

# **Mud Buddy**

## **2004**

# **HyperDrive**

# **Owner's Manual**

**Thank you for purchasing the most advanced  
mud motor in the world.**

**Assembly - Read the instructions inside before  
installing your motor. Check the crate and engine for  
damage. Call Mud Buddy and the shipping company  
immediately if you find any damage or missing items.**

**Notice: Engine is shipped without oil. Fill before starting.  
Check the oil with engine in level position. Use a good grade of  
SAE 10W-30 oil. You may also use a synthetic blend oil.**

### **Engines**

**Vanguard 29 and 31- takes up to 2 qt. (check after adding 1.5 qt.)  
18-29 h.p. Kawi - takes up to 1.4 qt. (check after adding 1 qt.)**

### **Kawasaki Notice**

**Your engine is equipped with a mercury safety switch which prevents the engine from being started unless the propeller is raised and out of the water.**

**Kawasaki 29 EFI Notice: Fuel injection system. When new or when in storage for an extended period, bleed the fuel line of air. Remove the fuel line above the fuel filter, turn the key on and pump out 1/4 cup of fuel into a suitable container. Reassemble. The fuel filter may have a little air inside, this is okay. If you run out of fuel the above procedure must be repeated.**

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engine service, or need frame repair, please contact:

Also, you can go to the customer page at [www.mudbuddy.com](http://www.mudbuddy.com) and access the engine service center locator. Your user name is outdoor, and your password is fun, all in lower case.

**Mud Buddy Manufacturing**  
 7956 S. 1530 W.  
 West Jordan, Utah 84088  
[www.mudbuddy.com](http://www.mudbuddy.com)  
[info@mudbuddy.com](mailto:info@mudbuddy.com)  
 1-801-352-8011

## Safety

- Read these safety precautions before operating your Mud Buddy.
- Always attach the safety lanyard to yourself while operating the Mud Buddy. Unclip the safety lanyard from the switch or depress the red button each time you run the engine to ensure it is working properly. The engine should stop immediately when the red button is depressed or the safety clip is removed from the switch.
- Start the engine with the propeller clear of the water. You must tie down the handle if you intend to run the engine without holding the control handle. Do not leave a running engine unattended.
- The Mud Buddy can be operated from the siting position. If you stand, use a stand-up bar or some other steady-hold to maintain your balance.
- Always wear a Coast Guard approved floatation device.
- Keep body parts and clothing clear of all moving engine components, the drive shaft, engine front and propeller.
- Do not operate your Mud Buddy while others are standing nearby in the water.
- Use extreme caution while operating your Mud Buddy, particularly when it is out of the water and on the boat or on a storage stand. Never clean the engine or frame while the engine is running.
- The engine and muffler can become extremely hot and cause severe burns.
- Do not operate the engine in an enclosed area. Exhaust gases can cause severe injury and death.

## Assembly

Your engine is shipped without oil. See this owner's manual cover for oil type and amount.

Each Mud Buddy is inspected and tested before shipping. If you encounter any physical damage to the crate, or engine assembly, notify the shipper immediately.

- Remove the sides of the crate to facilitate lifting the engine assembly.
- Mounting requires at least two people or an engine hoist. If you use a hoist, the engine balance point is located directly over the engine drive shaft--place a lift strap between the aluminum outdrive, next to the engine.
- Locate and mark the center of your transom.

## Warranty

**Two Years: (Engine manufacturer provides a 2 year warranty on all engines.)**

***Mud Buddy warrants that the drive is free from defects in material and workmanship, assuming normal use, for a period of two years from the date of purchase. Warranty covers parts and labor the first year, and parts during the second year. Warranty does not cover propeller and belt wear. Warranty does not cover lack of lubrication, abuse or mistreatment.***

**Two Years:**

***Warrants that the frame is free from defects in material and workmanship, assuming normal use, for a period of two years from the date of purchase.***

***If a defect occurs during these periods, contact your nearest dealer or Mud Buddy with a dated proof of purchase.***

***Except for the express warranty of the Mud Buddy set forth above, Mud Buddy grants no other warranties, express or implied, by statute or otherwise, regarding the Mud Buddy backwater motor, its fitness for any other purpose, its quality, its merchantability, or otherwise. The liability of Mud Buddy under the warranty set forth above shall be limited to the amount paid by the customer for the product, less sales tax. In no event shall Mud Buddy Manufacturing be liable for any special, consequential, or other damages for breach of warranty.***

**Thank you for purchasing a Mud Buddy product.**

This owner's manual contains the necessary information you will need to unpack, install, operate and maintain your Mud Buddy backwater motor. Safety is key to operating any motorized equipment. **Read the warnings in this owner's manual, the caution labels on the engine, and the caution labels on the frame before running your Mud Buddy.**

The Mud Buddy is designed for use in shallow water conditions, and with simple care, it should last you many enjoyable years. Engine service centers are located in every major city. If you have difficulty getting

- The handle will be mounted to the side of the engine. Loosen the bolt and swing the handle towards the front. Be careful with the wiring and avoid hitting the handle control switches. Attach the handle with 3 each, 3/8" X 1" bolts. A washer must be installed on the inside of the handle mount. The handle rotates in the slots. Tighten the nuts enough for good mounting, but not so tight that the handle does not tilt up and down.

- Loosen the clamp mounts as wide as possible. If the clamp cup retaining clips come off, you will need to hold the cups in position when you tighten the clamps later.

- Lift the engine in place. Keep fingers clear of all pinch points. Tighten the clamps by hand, do not use a wrench.

- Connect the cables to a battery that has at least a 250 cranking amp capacity. A garden tractor or marine starting battery is best. Red to positive (+), and black to negative (-). Negative cable also attaches to engine bolt.

- Two bolt mounting holes are provided on the clamp mount. They are used to deter theft and to provide additional mounting strength.

- Engines are shipped without oil. *The engine must be level before checking the oil level.* Use a good grade of 10W-30. Do not overfill. If your engine has a remote gas tank, connect the hose. Fill the tank with unleaded fuel with an 87 or higher octane rating.

### **Trailer Bracket**

**You must attach the provided trailer bracket and transom-saver bar to the engine before trailering. Use the two bungees provided to hold the engine from swaying left and right. The tube should be cut to length so that the engine is tilted up and all the way forward and against the mount. Drill and attach the transom saver travel clips. See the photo on page 5.**

### **Operation/Break-in**

- **Prepare the engine for starting:** *Note: Observe break-in precautions. Do not over-rev the engine during the first couple hours. Do not break-in the engine on the trailer. The drive bearings and seals should be run in the water for the first couple hours. However, you can start the engine and let it warm up a few minutes out of the water during the break-in period.*

- **Starting the engine:** *Read the safety precautions in the front of this owner's manual before starting. Attach the safety lanyard to yourself.*

- First, pull out the choke. (The 29 Kawi is fuel injected and has no choke) Ensure everyone is clear of the engine and propeller. **And, ensure the prop is out of the water and engine is in the level position. Do not leave a running engine unattended.**

- **On the water:** This is where your fun begins. The Mud Buddy is designed to run in almost any water condition, from open water, rocky rivers, to thick vegetation and mud. **We want you to enjoy yourself, but ask that you be safe, courteous to others and environmentally sensitive.**

- **Set throttle to idle. Attach the safety lanyard to yourself before starting. Start the engine with the propeller out of the water.**

**Caution: never place the propeller in the water at high engine speeds, particularly when the drive shaft is off to the side of the boat. This is true of any outboard motor. The boat can lurch forward, or spin and expel the operator and passengers.**

- Operate the Mud Buddy from a sitting position, or standing using a stand-up bar for balance. **A stand-up bar kit is available from Mud Buddy.**

- With the engine set at idle, lift the handle and/or use the power assist tilt and trim to lower the propeller in the water directly behind the boat. You will now be moving forward.

- Start off slowly and soon you will learn new ways of using the Mud Buddy to propel your boat in and out of places you never dreamed possible.

- Steering the boat is made easy by pushing or pulling the handle. You can also lift and place the propeller in and out of the water as needed to maneuver through vegetation and mud.

- The power tilt and trim is used to lift the propeller out of the water and to set the optimum drive angle when running. Through experience you will find the best trim angle for your boat, motor and load. Be careful when trimming up so that the propeller does not come too far out of the water which can cause the propeller to run across the water surface and cause excessive pull on the handle.

- The Mud Buddy is balanced and designed to find its own water level, from idle to full throttle. When operated at high speeds, the surfacing piercing propeller should be adjusted so that it is about an inch above the surface. The normal operating RPM is 3500 to 3900 RPM.

### **Service**

The Mud Buddy drive is unique in that it doesn't require frequent greasing. The drive tube is filled with grease from the factory. Every three years or 300 hours, remove the propeller and lower bearing cap. (Note: the bearing cap is left-hand threaded. Turn clockwise to loosen.) Locate a grease filler set screw on the aluminum outdrive near the drive tube. Remove the set screw and insert a grease fitting (1/4" X 28 pitch thread). The grease fitting is available from Mud Buddy. Grease the drive until clean grease comes out of the lower bearing assembly. Install the cap.

Lubrication performed on a regular schedule as depicted below will add years to the life of your Mud Buddy.

You will need a hand held grease gun filled with a good quality marine-grade wheel bearing grease. You can find the grease at any major automotive store.

Locate the grease fittings on the horizontal and vertical clamp mount swivel. Lubricate each year.

Throttle: Lubricate the throttle wire with WD-40 or graphite. Coat the throttle cable with grease near the engine twice per season. This helps keep water out of the throttle cable and deters freezing.

**Engine oil and filter** should be replaced according to the engine manufacturer's instructions. Change the oil, and filter if equipped, at the end of the season. Acids accumulate in the oil and if not drained, can cause internal pitting if left in the crankcase for extended periods.

**The frame** is coated with a marine grade powder coating and easily cleaned with soap and water. If you use a high-pressure washer, do not direct the spray at any area containing a seal such as the propeller, upper drive tube, and universal joint or engine drive shaft. The pressure will drive dirt and grime into the seals and cause premature wear.

**Storage:** At the end of the season, and for extended periods of storage beyond one month, the fuel should be run out of the carburetor, and treated with a gas stabilizer. **The most common carburetor problems occur because this simple procedure isn't followed.**

Also, if you have a remote fuel tank, ensure the vent screw located on the gas cap is open. If closed, pressure can build which causes fuel to be pushed through the carburetor into the crankcase. Over time, this dilutes the oil and can cause engine failure.

## Propeller Removal

Replace and/or repair the propeller when it shows signs of damage or excessive wear. Lack of power or reduced thrust in mud is an indication of prop wear. **A bent propeller causes vibration that will lead to driveline failure.**

- Place a large wrench on the nut located behind the propeller. If available, add a long piece of tube or pipe to the wrench for leverage. Use a Mud Buddy prop wrench, to unscrew the propeller. You can also make a prop wrench by drilling a 7/8" hole in a 1.25" X 3' section of flat bar steel.
- Usually, the prop will be threaded on very tightly and it will require considerable force to unscrew. Do not hit the propeller with a hammer, this never loosens the prop, rather, it causes damage. Call us if you have difficulty removing a prop. Leverage is the key.

## Propeller Installation

Inspect the nuts and washers and replace as needed, using only the Mud Buddy nut set. They are of special design which ensures the prop runs perfectly straight on the drive shaft. Ensure two propeller washers are installed on the drive shaft prior to mounting the propeller.

**- Never force a tight fitting propeller on the drive shaft. The shaft is constructed of a very hard steel and the propeller is stainless steel. The two will jam and the propeller will neither go on or off, requiring extensive machine work to remove.** Instead, use a wire brush to clean the threads. It may also be necessary to run a 7/8" coarse die-nut over the threads. You may also need to run a 7/8" coarse TPI tap through the propeller to ensure the threads are clear of any burrs.

- Coat the drive shaft threads with marine grease or never-seize.
- Install the propeller (**use gloves, the prop might be sharp**) with cupped ends toward you. Install in this order— two bronze washers, propeller, another bronze washer, jam nut, and finally, the nylon lock nut. Some props only have one nut.

## Warranty Service

Your Mud Buddy is designed to last you many years. Warranty items are repaired by authorized Honda, Vanguard, Robin, Kohler, or Kawasaki engine repair centers and the drive/frame by Mud Buddy Service Centers. Parts and tool information and prices are available from Mud Buddy. Tools may be purchased or rented for a reasonable fee, plus shipping. Tools are available, free for your use, to complete service work during the warranty period, and may be rented thereafter. You are important to us, so call whenever you have questions or need assistance. ***Prior approval by Mud Buddy is required before completing any warranty work.***

## Drive Assembly Inspection

The most common reason for drive failure is a bent propeller. Replace an unbalanced propeller immediately. A common symptom of a bent propeller bent driveshaft is a vibration at mid and full throttle. If you encounter either, remove the propeller for balancing. While the propeller is removed, run the engine at an idle checking the shaft for straightness. Notice the small gap between the bearing cap and drive shaft. Watch the shaft as it rotates. If the shaft is bent, it will be obvious.

## Outdrive Removal , Belt Replacement or Rebuild

Simply remove the top brace and nine face bolts from the outdrive. If repairs are needed, you can do it yourself or send the outdrive to Mud Buddy. We have

convenient outdrive UPS shipping boxes that we will send to you if needed. Coordinate any warranty work with your Mud Buddy dealer.

### **Belt Replacement Procedure: (guide and video is available, 801.352.8011)**

The Goodyear Eagle PD belt is tensioned by moving the outdrive up and down on the engine and engine mount face. The adjustment bolt is located on the bottom inside of the aluminum outdrive.

- Remove the outdrive top access cover. (says Mud Buddy patented HyperDrive on the cover) Loosen the four engine face bolts. Do not remove the bolts, just loosen them enough to allow the cast aluminum outdrive to slide in the bolt slots.

- Loosen the outdrive belt tension bolt about a half inch. It is located on the lower back end of casting.

- Locate the four lower cast aluminum mounting bolts. They are above the outdrive adjustment bolt on the outside of the rear lower end of the casting. Loosen them slightly. Again, just enough so the aluminum casting can slide up and down to tension the belt.

- Squeeze the belt together. This will cause the outdrive housing to slide up in the adjustment slots. Tighten one of the engine face bolts to hold the outdrive in the up position. This will help you get the belt back on the drive sprocket later.

- Remove the five lower outdrive bolts and top brace. Clean the old silicone off the casting mounting face.

- Place a new belt on the sprocket. Ensure the belt is facing the correct direction so the teeth and belt mesh.

- Place a thin bead of silicone on the main outdrive casting.

- With a few bolts in hand, hold the drive tube section in place. Tighten the face bolts.

- Slip the belt up and over the top sprocket. Turn the propeller to ensure the belt and sprockets are engaged.

- Remove each of the lower four adjustment bolts, one-by-one, and place silicone on the threads. Replace and tighten snugly, but not too tight yet.

- Remove each of the four engine face bolts, one-by-one and add a small drop of blue 243 loctite to each. Tighten all the face bolts snug, but not so tight that it restricts tightening of the belt.

- Adjust the belt tension by turning the tension bolt.

- Locate the belt tension access hole on the right side of the casting. Remove the hole plug.

- Check the belt tension with a Mud Buddy belt tension tool. The procedure is very simple. The belt should move 1/4" with 18-20 pounds of force from the belt tension tool. The tool is inserted through the access hole. While holding a tape measure across the front of the belt, depress the belt with the tool, moving the belt 1/4". The o-ring on the tool will slide down its inner shaft and mark how many pounds it took to move the belt 1/4". Adjust the rear casting tension bolt as needed to get the desired 18-20 pounds of belt tension. Lock the tension bolt in place with its jam nut.

- Tighten all four of the engine face bolts to 150 inch pounds and the four casting bolts to 180 inch pounds. Run the engine to check the belt operation.

- Clean, then place a small bead of silicone on the top access cover and re-install.

Call Mud Buddy for the tool and a belt tensioning guide. The guide photos and video will help you quickly and accurately adjust the belt tension. The tool may be rented for \$10 to cover shipping and handling. Call us at 801.352.8011.

