

JOHNSON 85ETLR77S OUTBOARD MOTOR REPA Study Guide

johnson 85etlr77s outboard motor repa is a common phrase among boat owners and marine enthusiasts seeking reliable information on maintaining and repairing their Johnson outboard motors. The Johnson 85ETLR77S is a popular model known for its durability and performance, but like all mechanical equipment, it requires regular maintenance and occasional repairs to ensure optimal operation. This comprehensive guide aims to provide detailed insights into the common issues, troubleshooting steps, repair procedures, and preventive measures for the Johnson 85ETLR77S outboard motor.

Understanding the Johnson 85ETLR77S Outboard Motor

Overview of the Model

The Johnson 85ETLR77S is a mid-range outboard motor, typically used for small to medium-sized boats. It features a 2-cylinder, 2-stroke engine with a manual start system. Known for its lightweight design and fuel efficiency, this model is favored by recreational boaters.

Key Features

- Engine Type: 2-cylinder, 2-stroke
- Horsepower: 85 HP
- Cooling System: Water-cooled
- Start System: Manual pull start
- Ignition System: CDI electronic ignition
- Trim and Tilt: Manual operation

Common Issues with Johnson 85ETLR77S Outboard Motor

Understanding typical problems can help boat owners diagnose and address issues promptly. Some common problems include:

Engine Not Starting

- Faulty spark plug

- Dirty carburetor
- Fuel delivery issues
- Dead battery or ignition switch problems

Overheating

- Blocked water intake
- Worn impeller
- Low coolant levels

Loss of Power or Poor Performance

- Dirty fuel filter
- Carburetor misadjustment
- Worn out spark plugs

Starting Difficulties or Stalling

- Fuel mixture issues
- Vacuum leaks
- Faulty ignition system

Unusual Noises or Vibrations

- Worn propeller
- Bent driveshaft
- Loose mounting bolts

Diagnosing Common Problems

Effective troubleshooting is essential before attempting repairs. Here's a step-by-step approach:

Step 1: Visual Inspection

- Check for loose or damaged wires
- Inspect the propeller for damage or debris

- Examine cooling water intake for blockages

Step 2: Check Fuel and Oil Levels

- Ensure adequate fuel supply and proper fuel mixture
- Verify oil levels if applicable

Step 3: Spark Test

- Remove the spark plug and inspect for fouling or damage
- Use a spark tester to verify ignition spark

Step 4: Listen and Observe

- Note any unusual sounds or vibrations during operation
- Observe water spray for cooling system effectiveness

Essential Repairs and Maintenance for Johnson 85ETLR77S

To keep your outboard motor running smoothly, regular maintenance and timely repairs are vital.

1. Replacing Spark Plugs

- Remove the old spark plug using a spark plug wrench
- Inspect for fouling or damage
- Replace with a recommended spark plug model
- Gap the spark plug to manufacturer specifications

2. Cleaning or Rebuilding the Carburetor

- Remove the carburetor following manufacturer instructions
- Disassemble and clean all parts with carburetor cleaner
- Replace worn gaskets and seals
- Reassemble carefully and reinstall

3. Replacing the Impeller

The water pump impeller ensures cooling efficiency.

- Drain engine water
- Remove the lower unit following the service manual
- Extract the impeller and inspect for wear
- Install a new impeller, ensuring correct orientation
- Reassemble the lower unit

4. Fuel System Repair

- Replace fuel filters regularly
- Clean or replace fuel lines
- Drain old fuel and refill with fresh mixture

5. Propeller Repair or Replacement

- Remove the propeller using a propeller wrench
- Inspect for damage or bent blades
- Replace or repair as needed
- Ensure proper torque when reinstalling

Preventive Maintenance Tips

Prevention is better than cure. Regular maintenance can extend the life of your Johnson 85ETLR77S outboard motor.

- Conduct routine visual inspections before each outing
- Change engine oil and lower unit lubricant periodically
- Check and replace spark plugs annually or as needed
- Inspect and clean cooling water intake regularly
- Use fresh fuel and add fuel stabilizer if the boat is stored for extended periods
- Store the motor properly during winter or off-season, including draining fuel and water from the system

Tools and Parts Required for Repairs

Having the right tools and parts can significantly ease the repair process. Here is a list of essentials:

- Screwdrivers (flathead and Phillips)
- Socket and wrench sets
- Spark plug socket
- Carburetor cleaner
- Replacement spark plugs and gaskets
- Impeller kit
- Fuel line and filter replacements
- Propeller wrench
- Manual for Johnson 85ETLR77S

Where to Seek Professional Help

While many repairs can be performed by experienced boat owners, some issues require professional expertise:

- Major engine overhauls
- Electrical system diagnostics
- Structural damage repairs
- Complex fuel system issues

Locate authorized Johnson service centers or qualified marine mechanics with experience in Johnson outboard motors for reliable repairs.

Conclusion

Maintaining and repairing the Johnson 85ETLR77S outboard motor is essential for ensuring safe and efficient boating experiences. Regular inspections, timely repairs, and preventive maintenance can prolong the life of your motor and prevent costly breakdowns. Whether tackling minor issues like spark plug replacement or more involved repairs like impeller replacement, understanding the fundamentals and having the right tools makes all the difference. Always consult the manufacturer's manual for specific procedures and torque specifications, and don't hesitate to seek professional assistance when needed.

By following these guidelines, boat owners can confidently keep their Johnson 85ETLR77S outboard motors in top condition, ensuring smooth sailing on the water for years to come.

Johnson 85ETLR77S Outboard Motor Repair: A Comprehensive Guide to Troubleshooting and Maintenance

When it comes to maintaining and repairing your Johnson 85ETLR77S outboard motor,

understanding the intricacies of this powerful marine engine is essential for boaters and marine enthusiasts alike. This detailed review aims to provide an in-depth exploration of common issues, troubleshooting techniques, maintenance tips, and repair procedures specifically tailored for the Johnson 85ETLR77S model. Whether you're a seasoned mechanic or a boat owner eager to learn, this guide will serve as a comprehensive resource to keep your outboard motor running smoothly for years to come.

Understanding the Johnson 85ETLR77S Outboard Motor

Before diving into repair and troubleshooting, it's crucial to understand the core features and specifications of the Johnson 85ETLR77S outboard motor.

Key Features and Specifications

- Horsepower: 85 HP, providing ample power for a variety of small to medium-sized boats.
- Engine Type: 2-cylinder, 2-stroke engine, known for its simplicity and ease of maintenance.
- Cooling System: Water-cooled system drawing from the lake or river through a water intake.
- Ignition System: Electric start with a reliable ignition system.
- Gearcase: Forward, neutral, and reverse gears with a tilt-and-trim mechanism.
- Fuel System: Carbureted fuel delivery, requiring periodic cleaning and adjustments.

Understanding these features helps diagnose issues effectively, as different components and systems may fail or require maintenance over time.

Common Problems with Johnson 85ETLR77S Outboard Motors

While the Johnson 85ETLR77S is known for its durability, like all engines, it's susceptible to specific issues. Recognizing these problems early can prevent more significant damage and costly repairs.

Frequent Troubleshooting Areas

- Starting Difficulties
 - Dead battery or faulty ignition switch
 - Faulty spark plugs
 - Carburetor issues or clogs
 - Fuel line blockages or stale fuel

- Loss of Power or Poor Performance
 - Dirty or clogged carburetor
 - Worn spark plugs
 - Clogged fuel filter
 - Compression issues
- Overheating
 - Clogged water intake screen
 - Water pump failure
 - Thermostat malfunction
- Excessive Smoke or Fuel Consumption
 - Rich fuel mixture
 - Worn piston rings or cylinder walls
 - Carburetor adjustments needed
- Unusual Noises or Vibrations
 - Loose propeller or damaged propeller blades
 - Misaligned engine components
 - Internal engine wear or damage
- Oil Leaks or Fuel Leaks
 - Damaged gaskets or seals
 - Cracked fuel lines or fittings

Recognizing these symptoms allows for targeted troubleshooting, saving time and avoiding unnecessary repairs.

Detailed Troubleshooting and Repair Procedures

This section provides step-by-step guidance on diagnosing and fixing common issues in the Johnson 85ETLR77S outboard motor.

1. Addressing Starting Problems

Symptoms: Engine does not start or takes multiple attempts to start.

Troubleshooting Steps:

- Check the Battery: Ensure the battery is fully charged and connections are clean and tight.
- Inspect Spark Plugs: Remove and examine for fouling, wear, or damage. Replace if necessary.
- Test Spark: Use a spark tester to verify ignition spark.
- Examine the Carburetor: Remove and clean to remove varnish or debris that may block fuel flow.
- Verify Fuel Supply: Ensure fuel tank has fresh fuel, and fuel lines are unobstructed.

Repair Tips:

- Replace faulty spark plugs with NGK or equivalent marine-grade plugs.
- Clean or rebuild the carburetor using appropriate kits.
- Replace the battery if it no longer holds a charge.

2. Restoring Power and Performance

Symptoms: Engine runs but lacks power, stalls under load.

Troubleshooting Steps:

- Check Carburetor Settings: Adjust the mixture screws to optimize fuel-air mixture.
- Replace Spark Plugs: Use new plugs for reliable ignition.
- Replace Fuel Filter: Remove and replace to ensure clean fuel reaches the engine.
- Inspect Compression: Use a compression gauge; low compression indicates internal wear.
- Examine Exhaust System: Blockages or leaks can reduce power.

Repair Tips:

- Perform a thorough carburetor clean and rebuild.
- Conduct a compression test and replace worn piston rings or cylinder heads if compression is low.
- Ensure fuel quality is high and free from water or debris.

3. Overheating Prevention and Repair

Symptoms: Engine temperature gauge reading high; engine shuts down.

Troubleshooting Steps:

- Inspect Water Intake Screen: Remove and clean to ensure water flow.
- Check Water Pump Impeller: Remove and replace if damaged or worn.
- Test Thermostat: Remove and test in boiling water; replace if faulty.
- Examine Cooling Hoses: Look for leaks, cracks, or blockages.

Repair Tips:

- Regularly replace the water pump impeller every 100 hours of operation.
- Keep water intake screens clean to avoid overheating.
- Use marine-grade thermostats for durability.

4. Propeller and Gearcase Maintenance

Symptoms: Vibration or unusual noises; poor acceleration.

Troubleshooting Steps:

- Inspect Propeller: Check for dents, cracks, or bent blades.
- Ensure Proper Propeller Fit: Confirm it's the correct size and pitch.
- Check Gearcase Oil: Remove the lower unit drain screw to inspect oil for water or metal shavings.
- Lubricate Moving Parts: Apply marine grease to propeller shaft and gearcase components.

Repair Tips:

- Replace damaged propellers with OEM or high-quality aftermarket parts.

- Change gearcase oil annually or after 100 hours of use.
- Tighten propeller nut securely to prevent wobbling.

Preventative Maintenance Tips for Johnson 85ETLR77S

Regular maintenance is key to extending the lifespan of your outboard motor and avoiding costly repairs.

Maintenance Checklist:

- Change Gearcase Oil: Every 100 hours or annually.
- Replace Spark Plugs: Every 100 hours or as needed.
- Clean or Replace Fuel Filters: Every 50 hours.
- Inspect and Replace Water Pump Impeller: Every 100 hours.
- Flush Cooling System: After each use in saltwater or dirty environments.
- Check and Tighten Bolts and Fasteners: Monthly inspection.
- Lubricate Moving Parts: Use marine grease on all accessible moving components.
- Use Fresh Fuel: Avoid stale fuel by refueling regularly and adding fuel stabilizer.

Seasonal Storage Tips:

- Drain fuel system or add fuel stabilizer.
- Remove and store the propeller.
- Fog the engine cylinders with fogging oil.
- Store in a dry, protected environment.

Tools and Spare Parts Recommended for Repairs

Having the right tools and parts on hand simplifies repairs and reduces downtime.

Essential Tools:

- Screwdriver set (Phillips and flathead)
- Pliers and adjustable wrenches
- Torque wrench
- Carburetor cleaning kit
- Compression gauge
- Multimeter for electrical testing

- Marine-grade grease and lubricants

Spare Parts:

- Spark plugs
- Water pump impeller and housing
- Fuel filters
- Gaskets and seals
- Propellers
- Replacement ignition components

When to Seek Professional Help

While many repairs can be performed by knowledgeable boat owners, some issues require specialized skills or equipment.

Signs to consult a marine mechanic:

- Persistent overheating despite maintenance
- Internal engine damage or low compression
- Electrical system failures beyond basic troubleshooting
- Cracked or severely damaged gearcase housing
- Comprehensive engine rebuilds

Engaging professional services ensures proper diagnostics, repairs, and engine calibration, ultimately saving money and preventing further damage.

Conclusion: Keeping Your Johnson 85ETLR77S in Top Condition

The Johnson 85ETLR77S outboard motor is renowned for its reliability and performance when properly maintained. Regular inspection, timely repairs, and adherence to maintenance schedules will ensure your engine delivers powerful and dependable operation on the water. Understanding common issues, troubleshooting effectively, and knowing when to seek professional assistance form the backbone of responsible marine engine ownership.

By investing time in routine maintenance and addressing problems promptly, you can extend the lifespan of your Johnson 85ETLR77S and enjoy many trouble-free boating adventures. Remember, a well-maintained outboard motor not only performs better but also enhances safety and enjoyment during your time on the water.

Question What are common issues faced when repairing the Johnson 85ETLR77S outboard motor? Common issues include fuel system problems, ignition coil failures, corrosion in the lower unit, and carburetor clogging. Regular maintenance can help prevent these problems. How do I troubleshoot electrical problems on the Johnson 85ETLR77S outboard motor? Start by checking the spark plug for proper spark, inspect the wiring for corrosion or damage, and test the ignition switch and kill switch. Using a multimeter can help identify electrical faults. What are the steps to replace the water pump impeller on the Johnson 85ETLR77S? First, remove the lower unit, then locate and remove the old impeller. Clean the housing, install the new impeller ensuring proper orientation, and reassemble the lower unit. Always test for proper water flow afterward. Can I perform the repairs on the Johnson 85ETLR77S myself, or should I seek professional help? Basic maintenance and minor repairs can often be done by experienced boat owners with proper tools. However, for complex issues like engine rebuilding or electrical diagnostics, it's recommended to consult a certified technician. What tools are essential for repairing the Johnson 85ETLR77S outboard motor? Essential tools include screwdrivers, wrenches, pliers, a multimeter, a spark tester, and specialty tools like a lower unit removal tool. Having a repair manual specific to this model is also helpful. How often should I perform maintenance on the Johnson 85ETLR77S outboard motor to prevent repairs? Routine maintenance should be performed every 100 hours of operation or annually, including changing the gear oil, inspecting spark plugs, cleaning the carburetor, and checking the cooling system. Where can I find genuine replacement parts for the Johnson 85ETLR77S outboard motor? Genuine parts can be purchased through authorized Johnson/Evinrude dealers, online marine parts retailers, or through the manufacturer's official website. What are signs that my Johnson 85ETLR77S outboard motor needs repairs? Signs include difficulty starting, loss of power, unusual noises, excessive smoke, overheating, or leaks. Addressing these issues early can prevent more extensive damage. Are there specific maintenance tips to extend the lifespan of the Johnson 85ETLR77S outboard motor? Yes, regularly flush the engine with fresh water after use, keep the propeller and cooling system clean, use recommended fuel and oil, and perform scheduled inspections and maintenance. What safety precautions should I take when repairing the Johnson 85ETLR77S outboard motor? Always disconnect the spark plug to prevent accidental starting, work in a well-ventilated area, wear protective gloves and eyewear, and consult the service manual for proper procedures.

Related keywords: Johnson 85ETLR77S, outboard motor repair, Johnson outboard engine, outboard motor maintenance, outboard engine troubleshooting, Johnson outboard parts, outboard motor service, Johnson outboard troubleshooting, outboard motor repair kit, Johnson outboard diagnostics