**RMS-PLUS™ HIGH-POWER Re-loadable Motor System™**

Rocket Motor Reload Kit With RMS-Plus Delay Assembly & Operation Instructions

For RMS-29/240-360 Motor Hardware

**DO NOT OPEN RELOAD KIT UNTIL READY TO USE**

**Note:** Motor designation and complete performance specifications (including sample time-thrust curve) are printed on the RMS-Plus packaging tube.

**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 16 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. **CAUTION:** Keep out of reach of children. Metalstorm™ propellants produce showers of hot sparks. Clear launch area of all combustible material for at least a 75 foot diameter radius around launcher. Follow NAR & TRA safety codes at all times. Motor hot after firing.

**Setting the Time Delay**

**Note:** If you want to use the longest (as-supplied) time delay, do not use the RMS delay drilling tool and instead proceed with general motor assembly (inside pages).

1. **WARNING:** Do not smoke and ensure that there are no open flames or heat sources nearby when setting the time delay. Assemble the AeroTech RMS delay drilling tool with the desired amount of delay time removal (i.e., the -4 or -8 seconds removal marked on the tool label) facing the exposed drill bit and delay grain.

2. **Optional:** Place the washer between the drill knob and the tool if you want to remove 2 seconds less than the value printed on the tool (i.e., -2 or -6 seconds removal).

3. Place the delay grain into the cavity in the appropriate end of the tool, hold the tool and grain firmly together and turn the drill knob several times clockwise until the drill knob sits flush against the drill tool body.

4. Remove the tool and shake out the shavings from the tool and delay grain. Dispose of the shavings by burning with a safe method and in a safe location.
**NOTE:** THE DRAWING SHOWN BELOW IS A GENERIC REPRESENTATION OF THE ACTUAL MOTOR. NOZZLE SIZE, NUMBER AND SIZE OF PROPELLANT GRAINS AND LENGTH OF DELAY GRAIN & SPACER MAY BE DIFFERENT. FOR A DETAILED ASSEMBLY DRAWING OF THIS MOTOR PLEASE VISIT THE AEROTECH WEBSITE AT WWW.AEROTECH-ROCKETRY.COM

### General Assembly Instructions

1. Lightly grease o-rings (4, 9, 10 & 16), and case and closure threads (2, 6 & 13).
2. Install forward seal disk o-ring (10) into groove on forward seal disk (8).
3. Install forward seal disk assembly (10 & 8) into one end of the liner (5).
4. Insert propellant grain(s) (7) into liner (5), then push liner assembly into case (6) until recessed equally from ends of case.
5. Install forward o-ring (9) into the end of case (6) with the forward seal disk (8).
6. Trim time delay grain (11) if desired, using AeroTech RMS Delay Drilling Tool (RDDT). **NOTE:** Drilled end of delay drain faces propellant.
7. Assemble time delay components into the forward closure (13) as shown and per the Complete Reload Delay Kit (CRDK) instructions.
8. Thread the assembled forward closure (13) into the end of the case (6) with the forward seal disk (8) and forward o-ring (9) until seated.
9. Install aft insulator (18), nozzle (3), aft o-ring (4), and aft closure (2) into open end of case (6) until seated.
10. Dispense ejection charge (14) into forward closure (13) and seal end with ejection charge cap (15).

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**Aft O-ring (4)**
1" x 1/16" 020

**Forward O-ring (9)**
1" x 3/32" 117

**Forward Seal Disk O-ring (10)**
15/16" x 1/16" 019

**Delay O-ring (16)**
21mm x 3mm
AeroTech P/N 00001

**Aft Insulator (18)**

**Forward Delay Spacer (17)**