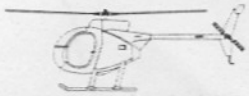
REVOLUTION
HELICOPTER CORP., INC.



Mini-500

1905 W. Jesse James Rd. * Excelsior Springs, Missouri 64024
Phone (816) 637-2800 * Fax (816) 637-7936

WARNING!

Failure to re-jet the carburetors on this engine for helicopter use will result in death, injury, or expensive equipment failure!

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The PEP package in this aircraft kit includes a specially tuned exhaust system and a set of carburetor jets which must be installed prior to starting the engine. Currently these jets are installed at the factory prior to shipping the kit. If this PEP Package was purchased as a supplemental system, you will have to change the jetting. **The aircraft will not run reliably on stock jetting with the PEP exhaust installed.**

As a matter of design, two stroke engines are more sensitive to jetting than four stroke engines. The compensation is that you get more horsepower per pound with a two stroke. With proper care in accordance with the Rotax manual, there is no reason you cannot get many hours of reliable operation from your powerplant. Proper jetting for your density altitude is of paramount importance.

The jets that come with the PEP are fail safe in nature in that they are adequate for the lowest density altitude this engine might encounter during normal operation. For many applications additional jetting will be required to fine tune the EGT for maximum available power/fuel economy. Recommended additional jets are: **Main Jet**: 158, 160, 162, 165; **Needle Jet**: 2.74. These jets are available from many after market sources. The 11K2 needle on the highest (#4) position is used throughout the jetting process.

The following recommended jetting procedure assumes that your ignition, fuel delivery, and engine monitoring systems are correctly installed and operational. Any questions about the function or serviceability of these systems should be addressed to Westberg Mfg or a Rotax distributor as appropriate.

1. For engine break-in use the following density altitude table to determine appropriate jetting.

Density Altitude	**Jetting**
-500 to 2500 ft	Supplied jetting
2500 to 4000 ft	165 main jet
4000 to 6000 ft	162 main jet

This jetting may produce low EGT's and barely enough power for a low hover. During break in this is a good thing. Follow Rotax guidance on oil mixing and RHCI guidance on break in procedures. In any case, monitoring of engine parameters is crucial because factors other than carburetor jetting can cause excessive EGT's, i.e. fuel system restrictions, intake air leaks, etc.

2. To determine proper jetting for maximum power and economy, a method of weighing down the aircraft will be required. A plywood platform across the skids with several hundred pounds of sand bags is suggested. The following table lists **approximate** jetting for the nominal Rotax 582 with PEP installed in the Mini 500. Start richer than your current conditions require and work in small increments towards the ideal setup.

Density Altitude	**Jetting**
-500 to 1500 ft	Supplied Jetting
1500 to 2500 ft	165 main jet, 2.76 needle jet
2500 to 3500 ft	162 main jet, 2.76 needle jet
3500 to 4500 ft	160 main jet, 2.74 needle jet
4500 to 6000 ft	158 main jet, 2.74 needle jet

For environmental conditions not listed work slowly from known conditions and values to unknown conditions and values until satisfactory performance is obtained.

3. The larger the numbers on the jets, the richer the mixture. Start with slightly richer jets than your density altitude merits. Start and warm up the helicopter. During the following procedures the EGT should never exceed 1150 degrees F. Temperatures between 1200 and 1300 degrees F are in the danger zone, and at temperatures exceeding 1300 degrees F the engine **will seize abruptly.** EGT's between 1150 degrees and 1300 degrees produce only marginal power increases in this application and should be avoided for the longevity of the equipment and the life of the pilot.

After warm up weight down the helicopter in some fashion so that it will not fly. Open the throttle to 100% rpm and observe the EGT's. Leanness in mixture will first manifest itself in one of two places: from flat pitch 100% to approximately 1 inch collective input, or at the absolute maximum power available for current conditions. Slowly raise the collective 1 inch at a time, pausing for 30 seconds at each increment to allow the EGT's to stabilize. Monitor the EGT's so as not to exceed any engine limitations. Continue pulling up incrementally on the collective, adjusting the throttle as necessary to maintain 100% rotor rpm, until power available is exceeded and the rotor rpm bleeds off.

4. Assuming you have not approached any limitations, your aircraft is safe to hover at this time. A nominal jetting will return 1050+50 -75 degrees F at a hover, slightly lower in cruise flight, and the same or slightly higher during approach/decel. While the main jet regulates fuel flow primarily in the 80%-100% power range and the needle jet from 30%-80%, there is some overlap as all of the fuel must flow through both jets. Adjust the jetting as necessary to achieve the desired EGT readings. Repeat step 3 after each jet change to assure no limitations are exceeded for any power requirements.

Adjustments must be made for seasonal variations in temperature and humidity. For example, the averages in Missouri in July are 96 and 86% respectively, requiring jetting of 158 main, 2.74 needle. January averages are 39 and 27%, requiring 170 main jets and 2.76 needle jets.

5. Differential EGT's, lack of power, and other problems are addressed in the back of the Rotax maintenance manual that came with your engine.

If you have any further questions please contact RHCI Technical Service Department at 816-637-2800.