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› NICHE Carburetor Instruction Manual for Polaris ATV/UTV Models

Niche 519-KCR2237B

NICHE Carburetor Instruction Manual

For Polaris ATV/UTV Models

1. PRODUCT OVERVIEW

This manual provides essential information for the installation, operation, and maintenance of your NICHE Carburetor. This carburetor is designed as a direct replacement component for specific Polaris ATV and UTV models, ensuring proper fuel delivery and engine performance. Please read all instructions carefully before proceeding with installation or maintenance.

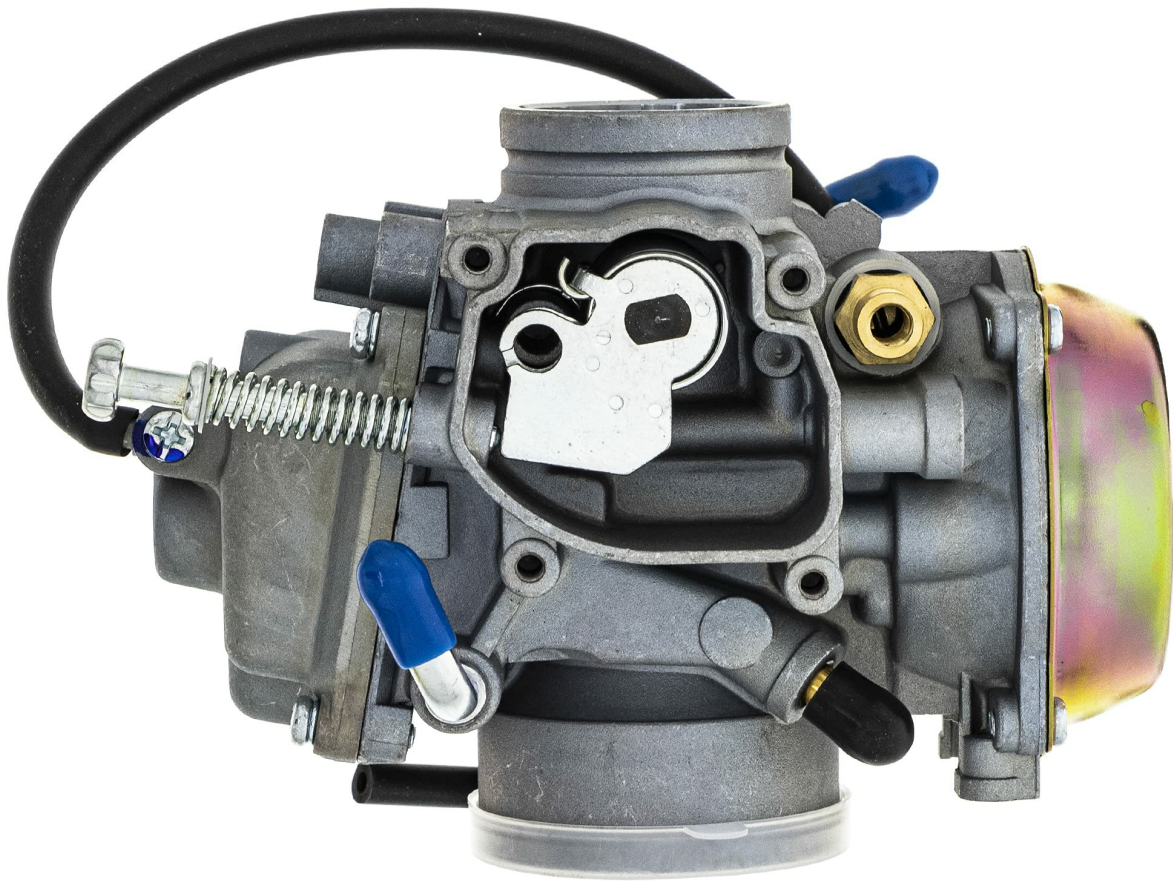


Image 1.1: NICHE Carburetor Assembly, including the main carburetor unit, packaging, and a kit of jets and gaskets.

2. COMPATIBILITY

This NICHE Carburetor (Model 519-KCR2237B) is compatible with the following Polaris ATV and UTV models and OEM part numbers:

- **Polaris Models:**

- 1997-2001 Sportsman 500
- 2004-2008 Sportsman 500 6x6
- 2003-2005 Sportsman 600
- 2004 Ranger 425
- 2004-2009 Ranger 500
- 1998-1999 Big Boss 500
- 1999 Worker 500
- 1995-1998 Magnum 425
- 2012-2014 Hawkeye 400

- **Compatible OEM Part Numbers:**

- Polaris: 3131441, 3131519, 3131209, 3131446, 3130724, 3131200, 3131572, 1253436, 3131365, 3130898, 3131424, 3130959, 3131222, 3131387
- Suzuki: 13200-19BA1, 13200-19BA3

Always verify compatibility with your specific vehicle's make, model, and year before installation.

3. SETUP AND INSTALLATION

Carburetor installation requires mechanical aptitude. If you are unsure about any steps, consult a qualified mechanic or refer to your vehicle's official service manual.

3.1 Pre-Installation Checks

- Ensure the engine is cool and the vehicle is stable.
- Disconnect the battery's negative terminal.
- Drain the fuel tank and carburetor float bowl.
- Inspect all fuel lines, vacuum lines, and air intake boots for cracks or damage. Replace as necessary.

3.2 Removal of Old Carburetor

1. Carefully disconnect the fuel line, vacuum lines, and throttle cable from the old carburetor.
2. Remove mounting bolts or clamps securing the carburetor to the intake manifold and airbox.
3. Gently remove the old carburetor, ensuring no debris falls into the intake manifold.

3.3 Installation of New Carburetor

1. Install new gaskets (provided in the kit) between the carburetor and the intake manifold/airbox.
2. Mount the new NICHE Carburetor, ensuring it is seated correctly and securely tightened. Do not overtighten.
3. Reconnect the fuel line, vacuum lines, and throttle cable. Ensure all connections are secure and free of leaks.
4. Adjust the throttle cable for proper tension and smooth operation.
5. Refill the fuel tank with fresh fuel.
6. Reconnect the battery's negative terminal.

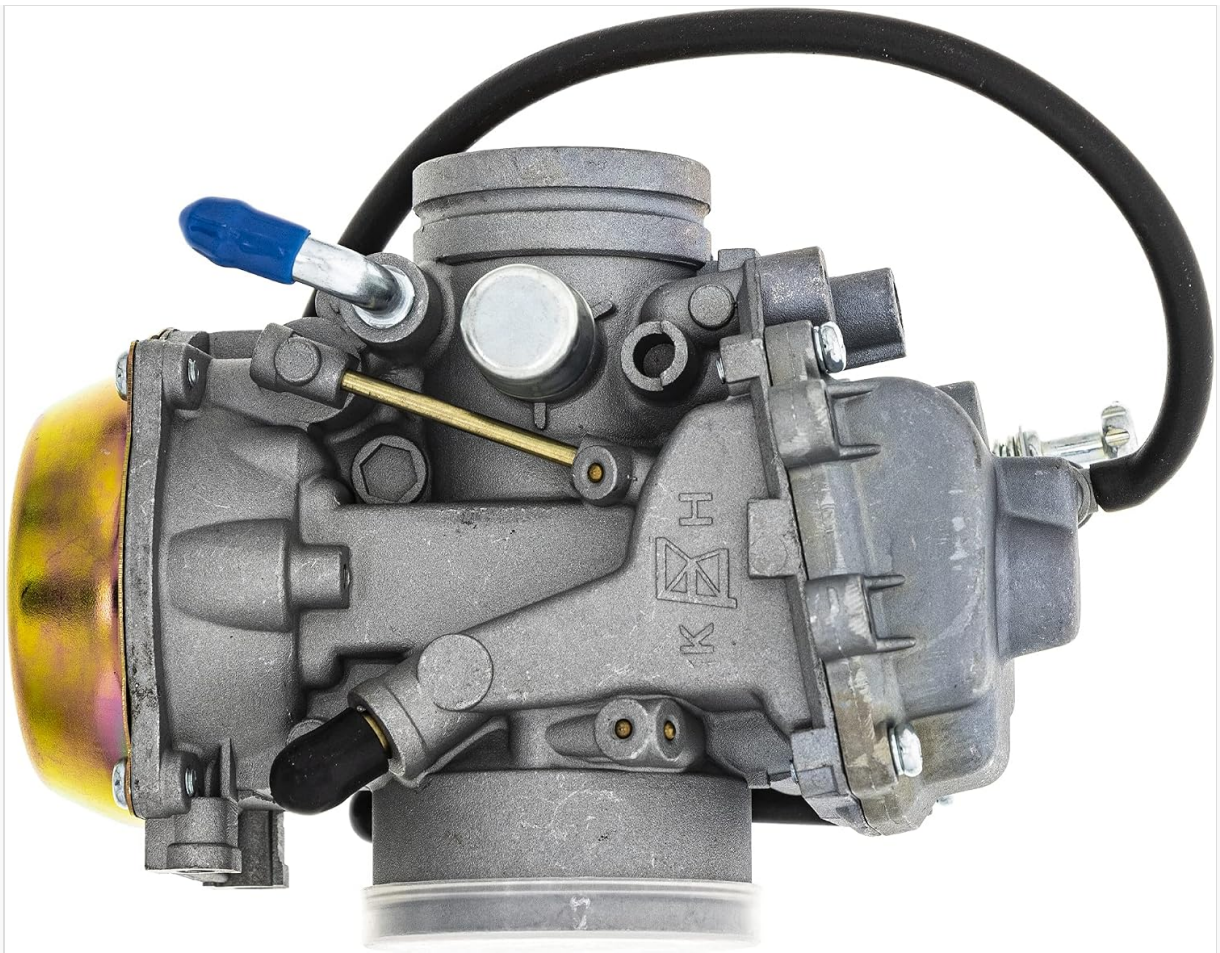


Image 3.1: Side view of the NICHE Carburetor, highlighting the various ports and connections for fuel and vacuum lines.



Image 3.2: Included gasket and jet kit, essential for proper installation and tuning.

4. OPERATING INSTRUCTIONS

After installation, proper tuning is crucial for optimal engine performance and longevity.

4.1 Initial Start-Up

1. Turn the fuel petcock to the ON position. Allow a few minutes for the carburetor float bowl to fill.
2. Engage the choke (if applicable) and attempt to start the engine.
3. Once the engine starts, gradually disengage the choke as the engine warms up.

4.2 Idle and Mixture Adjustment

- Allow the engine to reach operating temperature.
- Adjust the idle speed screw to achieve the manufacturer's recommended RPM.
- Adjust the air/fuel mixture screw for the smoothest idle and highest RPM, then back it out slightly (typically 1/4 to 1/2 turn) to ensure a rich enough mixture to prevent lean conditions.

Refer to your vehicle's service manual for specific idle speed and mixture screw adjustment procedures

and specifications.

5. MAINTENANCE

Regular maintenance ensures the longevity and proper function of your carburetor.

5.1 Cleaning

- Periodically clean the exterior of the carburetor to prevent dirt buildup.
- If performance issues arise, disassemble the carburetor and clean all internal passages, jets, and the float bowl with a carburetor cleaner. Use compressed air to clear small orifices.

5.2 Jet Inspection

- Inspect main and pilot jets for clogs or damage. Replace if necessary.
- Ensure the float level is set correctly according to vehicle specifications to prevent fuel overflow or starvation.

5.3 Fuel System

- Always use clean, fresh fuel.
- Regularly check and replace the fuel filter.
- During long periods of storage, drain the fuel from the carburetor float bowl to prevent fuel degradation and clogging.

6. TROUBLESHOOTING

Refer to the following common issues and their potential solutions:

Symptom	Possible Cause	Solution
Engine will not start or starts with difficulty	Clogged jets, incorrect choke setting, stale fuel, fuel starvation, improper float level	Clean jets, adjust choke, use fresh fuel, check fuel filter/lines, adjust float level
Rough idle or poor low-speed performance	Clogged pilot jet, incorrect air/fuel mixture, vacuum leak	Clean pilot jet, adjust mixture screw, check for vacuum leaks
Engine bogs or lacks power at high RPM	Clogged main jet, incorrect main jet size, fuel starvation	Clean main jet, consider changing main jet size (refer to specifications), check fuel flow
Fuel leaks from carburetor	Damaged float needle/seat, incorrect float level, cracked float bowl gasket, loose drain screw	Inspect/replace float needle/seat, adjust float level, replace gasket, tighten drain screw
Excessive smoke from exhaust	Overly rich fuel mixture, high float level	Adjust air/fuel mixture, adjust float level

For persistent issues, consult your vehicle's service manual or a professional mechanic.

7. SPECIFICATIONS

Key specifications for the NICHE Carburetor (Model 519-KCR2237B):

- **Jetting (Installed):**
 - Main Jet: 160
 - Pilot Jet: 42
 - Air Jet: 135mm
 - **Spare Jets Included:**
 - Main Jet Spares: #117.5, #120
 - Pilot Jet Spares: #45
 - **Port Sizes:**
 - Input Port Outer Diameter (OD): 40mm
 - Input Port Inner Diameter (ID): 34mm
 - Output Port Outer Diameter (OD): 50mm
 - Output Port Inner Diameter (ID): 46mm
 - **Physical Dimensions:**
 - Product Dimensions: 16.51 x 12.45 x 11.94 cm (approx. 6.5 x 4.9 x 4.7 inches)
 - Weight: 680.39 g (approx. 1.5 lbs)
 - **Material:** Aluminum (Exterior Finish)
 - **Vehicle Service Type:** ATV, UTV
 - **Country of Origin:** China
 - **Manufacturer:** Mishon Inc
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8. WARRANTY INFORMATION

NICHE Industries provides a **2-Year Limited Warranty** on this carburetor. This warranty covers defects in materials and workmanship under normal use and service. For specific terms and conditions, please contact NICHE customer support.

9. CUSTOMER SUPPORT

If you have any questions, require technical assistance, or need to file a warranty claim, please contact NICHE customer support:

- **Email:** Help@NicheIndustries.com

