

PATENT ASSIGNMENT

Electronic Version v1.1  
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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY AGREEMENT

CONVEYING PARTY DATA

Name	Execution Date
Aerojet-General Corporation	06/14/2013

RECEIVING PARTY DATA

Name:	Wells Fargo Bank, National Association
Street Address:	1525 West W.T. Harris Blvd.
Internal Address:	Mail Code NC 0680
City:	Charlotte
State/Country:	NORTH CAROLINA
Postal Code:	28262

PROPERTY NUMBERS Total: 67

Property Type	Number
Patent Number:	5332359
Patent Number:	5310265
Patent Number:	5415748
Patent Number:	5444973
Patent Number:	5473817
Patent Number:	5477613
Patent Number:	5534086
Patent Number:	5546656
Patent Number:	5557928
Patent Number:	5564753
Patent Number:	5566544
Patent Number:	5580835
Patent Number:	5582000
Patent Number:	5591380

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Patent Number:	5660040
Patent Number:	5679180
Patent Number:	5683033
Patent Number:	5801453
Patent Number:	5751113
Patent Number:	5845880
Patent Number:	5847493
Patent Number:	5881619
Patent Number:	5873241
Patent Number:	5918460
Patent Number:	5962803
Patent Number:	6053636
Patent Number:	6408760
Patent Number:	6532741
Patent Number:	6606853
Patent Number:	6627126
Patent Number:	6629673
Patent Number:	6652248
Patent Number:	6715293
Patent Number:	6807805
Patent Number:	6883330
Patent Number:	6907920
Patent Number:	7030576
Patent Number:	7051513
Patent Number:	7117680
Patent Number:	7185675
Patent Number:	7188477
Patent Number:	7204078
Patent Number:	7213392
Patent Number:	7246483
Patent Number:	7276290
Patent Number:	7299551
Patent Number:	7328571
Patent Number:	7347041
Patent Number:	7370469

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Patent Number:	7389636
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Patent Number:	7849670
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Patent Number:	7884279
Patent Number:	7490469
Patent Number:	7685820
Patent Number:	8236190
Patent Number:	8242375
Patent Number:	8281603
Patent Number:	8429894
Patent Number:	8365529
Application Number:	13180755
Application Number:	13467238
Application Number:	13299718

**CORRESPONDENCE DATA**

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ATTORNEY DOCKET NUMBER:	18464.015024
NAME OF SUBMITTER:	Mark Russell
Signature:	/Mark Russell/
Date:	06/17/2013

Total Attachments: 8  
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NOTICE  
OF  
GRANT OF SECURITY INTEREST  
IN  
PATENTS

June 14, 2013

United States Patent and Trademark Office

Gentlemen:

Please be advised that pursuant to the Second Amended and Restated Security Agreement dated as of November 18, 2011 (the “Security Agreement”) by and among GenCorp Inc., an Ohio corporation and the other Obligor party thereto (each an “Obligor” and collectively, the “Obligors”) and Wells Fargo Bank, National Association, as Administrative Agent (the “Administrative Agent”) for the lenders referenced therein (the “Lenders”), the undersigned Obligor has granted a continuing security interest in and continuing lien upon, the patents and patent applications shown below to the Administrative Agent for the ratable benefit of the Lenders:

PATENTS

<u>PATENT NO.</u>	<u>COUNTRY</u>	<u>FILING DATE</u>	<u>TITLE</u>
5332359	US	10/12/1993	STATOR ASSEMBLY FOR A ROTARY MACHINE HAVING A CENTRIFUGAL ON IMPELLER AND VOLUTE
5310265	US	4/28/1993	HEXAGONAL CLUSTER NOZZLE FOR A ROCKET ENGINE
5415748	US	2/23/1994	PROCESS FOR THE ELECTROPHORETIC DEPOSITION OF DEFECT-FREE METALLIC OXIDE COATINGS
5444973	US	12/13/1993	PRESSURE-FED ROCKET BOOSTER SYSTEM
5473817	US	3/14/1994	METHOD OF MAKING COOLED ROCKET COMBUSTION CHAMBER CONSTRUCTION
5477613	US	3/14/1994	METHOD OF SIMULTANEOUSLY FORMING ROCKET THRUST CHAMBER COOLING TUBES
5534086	US	5/1/1995	METHOD FOR MAKING A COBALT-BORIDE DISPERSION-STRENGTHENED COPPER
5546656	US	11/30/1994	FABRICATION OF ROCKET THRUST CHAMBERS
5557928	US	8/16/1994	TUBE ROCKET THRUST CHAMBER CONSTRUCTION AND METHOD
5564753	US	10/3/1991	CRYOGENIC FLUID MANIFOLD

Aerojet-General Corporation – Patents

PATENT NO.	COUNTRY	FILING DATE	TITLE
5566544	US	5/27/1994	ROCKET PREBURNER INJECTOR WITH TAILORED GAS TEMPERATURE PROFILE *
5580835	US	1/7/1991	CERAMIC FIBERS PRODUCED BY ELECTROPHORETIC DEPOSITION OF PARTICLES
5582000	US	2/8/1989	COOLABLE ROCKET NOZZLE FOR A ROCKET ENGINE
5591380	US	5/9/1995	PREPARATION OF ALUMINA-SILICA SOL GEL COMPOSITIONS
5660040	US	12/20/1994	SCRAMJET FUEL INJECTION SYSTEM HAVING INDEPENDENT FUEL SUPPLIES FOR SUPERSONIC AND HYPERSONIC OPERATION *
5679180	US	6/22/1995	I STRENGTHENED SINGLE CRYSTAL TURBINE BLADE ALLOY FOR HYDROGEN FUELED PROPULSION SYSTEMS
5683033	US	12/11/1990	ROCKET NOZZLE FOR A ROCKET ENGINE
5801453	US	6/11/1996	PROCESS FOR PREPARING SPHERICAL ENERGETIC COMPOUNDS
5751113	US	12/9/1996	CLOSED ELECTRON DRIFT HALL EFFECT PLASMA ACCELERATOR WITH ALL MAGNETIC SOURCES LOCATED
5845880	US	12/9/1996	HALL EFFECT PLASMA THRUSTER
5847493	US	12/9/1996	HALL EFFECT PLASMA ACCELERATOR
5881619	US	6/22/1993	METHOD AND APPARATUS FOR CUTTING BLOCKS OF SOLID ENERGETIC MATERIALS
5873241	US	5/23/1991	ROCKET ENGINE AUXILIARY POWER SYSTEM
5918460	US	5/5/1997	LIQUID OXYGEN GASIFYING SYSTEM FOR ROCKET ENGINES
5962803	US	3/25/1998	PROCESS FOR PREPARING SPHERICAL ENERGETIC COMPOUNDS
6053636	US	11/10/1998	HYDROSTATIC BEARING WITH COMPENSATORY FLUID INJECTION
6408760	US	12/18/1997	METHOD OF MANUFACTURING SOLID ROCKET MOTORS
6532741	US	6/29/2001	GAS GENERATOR FOR PRODUCING ADJUSTABLE FLOW
6606853	US	12/5/2002	ROCKET PROPULSION SYSTEM
6627126	US	7/16/2001	METHOD FOR PREPARING REFRACTORY CARBIDES
6629673	US	11/28/2001	ADAPTABLE SOLID-HYBRID ROCKET FOR CREW ESCAPE AND ORBITAL INJECTION PROPULSION
6652248	US	6/29/2001	CATALYST BED
6715293	US	3/28/2002	SCRAM JET ENGINE DESIGN *
6807805	US	3/11/2003	HYPERGOLIC FUEL SYSTEM
6883330	US	10/2/2002	VARIABLE GEOMETRY INLET DESIGN FOR SCRAM JET ENGINE
6907920	US	1/29/2002	HEAT EXCHANGER PANEL
7030576	US	12/2/2003	MULTICHANNEL HALL EFFECT THRUSTER
7051513	US	6/6/2003	ROCKET ENGINE TUBULAR CHAMBER WITH SINGLE PIECE JACKET

Aerojet-General Corporation – Patents

PATENT NO.	COUNTRY	FILING DATE	TITLE
7117680	US	4/22/2004	COOLING SCHEME FOR SCRAMJET VARIABLE GEOMETRY HARDWARE *
7185675	US	4/15/2004	REDUCED GAIN THRUST CONTROL VALVE
7188477	US	4/21/2004	HIGH TEMPERATURE DYNAMIC SEAL FOR SCRAMJET VARIABLE GEOMETRY *
7204078	US	7/21/2004	STAGED EMITTER-ATTRACTOR ION DRIVE
7213392	US	6/10/2003	ROCKET ENGINE COMBUSTION CHAMBER
7246483	US	7/21/2004	ENERGETIC DETONATION PROPULSION
7276290	US	8/27/2004	CRYOGENIC INSULATION
7299551	US	11/10/2004	METHOD OF ASSEMBLING A ROCKET ENGINE WITH A TRANSITION ZONE BETWEEN THE COMBUSTION CHAMBER AND THE COOLANT SYSTEM
7328571	US	11/29/2004	SEMI-AXISYMMETRIC SCRAMJET FLOWPATH WITH CONFORMAL NOZZLE
7347041	US	12/7/2005	ROCKET ENGINE COMBUSTION CHAMBER
7370469	US	12/13/2004	ROCKET CHAMBER HEAT EXCHANGER
7373774	US	2/12/2004	ENHANCED PERFORMANCE TORROIDAL COOLANT-COLLECTION MANIFOLD
7389636	US	7/6/2005	BOOSTER ROCKET ENGINE USING GASEOUS HYDROCARBON IN CATALYTICALLY ENHANCED GAS GENERATOR CYCLE
7553385	US	11/23/2004	COLD GAS DYNAMIC SPRAYING OF HIGH STRENGTH COPPER
7621119	US	6/30/2006	HEAT EXCHANGE INJECTOR FOR USE IN A ROCKET ENGINE
7685807	US	9/6/2006	THREE COMPONENT INJECTOR FOR KEROSENE-OXYGEN ROCKET ENGINE
7849670	US	4/15/2003	PROPULSION SYSTEM WITH INTEGRATED ROCKET ACCELERATOR
8122703	US	4/28/2006	COAXIAL IGNITION ASSEMBLY
7884279	US	3/16/2006	SOLAR TRACKER
7490469	US	8/7/2006	DUAL-FUNCTION STIRLING ENGINE SYSTEM
7685820	US	12/8/2006	SUPERCRITICAL CO <sub>2</sub> TURBINE FOR USE IN SOLAR POWER PLANTS
8236190	US	6/13/2008	RECAST REMOVAL METHOD
8242375	US	8/14/2012	CONDUCTIVE EMISSIONS PROTECTION
8281603	US	8/11/2008	FASTENER ASSEMBLY FOR CONNECTING ROCKET ENGINE NOZZLES
8429894	US	4/30/2013	NANO-GRAINED ALUMINUM ALLOY BELLOWS
8365529	US	2/5/2013	HIGH TEMPERATURE MOLTEN SALT RECEIVER

PATENT APPLICATIONS

<u>APPLICATION NO.</u>	<u>COUNTRY</u>	<u>FILING DATE</u>	<u>TITLE</u>
13/180,755	US	7/12/2011	AGGLOMERATOR WITH CERAMIC MATRIX COMPOSITE OBSTACLES
13/467,238	US	5/9/2012	INJECTOR HAVING MULTIPLE IMPINGEMENT LENGTHS
13/299,718	US	11/18/2011	CENTRIFUGAL IMPELLER

\* Denotes subject inventions with the U.S. government right to a non-exclusive license.



PATENT LICENSES

1. Non-exclusive IP licenses are granted to the government pursuant to certain government contracts and bids for all patents and patent applications marked with an asterisk.
2. All intellectual property rights owned by RPW Acquisition LLC will be licensed back to United Technologies Corporation pursuant to the Seller's License Agreement.
3. In Licenses:

<u>APPLICATION NO.</u>	<u>COUNTRY</u>	<u>FILING DATE</u>	<u>TITLE</u>
13/170,433	US	6/28/2011	DAMPER FOR AN INTEGRALLY BLADED ROTOR *
12174114.4	EP	6/28/2012	DAMPER FOR AN INTEGRALLY BLADED ROTOR *

\* Denotes subject inventions with the U.S. government right to a non-exclusive license.

The Obligors and the Administrative Agent, on behalf of the Lenders, hereby acknowledge and agree that the security interest in the foregoing patents and patent applications (i) may only be terminated in accordance with the terms of the Security Agreement and (ii) is not to be construed as an assignment of any patent or patent application.

[signature pages to follow]

Very truly yours,

AEROJET-GENERAL CORPORATION,  
an Ohio corporation

By: *Kathleen E. Redd*  
Name: Kathleen E. Redd  
Title: Vice President and Chief Financial Officer

Acknowledged and Accepted:

WELLS FARGO BANK, NATIONAL ASSOCIATION,  
as Administrative Agent

By: \_\_\_\_\_  
Name:  
Title:

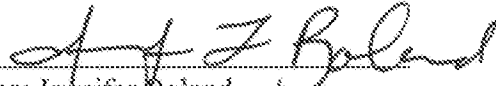
Very truly yours,

AEROJET-GENERAL CORPORATION,  
an Ohio corporation

By: \_\_\_\_\_  
Name: Kathleen E. Redd  
Title: Vice President and Chief Financial Officer

Acknowledged and Accepted:

WELLS FARGO BANK, NATIONAL ASSOCIATION,  
as Administrative Agent

By:   
Name: Jennifer Boland  
Title: Senior Vice President

{Aerojet -- First Lien -- Notice of Grant of Security Interest in Patents}