DO NOT OPEN RELOAD KIT UNTIL READY TO USE.

PARTS:

**RMS™-75 HARDWARE**
- 75mm aft closure 1
- 75/6400 case 1
- 75mm plugged forward closure 1
- 75mm forward seal disk 1

**RELOAD PARTS KIT**
- Nozzle (large black plastic part) 1
- Liner (2-3/4" O.D. black plastic tube) 1
- Propellant grains (7/8" core) 5
- Fin & aft o-rings (1/8" thick x 2-3/4" O.D.) 2
- Forward seal disk o-ring (3/32" thick x 2-9/16" O.D.) 1
- Grain spacer o-rings (1-1/16" thick x 2-1/2" O.D.) 4
- Smoke charge (short solid part) 1
- Grain spacer insulator (1-1/2" O.D. tube) 1
- Nozzle Cap (2-1/4" dia. red cap) 1

ITEMS NEEDED FOR USE:
- Synco™ Super Lube™ or other grease
- Hobby knife
- Electrical match with/without, Firestar™ or other igniter
- Masking tape
- Wet wipes or damp paper towels

SAVE THE RELOAD KIT PLASTIC BAG FOR THE USED RELOAD PARTS. DISPOSE OF BAG AND PARTS PROPERLY.

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**Chapter 2. Case Assembly**

2.1. Fig.-4: Insert the larger diameter portion of the nozzle into one end of the liner, with the nozzle liner flange seated against the liner. **NOTE:** The M1315W uses a single large throat nozzle rather than the multiple-throat “Medusa” nozzle shown in the illustrations.

2.2. Fig.-5: Perform the remaining assembly steps with the liner held in a horizontal position. Install the propellant grains into the liner, placing the four (4) grain spacer o-rings (1/16" thick x 2-1/2" O.D.) between each propellant grain. The aft grain should be seated against the nozzle grain flange. **NOTE:** Three propellant grains are shown in all illustrations for simplicity. RMS-75/6400 motors use five (5) grains.

2.3. Fig.-6: Place the greased forward seal disk (3/32" thick x 2-3/4" O.D.) o-ring into the groove in the forward seal disk.

2.4. Fig.-7: Insert the smaller (o-ring) end of the seal disk into the open end of the liner tube until the seal disk flange is seated against the end of the liner.

2.5. Fig.-8: Push the liner assembly into the motor case until the nozzle protrudes approximately 1-3/4" from the end of the case. **NOTE:** A coating of grease on the outside surface of the liner will facilitate installation and casing cleanup after motor firing.

2.6. Fig.-9: Place the greased forward (1/8" thick x 2-3/4" O.D.) o-ring into the forward (bulkhead) end of the case until it is seated against the forward seal disk.

2.7. Fig.-10: Thread the previously-completed forward closure assembly into the forward 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.

2.8. Fig.-11: Place the greased aft (1/8" thick x 2-3/4" O.D.) o-ring into the groove in the nozzle.

2.9. Fig.-12: 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 (1/32") to (1/16") gap remains between the closure and the case, and the grains rattle slightly in the liner after tightening.
Chapter 3. Preparation For Flight
Install Igniter Against Smoke Charge.

Chapter 5. First Aid

WARNING: 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 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.

Chapter 4. Post-Recovery Cleanup

NOTE: Perform motor clean-up as soon as possible after motor firing. Propellant and smoke charge 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 smoke charge and propellant residues 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. Remove the forward seal disk from the liner, and remove and discard the forward seal disk o-ring. DO NOT DISCARD THE FORWARD SEAL DISK! Discard the nozzle and liner. Using wet wipes or damp paper towels, wipe the inside of the casing and the forward seal disk 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.

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