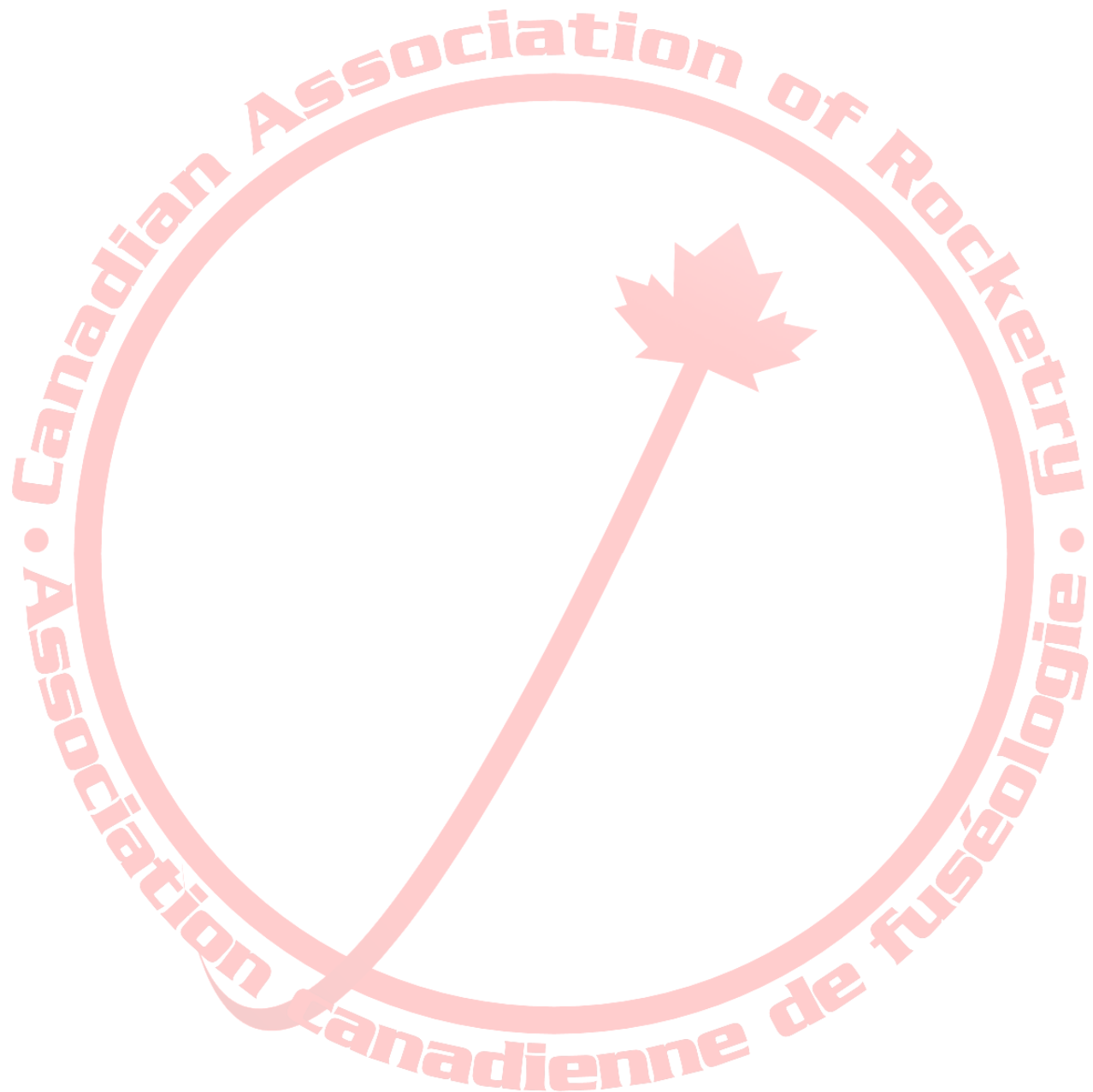


Canadian Association of Rocketry

Rocket Motor Certification



July 24, 2009 Session

Submitted to the CAR Executive July 29, 2009

Introduction

A short motor testing session was held at the Cesaroni Technology Incorporated facility in Gormley, Ontario on July 24th, 2009. Thanks to Angelo Castellano (CAR Chairman) for supervising the testing session.

Ten (10) motors were fired to certify 3 new reloads. These motors included a G, an H and an M. For this testing session, the propellants fired were Skidmark and Red Lightning.

This session included more motors at nearly full impulse (G and H) and the certification of the first reload to fit the Pro75-6G hardware, which was also cross-certified for use in Aerotech hardware.

While these motors were certified in Canada, a reciprocal agreement between the Canadian Association of Rocketry, the Tripoli Rocketry Association and the National Association of Rocketry means they may be flown in many jurisdictions. With that in mind, one of these motors includes a note that indicate it is considered high power under NFPA 1125.

I am very pleased to announce the certification of three (3) new reloads from Cesaroni Technology, Inc. Individual certification letters follow for each motor.

These letters and the accompanying thrust curves will be available on the official CAR website soon.

Respectfully submitted,

Thomas Raithby
Chair of CAR Motor Certification

www.CanadianRocketry.org

Contents

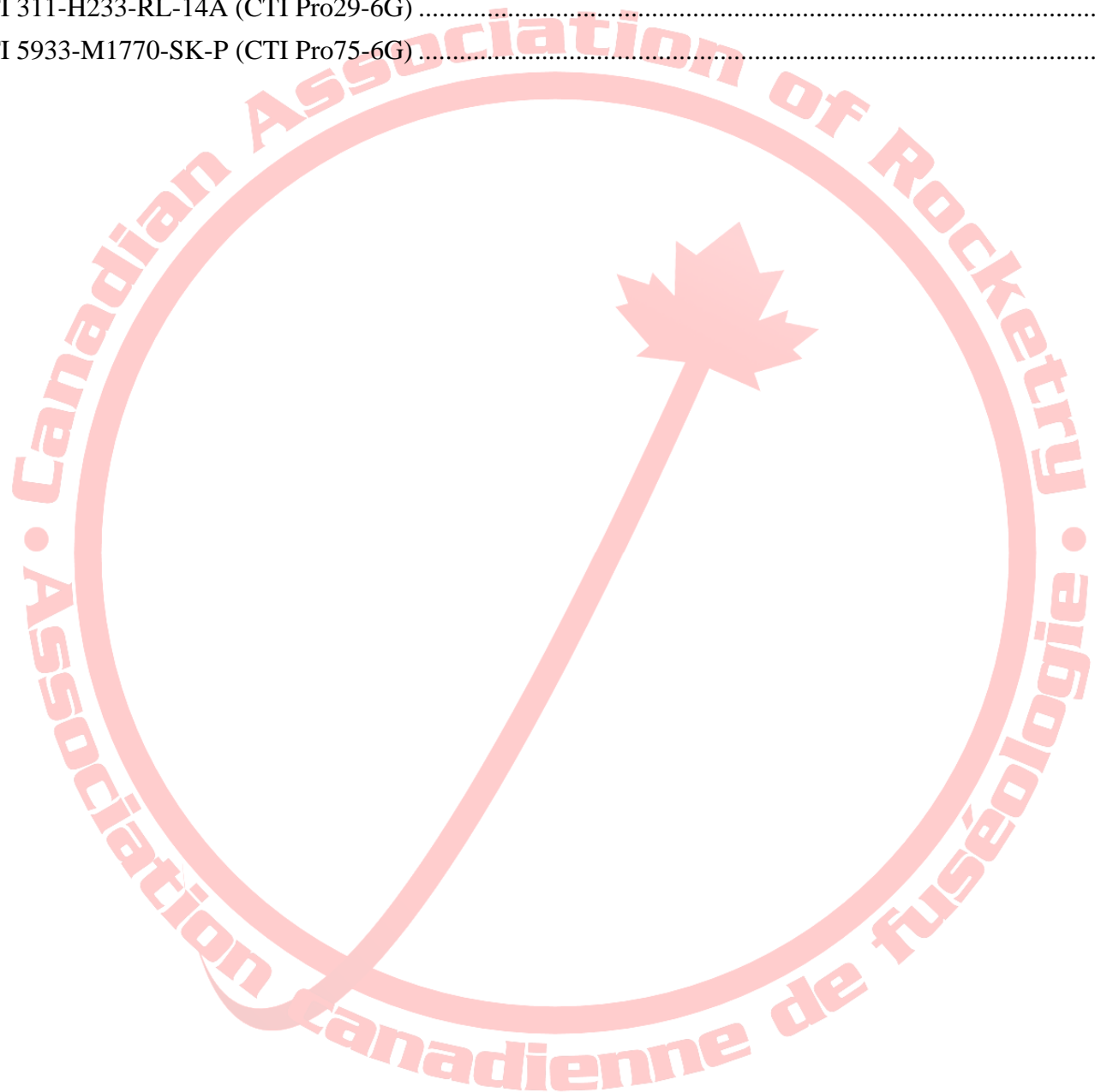
Introduction..... 2

Certified Motors..... 4

 CTI 159-G125-RL-14A (CTI Pro29-3G) 4

 CTI 311-H233-RL-14A (CTI Pro29-6G) 5

 CTI 5933-M1770-SK-P (CTI Pro75-6G) 6



Certified Motors

CTI 159-G125-RL-14A (CTI Pro29-3G)

Canadian Association of Rocketry
 CAR Motor Certification
 c/o 1518-3rd Ave. S.
 Lethbridge, AB
 T1J 0K8

July 29th, 2009

Cesaroni Technology Incorporated
 2561 Stouffville Road
 Gormley, Ontario
 L0H 1G0

Dear Dr. Jeroen Louwers,

The **CTI 159-G125-RL-14A** rocket motor was tested July 24th, 2009 and is in compliance with the certification requirements and standards of the Canadian Association of Rocketry (CAR). The motor is hereby certified for hobby rocketry use by the members of CAR and any other rocketry associations with current reciprocal motor certification agreements in place with CAR.

CAR Designation	159-G125-RL-14A	Test Date	July 24, 2009
Manufacturer Designation	159-G125-14A	Manufacturer	Cesaroni Technology Inc.
Propellant	<i>Red Lightning</i>	Hardware	Pro29-3G
Single-Use/Reload/Hybrid	Reloadable	Motor Dimensions	29mm x 187mm
Loaded Weight	194.5 g	Total Impulse	159.6 Ns
Burnout Weight	104.9 g	Maximum Thrust	171.8 N
Propellant Weight	81.9 g	Average Thrust	125.3 N
Delays Tested	14-5 seconds, adjustable	Specific Impulse (Isp)	198.7 s
Samples per second	1000	Burn time	1.27 s
Notes	99.5% G, considered NFPA 1125 (7.7.2) HP due to propellant mass and average thrust		

Respectfully submitted,

Thomas Raithby
 Chairman, CAR Motor Certification

07240905.gra

CTI 311-H233-RL-14A (CTI Pro29-6G)

Canadian Association of Rocketry
 CAR Motor Certification
 c/o 1518-3rd Ave. S.
 Lethbridge, AB
 T1J 0K8

July 29th, 2009

Cesaroni Technology Incorporated
 2561 Stouffville Road
 Gormley, Ontario
 L0H 1G0

Dear Dr. Jeroen Louwers,

The **CTI 311-H233-RL-14A** rocket motor was tested July 24th, 2009 and is in compliance with the certification requirements and standards of the Canadian Association of Rocketry (CAR). The motor is hereby certified for hobby rocketry use by the members of CAR and any other rocketry associations with current reciprocal motor certification agreements in place with CAR.

CAR Designation	311-H233-RL-14A	Test Date	July 24, 2009
Manufacturer Designation	311-H233-14A	Manufacturer	Cesaroni Technology Inc.
Propellant	<i>Red Lightning</i>	Hardware	Pro29-6G
Single-Use/Reload/Hybrid	Reloadable	Motor Dimensions	29mm x 320mm
Loaded Weight	327.6 g	Total Impulse	311.5 Ns
Burnout Weight	153.8 g	Maximum Thrust	354.7 N
Propellant Weight	163.7 g	Average Thrust	233.5 N
Delays Tested	14 to 5, adjustable	Specific Impulse (Isp)	194.01 s
Samples per second	1000	Burn time	1.33 S
Notes	94.7% H		

Respectfully submitted,

Thomas Raithby
 Chairman, CAR Motor Certification

07240909.gra

CTI 5933-M1770-SK-P (CTI Pro75-6G)

Canadian Association of Rocketry
 CAR Motor Certification
 c/o 1518-3rd Ave. S.
 Lethbridge, AB
 T1J 0K8

July 29th, 2009

Cesaroni Technology Incorporated
 2561 Stouffville Road
 Gormley, Ontario
 L0H 1G0

Dear Dr. Jeroen Louwers,

The **CTI 5933-M1770-SK-P** rocket motor was tested July 24th, 2009 and is in compliance with the certification requirements and standards of the Canadian Association of Rocketry (CAR). The motor is hereby certified for hobby rocketry use by the members of CAR and any other rocketry associations with current reciprocal motor certification agreements in place with CAR.

CAR Designation	5933-M1770-SK-P	Test Date	June 24, 2009
Manufacturer Designation	5933-M1770-P	Manufacturer	Cesaroni Technology Inc.
Propellant	<i>Skidmark</i>	Hardware	Pro75-6G / AT 75-7680
Single-Use/Reload/Hybrid	Reloadable	Motor Dimensions	75mm x 893mm (937mm)
Loaded Weight	CTI 5993.3 g / AT 6157.8 g	Total Impulse	5933.4 Ns
Burnout Weight	CTI 2385.8 g / AT 2535.3 g	Maximum Thrust	2195.2 N
Propellant Weight	3520 g	Average Thrust	1776.8 N
Delays Tested	plugged	Specific Impulse (Isp)	171.89 s
Samples per second	1000	Burn time	3.34 s
Notes	15.9% M, cross-certified in Aerotech hardware (figures for CTI / Aerotech)		

Respectfully submitted,

Thomas Raithby
 Chairman, CAR Motor Certification

07240904.gra

