**FIRE SAFETY**

Tests show that composite propellant RMS reload kits will not explode if left in your vehicle or home. Composite propellant RMS reload kits will become involved: direct the water at the AerosTech/RCS RMS reload kit to keep them below their 550˚F autoignition temperature. Foam and carbon dioxide fire extinguishers will NOT extinguish the direct flame and then will burn slowly. Use water to fight fires in this area in water at once and see a Physician as quickly as possible. In the unlikely event of oral ingestion of the propellant, delay or ejection charge, induce vomiting and see a physician as quickly as possible. The AerosTech/RCS composite rocket propellant consists of ammonium perchlorate and a rubber like plastic elastomer.

**REMARKS:**

1. **POST-FIRING CLEANUP**

   - 1. After the motor has cooled down, remove the aft closure. Using a wet wipe or damp paper towel, remove any propellant residue from the closure.
   
   - 2. Remove the nozzle and liner assembly and discard. **SAVE THE O-RING** for use with the remaining sets of reload components.
   
   - 3. Using a wet wipe or a damp paper towel, wipe the inside of the casing to remove all propellant residue.
   
   - 4. Apply a light coat of grease to all threads and the inside of the casing to remove propellant residue from the closure.

   - 5. When attaching the micro-clips of your launch system to the tabs on the INTER-LOCK clip or...

**FIRST AID**

For a minor burn, apply a burn ointment. 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, delay or ejection charge, induce vomiting and see a physician as quickly as possible. The AerosTech/RCS composite rocket propellant consists of ammonium perchlorate and a rubber like plastic elastomer.

**DISPOSAL**

Damaged or defective reloads should be returned to RCS.

**NOTICE:** As we can not control the storage and use of our products, once sold we cannot assume any responsibility for product storage, transportation or use. 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 AerosTech/RCS products on these conditions. No warranty either expressed or implied is made regarding AerosTech/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.

**DATA SHEET**

- **Motor Type**: E12-J
- **Propellant Weight**: 1.0 oz
- **Total Impulse**: 28.3 lbs-sec
- **Average Thrust**: 8.1 lbs
- **Loaded Motor Weight**: 36.8 oz
- **J = Black Jack Propellant**

**REQUIRES 12 VOLT LAUNCH SYSTEM**

**DISPENSE OF SPENT MOTOR**

- **FIRST AID**
  - For a minor burn, apply a burn ointment. 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, delay or ejection charge, induce vomiting and see a physician as quickly as possible. The AerosTech/RCS composite rocket propellant consists of ammonium perchlorate and a rubber like plastic elastomer.

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RMS-RC™ 24/20-40 Assembly and Operation Instructions

BEFORE YOU BEGIN:

- Study the illustrations and sequence of assembly. THE SEQUENCE OF ASSEMBLY IS EXTREMELY IMPORTANT. USE RMS™ MOTORS AND RELOAD KITS ONLY IN ACCORDANCE WITH ALL INSTRUCTIONS. Review the parts list and become familiar with all parts before assembly. IF ANY PARTS ARE MISSING OR DAMAGED, CONTACT RCS AT 1 (435) 865-7100 or email at: warranty@aerotech-rocketry.com

- DO NOT MODIFY THE MOTOR OR THE RELOAD KITS IN ANY WAY! Modifications of motor or reload kit parts could result in motor failure and lead to the destruction of both your R/C vehicle and motor and will invalidate your motor warranty.

- USE ONLY AeroTech/RCS RELOAD KITS AND MOTOR PARTS TO REFURBISH YOUR RMS! The AeroTech/RCS reload kits have been designed specifically for use in your particular AeroTech/RCS RMS-RC Motor. Use of imitation components may destroy your motor, R/C vehicle and radio and will invalidate your motor warranty. Only use parts from the AeroTech/RCS reload kit intended for your specific motor. DO NOT INTERCHANGE PARTS! Do not use AeroTech/RCS reload kit parts or motor components for any other purpose than to refurbish an AeroTech/RCS RMS-RC motor.

- DO NOT REUSE ANY OF THE DISPOSABLE PARTS OF THE RELOAD KIT. This includes the liner and nozzle insert. These components have been designed for one use only and must be discarded after firing. Reuse can result in motor failure during subsequent operation and will invalidate your motor warranty.

- DO NOT USE ANY PARTS OF THE RMS-RC SYSTEM THAT ARE DAMAGED IN ANY WAY! Do not use an RMS-RC reload kit that is missing parts. If in doubt, contact RCS at the number above for assistance.

- MOTORS ARE NOT AFTER FIRING. Although the RMS-RC operates at a lower temperature than most disposable motors, the higher thermal conductivity of the aluminum motor parts may make it seem otherwise. If necessary to handle a motor before it has cooled down, use a rag or similar article.

- Comply with all federal, state and local laws in all activities with hobby rockets.

DO NOT OPEN RELOAD KITS UNTIL READY TO USE! Close reload kit bag securely after removing a set of reload components.

PARTS:

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS-RC 24/20-40 MOTOR</td>
<td></td>
</tr>
<tr>
<td>24mm Aft Closure</td>
<td>1</td>
</tr>
<tr>
<td>24mm Case</td>
<td>1</td>
</tr>
<tr>
<td>Grease</td>
<td>1 tube</td>
</tr>
</tbody>
</table>

RELOAD KIT (3-Pak)

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liner (7/8&quot; O.D. tube)</td>
<td>3</td>
</tr>
<tr>
<td>Propellant Grain (solid slotted part)</td>
<td>3</td>
</tr>
<tr>
<td>Aft O-Ring (3/32&quot; thick x 7/8&quot; O.D.) (reuse twice)</td>
<td>1</td>
</tr>
<tr>
<td>Nozzle (Black plastic part)</td>
<td>3</td>
</tr>
<tr>
<td>COPPERHEAD™ Igniter</td>
<td>3</td>
</tr>
<tr>
<td>Forward Insulator (25/32&quot; O.D. fiber disk)</td>
<td>3</td>
</tr>
</tbody>
</table>

ITEMS NEEDED FOR USE:

- Wet wipes or damp paper towels
- Remotely operated electrical ignition system

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1. Apply a light coat of grease to the Aft O-ring and all threaded surfaces. This will facilitate assembly and prevent the threads from seizing. **NOTE:** When all this grease that comes with the motor has been consumed, use petroleum jelly or similar grease.

2. Using your fingernail or a blunt object, remove the burr (rough raised edge) from both inside and outside ends of the delay insulator tube by pressing or scraping and rotating the tube at the same time.

3. Fig-1: Insert a propellant grain into the liner tube until one end is recessed approximately 1/16" from one end of the tube. The propellant grain will be flush or slightly protruding from the other end of the liner tube.

4. Fig-2: Install the forward insulator (25/32" fiber disk) into the end of the liner tube where the propellant grain is recessed 1/16" from the end of the liner tube. The forward insulator should now be flush with the end of the liner tube.

5. Fig-3: Insert the liner assembly into the motor case until it is seated against the forward end of the case, with the forward insulator disk seated as shown.

6. Fig-4: Insert the coated (black) end of a COPPERHEAD igniter into the motor case, through the slot in the propellant grain and seated against the forward insulator disk as illustrated.

7. Fig-5: Place the greased aft O-ring (3/32" thick) into the groove between the nozzle and the case.

8. Fig-6: Using the point of a pencil, remove any plastic “flashing” that may still remain in the nozzle throat. Insert the large (wide) end of the nozzle over the igniter and into the motor case until it is seated against the end of the liner assembly.

9. Fig-7: Thread the aft closure into the case until seated by hand.

10. Secure the igniter lead to the nozzle using a small piece of masking tape.