**Chapter 1. Forward Closure Assembly**

1-1. **Fig.-1:** Apply a light coat of Synco™ Super Lube™ or other grease to all threads, sealing surfaces and o-rings. This will facilitate assembly and prevent the threads from seizing.

1-2. **Fig.-2:** Insert the smoke charge element into the smoke charge insulator until it is flush with both ends of the insulator.

1-3. **Fig.-3:** Apply a liberal amount of grease to one end of the smoke charge element and the outside of the smoke charge insulator.

1-4. **Fig.-3:** Insert the *greased* end of the smoke charge assembly into the smoke charge cavity of the forward closure until it is seated against the forward end of the cavity. Set the completed forward closure assembly aside.

**Chapter 2. Liner & Case Assembly**

2-1. **Fig.-4:** Dispense approximately 20 grams of 15 or 30 minute epoxy and mix thoroughly.

2-2. **Fig.-5:** Apply epoxy to one end of the 1" (aft chamfered) & 2" grains. **NOTE:** The chamfered end of the 1" grain faces the nozzle and is not coated with epoxy.
Chapter 2. Liner & Case Assembly (Cont’d)

2-15. Fig.-18: Place the greased forward (3/16” thick X 3-5/8” O.D.) o-ring into the forward (bulkhead) end of the case until it is seated against the forward seal disk.

2-16. Fig.-19: Thread the forward closure assembly into the forward end of the motor case by hand until it is seated against the case.

2-17. Fig.-20: Place the motor assembly in a horizontal position. Place the greased aft (3/16” thick X 3-5/8” O.D.) o-ring into the groove around the nozzle.

2-18. Fig.-21: Thread the aft closure into the aft end of the motor case by hand until it is seated against the case. NOTE: There will be considerable resistance to threading in the closure during the last 1/8” to 3/16” of travel. It is normal if a slight (1/16” to 3/32”) gap remains between the closure and the case after tightening.

Chapter 3. Preparation For Flight

3-1. Insert the coated end of a Firestar™ or other igniter through an open nozzle throat, aligned with the offset "moon" core, until it stops against the forward seal disk.

3-2. Secure the igniter to the nozzle with a piece of masking tape.

3-3. 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.

3-4. 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.

Chapter 4. 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 bags and boxes and dispose of properly.

4-1. After the motor has cooled down, unthread and remove the forward and aft closures.

4-2. Remove the smoke charge insulator from the forward closure and discard. Using wet wipes or damp paper towels, remove all delay and propellant residue from the closures.

4-3. Remove and discard the forward and aft o-rings from the motor case. Remove the liner, forward seal disk and nozzle from the casing by pushing on the nozzle end and discard. NOTE: The phenolic seal disk provided with this reload kit is designed for one use only. Using wet wipes or damp paper towels, wipe the inside of the casing to remove all propellant residue.

4-4. 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.

Chapter 5. 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, induce vomiting and see a physician as quickly as possible. The AeroTech/RCS composite propellant consists primarily of ammonium perchlorate and a rubber-like plastic elastomer.

Chapter 6. Disposal

Damaged or defective reload kits should be returned to RCS.

Chapter 7. 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 Composite Propellant Ingestion Kit and then will burn slowly. Place the greased forward (3/16” thick X 3-5/8” O.D.) o-ring into the groove around the nozzle. Damaged or defective reload kits should be returned to RCS.

Chapter 5. First Aid

Discolored or discolored not covered by this warranty. For more information, please contact RCS. Proof of purchase required. For repair or replacement under this warranty, please contact RCS. Proof of purchase will be required. Notice: Your state may provide additional rights not covered by this warranty.

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