Before You Begin

- Use disposable rubber gloves when handling Mojave Green propellant.
- Do not modify the motor in any way.
- If any parts are missing or damaged, call AeroTech at 435-865-7100.
- Use only AeroTech RMS reload kits to refurbish an RMS motor.
- Do not interchange parts from different reload kits.
- Do not reuse any parts of the RMS reload kit.
- Save the reload kit plastic bag for the used reload kit parts.

Disposal
Damaged or defective reload kits should be returned to RCS.

Hardware & Supplies Required

<table>
<thead>
<tr>
<th>Hardware &amp; Supplies Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS 54mm small nozzle aft closure</td>
</tr>
<tr>
<td>RMS 54/426 case</td>
</tr>
<tr>
<td>RMS 54mm std or plugged forward closure</td>
</tr>
<tr>
<td>54mm reload adapter system (also refer to RAS instructions)</td>
</tr>
<tr>
<td>Disposable rubber gloves</td>
</tr>
<tr>
<td>Synco™ Super Lube™ or other grease</td>
</tr>
<tr>
<td>Hobby knife</td>
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<tr>
<td>Wet wipes or damp paper towels</td>
</tr>
</tbody>
</table>

Preparation For Flight

1. Insert the coated end of a FirstFire™, Firestar™ or other initiator through the center nozzle throat until it stops against the delay charge element.
2. Secure the initiator to the nozzle with a piece of masking tape.
3. Install the motor into the rocket’s motor mount tube. Ensure that the motor is securely retained in the rocket by using positive mechanical means to prevent it from being ejected during recovery system deployment.
4. Prepare the rocket’s recovery system and then launch the rocket in accordance with the Tripoli Rocketry Association (TRA) Safety Code and National Fire Protection Association (NFPA) Code 1127.

Post-Recovery Cleanup
NOTE: Perform motor clean-up as soon as possible after motor firing. Propellant and delay residues become difficult to remove after 24 hours and can lead to corrosion of the metal parts. Place the spent motor components in the reload kit plastic bag and dispose of properly.

1. After the motor has cooled down, remove the forward and aft closures.
2. Remove the delay insulator, delay o-ring and forward delay spacer (neoprene washer) from the forward closure and discard. Remove and discard the nozzle, nozzle o-ring and the forward and aft o-rings. Using wet wipes or damp paper towels, remove all delay and propellant residue from the closures.
3. Replace the forward closure with a new RMS 54mm small nozzle aft closure.
4. Apply a light coat of grease to all threads and the inside of the motor case. Reassemble metal parts and store motor in a dry place.

First Aid

DANGER: Do not ingest propellant or breathe exhaust fumes. For a minor burn, apply a burn ointment. Wash hands after handling Mojave Green propellant and before eating. For a severe burn, immerse the burned area in ice water at once and see a physician as quickly as possible. In the unlikely event of oral ingestion of the propellant, induce vomiting and see a physician as quickly as possible. Mojave Green composite propellant consists primarily of Ammonium Perchlorate, Barium Nitrate and a rubber-like plastic elastomer.

Fire Safety

Tests show that the pyrotechnic components of RMS™ reload kits will not explode in fires and normally will not ignite unless subjected to direct flame and then will burn slowly. Use water to fight any fires in which AeroTech/RCS RMS™ reload kit pyrotechnic components may become involved. Direct the water at the AeroTech/RCS RMS™ reload kit pyrotechnic components to keep them below their 550 deg. F autoignition temperature. Foam and carbon dioxide fire extinguishers will NOT extinguish burning propellants of the type used in RMS™ reload kit pyrotechnic components. Keep reload kit pyrotechnic components away from flames, sources of heat and flammable materials.

Disclaimer and Warranty

NOTE: As we cannot control the storage and use of our products, once sold we cannot assume any responsibility for product storage, transportation or usage. RCS shall not be held responsible for any personal injury or property damage resulting from the handling, storage or use of our product. The buyer assumes all risks and liabilities therefrom and accepts and uses AeroTech/RCS products on these conditions. No warranty either expressed or implied is made regarding AeroTech/RCS products, except for replacement or repair, at RCS’s option, of those products which are proven to be defective in manufacture within one year from the date of original purchase. For repair or replacement under this warranty, please contact RCS. Proof of purchase will be required. Note: Your state may provide additional rights not covered by this warranty.

Warning: FLAMMABLE: Read Instructions Before Use. Use RMS reload kits only in accordance with instructions. Sale to persons under 18 years of age prohibited by federal law. For use only by certified users 18 years of age or older. Ignite by electrical means only. Do not smoke when loading RMS motors or use in the vicinity of open flames. DANGER-POISON: Contains Barium Nitrate. Do not ingest propellant or breathe exhaust fumes. Wear disposable rubber gloves when handling propellant. CAUTION: Keep out of reach of children. Follow NAR & TRA safety codes at all times. Motor hot after firing.

Do not open reload kit until ready to use.

RCS Rocket Motor Components, Inc., 2113 W. 850 N. St., Cedar City, UT 84721
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HIGH-POWER RMS™ Reloadable Motor System™ I170G-10A Rocket Motor Reload Kit For RMS-54/426 Motor Hardware Mojave Green™ Composite Propellant

To adjust time delay, use AeroTech Reload Delay Kits (RDKs) or drill delay 0.025" per second of adjustment using twist drill. Drilled end faces propellant.

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1170G-10A Typical Time-Thrust Curve

Motor Specifications

<table>
<thead>
<tr>
<th>Motor</th>
<th>Total Impulse</th>
<th>Propellant WL</th>
<th>Loaded WL</th>
<th>Motor Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1170G-10A</td>
<td>424 N-sec</td>
<td>217.8 grams</td>
<td>530 grams</td>
<td>54mm</td>
</tr>
</tbody>
</table>

Burn Time: 2.6 seconds
Peak Thrust: 44 pounds
Delay Time: 10 seconds (adjustable)
Motor Length: 6.17"
Assembly Instructions (numbers refer to item numbers on drawing):
1. Assemble O-rings (4 & 10) in case thread (1) and delay cavity of forward closure (14) (but not the forward end of cavity).
2. Install forward delay spacer (17) into forward closure (14), then push liner assembly into case (20) until recessed equally from ends of case.
3. Insert propellant grain (8) and grain spacer (20) into liner (6), then push liner assembly into case (20).
4. Install forward insulator (9) and forward O-ring (10) into case (7) with the forward insulator (9) and forward O-ring (10) until seated.
5. Apply propellant grain (8) and grain spacer (20) to the inside of the case (7) until seated.
6. Thread small nozzle O-ring (19) and nozzle O-ring (18) into end of case (7) with the forward insulator (9) and forward O-ring (10) until seated.
7. Install small nozzle O-ring (19) and nozzle O-ring (18) into end of case (7) until seated.
8. Dispense black anneal charge (14) into case (7) until seated.