts, and other media. Ensuring originality or proper citation in Yanmar 4tnv88 Diesel Engine Specs protects creators and maintains trust with readers.

Using plagiarism detection tools before publishing helps identify potential issues and ensures that content meets ethical and legal standards.

Distribution rights and sharing limitations

Not all PDFs are intended for unrestricted distribution. Some documents are licensed for personal use only, while others permit sharing under specific conditions. Before redistributing Yanmar 4tnv88 Diesel Engine Specs, reviewing distribution rights prevents violations and misuse.

Clear usage statements included within PDFs help inform users about permitted actions, reducing confusion and unintentional infringement.

DRM and copy protection considerations

Digital Rights Management (DRM) technologies can be applied to PDFs to control access and usage. DRM may restrict copying, printing, or sharing. While DRM provides strong protection, it can also limit compatibility and user experience.

Deciding whether to use DRM for Yanmar 4tnv88 Diesel Engine Specs depends on content value, audience expectations, and distribution goals. In some cases, lighter protection combined with clear licensing is more effective.

Legal compliance across regions

Copyright and data protection laws vary by country. What is legal in one region may not be permitted in another. When distributing Yanmar 4tnv88 Diesel Engine Specs internationally, understanding regional regulations helps ensure compliance and reduces legal risk.

For organizations, consulting legal guidance ensures that PDF distribution practices align with applicable laws and standards across jurisdictions.

Privacy and data protection laws

PDFs containing personal data must comply with privacy regulations such as data protection and confidentiality requirements. Collecting, storing, or sharing personal information within Yanmar 4tnv88 Diesel Engine Specs should follow legal guidelines to protect individual privacy.

Limiting data collection, anonymizing information, and securing access are key practices for maintaining compliance and trust.

Handling user-generated content in PDFs

Some PDFs include user-generated content such as comments, forms, or submissions. Managing this data responsibly is essential. Clear policies regarding storage, access, and retention protect both users and content owners when handling Yanmar 4tnv88 Diesel Engine Specs.

Removing unnecessary personal data before archiving or sharing PDFs reduces risk and supports compliance with privacy standards.

Document retention and deletion policies

Legal and organizational requirements may dictate how long documents should be retained. Establishing retention policies ensures that PDFs are stored appropriately and deleted when no longer needed. Applying these practices to Yanmar 4tnv88 Diesel Engine Specs supports compliance and reduces data exposure.

Secure deletion methods ensure that sensitive documents cannot be recovered after disposal, further protecting information security.

Educating users about legal and security responsibilities

Users often play a role in maintaining document security and legal compliance. Providing guidance on proper usage, sharing, and storage of Yanmar 4tnv88 Diesel Engine Specs helps reduce misuse and accidental violations.

Clear instructions and usage notices included within PDFs support responsible behavior and reinforce expectations for readers and recipients.

Risk management and proactive protection

Proactively addressing security and legal risks reduces potential issues before they arise. Regular reviews of security settings, licensing terms, and distribution methods help ensure that Yanmar 4tnv88 Diesel Engine Specs remains compliant and protected.

Staying informed about legal updates and security best practices allows content creators and distributors to adapt to changing requirements effectively.

Final thoughts on PDF security and legal use

Security, copyright, and legal considerations are essential aspects of responsible PDF usage. By understanding protection features, respecting intellectual property, and complying with legal standards, users can safely create and distribute Yanmar 4tnv88 Diesel Engine Specs. Thoughtful practices ensure that PDFs remain valuable, trustworthy, and legally sound resources in an increasingly digital world.