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› Goudergo 186FA 10HP 4-Stroke Diesel Engine User Manual

Goudergo BI-MLLCR-144-186FA

Goudergo 186FA 10HP 4-Stroke Diesel Engine User Manual

Model: BI-MLLCR-144-186FA

1. PRODUCT OVERVIEW

This manual provides essential information for the safe and efficient operation and maintenance of your Goudergo 186FA 10HP 4-Stroke Diesel Engine. This powerful 418CC, 6300W air-cooled single-cylinder diesel motor is designed for various applications, including micro-tillers, agricultural machinery, and other small engineering equipment.

The engine features a robust design, efficient power delivery, and a forced air-cooling system for extended operational life. Please read this manual thoroughly before operating the engine.

Wide Application



Figure 1: General view of the Goudergo 186FA 10HP 4-Stroke Diesel Engine.

2. SAFETY INSTRUCTIONS

Always prioritize safety when operating and maintaining the engine. Failure to follow these instructions can result in serious injury or equipment damage.

- **Read the Manual:** Understand all operating and maintenance procedures before use.
- **Ventilation:** Operate the engine in a well-ventilated area to prevent carbon monoxide poisoning.
- **Fuel Safety:** Diesel fuel is flammable. Handle with care, avoid spills, and do not refuel while the engine is running or hot. Store fuel in approved containers.
- **Hot Surfaces:** The engine and exhaust system become very hot during operation. Avoid contact to prevent burns.
- **Moving Parts:** Keep hands, feet, and clothing away from moving parts to prevent entanglement.
- **Personal Protective Equipment (PPE):** Wear appropriate PPE, including safety glasses, gloves, and hearing protection.
- **Children and Pets:** Keep children and pets away from the engine during operation.

3. SETUP AND INSTALLATION

3.1 Unpacking and Inspection

Carefully remove the engine from its packaging. Inspect for any signs of damage during transit. Ensure all components listed in the packing list are present. If any damage or missing parts are found, contact your dealer immediately.

3.2 Mounting the Engine

Mount the engine securely to a stable, level surface using appropriate bolts and hardware. Ensure the mounting surface can support the engine's weight and vibration during operation. Refer to the bolt pattern specifications in Section 6 for proper alignment.

3.3 Adding Engine Oil

The engine is shipped without oil. Before starting, fill the crankcase with the recommended diesel engine oil (e.g., SAE 10W-30 or 15W-40, depending on ambient temperature) to the upper mark on the dipstick. Do not overfill.

1. Place the engine on a level surface.
2. Remove the oil filler cap/dipstick.
3. Slowly add oil until it reaches the upper level mark on the dipstick.
4. Reinstall the oil filler cap/dipstick securely.

3.4 Fueling the Engine

Use clean, fresh diesel fuel. The fuel tank capacity is approximately 1.45 gallons (5.5 liters).

1. Ensure the engine is off and cool.
2. Open the fuel tank cap.
3. Fill the tank with diesel fuel, leaving a small air gap at the top to allow for expansion.
4. Securely close the fuel tank cap.

4. OPERATING INSTRUCTIONS

4.1 Pre-Operation Checks

- Check engine oil level.
- Check fuel level.
- Inspect air filter for cleanliness.
- Ensure all connections and fasteners are tight.

4.2 Starting the Engine (Recoil Start)

The engine utilizes a manual recoil start system.

1. Ensure the fuel valve is in the 'ON' position.
2. Move the throttle lever to the 'START' or 'CHOKE' position (if applicable for cold starts).
3. Pull the recoil starter handle slowly until resistance is felt, then pull firmly and quickly.
4. Allow the rope to retract smoothly. Repeat until the engine starts.
5. Once started, gradually move the throttle lever to the desired operating speed.

Easy to Use

Throttle Cable Mounting Bracket Enables Remote Speed Control



Figure 2: Illustration of the recoil manual start and ergonomic control knob for speed adjustment.

4.3 Stopping the Engine

1. Move the throttle lever to the 'IDLE' position.
2. Move the engine switch to the 'OFF' position.
3. Close the fuel valve.

5. MAINTENANCE

Regular maintenance is crucial for the longevity and optimal performance of your diesel engine.

5.1 Maintenance Schedule

Item	Every 8 Hours / Daily	Every 50 Hours / Monthly	Every 100 Hours / 3 Months	Every 300 Hours / Annually
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Item	Every 8 Hours / Daily	Every 50 Hours / Monthly	Every 100 Hours / 3 Months	Every 300 Hours / Annually
Check Engine Oil Level	✓			
Clean Air Filter	✓			
Change Engine Oil		✓		
Check Fuel Filter		✓		
Inspect Fuel Lines			✓	
Clean Fuel Tank				✓
Inspect Valve Clearance				✓

5.2 Air Filter Maintenance

A clean air filter is essential for engine performance and longevity. Clean or replace the air filter regularly, especially in dusty conditions.

1. Remove the air filter cover.
2. Remove the foam and paper filter elements.
3. Clean the foam element with warm, soapy water, rinse, and allow to dry completely. Lightly oil the foam element with engine oil and squeeze out excess.
4. Clean the paper element by tapping it gently or using compressed air (from the inside out). Do not wash. Replace if heavily soiled or damaged.
5. Reassemble the air filter.

Good Heat Dissipation

Forced Air-cooling System Better Cooling Effect



Figure 3: View of the engine showing the air filter housing (left) and exhaust (right).

5.3 Oil Change Procedure

Change the engine oil after the first 20 hours of operation, then every 50 hours or monthly, whichever comes first.

1. Run the engine for a few minutes to warm the oil, then stop it.
2. Place a suitable container under the oil drain plug.
3. Remove the oil drain plug and the oil filler cap/dipstick to allow the oil to drain completely.
4. Reinstall the oil drain plug securely.
5. Fill with new, recommended engine oil to the upper mark on the dipstick (refer to Section 3.3).
6. Dispose of used oil responsibly.

6. PRODUCT SPECIFICATIONS

Detailed technical specifications for the Goudergo 186FA Diesel Engine.

Product Parameter



Figure 4: Product parameter diagram including dimensions and key specifications.

Specification	Value
Model	186FA
Displacement	418cc
Power Output	6.3 kW (10 HP)
Rated Speed	3600 rpm
Engine Type	4-Stroke, Single Cylinder, Air-Cooled Diesel
Bore x Stroke	86 x 72 mm (3.39 x 2.83 inches)
Compression Ratio	19:1
Crankshaft Orientation	Horizontal
Shaft Diameter	25 mm (0.98 inches)
Shaft Length	72.2 mm (2.84 inches)
Fuel Tank Capacity	1.45 Gallons (approx. 5.5 Liters)
Lubricating Oil Volume	1.65 Liters (0.44 Gallons)
Fuel Consumption Rate	$\leq 280\text{g/Kw.h}$
Lubrication Method	Pressure and Splash Compound Method
Product Dimensions (L x W x H)	16.93 x 16.14 x 19.29 inches
Item Weight	92.3 pounds

Specification	Value
Material	Iron, Die-casting Aluminum, Aluminum

7. TROUBLESHOOTING

This section provides solutions to common operational issues. For problems not listed here, contact customer support.

7.1 Engine Will Not Start

- **No Fuel:** Check fuel level and ensure the fuel valve is open.
- **Incorrect Choke/Throttle Position:** Adjust throttle lever to 'START' or 'CHOKE' for cold starts.
- **Low Oil Level:** The engine may have a low oil shutdown sensor. Check and add oil if necessary.
- **Clogged Fuel Filter:** Inspect and clean or replace the fuel filter.
- **Air in Fuel System:** Bleed the fuel system if air is suspected.

7.2 Loss of Power / Engine Runs Poorly

- **Dirty Air Filter:** Clean or replace the air filter.
- **Stale or Contaminated Fuel:** Drain old fuel and refill with fresh diesel.
- **Low Oil Level:** Check oil level and add if low.
- **Overheating:** Ensure cooling fins are clean and air circulation is not obstructed.

8. OFFICIAL PRODUCT VIDEO

Your browser does not support the video tag.

Video 1: Diesel Engine Showcase. This video provides a visual overview of the Goudergo 186FA Diesel Engine, highlighting its design and features.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or to order replacement parts, please contact the seller or manufacturer directly. Keep your purchase receipt and product model number (BI-MLLCR-144-186FA) readily available when contacting support.

Manufacturer: TTOCTE