



ROCKETS



Century
LASER-X
SPACE PROBE

... motor, locking 70...
... 10" PARACHUTE HOODS...

\$300

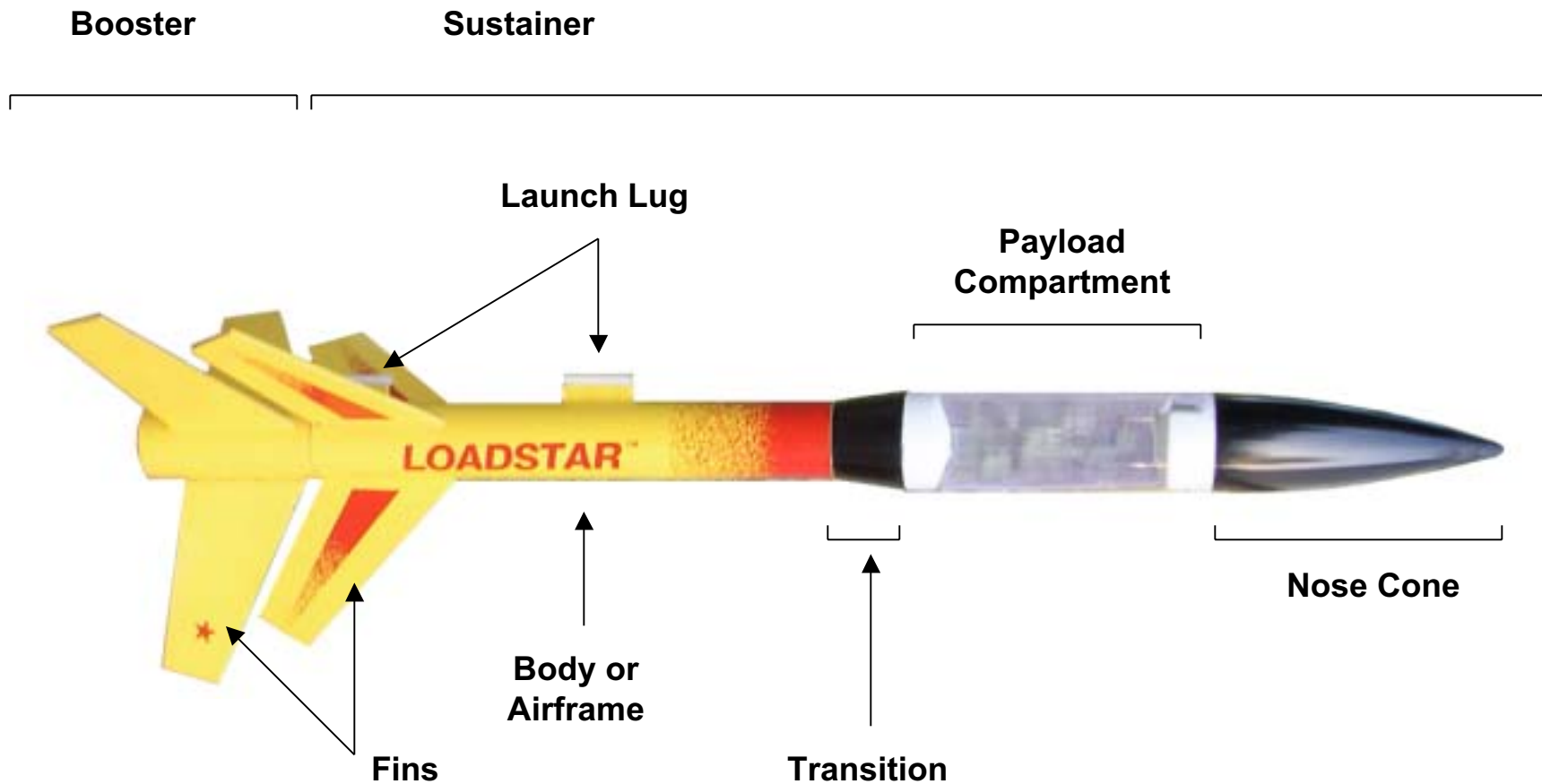
CAT NO. 4284
The '90 Year

FIG. 3-COLOR DECAL

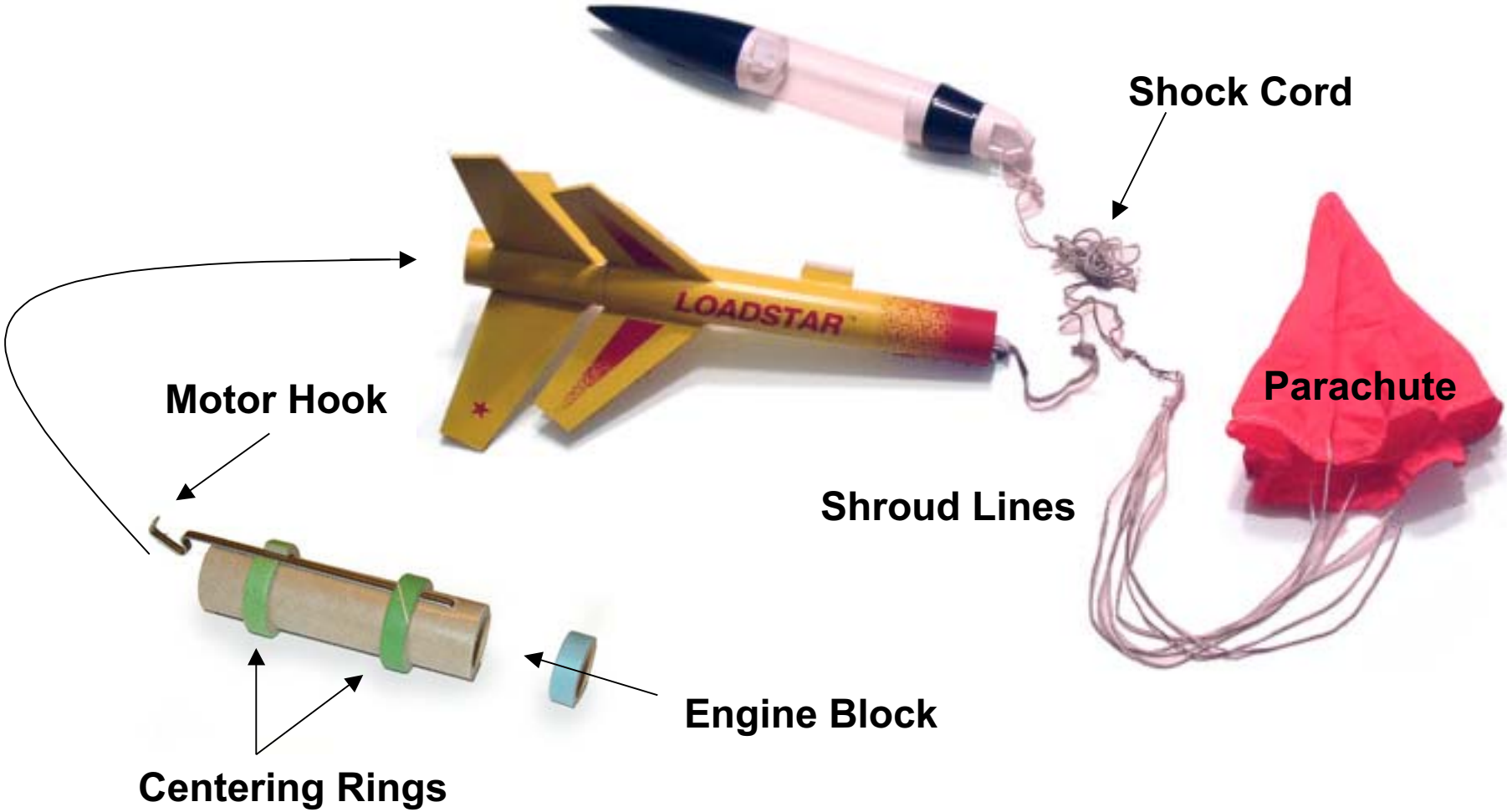
SPECIFICATIONS
Length 23 1/2"
Diameter 1 3/4"
Net Wt. 7.75 oz
Recommended Engine
A-10
A-10
C14



Parts of a Model Rocket



Internal Parts



What Makes it Go?

**Burning black powder makes
a stream of hot gasses exiting
the motor**

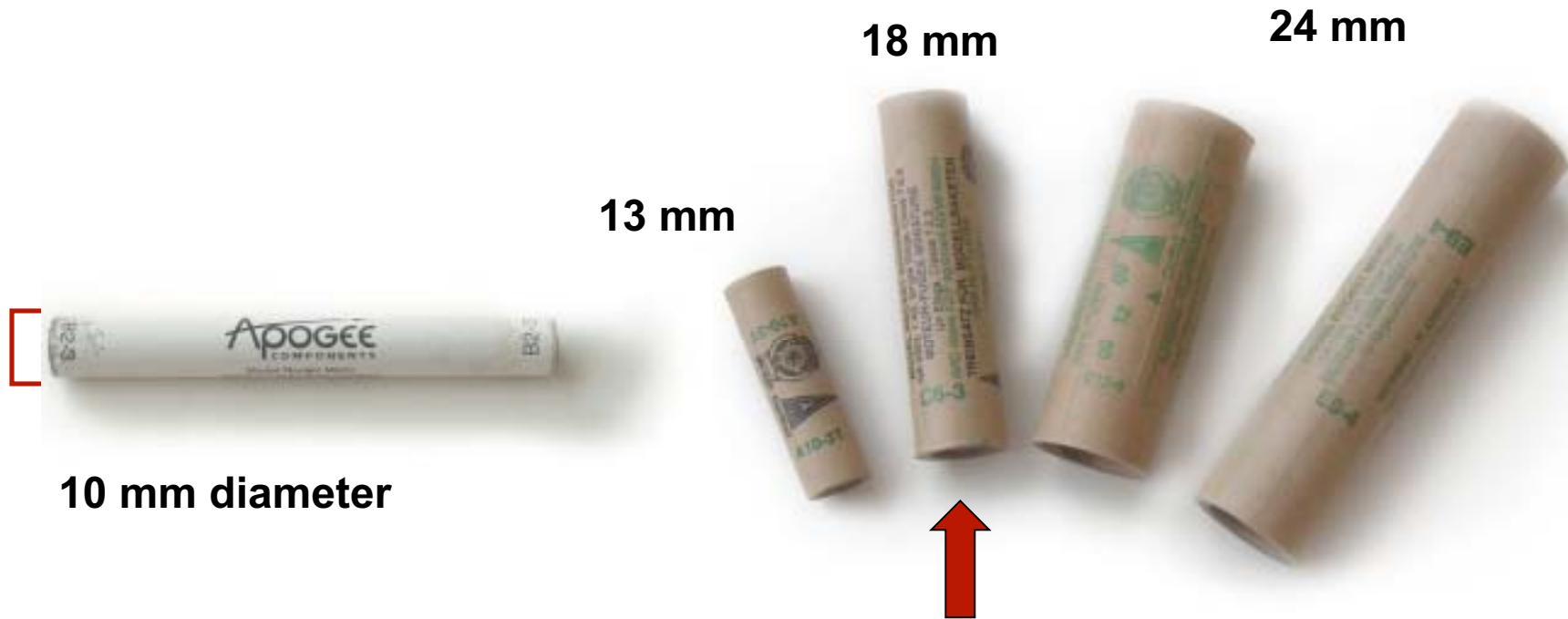


**Which cause the motor
to move forward**

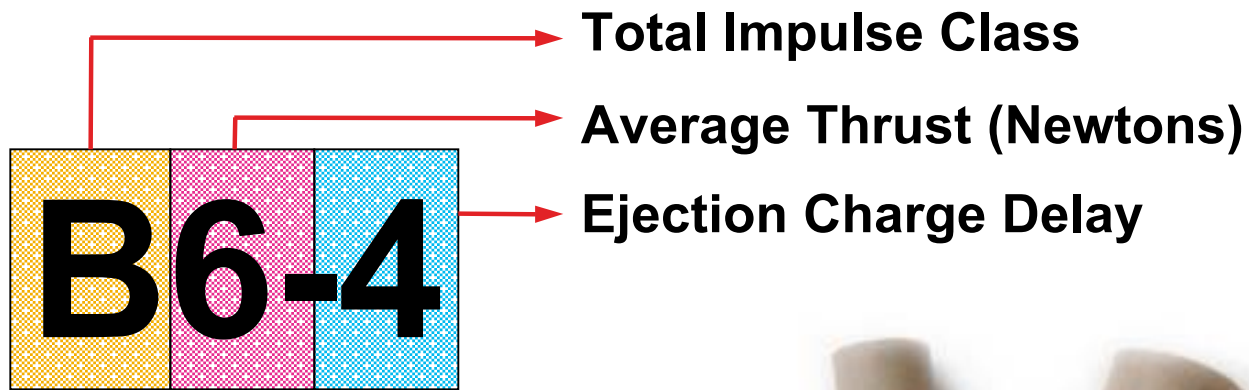
Remember Newton's third law: action  reaction

What Makes it Go?

Model rocket motors come in a variety of sizes and power ratings.



What Makes it Go?



B2



A10



C6



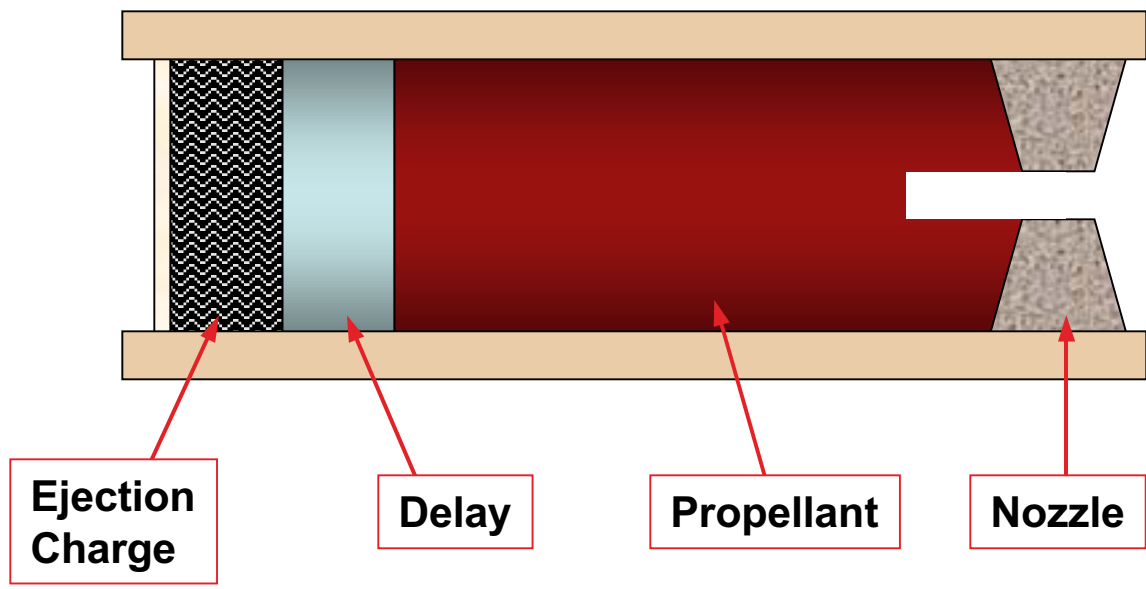
D12



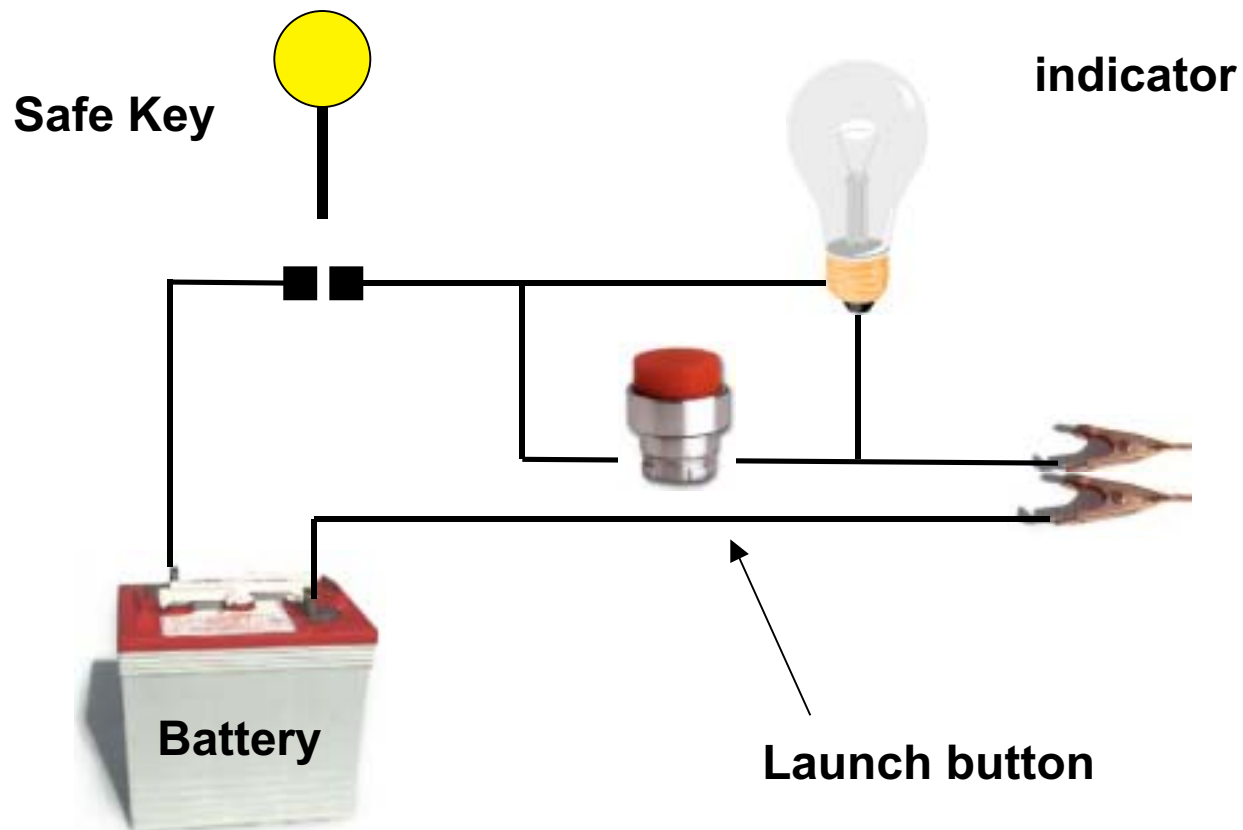
E9

Rocket Motors - What's Inside?

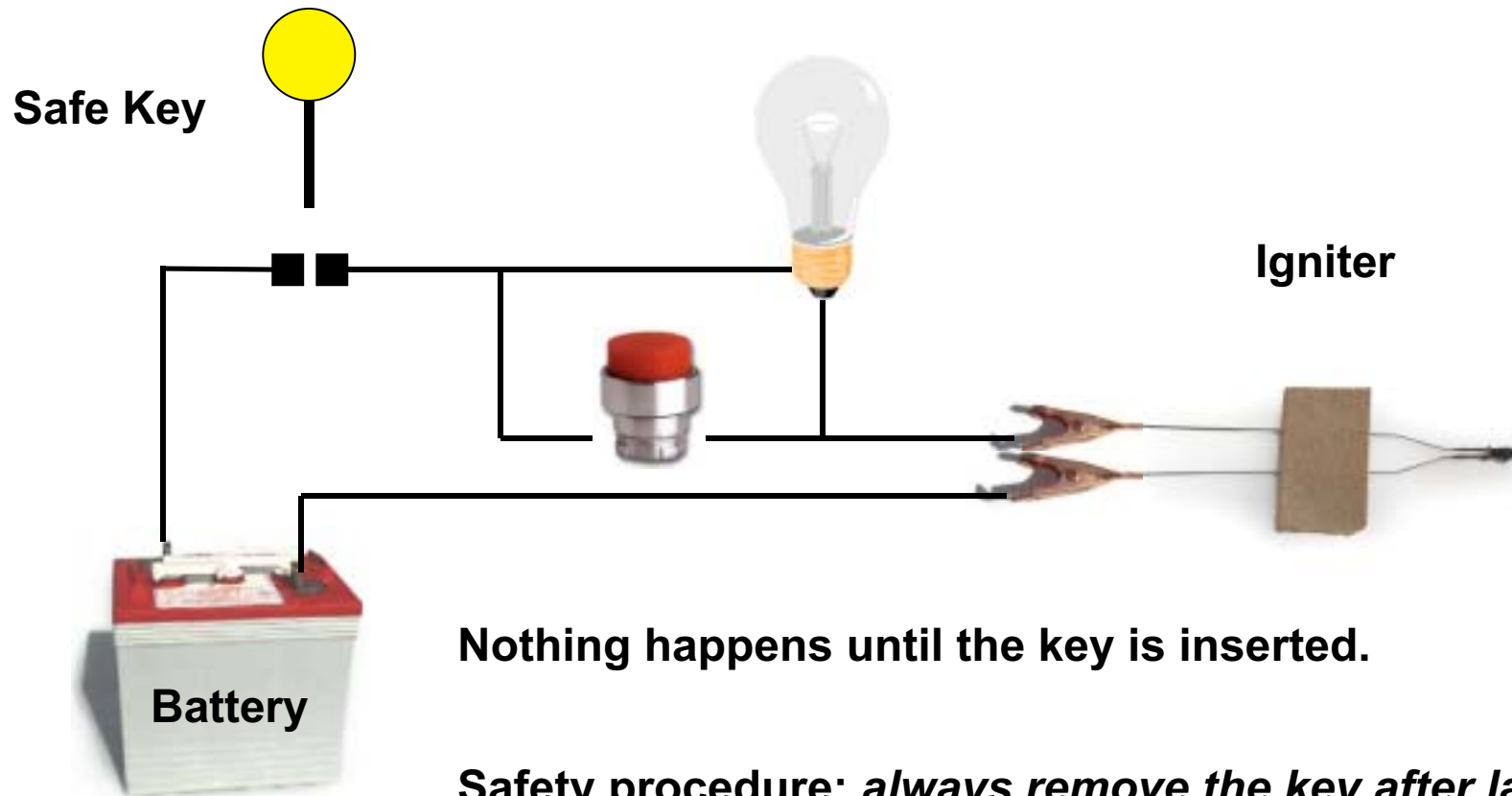
Typical Black Powder Motor



How Does the Motor Get Started?



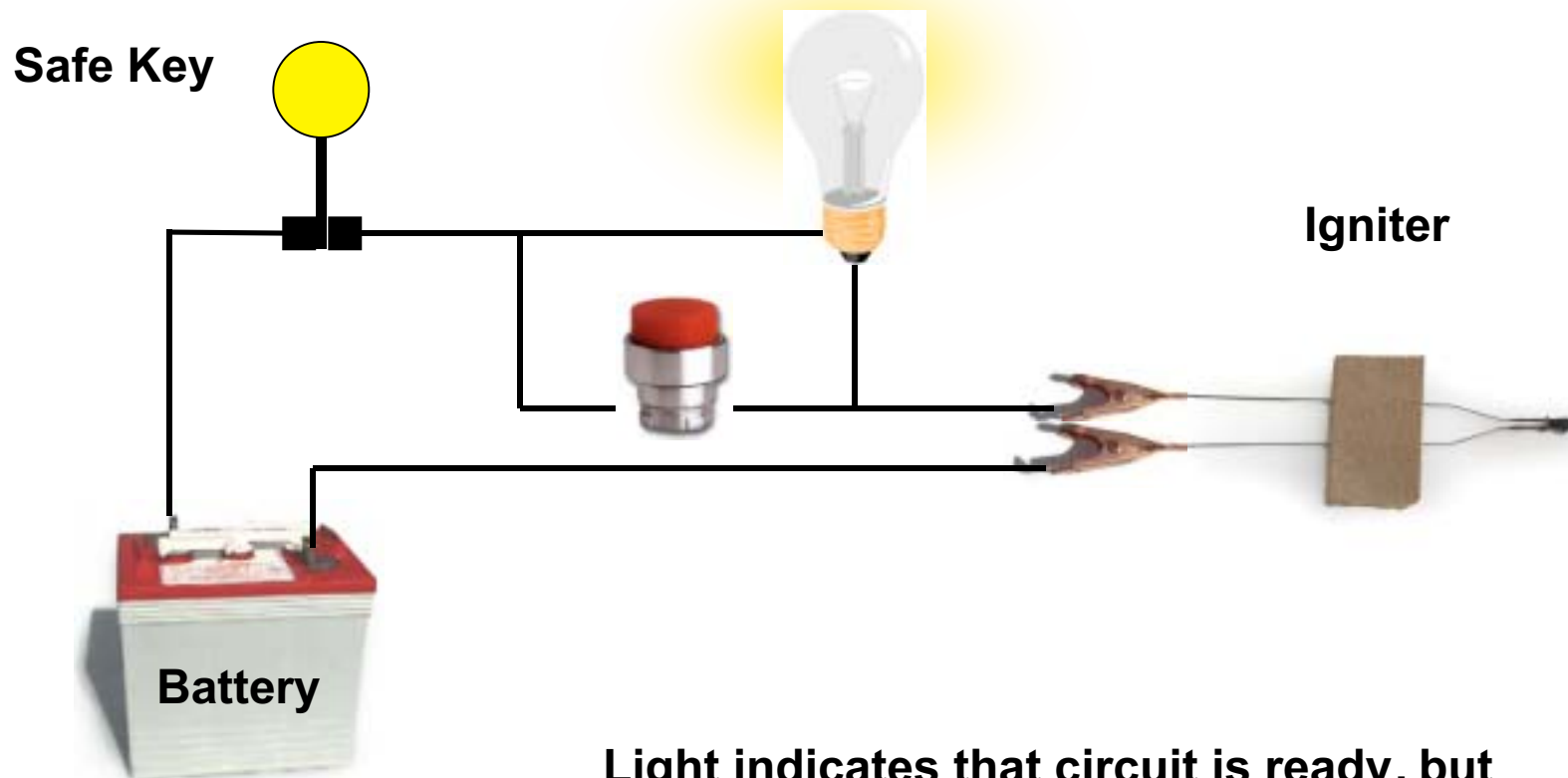
How Does the Motor Get Started?



Nothing happens until the key is inserted.

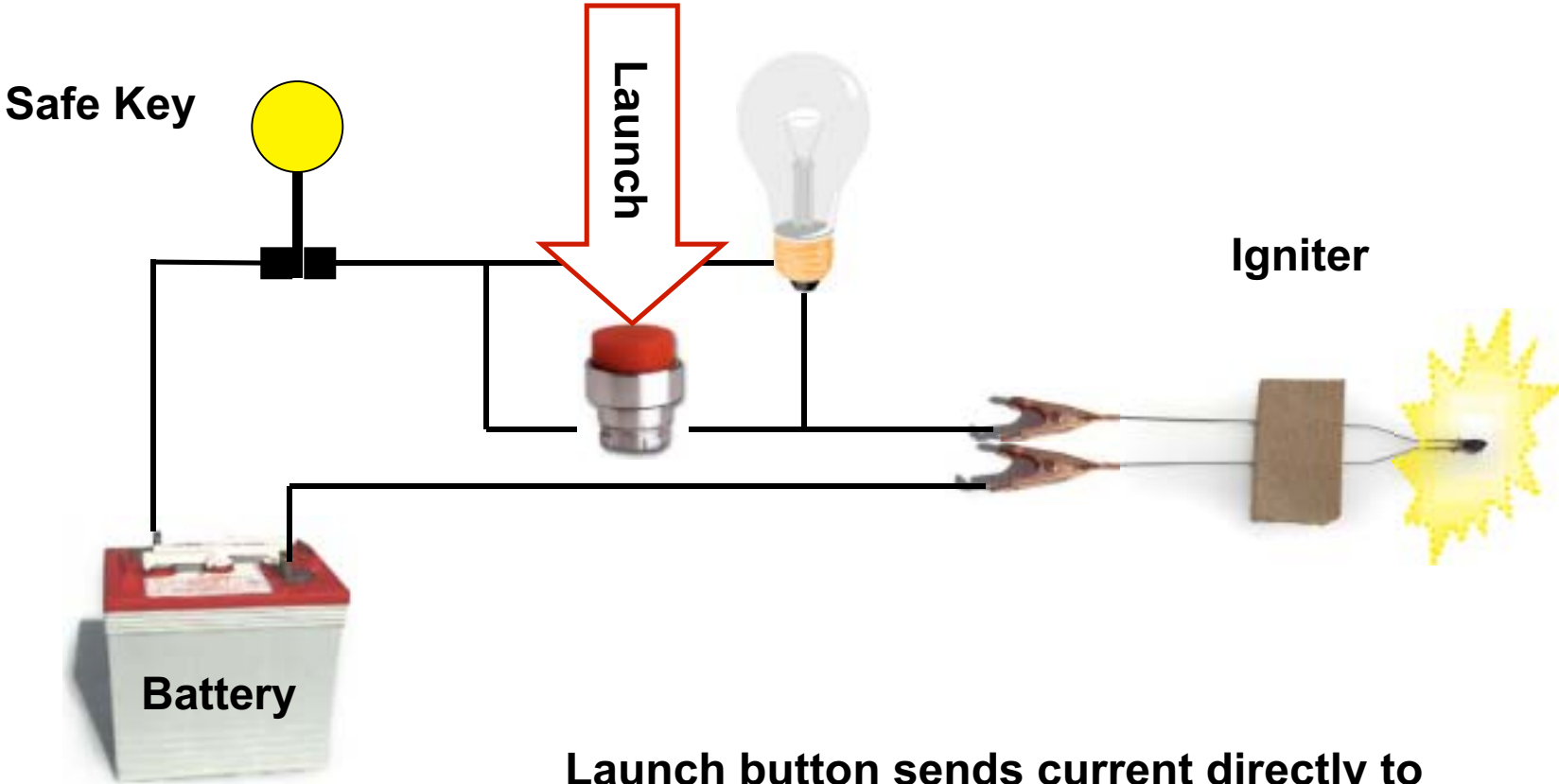
Safety procedure: *always remove the key after launch. Never clip an igniter unless the safety key is removed.*

How Does the Motor Get Started?



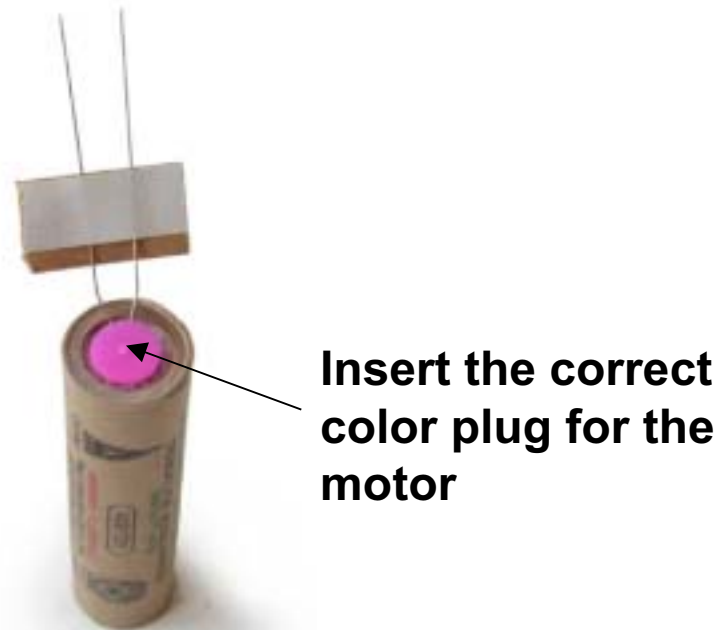
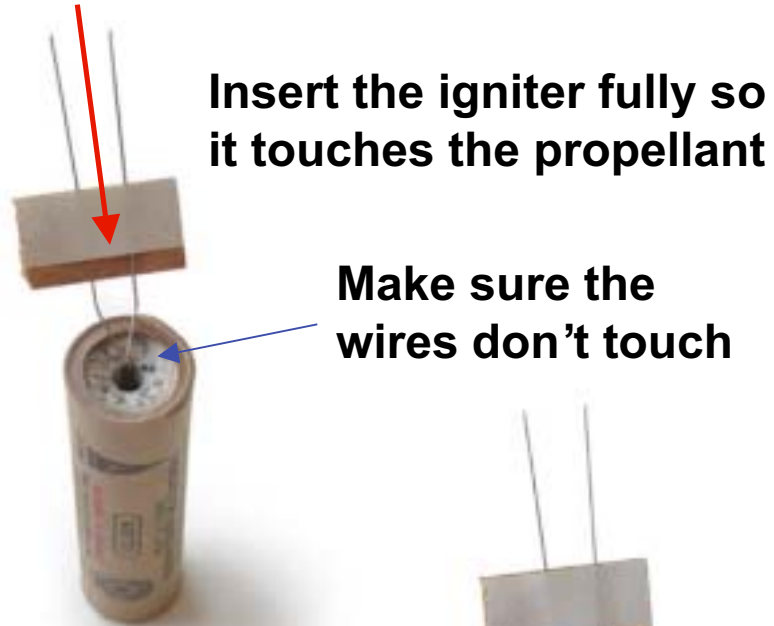
Light indicates that circuit is ready, but
bulb uses all power - igniter doesn't light

How Does the Motor Get Started?



Launch button sends current directly to the igniter, which starts the motor

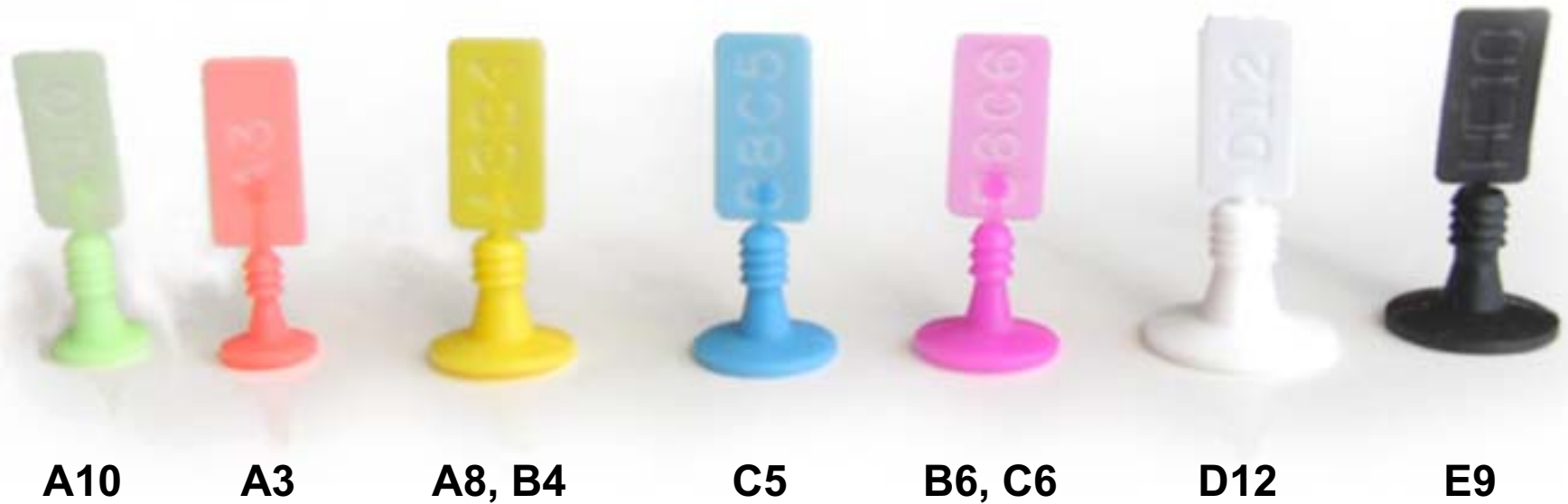
Inserting the Igniter



Clip against the paper (optional)

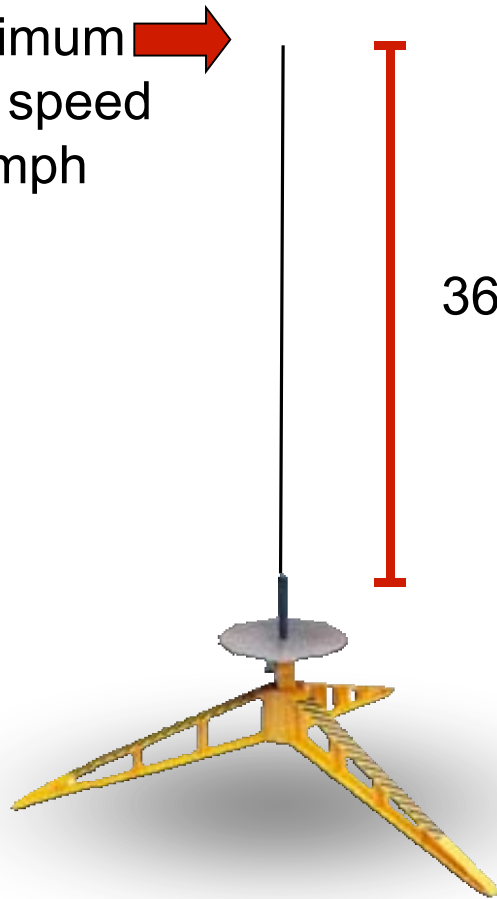


What Motor Gets What Plug?



The Launch System

Minimum
exit speed
25 mph



36 inches



A tube and guide rod are used to get the rocket started on a straight flight.
A typical rocket must be traveling at least 25 mph for the fins to become effective.

Rocket Flight Phases

