

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4993632

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENTS	
CONVEYING PARTY DATA		
Name		Execution Date
WELLS FARGO BANK, NATIONAL ASSOCIATION, AS ADMINISTRATIVE AGENT		06/06/2018
RECEIVING PARTY DATA		
Name:	ORBITAL ATK, INC.	
Street Address:	45101 WARP DRIVE	
City:	DULLES	
State/Country:	VIRGINIA	
Postal Code:	20166	
PROPERTY NUMBERS Total: 503		
Property Type	Number	
Patent Number:	6315238	
Patent Number:	7129348	
Patent Number:	5783769	
Patent Number:	5955629	
Patent Number:	7958718	
Patent Number:	5798480	
Patent Number:	6147209	
Patent Number:	5912430	
Patent Number:	6123789	
Patent Number:	5693906	
Patent Number:	5642081	
Patent Number:	5755401	
Patent Number:	5726375	
Patent Number:	6094054	
Patent Number:	5766357	
Patent Number:	5792981	
Patent Number:	6083560	
Patent Number:	5909197	
Patent Number:	5892172	
Patent Number:	6218605	

PATENT

Property Type	Number
Patent Number:	5922987
Patent Number:	6039820
Patent Number:	5961738
Patent Number:	5914459
Patent Number:	5925845
Patent Number:	6054848
Patent Number:	5870181
Patent Number:	5973649
Patent Number:	6054521
Patent Number:	5874574
Patent Number:	5936575
Patent Number:	6125228
Patent Number:	5959236
Patent Number:	6026750
Patent Number:	6793479
Patent Number:	6148729
Patent Number:	6026883
Patent Number:	6050315
Patent Number:	6088925
Patent Number:	6835255
Patent Number:	5984369
Patent Number:	6060703
Patent Number:	6136115
Patent Number:	6241833
Patent Number:	6224099
Patent Number:	6170399
Patent Number:	6096164
Patent Number:	6127864
Patent Number:	6186094
Patent Number:	6196130
Patent Number:	6125764
Patent Number:	6162314
Patent Number:	6241506
Patent Number:	6066214
Patent Number:	6357357
Patent Number:	6312247
Patent Number:	6544367
Patent Number:	6191750

Property Type	Number
Patent Number:	6220779
Patent Number:	6192684
Patent Number:	6140963
Patent Number:	6209312
Patent Number:	6094906
Patent Number:	6176168
Patent Number:	6195043
Patent Number:	6177627
Patent Number:	6264095
Patent Number:	6279214
Patent Number:	6119984
Patent Number:	6343564
Patent Number:	6107483
Patent Number:	6235359
Patent Number:	6091017
Patent Number:	6276144
Patent Number:	6272994
Patent Number:	6554936
Patent Number:	6290799
Patent Number:	6525814
Patent Number:	6394722
Patent Number:	6495259
Patent Number:	6241281
Patent Number:	7163121
Patent Number:	6352030
Patent Number:	6815522
Patent Number:	6281833
Patent Number:	6311930
Patent Number:	6795901
Patent Number:	6566420
Patent Number:	6437737
Patent Number:	6393830
Patent Number:	7004072
Patent Number:	6412650
Patent Number:	6382309
Patent Number:	6343552
Patent Number:	6360666
Patent Number:	6481327

Property Type	Number
Patent Number:	6317074
Patent Number:	6478922
Patent Number:	6481198
Patent Number:	6555803
Patent Number:	6620626
Patent Number:	6362311
Patent Number:	6432231
Patent Number:	6893597
Patent Number:	6511563
Patent Number:	6711901
Patent Number:	6632378
Patent Number:	7085689
Patent Number:	6499289
Patent Number:	6539871
Patent Number:	6997997
Patent Number:	6407711
Patent Number:	7067024
Patent Number:	6889754
Patent Number:	6951137
Patent Number:	6505560
Patent Number:	6564860
Patent Number:	6719165
Patent Number:	6651438
Patent Number:	6606851
Patent Number:	6718881
Patent Number:	7849695
Patent Number:	6761335
Patent Number:	6736913
Patent Number:	7127380
Patent Number:	6776049
Patent Number:	6619029
Patent Number:	6992185
Patent Number:	6691505
Patent Number:	6770821
Patent Number:	7149434
Patent Number:	6750293
Patent Number:	7211722
Patent Number:	6711890

Property Type	Number
Patent Number:	7051659
Patent Number:	7240564
Patent Number:	7079070
Patent Number:	6713670
Patent Number:	7082172
Patent Number:	7184493
Patent Number:	6919840
Patent Number:	6744637
Patent Number:	6787586
Patent Number:	6870061
Patent Number:	6906685
Patent Number:	7956104
Patent Number:	6959605
Patent Number:	7011722
Patent Number:	6992877
Patent Number:	6962634
Patent Number:	6915843
Patent Number:	6994324
Patent Number:	6927736
Patent Number:	6966261
Patent Number:	7159986
Patent Number:	RE43867
Patent Number:	7307117
Patent Number:	7012107
Patent Number:	7004240
Patent Number:	7459043
Patent Number:	7249943
Patent Number:	7288648
Patent Number:	6966264
Patent Number:	6782830
Patent Number:	6981672
Patent Number:	8136580
Patent Number:	7708053
Patent Number:	7337856
Patent Number:	7281367
Patent Number:	7316327
Patent Number:	7694486
Patent Number:	6951161

Property Type	Number
Patent Number:	7083753
Patent Number:	7261028
Patent Number:	6904755
Patent Number:	6997492
Patent Number:	7370584
Patent Number:	6959491
Patent Number:	7549461
Patent Number:	7513769
Patent Number:	7334523
Patent Number:	7371784
Patent Number:	7410607
Patent Number:	6984746
Patent Number:	7251889
Patent Number:	8113118
Patent Number:	7124689
Patent Number:	7545969
Patent Number:	7603951
Patent Number:	8042305
Patent Number:	7198231
Patent Number:	7197982
Patent Number:	7314004
Patent Number:	7292197
Patent Number:	7339537
Patent Number:	7397019
Patent Number:	8397798
Patent Number:	7301750
Patent Number:	7301095
Patent Number:	7848624
Patent Number:	7661464
Patent Number:	7331290
Patent Number:	7238336
Patent Number:	7205916
Patent Number:	7248994
Patent Number:	7566027
Patent Number:	7467782
Patent Number:	7882888
Patent Number:	7414593
Patent Number:	7716912

Property Type	Number
Patent Number:	7857921
Patent Number:	8172966
Patent Number:	7931072
Patent Number:	8047268
Patent Number:	7694465
Patent Number:	8408322
Patent Number:	7767746
Patent Number:	RE45318
Patent Number:	7609073
Patent Number:	7963100
Patent Number:	7744710
Patent Number:	8042594
Patent Number:	7614348
Patent Number:	7469640
Patent Number:	8122833
Patent Number:	8002026
Patent Number:	7714078
Patent Number:	7581450
Patent Number:	7726243
Patent Number:	7669532
Patent Number:	7926402
Patent Number:	7549374
Patent Number:	7552682
Patent Number:	8075715
Patent Number:	7977420
Patent Number:	8567486
Patent Number:	8012277
Patent Number:	8030521
Patent Number:	7372259
Patent Number:	8276361
Patent Number:	8226787
Patent Number:	7955617
Patent Number:	7583233
Patent Number:	7789153
Patent Number:	7884579
Patent Number:	7784404
Patent Number:	7928900
Patent Number:	7810421

Property Type	Number
Patent Number:	7845423
Patent Number:	8147135
Patent Number:	8568541
Patent Number:	8218593
Patent Number:	8540828
Patent Number:	7690308
Patent Number:	8297172
Patent Number:	7820092
Patent Number:	7819651
Patent Number:	7767128
Patent Number:	8052823
Patent Number:	7915525
Patent Number:	8203123
Patent Number:	7929586
Patent Number:	8223342
Patent Number:	8141473
Patent Number:	8438834
Patent Number:	8066055
Patent Number:	7814834
Patent Number:	7802518
Patent Number:	8882863
Patent Number:	8232924
Patent Number:	8381508
Patent Number:	8672348
Patent Number:	8585952
Patent Number:	7763753
Patent Number:	7737308
Patent Number:	7910776
Patent Number:	8443731
Patent Number:	8806747
Patent Number:	8286557
Patent Number:	8263027
Patent Number:	8697027
Patent Number:	8723722
Patent Number:	8291825
Patent Number:	8282751
Patent Number:	8420267
Patent Number:	8282757

Property Type	Number
Patent Number:	8367877
Patent Number:	8708555
Patent Number:	8109325
Patent Number:	8006462
Patent Number:	8471041
Patent Number:	8408132
Patent Number:	8539751
Patent Number:	7968620
Patent Number:	8597386
Patent Number:	8353222
Patent Number:	8596137
Patent Number:	8141490
Patent Number:	8599367
Patent Number:	8505432
Patent Number:	8366981
Patent Number:	8723493
Patent Number:	8939225
Patent Number:	8162350
Patent Number:	8470464
Patent Number:	8403269
Patent Number:	8549749
Patent Number:	8215097
Patent Number:	8524018
Patent Number:	8909385
Patent Number:	8493037
Patent Number:	8446132
Patent Number:	8587474
Patent Number:	8598245
Patent Number:	8968685
Patent Number:	8678322
Patent Number:	8658428
Patent Number:	8425702
Patent Number:	8952304
Patent Number:	8641842
Patent Number:	8627724
Patent Number:	8778103
Patent Number:	8359978
Patent Number:	8752616

Property Type	Number
Patent Number:	8616128
Patent Number:	8967284
Patent Number:	8361258
Patent Number:	8863665
Patent Number:	8721316
Patent Number:	8789797
Patent Number:	8555771
Patent Number:	8354641
Patent Number:	8868258
Patent Number:	8512497
Patent Number:	8616127
Patent Number:	8857312
Patent Number:	8985026
Patent Number:	8496208
Patent Number:	8971048
Patent Number:	8667879
Patent Number:	9074864
Patent Number:	7047885
Patent Number:	6648998
Patent Number:	6964714
Patent Number:	6881283
Patent Number:	8292217
Patent Number:	7913928
Patent Number:	8534570
Patent Number:	7095379
Patent Number:	6064352
Patent Number:	8530681
Patent Number:	8100043
Patent Number:	8210083
Patent Number:	6881374
Patent Number:	7419373
Patent Number:	7647763
Patent Number:	8033021
Patent Number:	8085828
Patent Number:	5665848
Patent Number:	5708114
Patent Number:	5928978
Patent Number:	6743393

Property Type	Number
Patent Number:	6129887
Patent Number:	6350713
Patent Number:	6294125
Patent Number:	6103178
Patent Number:	6251520
Patent Number:	6827312
Patent Number:	7628878
Patent Number:	7700202
Patent Number:	8974891
Patent Number:	8130167
Patent Number:	7888277
Patent Number:	8697024
Patent Number:	6679965
Patent Number:	8460777
Patent Number:	8999098
Patent Number:	8399312
Patent Number:	8308889
Patent Number:	9023121
Patent Number:	8658818
Patent Number:	8931415
Patent Number:	8973503
Patent Number:	8967046
Patent Number:	9038866
Patent Number:	7507842
Patent Number:	7745643
Patent Number:	8299053
Patent Number:	8178698
Patent Number:	8664247
Patent Number:	8927527
Patent Number:	5721558
Patent Number:	5907582
Patent Number:	5834923
Patent Number:	5970085
Patent Number:	6061387
Patent Number:	6667713
Patent Number:	6597258
Patent Number:	6707350
Patent Number:	6771222

Property Type	Number
Patent Number:	7369624
Patent Number:	8355359
Patent Number:	8573124
Patent Number:	8479557
Patent Number:	8483888
Patent Number:	9119277
Patent Number:	9103602
Patent Number:	9108282
Patent Number:	9133150
Patent Number:	9102571
Application Number:	13998918
Application Number:	09795690
Application Number:	11944061
Application Number:	12479251
Application Number:	12507605
Application Number:	12543938
Application Number:	12615980
Application Number:	12631030
Application Number:	12777508
Application Number:	12832251
Application Number:	13022445
Application Number:	13252825
Application Number:	13366782
Application Number:	13372804
Application Number:	13421524
Application Number:	13457996
Application Number:	13616277
Application Number:	13672411
Application Number:	13734661
Application Number:	13762030
Application Number:	13787355
Application Number:	13789147
Application Number:	13792903
Application Number:	13793816
Application Number:	13796685
Application Number:	13799519
Application Number:	13800243
Application Number:	13804148

Property Type	Number
Application Number:	13832960
Application Number:	13832992
Application Number:	13844105
Application Number:	13854632
Application Number:	13886030
Application Number:	13896621
Application Number:	14031493
Application Number:	14062635
Application Number:	14162476
Application Number:	14166521
Application Number:	14178100
Application Number:	14190417
Application Number:	14218547
Application Number:	14228627
Application Number:	14335651
Application Number:	14491246
Application Number:	14491518
Application Number:	14495063
Application Number:	14519748
Application Number:	14553785
Application Number:	14567334
Application Number:	14599395
Application Number:	14629065
Application Number:	14629297
Application Number:	14692175
Application Number:	62043975
Application Number:	62064910
Application Number:	13736723
Application Number:	14644062
Application Number:	12410283
Application Number:	12759333
Application Number:	13271416
Application Number:	13289669
Application Number:	13455831
Application Number:	13486941
Application Number:	13559321
Patent Number:	9115970
Patent Number:	9127918

Property Type	Number
Application Number:	13651814
Application Number:	13745196
Application Number:	13781217
Application Number:	13782865
Application Number:	13793891
Application Number:	13803361
Application Number:	13804331
Application Number:	13829988
Application Number:	13839176
Application Number:	13839637
Application Number:	13840672
Application Number:	13841794
Application Number:	14227988
Application Number:	14606601
Application Number:	14641214
Application Number:	14679341
Application Number:	13599709
Application Number:	14584177
Application Number:	13558080
Application Number:	13740672
Application Number:	13834214
Application Number:	13858438
Application Number:	14211271
Application Number:	14212397
Application Number:	14496071
Application Number:	14642225
Application Number:	62151969

CORRESPONDENCE DATA

Fax Number: (800)494-7512

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 202-370-4750

Email: ipteam@cogencyglobal.com

Correspondent Name: MELONY SOT

Address Line 1: 1025 VERMONT AVE NW, SUITE 1130

Address Line 2: COGENCY GLOBAL INC.

Address Line 4: WASHINGTON, D.C. 20005

ATTORNEY DOCKET NUMBER:	F177413 PT
--------------------------------	------------

NAME OF SUBMITTER:	RACHEL KLEIN
SIGNATURE:	/Rachel Klein/
DATE SIGNED:	06/06/2018

Total Attachments: 42

source=Orbital ATK - Patent Release - [EXECUTED]_flat#page2.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page3.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page4.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page5.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page6.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page7.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page8.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page9.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page10.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page11.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page12.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page13.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page14.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page15.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page16.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page17.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page18.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page19.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page20.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page21.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page22.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page23.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page24.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page25.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page26.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page27.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page28.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page29.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page30.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page31.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page32.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page33.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page34.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page35.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page36.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page37.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page38.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page39.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page40.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page41.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page42.tif
source=Orbital ATK - Patent Release - [EXECUTED]_flat#page43.tif

TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENTS

This TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENTS (this “Termination and Release”), dated as of June 6, 2018 (the “Effective Date”), is made by Wells Fargo Bank, National Association, in its capacity as Administrative Agent (the “Administrative Agent”), in favor of Orbital ATK, Inc., a Delaware corporation, and Orbital Sciences Corporation, a Delaware corporation (collectively, the “Grantors”).

WHEREAS, pursuant to that certain Security and Pledge Agreement, dated as of September 29, 2015, by and among the Administrative Agent, the Grantors and certain other parties thereto (as amended, amended and restated, or otherwise modified from time to time, the “Security Agreement”), each Grantor granted to the Administrative Agent a security interest in and to certain collateral;

WHEREAS, pursuant to the Security Agreement, the Grantors and the Administrative Agent executed and delivered a Notice of Grant of Security Interest in Patents, dated as of September 29, 2015 (the “Patent Security Agreement”), for recordal with the United States Patent and Trademark Office; and

WHEREAS, the Patent Security Agreement was recorded with the United States Patent and Trademark Office on September 30, 2015 at Reel/Frame 036732/0170;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Administrative Agent hereby agrees as follows:

1. Defined Terms. All capitalized terms used, but not otherwise defined herein, shall have the respective meanings ascribed in or otherwise referenced in the Security Agreement or the Patent Security Agreement, as applicable.

2. Release. The Administrative Agent, without representation or warranty of any kind, hereby releases, discharges, terminates, relinquishes and cancels all of its security interest in and to the patents and patent applications set forth on Schedule 1 to the Patent Security Agreement, and any other patents, patent applications, or patent rights subject to the Patent Security Agreement (the “Patent Collateral”), including but not limited to the patents and patent applications set forth on Schedule A attached hereto, arising under the Security Agreement and the Patent Security Agreement. If and to the extent that the Administrative Agent has acquired any right, title or interest in and to the Patent Collateral under the Security Agreement or the Patent Security Agreement, the Administrative Agent, without representation or warranty of any kind, hereby re-transfers, re-conveys and re-assigns such right, title or interest to the applicable Grantor.

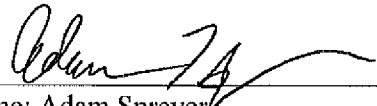
3. Termination. The Administrative Agent, without representation or warranty of any kind, hereby terminates and cancels the Patent Security Agreement.

4. Further Assurances. The Administrative Agent agrees to take all further actions, and provide to the Grantors and their respective successors, assigns or other legal representatives, all such cooperation and assistance (including, without limitation, the execution and delivery of any and all documents or other instruments), reasonably requested by the Grantors, at the Grantors’ sole cost and expense, to more fully and effectively effectuate the purposes of this Termination and Release.

5. Governing Law. This Termination and Release shall be governed exclusively under the laws of New York, without regard to conflicts of law or choice of law principles.

IN WITNESS WHEREOF, the Administrative Agent has caused this Termination and Release to be executed by its duly authorized representative as of the Effective Date:

**WELLS FARGO BANK, NATIONAL
ASSOCIATION**, acting in its capacity as Administra-
tive Agent for the holders of the Secured Obligations

By: 
Name: Adam Spreyer
Title: Director

[Patent Release Signature Page]

**PATENT
REEL: 046477 FRAME: 0891**

SCHEDULE A

U.S. Patents:

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
1.	Thrusting Apparatus	6315238	13-Nov-2001	07/212468	28-Jun-1988	Alliant Techsystems Inc.
2.	Polycyclic, Polyamides As Precursors For Energetic Polycyclic Polynitramine Oxidizers	7129348	31-Oct-2006	07/292028	21-Dec-1988	Orbital ATK, Inc.
3.	Solid Propellant With Non-Crystalline Polyether/Energetic Plasticizer Binder	5783769	21-Jul-1998	07/326852	17-Mar-1989	Alliant Techsystems Inc.
4.	Energetic Binders	5955629	21-Sep-1999	07/343977	26-Apr-1989	Alliant Techsystems Inc.
5.	Precision Controlled Variable Thrust Solid Propellant Rocket Motor	7958718	14-Jun-2011	07/376813	07-Jul-1989	Orbital ATK, Inc.
6.	High Performance Space Motor Propellants	5798480	25-Aug-1998	07/561973	02-Aug-1990	Orbital ATK, Inc.
7.	Method For Making New Polycyclic Polyamides As Precursors For Energetic Polycyclic Polynitramine Oxidizers	6147209	14-Nov-2000	07/989369	08-Dec-1992	Orbital ATK, Inc.
8.	Pressable Infrared Illuminant Compositions	5912430	15-Jun-1999	08/386327	10-Feb-1995	Orbital ATK, Inc.
9.	Castable Infrared Illuminant Compositions	6123789	26-Sep-2000	08/386328	10-Feb-1995	Orbital ATK, Inc.
10.	Electro-Mechanical Safety and Arming Device	5693906	02-Dec-1997	08/535744	28-Sep-1995	Alliant Techsystems Inc.
11.	FMCW VCO Closed Loop Linearizer	5642081	24-Jun-1997	08/548428	26-Oct-1995	Alliant Techsystems Inc.
12.	Missile Diverter Integration Method and System	5755401	26-May-1998	08/551006	31-Oct-1995	Orbital ATK, Inc.
13.	Gun Barrel Shrouding System	5726375	10-Mar-1998	08/662603	13-Jun-1996	Alliant Techsystems Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
14.	Radome Nose Cone Probe Apparatus For Use With Electrostatic Sensor	6094054	25-Jul-2000	08/668690	24-Jun-1996	Alliant Techsystems Inc.
15.	Apparatus For Fiber Impregnation	5766357	16-Jun-1998	08/716027	19-Sep-1996	Alliant Techsystems Inc.
16.	Gun-Launched Rocket	5792981	11-Aug-1998	08/739469	28-Oct-1996	Orbital ATK, Inc.
17.	Process For Controlled Deposition Profile Forced Flow Chemical Vapor Infiltration	6083560	04-Jul-2000	08/752450	15-Nov-1996	Alliant Techsystems Inc.
18.	Deployable Helical Antenna Stowage in a Compact Retracted Configuration	5909197	01-Jun-1999	08/832982	04-Apr-1997	Orbital ATK, Inc.
19.	Improved Propellant System	5892172	06-Apr-1999	08/841431	22-Apr-1997	Alliant Techsystems Inc.
20.	Performance Optimizing System For a Satellite Solar Array	6218605	17-Apr-2001	08/841526	23-Apr-1997	Orbital ATK, Inc.
21.	Hydraulic Traverse and Elevation Mechanism	5922987	13-Jul-1999	08/862736	23-May-1997	Alliant Techsystems Inc.
22.	Metal Complexes For Use as Gas Generants	6039820	21-Mar-2000	08/899599	24-Jul-1997	Orbital ATK, Inc.
23.	Solar Array For Satellite Vehicles	5961738	05-Oct-1999	08/903123	30-Jul-1997	Orbital ATK, Inc.
24.	Acceleration/Deceleration Sensing Switch For Munitions	5914459	22-Jun-1999	08/905173	01-Aug-1997	Alliant Techsystems Inc.
25.	Shoot-Through Cover For An Explosively Formed Penetrator Warhead	5925845	20-Jul-1999	08/905174	01-Aug-1997	Alliant Techsystems Inc.
26.	Method and Apparatus For Detecting Electromagnetic Waves	6054848	25-Apr-2000	08/927145	03-Sep-1997	Alliant Techsystems Inc.
27.	Acoustic-Optical Scanning of Linear Detector Array For Laser Radar	5870181	09-Feb-1999	08/958956	28-Oct-1997	Alliant Techsystems Inc.
28.	Common Aperture Dual Mode Semi-Active Laser/Millimeter Wave Sensor	5973649	26-Oct-1999	08/959602	28-Oct-1997	Alliant Techsystems Inc.
29.	Erosion Resistant-Low Signature Liner For Solid Propellant Rocket Motors	6054521	25-Apr-2000	08/986875	08-Dec-1997	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
30.	Process Of Crystallizing 2,4,6,8,10,12-Hexanitro-2,4,6,8,10,12-Hexaazatetracyclo-5.5.0.0.5,903,111-Dodecane	5874574	23-Feb-1999	08/991432	16-Dec-1997	Orbital ATK, Inc.
31.	Apparatus and Method For Determining Angles-of-Arrival and Polarization of Incoming RF Signals	5936575	10-Aug-1999	09/023381	13-Feb-1998	Orbital ATK, Inc.
32.	Apparatus For Beam Splitting, Combining Wavelength Division Multiplexing and Demultiplexing	6125228	26-Sep-2000	09/035236	04-Mar-1998	Orbital ATK, Inc.
33.	Through Bulkhead Initiator	5959236	28-Sep-1999	09/052644	31-Mar-1998	Alliant Techsystems Inc.
34.	Shaped Charge Liner With Integral Initiation Mechanism	6026750	22-Feb-2000	09/053165	01-Apr-1998	Alliant Techsystems Inc.
35.	Remotely Actuated Localized Pressure and Heat Apparatus and Method of Use	6793479	21-Sep-2004	09/062046	17-Apr-1998	Alliant Techsystems Inc.
36.	Missile Severance Device	6148729	21-Nov-2000	09/067854	27-Apr-1998	Alliant Techsystems Inc.
37.	Self-Contained Apparatus For Fiber Element Placement	6026883	22-Feb-2000	09/070421	30-Apr-1998	Orbital ATK, Inc.
38.	Method and Apparatus For Producing Fiber Reinforced Structures	6050315	18-Apr-2000	09/070445	30-Apr-1998	Alliant Techsystems Inc.
39.	Capture Feature Tang Seal Defect Measurement Tool	6088925	18-Jul-2000	09/086572	29-May-1998	Orbital ATK, Inc.
40.	Reduced Energy Binder For Energetic Compositions	6835255	28-Dec-2004	09/088163	01-Jun-1998	Alliant Techsystems Inc.
41.	Assembly Including Tubular Bodies and Mated with a Compression Loaded Adhesive Bond	5984369	16-Nov-1999	09/094569	15-Jun-1998	Orbital ATK, Inc.
42.	Coaxial Unfocused Optical Sensor For Dual Mode Seekers	6060703	09-May-2000	09/107009	29-Jun-1998	Alliant Techsystems Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
43.	Thermally-Stabilized Prilled Ammonium Dinitramide Particles, and Process For Making the Same	6136115	24-Oct-2000	09/108383	01-Jul-1998	Orbital ATK, Inc.
44.	High Energy Gun Propellants	6241833	05-Jun-2001	09/116744	16-Jul-1998	Alliant Techsystems Inc.
45.	Supplemental-Restraint-System Gas Generating Device With Water-Soluble Polymeric Binder	6224099	01-May-2001	09/119517	21-Jul-1998	Orbital ATK, Inc.
46.	Flares Having Igniters Formed From Extrudable Igniter Compositions	6170399	09-Jan-2001	09/119518	21-Jul-1998	Orbital ATK, Inc.
47.	Multiple Axes Fiber Placement Machine	6096164	01-Aug-2000	09/135068	17-Aug-1998	Orbital ATK, Inc.
48.	Temporally Redundant Latch For Preventing Single Event Disruptions in Sequential Integrated Circuits	6127864	03-Oct-2000	09/136872	19-Aug-1998	Alliant Techsystems Inc.
49.	Sabot Anti-Splitting Ring	6186094	13-Feb-2001	09/140512	26-Aug-1998	Alliant Techsystems Inc.
50.	Electrostatic Arming Apparatus For an Explosive Projectile	6196130	06-Mar-2001	09/158048	22-Sep-1998	Alliant Techsystems Inc.
51.	Simplified Tailored Composite Architecture	6125764	03-Oct-2000	09/160952	25-Sep-1998	Alliant Techsystems Inc.
52.	Thermal Welding of Fiber Reinforced Thermoplastic Prepreg	6162314	19-Dec-2000	09/162680	29-Sep-1998	Alliant Techsystems Inc.
53.	Compression Mold	6241506	05-Jun-2001	09/162931	29-Sep-1998	Alliant Techsystems Inc.
54.	Solid Rocket Propellant	6066214	23-May-2000	09/183750	30-Oct-1998	Alliant Techsystems Inc.
55.	Improved Propulsion System	6357357	19-Mar-2002	09/227070	05-Jan-1999	Alliant Techsystems Inc.
56.	Vacuum Debulking Table For Thermoplastic Materials	6312247	06-Nov-2001	09/240164	29-Jan-1999	Alliant Techsystems Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
57.	Overwrap Tape End-Effector For Fiber Placement/Winding Machines	6544367	08-Apr-2003	09/241830	01-Feb-1999	Alliant Techsystems Inc.
58.	Traveling Wave Slot Antenna and Method of Making Same	6191750	20-Feb-2001	09/262163	03-Mar-1999	Alliant Techsystems Inc.
59.	Joint For Connecting Extrudable Segments	6220779	24-Apr-2001	09/263212	05-Mar-1999	Orbital ATK, Inc.
60.	Mechanical Actuator Assembly	6192684	27-Feb-2001	09/271549	18-Mar-1999	Orbital ATK, Inc.
61.	Ambiguity Removal and Angles-of-Arrival Estimation For Radially Polarized Conformal Arrays	6140963	31-Oct-2000	09/287256	07-Apr-1999	Orbital ATK, Inc.
62.	Rocket Motor Throat Assembly With Zero Or Very Low Erosion Flow Surfaces	6209312	03-Apr-2001	09/288330	08-Apr-1999	Alliant Techsystems Inc.
63.	Gun-Launched Rocket	6094906	01-Aug-2000	09/301157	28-Apr-1999	Orbital ATK, Inc.
64.	Transmitter Coil, Improved Fuze Setter Circuitry for Adaptively Tuning the Fuze Setter for Resonance and Current Difference Circuitry for Interpreting a Fuze Talkback Message	6176168	23-Jan-2001	09/302136	29-Apr-1999	Alliant Techsystems Inc.
65.	AOA Estimation and Polarization Induced Phase Correction Using a Conformal Array of Titled Antenna Elements	6195043	27-Feb-2001	09/311139	13-May-1999	Orbital ATK, Inc.
66.	Solar Cell Array With Multiple Rows of Cells and Collapsible Reflectors	6177627	23-Jan-2001	09/337624	21-Jun-1999	Orbital ATK, Inc.
67.	High Temperature Isostatic Pressure Bonding of Beryllium Pressure Vessels With an Interior Void	6264095	24-Jul-2001	09/350349	14-Jul-1999	Orbital ATK, Inc.
68.	Moisture Seal For Composite Sabot With Depleted Uranium Penetrator	6279214	28-Aug-2001	09/353695	14-Jul-1999	Alliant Techsystems Inc.
69.	Low Shock Anti-Friction Release Device	6119984	19-Sep-2000	09/356200	16-Jul-1999	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
70.	Ammunition Detector	6343564	05-Feb-2002	09/360756	26-Jul-1999	Alliant Techsystems Inc.
71.	Process For The Large Scale Synthesis Of 4,10-Dinitro-2,6,8,12-Tetraoxa-4,10-Diazatetracyclo-[5.5.0.0.5,903,11]-Dodecane	6107483	22-Aug-2000	09/362083	28-Jul-1999	Orbital ATK, Inc.
72.	Rocket Assembly Ablative Materials Formed From, as a Precursor, Staple Cellulosic Fibers, and Method of Insulating or Thermally Protecting a Rocket Assembly With the Same	6235359	22-May-2001	09/377186	19-Aug-1999	Orbital ATK, Inc.
73.	Solar Concentrator Array	6091017	18-Jul-2000	09/379254	23-Aug-1999	Alliant Techsystems Inc.
74.	Cryogenic Thermal Switch Employing Materials Having Differing Coefficients of Thermal Expansion	6276144	21-Aug-2001	09/383897	26-Aug-1999	Orbital ATK, Inc.
75.	Plastic Liner For Bayonet Primers	6272994	14-Aug-2001	09/386810	31-Aug-1999	Alliant Techsystems Inc.
76.	Method of Constructing Insulated Metal Dome Structure For a Rocket Motor	6554936	29-Apr-2003	09/391979	08-Sep-1999	Orbital ATK, Inc.
77.	Method and Apparatus For Producing Fiber Reinforced Structures	6290799	18-Sep-2001	09/399691	21-Sep-1999	Alliant Techsystems Inc.
78.	Apparatus and Method For Producing a Spectrally Variable Radiation Source and Systems Including Same	6525814	25-Feb-2003	09/425595	22-Oct-1999	Alliant Techsystems Inc.
79.	Anti-Distortion Insert For Mounting Optical Elements on a Honeycomb Panel	6394722	28-May-2002	09/427390	26-Oct-1999	Orbital ATK, Inc.
80.	Rubber-Epoxy Bonding Via an Interfacial Layer Containing Acrylates	6495259	17-Dec-2002	09/433321	03-Nov-1999	Orbital ATK, Inc.
81.	Metal Complexes For Use as Gas Generants	6241281	05-Jun-2001	09/434274	05-Nov-1999	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
82.	High Temperature Isostatic Pressure Bonding of Hollow Beryllium Pressure Vessels Using a Bonding Flange	7163121	16-Jan-2007	09/434507	05-Nov-1999	Orbital ATK, Inc.
83.	Gas Generating Eject Motor	6352030	05-Mar-2002	09/436357	09-Nov-1999	Orbital ATK, Inc.
84.	Synthesis of Energetic Thermoplastic Elastomers Containing Oligomeric Urethane Linkages	6815522	09-Nov-2004	09/436440	09-Nov-1999	Orbital ATK, Inc.
85.	Range Rate Aiding in a Pulsed Radar System	6281833	28-Aug-2001	09/437828	10-Nov-1999	Orbital ATK, Inc.
86.	Anti-Friction Release Device	6311930	06-Nov-2001	09/459799	13-Dec-1999	Orbital ATK, Inc.
87.	Shared Memory Interface With Conventional Access and Synchronization Support	6795901	21-Sep-2004	09/466303	17-Dec-1999	Orbital ATK, Inc.
88.	EPDM Rocket Motor Insulation	6566420	20-May-2003	09/481709	12-Jan-2000	Orbital ATK, Inc.
89.	Antenna Data Compression Using Multi-Dipole Antenna	6437737	20-Aug-2002	09/491367	26-Jan-2000	Orbital ATK, Inc.
90.	Hybrid Rocket Propulsion System Including Array of Hybrid or Fluid Attitude-Control Rocket Engines	6393830	28-May-2002	09/532301	22-Mar-2000	Orbital ATK, Inc.
91.	Magnetically Sensed Second Environment Safety and Arming Device	7004072	28-Feb-2006	09/538785	30-Mar-2000	Alliant Techsystems Inc.
92.	End Closure Modules For Multi-Cell Pressure Vessels, And Pressure Vessels And Vehicles Containing The Same	6412650	02-Jul-2002	09/558628	26-Apr-2000	Orbital ATK, Inc.
93.	Loop Heat Pipe Incorporating an Evaporator Having a Wick That is Liquid Superheat Tolerant and is Resistant to Back-Conduction	6382309	07-May-2002	09/571779	16-May-2000	Orbital ATK, Inc.
94.	Solvent Application System	6343552	05-Feb-2002	09/587773	06-Jun-2000	Alliant Techsystems Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
95.	Alignment Fixture	6360666	26-Mar-2002	09/587962	06-Jun-2000	Alliant Techsystems Inc.
96.	Reuseable Training Dispenser	6481327	19-Nov-2002	09/592481	09-Jun-2000	Alliant Techsystems Inc.
97.	High Range Resolution Radar Through Non-Uniform Sampling	6317074	13-Nov-2001	09/594894	15-Jun-2000	Alliant Techsystems Inc.
98.	Method of Manufacturing a Composite Structure Using a Conformable Locating Aperture System	6478922	12-Nov-2002	09/594920	15-Jun-2000	Alliant Techsystems Inc.
99.	Multi-Stage Rocket Motor Assembly Including Jettisonable Launch Motor Integrated With Flight Igniter	6481198	19-Nov-2002	09/604679	27-Jun-2000	Orbital ATK, Inc.
100.	Method and Apparatus For Imaging a Field of Regard by Scanning the Field of View of an Imaging Electro-Optical System in a Series of Conical Arcs to Compensate For Image Rotation	6555803	29-Apr-2003	09/617372	17-Jul-2000	Orbital ATK, Inc.
101.	Antigen Detection Device and Method	6620626	16-Sep-2003	09/636772	09-Aug-2000	Alliant Techsystems Inc.
102.	Polymerization of Poly(Glycidyl Nitrate) From High Purity Glycidyl Nitrate Synthesized From Glycerol	6362311	26-Mar-2002	09/688819	17-Oct-2000	Orbital ATK, Inc.
103.	Extrudable Black Body Decoy Flare Compositions	6432231	13-Aug-2002	09/735643	14-Dec-2000	Orbital ATK, Inc.
104.	Method of Insulating a Case of a Solid Propellant Rocket Motor	6893597	17-May-2005	09/747192	21-Dec-2000	Orbital ATK, Inc.
105.	Device For Ultrasonically Consolidating Fiber Reinforced Composite Structures	6511563	28-Jan-2003	09/755422	05-Jan-2001	Alliant Techsystems Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
106.	Rocket Motor Nozzle Assemblies Having Vacuum Plasma-Sprayed Refractory MetalShell Throat Inserts, Methods of Making, and Rocket Motors Including Same	6711901	30-Mar-2004	09/765781	19-Jan-2001	Orbital ATK, Inc.
107.	Nitrate-Ester Plasticized Energetic Compositions, Method of Making and Rocket Motor Assemblies Containing the Same	6632378	14-Oct-2003	09/797929	02-Mar-2001	Orbital ATK, Inc.
108.	Method And Apparatus For Creating A Simulated Particle Pack	7085689	01-Aug-2006	09/805606	12-Mar-2001	Orbital ATK, Inc.
109.	Pyrolytic Graphite Gauge for Measuring Heat Flux	6499289	31-Dec-2002	09/820403	29-Mar-2001	Orbital ATK, Inc.
110.	Degradable Practice Mine	6539871	01-Apr-2003	09/821219	29-Mar-2001	Alliant Techsystems Inc.
111.	Method For The Synthesis Of EnergeticThermoplasti c Elastomers In Non-Halogenated Solvents	6997997	14-Feb-2006	09/831411	07-May-2001	Orbital ATK, Inc.
112.	Antenna Array Apparatus With Conformal Mounting Structure	6407711	18-Jun-2002	09/841829	24-Apr-2001	Orbital ATK, Inc.
113.	Reduced Sensitivity, Melt-Pourable TNT Replacements	7067024	27-Jun-2006	09/893337	27-Jun-2001	Orbital ATK, Inc.
114.	Phase Control in the Capillary Evaporators	6889754	10-May-2005	09/896561	29-Jun-2001	Orbital ATK, Inc.
115.	Method and Apparatus For Measuring Bending in a Pin Member	6951137	04-Oct-2005	09/897003	02-Jul-2001	Orbital ATK, Inc.
116.	Spring Disc for Securing a Combustible Cartridge Case to a Case Base	6505560	14-Jan-2003	09/923852	07-Aug-2001	Alliant Techsystems Inc.
117.	Evaporator Employing a Liquid Superheat Tolerant Wick	6564860	20-May-2003	09/933589	21-Aug-2001	Orbital ATK, Inc.
118.	Apparatus and Method For Reinforcing A Pressure Vessel	6719165	13-Apr-2004	09/938327	22-Aug-2001	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
119.	Rocket Nozzel Assembly Having Rotatable Variable Thrust Control Cylinders, and Rocket Assembly Comprising The Same	6651438	25-Nov-2003	09/941397	29-Aug-2001	Orbital ATK, Inc.
120.	Transpiration Cooling of Rocket Engines	6606851	19-Aug-2003	09/946630	06-Sep-2001	Orbital ATK, Inc.
121.	Ordnance Control and Initiation System and Related Method	6718881	13-Apr-2004	09/949031	07-Sep-2001	Orbital ATK, Inc.
122.	Rocket Thruster Comprising Load-Balanced Pintle Valve	7849695	14-Dec-2010	09/954126	17-Sep-2001	Orbital ATK, Inc.
123.	Apparatus for Load Transfer Between Aerospace Vehicle Components, Aerospace Vehicles Including Same, and Method of Attachment of Aerospace Vehicle Components	6761335	13-Jul-2004	09/997642	29-Nov-2001	Orbital ATK, Inc.
124.	Method for Processing Explosives Containing 2,4,6,8,10,12-Hexanitro-2,4,6,8,10,12-Hexaazatetracyclo[5.5.0.05,903,11]-Dodecane (CL-20) with Naphthenic and Paraffinic Oils	6736913	18-May-2004	10/000244	18-Oct-2001	Orbital ATK, Inc.
125.	System For Performing Coupled Finite Analysis	7127380	24-Oct-2006	10/005752	07-Nov-2001	Orbital ATK, Inc.
126.	System and Method For Measuring Stress at an Interface	6776049	17-Aug-2004	10/016479	07-Dec-2001	Orbital ATK, Inc.
127.	Rocket Motors With Insensitive Munitions Systems	6619029	16-Sep-2003	10/016697	01-Nov-2001	Orbital ATK, Inc.
128.	Crystallization of 2,4,6,8,10,12-Hexanitro-2,4,6,8,10,12-Hexaazatetracyclo[5.5.0.05.903.11]-Dodecane	6992185	31-Jan-2006	10/042522	09-Jan-2002	Orbital ATK, Inc.
129.	Fiber-Reinforced Rocket Motor Insulation	6691505	17-Feb-2004	10/046132	09-Jan-2002	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
130.	Strain Control Device For Attaching Transmission Lines to Deformable Structures and Methods Employing Same	6770821	03-Aug-2004	10/056943	25-Oct-2001	Orbital ATK, Inc.
131.	System and Method For Optical Communication	7149434	12-Dec-2006	10/107528	25-Mar-2002	Orbital ATK, Inc.
132.	High Strength Rubber Formulations, and Shear Ply Made From the Same	6750293	15-Jun-2004	10/107594	27-Mar-2002	Orbital ATK, Inc.
133.	Structures Including Synchronously Deployable Frame Members and Methods of Deploying the Same	7211722	01-May-2007	10/117314	05-Apr-2002	Orbital ATK, Inc.
134.	Pressure-Actuated Joint System	6711890	30-Mar-2004	10/132950	26-Apr-2002	Orbital ATK, Inc.
135.	Projectile Structure	7051659	30-May-2006	10/164718	10-Jun-2002	Orbital ATK, Inc.
136.	Method and Apparatus For Detecting and Determining Event Characteristics With Reduced Data Collection	7240564	10-Jul-2007	10/208518	30-Jul-2002	Orbital ATK, Inc.
137.	Radar-Filtered Projectile	7079070	18-Jul-2006	10/215475	15-Apr-2002	Orbital ATK, Inc.
138.	Electrostatically Clean Solar Array	6713670	30-Mar-2004	10/219849	14-Aug-2002	Orbital ATK, Inc.
139.	Digital Signal Gating Apparatus and Method in a Pulse Receiver System	7082172	25-Jul-2006	10/268170	09-Oct-2002	Orbital ATK, Inc.
140.	Pulse Sorting Apparatus For Frequency Histogramming in a Radar Receiver System	7184493	27-Feb-2007	10/270864	15-Oct-2002	Orbital ATK, Inc.
141.	Integration of a Semi-Active Laser Seeker into the DSU-33 Proximity Sensor	6919840	19-Jul-2005	10/301522	21-Nov-2002	Alliant Techsystems Inc.
142.	Guided Munitions Electronics Package and Method	6744637	01-Jun-2004	10/307127	27-Nov-2002	Orbital ATK, Inc.
143.	EPDM Rocket Motor Insulation	6787586	07-Sep-2004	10/310005	03-Dec-2002	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
144.	Continuous Process and System For Production of Glycidyl Nitrate From Glycerin, Nitric Acid And Caustic and Conversion of Glycidyl Nitrate to Poly (Glycidyl Nitrate)	6870061	22-Mar-2005	10/340167	10-Jan-2003	Orbital ATK, Inc.
145.	Electromagnetic-Field Polarization Twister	6906685	14-Jun-2005	10/348044	17-Jan-2003	Alliant Techsystems Inc.
146.	Centerport Inhibitor For a Solid Propellant Rocket Motor, a Solid Propellant Rocket Motor Including Same, and a Method of Inhibiting a Centerport of a Solid Propellant RocketMotor	7956104	07-Jun-2011	10/369488	24-Feb-2003	Orbital ATK, Inc.
147.	Incremental Pressurization Fluctuation Counter and Methods Therefor	6959605	01-Nov-2005	10/377273	27-Feb-2003	Orbital ATK, Inc.
148.	Propellant Formulation	7011722	14-Mar-2006	10/383656	10-Mar-2003	Orbital ATK, Inc.
149.	Electronic Switching System For a Detonation Device	6992877	31-Jan-2006	10/386578	12-Mar-2003	Orbital ATK, Inc.
150.	Low Temperature, Extrudable, High Density Reactive Materials	6962634	08-Nov-2005	10/386617	12-Mar-2003	Orbital ATK, Inc.
151.	Wick Having Liquid Superheat Tolerance and Being Resistant to Back-Conduction, Evaporator Employing a Liquid Superheat Tolerant Wick, and Loop Heat Pipe Incorporating Same	6915843	12-Jul-2005	10/388955	14-Mar-2003	Orbital ATK, Inc.
152.	Fiber Redirect System, Multi-Axis Robotic Wrist and Fiber Placement Apparatus Incorporating Same and Related Methods	6994324	07-Feb-2006	10/428332	02-May-2003	Alliant Techsystems Inc.
153.	System and Method For Integrating Antennas into a Vehicle Rear-Deck Spoiler	6927736	09-Aug-2005	10/440449	16-May-2003	Alliant Techsystems Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
154.	Fuze Explosive Ordnance Disposal Circuit	6966261	22-Nov-2005	10/441665	20-May-2003	Alliant Techsystems Inc.
155.	Wide Field Collimator	7159986	09-Jan-2007	10/441915	20-May-2003	Orbital ATK, Inc.
156.	Rocket Assembly Ablative Materials Formed From, as a Precursor, Staple Cellulosic Fibers, and Method of Insulating or Thermally Protecting a Rocket Assembly With the Same	RE43867	18-Dec-2012	10/444056	22-May-2003	Alliant Techsystems Inc.
157.	High Strength Reactive Materials and Methods of Making	7307117	11-Dec-2007	10/462437	16-Jun-2003	Alliant Techsystems Inc.
158.	Elastomeric Rocket Motor Insulation	7012107	14-Mar-2006	10/463751	17-Jun-2003	Alliant Techsystems Inc.
159.	Heat Transport System	7004240	28-Feb-2006	10/602022	24-Jun-2003	Orbital ATK, Inc.
160.	Moisture-Resistant Black Powder Substitute Compositions	7459043	02-Dec-2008	10/631545	31-Jul-2003	Orbital ATK, Inc. and U.S. Army
161.	Apparatus For Forming Composite Stiffeners and Reinforcing Structures	7249943	31-Jul-2007	10/633025	01-Aug-2003	Alliant Techsystems Inc.
162.	High Temperature Crystallization of 2,4,6,8,10,12-Hexanitro - 2,4,6,8,10,12-Hexaazatetracyclo[5.5.0.0(5,9)0(3,11)]-Dodecane	7288648	30-Oct-2007	10/636373	06-Aug-2003	Orbital ATK, Inc.
163.	Rocket Motors With Insensitive Munitions Systems and Projectiles Including Same	6966264	22-Nov-2005	10/645706	21-Aug-2003	Alliant Techsystems Inc.
164.	Obturator For Large Caliber Smooth Bore Ammunition	6782830	31-Aug-2004	10/660417	11-Sep-2003	Alliant Techsystems Inc.
165.	Fixed Canard 2-D Guidance of Artillery Projectiles	6981672	03-Jan-2006	10/664223	17-Sep-2003	Alliant Techsystems Inc.
166.	Evaporator For a Heat Transfer System	8136580	20-Mar-2012	10/676265	02-Oct-2003	Orbital ATK, Inc.
167.	Heat Transfer System	7708053	04-May-2010	10/694387	28-Oct-2003	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
168.	Method and Apparatus For Suppression of Fires	7337856	04-Mar-2008	10/727093	02-Dec-2003	Orbital ATK, Inc.
169.	Steerable, Intermittently Operable Rocket Propulsion System	7281367	16-Oct-2007	10/728733	05-Dec-2003	Orbital ATK, Inc.
170.	Apparatus and Method For Reinforcing A Pressure Vessel	7316327	08-Jan-2008	10/731774	08-Dec-2003	Alliant Techsystems Inc.
171.	Deployable Truss Having Second Order Augmentation	7694486	13-Apr-2010	10/734726	12-Dec-2003	Orbital ATK, Inc.
172.	Smooth Bore Second Environment Sensing	6951161	04-Oct-2005	10/737032	15-Dec-2003	Alliant Techsystems Inc.
173.	Honeycomb Core Composite Article and Method and Apparatus For Making Same	7083753	01-Aug-2006	10/737687	16-Dec-2003	Orbital ATK, Inc.
174.	Ordnance System With Common Bus, Method of Operation and Aerospace Vehicle Including Same	7261028	28-Aug-2007	10/744930	22-Dec-2003	Orbital ATK, Inc.
175.	Rocket Motor Nozzle Assemblies Having Vacuum Plasma-Sprayed Refractory Metal Shell Throat Inserts, Methods of Making, and Rocket Motors Including Same	6904755	14-Jun-2005	10/768731	28-Jan-2004	Alliant Techsystems Inc.
176.	Manual Container Lifter	6997492	14-Feb-2006	10/850260	20-May-2004	Alliant Techsystems Inc.
177.	Second Environment Sensing in Smart Bombs	7370584	13-May-2008	10/858809	02-Jun-2004	Alliant Techsystems Inc.
178.	Strain Control Device For Attaching Transmission Lines to Deformable Structures and Methods Employing Same	6959491	01-Nov-2005	10/871149	18-Jun-2004	Alliant Techsystems Inc.
179.	Thermal Management System	7549461	23-Jun-2009	10/890382	14-Jul-2004	Orbital ATK, Inc.
180.	Apparatus and Methods For Forming Composite Stiffeners and Reinforcing Structures	7513769	07-Apr-2009	10/903871	30-Jul-2004	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
181.	Fuze With Electronic Sterilization	7334523	26-Feb-2008	10/929931	30-Aug-2004	Alliant Techsystems Inc.
182.	Novel EPDM Rocket Motor Insulation	7371784	13-May-2008	10/931778	31-Aug-2004	Alliant Techsystems Inc.
183.	Method of Insulating a Case of a Solid Propellant Rocket Motor	7410607	12-Aug-2008	10/938446	10-Sep-2004	Alliant Techsystems Inc.
184.	Method For the Production of Alpha-Alane	6984746	10-Jan-2006	10/947078	22-Sep-2004	Orbital ATK, Inc.
185.	Manufacture of a Heat Transfer System	7251889	07-Aug-2007	10/974968	28-Oct-2004	Orbital ATK, Inc.
186.	Spin Sensor For Low Spin Munitions	8113118	14-Feb-2012	10/994497	22-Nov-2004	Orbital ATK, Inc.
187.	Method and Apparatus For Autonomous Detonation Delay in Munitions	7124689	24-Oct-2006	10/994754	22-Nov-2004	Orbital ATK, Inc.
188.	Method and System For Wide-Area Ultraviolet Detection of Forensic Evidence	7545969	09-Jun-2009	11/014524	16-Dec-2004	Orbital ATK, Inc.
189.	Reactive Material Enhanced Projectiles and Related Methods	7603951	20-Oct-2009	11/079925	14-Mar-2005	Orbital ATK, Inc.
190.	Deployable Structural Assemblies, Systems For Deploying Such Structural Assemblies	8042305	25-Oct-2011	11/080357	15-Mar-2005	Orbital ATK, Inc.
191.	Method of Applying Ablative Insulation Coatings and Articles Obtained Therefrom	7198231	03-Apr-2007	11/091661	28-Mar-2005	Alliant Techsystems Inc.
192.	Method For Detection of Media Layer By a Penetrating Weapon and Related Apparatus and Systems	7197982	03-Apr-2007	11/147980	08-Jun-2005	Orbital ATK, Inc.
193.	Method For Delayed Detonation of a Penetrating Weapon and Related Apparatus and Systems	7314004	01-Jan-2008	11/148955	09-Jun-2005	Orbital ATK, Inc.
194.	Microstrip Log-Periodic Antenna Array Having Grounded Semi-Coplanar Waveguide-To-Microstrip Line Transition	7292197	06-Nov-2007	11/163119	05-Oct-2005	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
195.	Capacitive Drive Antenna and an Air Vehicle So Equipped	7339537	04-Mar-2008	11/163271	12-Oct-2005	Orbital ATK, Inc.
196.	Light Sensor Module, Focused Light Sensor Array, and an Air Vehicle So Equipped	7397019	08-Jul-2008	11/163446	19-Oct-2005	Orbital ATK, Inc.
197.	Evaporators Including a Capillary Wick and a Plurality of Vapor Grooves and Two-Phase Heat Transfer Systems Including Such Evaporators	8397798	19-Mar-2013	11/167759	28-Jun-2005	Orbital ATK, Inc.
198.	Electronic Switching System For a Detonation Device, Method of Operation and Explosive Device Including The Same	7301750	27-Nov-2007	11/170261	29-Jun-2005	Alliant Techsystems Inc.
199.	Solar Cell Array	7301095	27-Nov-2007	11/249143	11-Oct-2005	Orbital ATK, Inc.
200.	Evaporator For Use in a Heat Transfer System	7848624	07-Dec-2010	11/257396	25-Oct-2005	Orbital ATK, Inc. & Technology Assessment and Transfer Incorporated
201.	Evaporator For Use in a Heat Transfer System	7661464	16-Feb-2010	11/275105	09-Dec-2005	Orbital ATK, Inc.
202.	Fuze Explosive Ordnance Disposal (EOD) Circuit	7331290	19-Feb-2008	11/284511	22-Nov-2005	Alliant Techsystems Inc.
203.	Method For the Production of Alpha-Alane	7238336	03-Jul-2007	11/329201	09-Jan-2006	Orbital ATK, Inc.
204.	Digital Method and Apparatus For Resolving Shaft Position	7205916	17-Apr-2007	11/341706	27-Jan-2006	Orbital ATK, Inc.
205.	Digital Method and Apparatus For Sensing Position With a Linear Variable Differential Transformer	7248994	24-Jul-2007	11/341738	27-Jan-2006	Orbital ATK, Inc.
206.	Roll Orientation Using Turns-Counting Fuze	7566027	28-Jul-2009	11/342736	30-Jan-2006	Alliant Techsystems Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
207.	Fiber Redirect System, Multi-Axis Robotic Wrist and Fiber Placement Apparatus Incorporating Same and Related Methods	7467782	23-Dec-2008	11/348537	06-Feb-2006	Alliant Techsystems Inc.
208.	Two-Phase Heat Transfer System Including a Thermal Capacitance Device	7882888	08-Feb-2011	11/359766	23-Feb-2006	Orbital ATK, Inc.
209.	Thermoformed Frequency Selective Surface	7414593	19-Aug-2008	11/362442	24-Feb-2006	Alliant Techsystems Inc.
210.	Propulsion Thrust Control System and Method	7716912	18-May-2010	11/366252	02-Mar-2006	Orbital ATK, Inc.
211.	Nontoxic, Noncorrosive Phosphorus-Based Primer Compositions	7857921	28-Dec-2010	11/367000	02-Mar-2006	Orbital ATK, Inc.
212.	Non-Lethal Payloads	8172966	08-May-2012	11/369908	07-Mar-2006	Orbital ATK, Inc. & United States of America, as represented by the Secretary of the Navy
213.	High Heat Flux Evaporator	7931072	26-Apr-2011	11/383740	16-May-2006	Orbital ATK, Inc.
214.	Two-Phase Heat Transfer System and Evaporators and Condensers For Use in Heat Transfer Systems	8047268	01-Nov-2011	11/383953	17-May-2006	Orbital ATK, Inc.
215.	Deployable Structural Assemblies, Systems For Deploying Such Structural Assemblies and Related Methods	7694465	13-Apr-2010	11/400718	07-Apr-2006	Orbital ATK, Inc.
216.	Man-Rated Fire Suppression System and Related Methods	8408322	02-Apr-2013	11/409257	21-Apr-2006	Orbital ATK, Inc.
217.	Basalt Fiber and Nanoclay Compositions, Articles Incorporating the Same, and Methods of Insulating a Rocket Motor With the Same	7767746	03-Aug-2010	11/431387	09-May-2006	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
218.	Method for Processing Explosives Containing 2,4,6,8,10,12-Hexanitro-2,4,6,8,10,12-Hexaazatetracyclo[5.5.0.05,903,11]-Dodecane (CL-20) with Naphthenic and Paraffinic Oils	RE45318	06-Jan-2015	11/437006	17-May-2006	Alliant Techsystems Inc.
219.	Methods and Devices for Measuring Volume Resistivity	7609073	27-Oct-2009	11/438084	19-May-2006	Orbital ATK, Inc.
220.	Cooling System For High Speed Vehicles and Method of Cooling High-Speed Vehicles	7963100	21-Jun-2011	11/442677	25-May-2006	Orbital ATK, Inc.
221.	Impact Resistant Explosive Compositions	7744710	29-Jun-2010	11/445910	02-Jun-2006	Orbital ATK, Inc.
222.	Compaction Device For Fiber Placement Using Interdependent Segment Travel	8042594	25-Oct-2011	11/476455	28-Jun-2006	Orbital ATK, Inc.
223.	Weapons and Weapon Components Incorporating Reactive Materials	7614348	10-Nov-2009	11/512058	29-Aug-2006	Orbital ATK, Inc.
224.	Flares Including Reactive Foil For Igniting a Combustible Grain Thereof and Methods of Fabricating and Igniting Such Flares	7469640	30-Dec-2008	11/536574	28-Sep-2006	Orbital ATK, Inc.
225.	Reactive Material Enhanced Projectiles and Related Methods	8122833	28-Feb-2012	11/538763	04-Oct-2006	Orbital ATK, Inc.
226.	Methods and Apparatuses For Electronic Time Delay and Systems Including Same	8002026	23-Aug-2011	11/553361	26-Oct-2006	Orbital ATK, Inc.
227.	One Pot Procedure For Poly (Glycidyl Nitrate) End Modification	7714078	11-May-2010	11/553752	27-Oct-2006	Orbital ATK, Inc.
228.	Relaxation Modulus Sensor, Structure Incorporating Same, and Method For Use of Same	7581450	01-Sep-2009	11/555029	31-Oct-2006	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
229.	Igniter Safe and Arm, Igniter Assembly and Flare So Equipped and Method of Providing a Safety For an Igniter Assembly	7726243	01-Jun-2010	11/559867	14-Nov-2006	Orbital ATK, Inc.
230.	Methods and Apparatuses For Projectile Fuze Setback Generator Power Source and Projectiles Including Same	7669532	02-Mar-2010	11/560991	17-Nov-2006	Orbital ATK, Inc.
231.	Method and Apparatus For Munition Timing and Munitions Incorporating Same	7926402	19-Apr-2011	11/564714	29-Nov-2006	Orbital ATK, Inc.
232.	Fuze Mounting For a Penetrator and Method Thereof	7549374	23-Jun-2009	11/613441	20-Dec-2006	Orbital ATK, Inc.
233.	Accelerometer Mounting For a Penetrator and Method Thereof	7552682	30-Jun-2009	11/613497	20-Dec-2006	Orbital ATK, Inc.
234.	Reactive Compositions Including Metal	8075715	13-Dec-2011	11/620205	05-Jan-2007	Alliant Techsystems Inc.
235.	Reactive Material Compositions, Shot Shells Including Reactive Materials, and a Method of Producing Same	7977420	12-Jul-2011	11/690016	22-Mar-2007	Orbital ATK, Inc.
236.	Reservoir Systems Including Flow Directional Devices, Heat Transfer Systems Including Reservoir Systems and Related Methods	8567486	29-Oct-2013	11/690110	22-Mar-2007	Orbital ATK, Inc.
237.	Ionic Liquid and a Method of Synthesizing an Ionic Liquid	8012277	06-Sep-2011	11/735105	13-Apr-2007	Orbital ATK, Inc.
238.	Methods of Producing 1,3,5-Triamino-2,4,6-Trinitrobenzene	8030521	04-Oct-2011	11/744986	07-May-2007	Orbital ATK, Inc.
239.	Magnetometer Transducer Sampling Front End Amplifier and Processor	7372259	13-May-2008	11/758825	06-Jun-2007	Alliant Techsystems Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
240.	Thermal Protection System and Related Methods	8276361	02-Oct-2012	11/763280	14-Jun-2007	Orbital ATK, Inc.
241.	Methods For Forming Composite Stiffeners and Reinforcing Structures	8226787	24-Jul-2012	11/831759	31-Jul-2007	Alliant Techsystems Inc.
242.	Traumatic Brain Injury Biomarker Diagnostic	7955617	07-Jun-2011	11/834493	06-Aug-2007	Alliant Techsystems Inc.
243.	RF Receiving and Transmitting Apparatuses Having a Microstrip-Slot Log-Periodic Antenna	7583233	01-Sep-2009	11/861477	26-Sep-2007	Orbital ATK, Inc.
244.	Methods and Apparatuses For Electronic Time Delay and Systems Including Same	7789153	07-Sep-2010	11/876841	23-Oct-2007	Orbital ATK, Inc.
245.	Energy Capture Circuit	7884579	08-Feb-2011	11/925188	26-Oct-2007	Alliant Techsystems Inc.
246.	Dual Fault Safe Arm Device, Adaptive Structures Therewith and Safety and Reliability Features Therefor	7784404	31-Aug-2010	11/933883	01-Nov-2007	Orbital ATK, Inc.
247.	Resolution Antenna Array Using Metamaterials	7928900	19-Apr-2011	11/955795	13-Dec-2007	Alliant Techsystems Inc.
248.	Methods of Preventing Initiation of Explosive Devices	7810421	12-Oct-2010	12/020491	25-Jan-2008	Orbital ATK, Inc.
249.	Method and Apparatus For Suppression of Fires	7845423	07-Dec-2010	12/042200	04-Mar-2008	Alliant Techsystems Inc.
250.	Methods and Systems For Verifying Sensor Bond Integrity	8147135	03-Apr-2012	12/046553	12-Mar-2008	Orbital ATK, Inc.
251.	Reactive Material Compositions and Projectiles Containing Same	8568541	29-Oct-2013	12/127627	27-May-2008	Alliant Techsystems Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
252.	Optical Devices Comprising Doped Glass Materials, Laser Systems Including Such Optical Devices, and Methods of Forming Such Optical Devices and Laser Systems	8218593	10-Jul-2012	12/179391	24-Jul-2008	Orbital ATK, Inc.
253.	NonToxic, Noncorrosive Phosphorus-Based Primer Compositions and an Ordnance Element Including the Same	8540828	24-Sep-2013	12/194437	19-Aug-2008	Orbital ATK, Inc.
254.	Methods of Fabricating and Igniting Flares Including Reactive Foil and a Combustible Grain	7690308	06-Apr-2010	12/250081	13-Oct-2008	Alliant Techsystems Inc.
255.	Unmanned Air Vehicle Weapon Adapter	8297172	30-Oct-2012	12/269731	12-Nov-2008	Alliant Techsystems Inc.
256.	Apparatus and Methods For Forming Composite Stiffeners and Reinforcing Structures	7820092	26-Oct-2010	12/323325	25-Nov-2008	Alliant Techsystems Inc.
257.	Apparatus and Methods For Forming Composite Stiffeners and Reinforcing Structures	7819651	26-Oct-2010	12/323382	25-Nov-2008	Alliant Techsystems Inc.
258.	Apparatus and Methods For Forming Composite Stiffeners and Reinforcing Structures	7767128	03-Aug-2010	12/323403	25-Nov-2008	Alliant Techsystems Inc.
259.	Stiffener Tool Positioning Apparatus	8052823	08-Nov-2011	12/363547	30-Jan-2009	Orbital ATK, Inc.
260.	Lightning Directing System	7915525	29-Mar-2011	12/391383	24-Feb-2009	Alliant Techsystems Inc.
261.	Neutron Detection by Neutron Capture-Initiated Relaxation of a Ferroelectrically, Ferromagnetically and/or Chemically Metastable Material	8203123	19-Jun-2012	12/401097	10-Mar-2009	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
262.	Electromagnetically Pumped Alkali Metal Vapor Cell System	7929586	19-Apr-2011	12/404593	16-Mar-2009	Alliant Techsystems Inc.
263.	Methods and Systems For Measuring Target Movement With an Interferometer	8223342	17-Jul-2012	12/404815	16-Mar-2009	Orbital ATK, Inc.
264.	Apparatus and Synthetic Weapon Stabilization and Firing	8141473	27-Mar-2012	12/406778	18-Mar-2009	Orbital ATK, Inc.
265.	Helical Cross Flow (HCF) Pulse Detonation Engine	8438834	14-May-2013	12/414281	30-Mar-2009	Orbital ATK, Inc.
266.	Thermal Management System	8066055	29-Nov-2011	12/426001	17-Apr-2009	Alliant Techsystems Inc.
267.	Fuze Mounting For a Penetrator and Method Thereof	7814834	19-Oct-2010	12/434826	04-May-2009	Alliant Techsystems Inc.
268.	Fuze Mounting Assemblies For Penetrator Weapons	7802518	28-Sep-2010	12/434839	04-May-2009	Alliant Techsystems Inc.
269.	Fuel Reformulation Systems	8882863	11-Nov-2014	12/465407	13-May-2009	Orbital ATK, Inc.
270.	Broadband Patch Antenna and Antenna System	8232924	31-Jul-2012	12/465835	14-May-2009	Orbital ATK, Inc.
271.	Closed-Cycle Rocket Engine Assemblies and Methods of Operating Such Rocket Engine Assemblies	8381508	26-Feb-2013	12/473383	28-May-2009	Orbital ATK, Inc.
272.	Gas-Generating Devices With Grain-Retention Structures and Related Methods and Systems	8672348	18-Mar-2014	12/478019	04-Jun-2009	Orbital ATK, Inc.
273.	Pressure Molded Preform Process For Composite Structures	8585952	19-Nov-2013	12/483613	12-Jun-2009	Alliant Techsystems Inc.
274.	Methods For the Production of 1,3,5-Triamino-2,4,6-Trinitrobenzene	7763753	27-Jul-2010	12/484917	15-Jun-2009	Orbital ATK, Inc.
275.	Methods For Nitrating Compounds	7737308	15-Jun-2010	12/484960	15-Jun-2009	Orbital ATK, Inc.
276.	Methods of Producing 1,3,5-Triamino-2,4,6-Trinitrobenzene	7910776	22-Mar-2011	12/484985	15-Jun-2009	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
277.	Reactive Material Enhanced Projectiles, Devices For Generating Reactive Material Enhanced Projectiles and Related Methods	8443731	21-May-2013	12/510017	27-Jul-2009	Orbital ATK, Inc.
278.	Method of Manufacturing Heat Exchanger Cooling Passages in Aero Propulsion Structure	8806747	19-Aug-2014	12/512515	30-Jul-2009	Orbital ATK, Inc.
279.	Projectiles For Marking Targets, Methods of Manufacturing the Same, and Methods of Utilizing the Same	8286557	16-Oct-2012	12/534450	03-Aug-2009	Orbital ATK, Inc.
280.	Apparatus, Systems and Methods for the Production of Hydrogen	8263027	11-Sep-2012	12/540331	12-Aug-2009	Orbital ATK, Inc.
281.	Methods and Systems of Producing Hydrogen and Oxygen For Power Generation, and Power Source	8697027	15-Apr-2014	12/546047	24-Aug-2009	Orbital ATK, Inc.
282.	Composites for Antennas and Other Applications	8723722	13-May-2014	12/548937	27-Aug-2009	Orbital ATK, Inc.
283.	Methods and Apparatuses For Electro-Mechanical Safety and Arming of a Projectile	8291825	23-Oct-2012	12/557028	10-Sep-2009	Orbital ATK, Inc.
284.	Methods of Forming a Sensitized Explosive and a Percussion Primer	8282751	09-Oct-2012	12/559218	14-Sep-2009	Alliant Techsystems Inc.
285.	Methods and Systems For Producing Hydrogen and System For Producing Power	8420267	16-Apr-2013	12/581735	19-Oct-2009	Orbital ATK, Inc.
286.	Automated Composite Annular Structure Forming	8282757	09-Oct-2012	12/615908	10-Nov-2009	Orbital ATK, Inc.
287.	Methods of Purifying 1,2,4-Butanetriol	8367877	05-Feb-2013	12/620131	17-Nov-2009	Orbital ATK, Inc.
288.	Methods and Systems For Verifying Sensor Bond Integrity and Structures Employing Such Systems	8708555	29-Apr-2014	12/631600	04-Dec-2009	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
289.	Heat Transfer System	8109325	07-Feb-2012	12/650394	30-Dec-2009	Alliant Techsystems Inc.
290.	Deployable Truss Having Second Order Augmentation	8006462	30-Aug-2011	12/683344	06-Jan-2010	Alliant Techsystems Inc.
291.	Methods of Synthesizing and Isolating N-(Bromoacetyl)-3,3-Dinitroazetidine and a Composition Including the Same	8471041	25-Jun-2013	12/702782	09-Feb-2010	Orbital ATK, Inc.
292.	Initiator Modules, Munitions Systems Including Initiator Modules, and Related Methods	8408132	02-Apr-2013	12/723446	12-Mar-2010	Orbital ATK, Inc.
293.	Methods of Controlling Thrust in a Rocket Motor	8539751	24-Sep-2013	12/760069	14-Apr-2010	Alliant Techsystems Inc.
294.	Rocket Motors Incorporating Basalt Fibers and Nanoclay Compositions and Methods of Insulating a Rocket Motor with the Same	7968620	28-Jun-2011	12/765585	22-Apr-2010	Alliant Techsystems Inc.
295.	Method and System For Continuously Pumping a Solid Material and Method and System for Hydrogen Formation	8597386	03-Dec-2013	12/775290	06-May-2010	Orbital ATK, Inc.
296.	Force Measuring Device and Related Methods	8353222	15-Jan-2013	12/797127	09-Jun-2010	Orbital ATK, Inc.
297.	Methods, Devices, and Systems Relating to a Sensing Device	8596137	03-Dec-2013	12/833894	09-Jul-2010	Orbital ATK, Inc.
298.	Dual Fault Safe and Arm Device, Adaptive Structures Therewith and Safety and Reliability Features Therefor	8141490	27-Mar-2012	12/842767	23-Jul-2010	Alliant Techsystems Inc.
299.	Apparatus and Methods For Obtaining Multi-Dimensional Spatial and Spectral Data With Lidar Detection	8599367	03-Dec-2013	12/850536	04-Aug-2010	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
300.	Multilayer Backing Materials For Composite Armor	8505432	13-Aug-2013	12/879496	10-Sep-2010	Alliant Techsystems Inc.
301.	Apparatus and Methods For Forming Composite Stiffeners and Reinforcing Structures	8366981	05-Feb-2013	12/883030	15-Sep-2010	Alliant Techsystems Inc.
302.	Methods and Apparatuses For Inductive Energy Capture For Fuzes	8723493	13-May-2014	12/899326	06-Oct-2010	Orbital ATK, Inc.
303.	Inflator-Based Fire Suppression	8939225	27-Jan-2015	12/899961	07-Oct-2010	Orbital ATK, Inc.
304.	Gas Generator	8162350	24-Apr-2012	12/900011	07-Oct-2010	Orbital ATK, Inc.
305.	Methods and Apparatuses For Electrochemical Cell Monitoring and Control	8470464	25-Jun-2013	12/904830	14-Oct-2010	Orbital ATK, Inc.
306.	Orbit Debris Removal and Asset Protection Assembly	8403269	26-Mar-2013	12/909935	22-Oct-2010	Alliant Techsystems Inc.
307.	Evaporators For Use in Heat Transfer Systems, Apparatus Including Such Evaporators and Related Methods	8549749	08-Oct-2013	12/960298	03-Dec-2010	Orbital ATK, Inc.
308.	Rocket Thruster Assembly Comprising Load-Balanced Pintle Valve	8215097	10-Jul-2012	12/966854	13-Dec-2010	Alliant Techsystems Inc.
309.	Percussion Primers Comprising a Primer Composition and Ordnance Including the Same	8524018	03-Sep-2013	12/978080	23-Dec-2010	Alliant Techsystems Inc.
310.	Infrared Signature Matching System, Control Circuit, and Related Method	8909385	09-Dec-2014	13/007463	14-Jan-2011	Orbital ATK, Inc.
311.	Energy Capture Circuit	8493037	23-Jul-2013	13/020510	03-Feb-2011	Alliant Techsystems Inc.
312.	Methods and Apparatuses For Electrical Pulse Energy Capture	8446132	21-May-2013	13/020982	04-Feb-2011	Orbital ATK, Inc.
313.	Resolution Radar Using Metamaterials	8587474	19-Nov-2013	13/086713	14-Apr-2011	Alliant Techsystems Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
314.	Insulating Materials Comprising Polysilazane, Methods of Forming Such Insulating Materials, and Precursor Formulations Comprising Polysilazane	8598245	03-Dec-2013	13/087224	14-Apr-2011	Orbital ATK, Inc.
315.	Fuel Processing System and Related Methods	8968685	03-Mar-2015	13/094709	26-Apr-2011	Orbital ATK, Inc.
316.	Multifunctional Chambered Radiation Shields and Systems and Related Methods	8678322	25-Mar-2014	13/095659	27-Apr-2011	Orbital ATK, Inc.
317.	Methodology for Determination of Nitrogen Content in Nitrocellulose	8658428	25-Feb-2014	13/175503	01-Jul-2011	Alliant Techsystems Inc.
318.	Precursor of an Explosive Composition Including at Least One Ionic Liquid and a Method of Desensitizing an Explosive Composition	8425702	23-Apr-2013	13/177263	06-Jul-2011	Alliant Techsystems Inc.
319.	Rocket Nozzle Assembly	8952304	10-Feb-2015	13/182686	14-Jul-2011	Alliant Techsystems Inc.
320.	Propellant Compositions Including Stabilized Red Phosphorus, a Method of Forming Same, and an Ordnance Element Including the Same	8641842	04-Feb-2014	13/222751	31-Aug-2011	Orbital ATK, Inc.
321.	Non-Intrusive Sensor For In-Situ Measurement of Recession Rate of Ablative and Eroding Materials	8627724	14-Jan-2014	13/224214	01-Sep-2011	Alliant Techsystems Inc.
322.	Energetic Compositions Including Nitrate Esters and Articles Including Such Energetic Compositions	8778103	15-Jul-2014	13/225159	02-Sep-2011	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
323.	Projectiles For Marking Targets and Methods of Manufacturing Such Projectiles	8359978	29-Jan-2013	13/234963	16-Sep-2011	Alliant Techsystems Inc.
324.	Thermal Management Systems Including Venting Systems	8752616	17-Jun-2014	13/251979	03-Oct-2011	Alliant Techsystems Inc.
325.	Gas Generator	8616128	31-Dec-2013	13/267410	06-Oct-2011	Orbital ATK, Inc.
326.	Liquid-Augmented, Generated-Gas Fire Suppression Systems and Related Methods	8967284	03-Mar-2015	13/267427	06-Oct-2011	Orbital ATK, Inc.
327.	Reactive Compositions Including Metal	8361258	29-Jan-2013	13/277999	20-Oct-2011	Alliant Techsystems Inc.
328.	Connectors For Separable Firing Unit Assemblies, Separable Firing Unit Assemblies, and Related Methods	8863665	21-Oct-2014	13/348485	11-Jan-2012	Orbital ATK, Inc.
329.	Automated Material Delivery System	8721316	13-May-2014	13/359289	26-Jan-2012	Orbital ATK, Inc.
330.	Payload Adapters Including Antenna Assemblies, Satellite Assemblies and Related Systems and Methods	8789797	29-Jul-2014	13/403106	23-Feb-2012	Orbital ATK, Inc.
331.	Apparatus For Synthetic Weapon Stabilization and Firing	8555771	15-Oct-2013	13/420441	14-Mar-2012	Alliant Techsystems Inc.
332.	Neutron-Detection by Neutron Capture-Initiated Relaxation of a Ferroelectrically, Ferromagnetically and/or Chemically Metastable Material	8354641	15-Jan-2013	13/473773	17-May-2012	Alliant Techsystems Inc.
333.	Methods and Apparatuses for Autonomous Flight Termination	8868258	21-Oct-2014	13/567794	06-Aug-2012	Orbital ATK, Inc.
334.	Automated Composite Annular Structure Forming	8512497	20-Aug-2013	13/606424	07-Sep-2012	Alliant Techsystems Inc.
335.	Methods for Electro-Mechanical Safety and Arming of a Projectile	8616127	31-Dec-2013	13/647846	09-Oct-2012	Alliant Techsystems Inc.
336.	Unmanned Aerial Vehicle Weapon Adapter	8857312	14-Oct-2014	13/664195	30-Oct-2012	Alliant Techsystems Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
337.	Penetrator Round Assembly	8985026	24-Mar-2015	13/681957	20-Nov-2012	Alliant Techsystems Inc.
338.	Orbit Debris Removal and Asset Protection Assembly	8496208	30-Jul-2013	13/775976	25-Feb-2013	Alliant Techsystems Inc.
339.	Self-Locating Electronics Package Precursor Structure, Method for Configuring an Electronics Package, and Electronics Package	8971048	03-Mar-2015	13/787438	06-Mar-2013	Orbital ATK, Inc.
340.	Multilayer Backing Materials For Composite Armor	8667879	11-Mar-2014	13/937374	09-Jul-2013	Alliant Techsystems Inc.
341.	Device and Method Relating to a Sensing Device	9074864	07-Jul-2015	14/095775	03-Dec-2013	Alliant Techsystems Inc.
342.	Multiple Pulse Cartridge Ignition System	7047885	23-May-2006	09/503524	14-Feb-2000	Alliant Techsystems Inc.
343.	Reduced Sensitivity Melt-Cast Explosives	6648998	18-Nov-2003	09/747303	21-Dec-2000	Orbital ATK, Inc./ARDEC
344.	Reduced Sensitivity, Melt-Pourable Tritonal Replacements	6964714	15-Nov-2005	09/893336	27-Jun-2001	Alliant Techsystems Inc./ United States of America, as represented by the Secretary of the Army
345.	Low-Sensitivity Explosive Compositions And Method For Making Explosive Compositions	6881283	19-Apr-2005	10/210863	31-Jul-2002	Orbital ATK, Inc./ United States of America, as represented by the Secretary of the Army
346.	Hypersonic Inlet Systems and Methods	8292217	23-Oct-2012	12/133289	04-Jun-2008	Alliant Techsystems Inc./Boeing
347.	Adaptive Structures, Systems Incorporating Same and Related Methods	7913928	29-Mar-2011	11/556988	06-Nov-2006	Orbital ATK, Inc.
348.	Adaptive Structures, Systems Incorporating Same and Related Methods	8534570	17-Sep-2013	13/072518	25-Mar-2011	Alliant Techsystems Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
349.	Radio Frequency Component and Method For Making Same	7095379	22-Aug-2006	10/164990	06-Jun-2002	Alliant Techsystems Inc./NASA
350.	Composite Isogrid Structures for Parabolic Surfaces	6064352	16-May-2000	09/053187	01-Apr-1998	Alliant Techsystems Inc./Northrop Grumman/NASA
351.	Pharmaceutical Compositions of O-Nitro Compounds	8530681	10-Sep-2013	13/484138	30-May-2012	Orbital ATK, Inc.
352.	Detonator Cartridge and Methods of Use	8100043	24-Jan-2012	12/411762	26-Mar-2009	Orbital ATK, Inc./Reynolds Systems, Inc.
353.	Detonator Cartridge	8210083	03-Jul-2012	13/351559	17-Jan-2012	Alliant Techsystems Inc./Reynolds Systems, Inc.
354.	Method for Induction Lamination of Electrically Conductive Fiber Reinforced Composite Materials	6881374	19-Apr-2005	10/253032	24-Sep-2002	Army Research Laboratory
355.	Apparatus and Method for Induction Lamination of Electrically Conductive Fiber Reinforced Composite Materials	7419373	02-Sep-2008	11/109491	19-Apr-2005	Army Research Laboratory
356.	Polyoxymethylene as Structural Support Member and Propellant	7647763	19-Jan-2010	11/086789	22-Mar-2005	ATK/Physical Sciences Inc.
357.	Method For Fabricating Structural Propellants	8033021	11-Oct-2011	12/689562	19-Jan-2010	ATK/Physical Sciences Inc.
358.	Portable Laser Source	8085828	27-Dec-2011	12/795222	07-Jun-2010	ATK/Pollack Laboratories, Inc.
359.	Crosslinkers For Silazane Polymers	5665848	09-Sep-1997	08/650389	20-May-1996	COI Ceramics, Inc.
360.	Crosslinkers For Silazane Polymers	5708114	13-Jan-1998	08/805397	24-Feb-1997	COI Ceramics, Inc.
361.	Continuous Method of Producing Silicon Carbide Fibers	5928978	27-Jul-1999	08/890878	10-Jul-1997	COI Ceramics, Inc.
362.	Method For Producing Ceramic Matrix Composites	6743393	01-Jun-2004	09/098822	17-Jun-1998	COI Ceramics, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
363.	Process to Produce Silicon Carbide Fibers Using a Controlled Concentration of BoronOxide Vapor	6129887	10-Oct-2000	09/140824	26-Aug-1998	COI Ceramics, Inc.
364.	Ceramic Matrix Composites	6350713	26-Feb-2002	09/198979	24-Nov-1998	COI Ceramics, Inc.
365.	Method For Changing the Dielectric Properties of a Ceramic Matrix Composite	6294125	25-Sep-2001	09/220172	23-Dec-1998	COI Ceramics, Inc.
366.	Method for Producing Ceramic Fibers FromBlends of Siloxane Resins and Carborane Siloxane Oligomers	6103178	15-Aug-2000	09/241613	02-Feb-1999	COI Ceramics, Inc.
367.	Method For Producing a Sized Coated Ceramic Fiber and Coated Fiber	6251520	26-Jun-2001	09/311385	13-May-1999	COI Ceramics, Inc.
368.	Method and System of Thermal Protection	6827312	07-Dec-2004	10/304236	27-Nov-2001	COI Ceramics, Inc.
369.	Ceramic Material Suitable For Repair of a Space Vehicle Component in a Microgravity and Vacuum Environment, Method of Making Same, and Method of Repairing a Space Vehicle Component	7628878	08-Dec-2009	11/228469	15-Sep-2005	COI Ceramics, Inc.
370.	Precursor Formulation of a Silicon Carbide Material	7700202	20-Apr-2010	11/357716	16-Feb-2006	COI Ceramics, Inc.
371.	Thermal Protection Systems Comprising Flexible Regions of Inter-Bonded Lamina of Ceramic Matrix Composite Material and Methods of Forming the Same	8974891	10-Mar-2015	11/925492	26-Oct-2007	COI Ceramics, Inc.
372.	Radomes, Aircraft and Spacecraft Including Such Radomes, and Methods of Forming Radomes	8130167	06-Mar-2012	12/422075	10-Apr-2009	COI Ceramics, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
373.	Methods of Repairing a Substrate	7888277	15-Feb-2011	12/621120	18-Nov-2009	COI Ceramics, Inc.
374.	Method of Forming a Silicon Carbide Material, and Structures Including the Material	8697024	15-Apr-2014	12/642100	18-Dec-2009	COI Ceramics, Inc.
375.	Low Density Composite Rocket Nozzle Components and Process For Making the Same From Standard Density Phenolic Matrix, Fiber Reinforced Materials	6679965	20-Jan-2004	09/090256	04-Jun-1998	Orbital ATK, Inc.
376.	Multifunctional Radiation-Hardened Laminate	8460777	11-Jun-2013	12/247090	07-Oct-2008	Orbital ATK, Inc.
377.	Backing For Pre-Preg Material	8999098	07-Apr-2015	12/701126	05-Feb-2010	Orbital ATK, Inc.
378.	Methods of Forming Radiation-Hardened Semiconductor Structures	8399312	19-Mar-2013	12/844684	27-Jul-2010	Orbital ATK, Inc.
379.	Out-of-Autoclave and Alternative Oven Curing Using a Self-Heating Tool	8308889	13-Nov-2012	12/870556	27-Aug-2010	Orbital ATK, Inc.
380.	Solid Feed Systems For Elevated Pressure Processes, Gasification Systems and Related Methods	9023121	05-May-2015	12/908768	20-Oct-2010	Orbital ATK, Inc.
381.	Methods of Producing Nitrate Esters	8658818	25-Feb-2014	12/953111	23-Nov-2010	Orbital ATK, Inc.
382.	Initiation Systems For Explosive Devices, Scalable Output Explosive Devices Including Initiation Systems, and Related Methods	8931415	13-Jan-2015	13/181131	12-Jul-2011	Orbital ATK, Inc.
383.	Fragmentation Bodies, Warheads Including Fragmentation Bodies, and Related Ordnance	8973503	10-Mar-2015	13/550705	17-Jul-2012	Orbital ATK, Inc.

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
384.	Gas Generators, Launch Tubes Including Gas Generators and Related Systems and Methods	8967046	03-Mar-2015	13/690040	30-Nov-2012	Orbital ATK, Inc.
385.	Application Tips Including a Dispensing Nozzle With One or More Dispensing Passages Extending Along a Length Thereof and Related Methods	9038866	26-May-2015	13/797639	12-Mar-2013	Orbital ATK, Inc.
386.	Cyclic Nitro Compounds, Pharmaceutical Compositions Thereof and Uses Thereof	7507842	24-Mar-2009	11/502810	11-Aug-2006	Orbital ATK, Inc./RadioRx, Inc.
387.	Methods of Synthesizing Cyclic Nitro Compounds	7745643	29-Jun-2010	12/252278	15-Oct-2008	Orbital ATK, Inc.
388.	Cyclic Nitro Compounds, Pharmaceutical Compositions Thereof and Uses Thereof	8299053	30-Oct-2012	12/397651	04-Mar-2009	Orbital ATK, Inc./RadioRx, Inc.
389.	Methods of Synthesizing Cyclic Nitro Compounds	8178698	15-May-2012	12/788014	26-May-2010	Orbital ATK, Inc./RadioRx, Inc.
390.	Acyclic Organonitro Compounds For Use in Treating Cancer	8664247	04-Mar-2014	13/593737	24-Aug-2012	Orbital ATK, Inc./Epicentrx, Inc.
391.	Cyclic Nitro Compounds, Pharmaceutical Compositions Thereof and Uses Thereof	8927527	06-Jan-2015	13/655618	19-Oct-2012	Orbital ATK, Inc./Epicentrx, Inc.
392.	Deployable Helical Antenna	5721558	24-Feb-1998	08/642454	03-May-1996	Orbital Sciences Corporation
393.	System for Turbo-Coded Satellite Digital Audio Broadcasting	5907582	25-May-1999	08/908045	11-Aug-1997	Orbital Sciences Corporation
394.	Battery Charge Control Method	5834923	10-Nov-1998	08/997923	24-Dec-1997	Orbital Sciences Corporation
395.	Method and Receiver for Coded Satellite Digital Audio Broadcasting	5970085	19-Oct-1999	09/061255	17-Apr-1998	Orbital Sciences Corporation

No.	Title	Patent Number	Issue Date	Application Number	Filing Date	Owner
396.	Method and System for Turbo-Coded Satellite Digital Audio Broadcasting	6061387	09-May-2000	09/275081	24-Mar-1999	Orbital Sciences Corporation
397.	Self-Monitoring Satellite System	6667713	23-Dec-2003	09/938983	24-Aug-2001	Orbital Sciences Corporation
398.	High Performance Duplexer and Method	6597258	22-Jul-2003	09/944781	30-Aug-2001	Orbital Sciences Corporation
399.	High Performance Duplexer and Method	6707350	16-Mar-2004	10/456317	06-Jun-2003	Orbital Sciences Corporation
400.	Phase-Array Antenna Duplexing	6771222	03-Aug-2004	10/456760	06-Jun-2003	Orbital Sciences Corporation
401.	Carrier Suppression Type Modulator With Encoded Modulating Signals	7369624	06-May-2008	10/856801	01-Jun-2004	Orbital Sciences Corporation
402.	Secondary Payload Interface	8355359	15-Jan-2013	12/185717	04-Aug-2008	Orbital Sciences Corporation
403.	Electronic Safe/Arm System and Methods of Use Thereof	8573124	05-Nov-2013	12/778046	11-May-2010	Orbital Sciences Corporation
404.	Shock Simulation Method and Apparatus	8479557	09-Jul-2013	12/874211	01-Sep-2010	Orbital Sciences Corporation
405.	Emergency Communications Channel Systems and Methods for Satellite Command	8483888	09-Jul-2013	13/438377	03-Apr-2012	Orbital Sciences Corporation

U.S. Patent Applications:

No.	Title	Application Number	Filing Date	Owner
1.	Electromagnetic Coil Assembly	13/998918	02-Dec-2013	
2.	High Voltage Arm/Fire Device and Method	09/795690	28-Feb-2001	Alliant Techsystems Inc.
3.	Solar Arrays	11/944061	21-Nov-2007	Orbital ATK, Inc.
4.	Optical Coupled Sensors For Harsh Environments	12/479251	05-Jun-2009	Alliant Techsystems Inc.
5.	Low Temperature, Extrudable, High Density Reactive Materials	12/507605	22-Jul-2009	Alliant Techsystems Inc.
6.	Insensitive Munitions Swaged Vent Plug	12/543938	19-Aug-2009	Alliant Techsystems Inc.
7.	Radially Extending Composite Structures	12/615980	10-Nov-2009	Orbital ATK, Inc.
8.	Metal Complexes For Use as Gas Generants	12/631030	04-Dec-2009	Alliant Techsystems Inc.
9.	Rockets, Methods of Rocket Control and Methods of Rocket Evaluation Utilizing Pressure Compensation	12/777508	11-May-2010	Orbital ATK, Inc.
10.	Variable Material Stretch-Forming Apparatus and Methods	12/832251	08-Jul-2010	Orbital ATK, Inc.
11.	Two-Phase Heat Transfer System Including a Thermal Capacitance Device and Related Methods	13/022445	07-Feb-2011	Alliant Techsystems Inc.
12.	Two-Phase Heat Transfer Systems and Evaporators and Condensers For Use in Heat Transfer Systems	13/252825	04-Oct-2011	Alliant Techsystems Inc.
13.	Heat Transfer System	13/366782	06-Feb-2012	Alliant Techsystems Inc.
14.	Reactive Material Enhanced Projectiles and Related Methods	13/372804	14-Feb-2012	Alliant Techsystems Inc.
15.	Evaporators For Heat Transfer Systems	13/421524	15-Mar-2012	Alliant Techsystems Inc.
16.	Devices Incorporating Non-Lethal Payloads and Methods of Producing Flash	13/457996	27-Apr-2012	Alliant Techsystems Inc.
17.	Composite Structures Including an Elongated Member Exhibiting a Curved Shape	13/616277	14-Sep-2012	Alliant Techsystems Inc.
18.	Non-Lethal Payloads and Methods of Producing Same	13/672411	08-Nov-2012	Orbital ATK, Inc.
19.	Induction Heating Compaction System	13/734661	04-Jan-2013	Orbital ATK, Inc.
20.	Composite Dome Connectors for Flywheel Rim to Shaft Attachment	13/762030	07-Feb-2013	Orbital ATK, Inc.

No.	Title	Application Number	Filing Date	Owner
21.	Passive Charge Neutralization System for Mitigating Electrostatic Discharge in Space	13/777732 (Patent No. 9119277)	26-Feb-2013	Orbital ATK, Inc.
22.	Insulation Materials Comprising Fibers Having a PartiallyCured Polymer Coating Thereon, Articles Including Such Insulation Materials, and Methods of Forming Such Materials and Articles	13/787355	06-Mar-2013	Orbital ATK, Inc.
23.	Charged Projectiles and Related Assemblies, Systems andMethods	13/789147	07-Mar-2013	Orbital ATK, Inc.
24.	Man-Rated Fire Suppression System and Related Methods	13/792903	11-Mar-2013	Alliant Techsystems Inc.
25.	Methods of Separating Mixtures of Miscible Fluids	13/793816	11-Mar-2013	Orbital ATK, Inc.
26.	Precursor Formulations for a Liner, a Rocket Motor Including the Liner, and Related Methods	13/796685	12-Mar-2013	Orbital ATK, Inc.
27.	Multi-Spectral Detection Device Including an Acoustic Detector Array	13/799519	13-Mar-2013	Alliant Techsystems Inc.
28.	Hybrid Optical and Microwave Imaging Satellite	13/800243	13-Mar-2013	Orbital ATK, Inc.
29.	Methods and Systems for Producing DEMN Eutectic, and Related Methods of Producing Energetic Compositions	13/804148	14-Mar-2013	Orbital ATK, Inc.
30.	Precursor Formulations for an Energetic Composition Including High Surface Area Amorphous Carbon Black	13/832960	15-Mar-2013	Orbital ATK, Inc.
31.	Downhole Injector Insert Apparatus	13/832992	15-Mar-2013	Orbital ATK, Inc.
32.	Launch Lightning Risk Mitigation System and Method	13/844105	15-Mar-2013	Orbital ATK, Inc.
33.	Evaporators Including a Capillary Wick and a Plurality of Vapor Grooves and Two-Phase Heat Transfer Systems Including Such Evaporators	13/847146 (Patent No. 9103602)	19-Mar-2013	Alliant Techsystems Inc.
34.	Initiator Modules, Munitions Systems Including Initiator Modules, and Related Methods	13/854632	01-Apr-2013	Alliant Techsystems Inc.
35.	Helical Cross Flow (HCF) Pulse Detonation Engine	13/886030	02-May-2013	Alliant Techsystems Inc.
36.	Reactive Material Enhanced Projectiles, Devices For Generating Reactive Material Enhanced Projectiles and Related Methods	13/896621	17-May-2013	Alliant Techsystems Inc.

No.	Title	Application Number	Filing Date	Owner
37.	Man-Rated Fire Suppression System and Related Methods	14/031493	19-Sep-2013	Alliant Techsystems Inc.
38.	Reactive Material Compositions and Projectiles Including theSame	14/062635	24-Oct-2013	Alliant Techsystems Inc.
39.	A Rotorcraft Collision Avoidance System	14/162476	23-Jan-2014	Alliant Techsystems Inc.
40.	Propellant Compositions Including Stabilized Red Phosphorus and Methods of Forming Same	14/166521	28-Jan-2014	Alliant Techsystems Inc.
41.	Methods and Apparatus for Detecting Defects in an Object ofInterest	14/178100	11-Feb-2014	Orbital ATK, Inc.
42.	Compositions Usable as Flare Compositions, Countermeasure Devices Containing the Flare Compositions, and Related Methods	14/190417	26-Feb-2014	Alliant Techsystems Inc.
43.	Illumination Compositions, Illumination Flares Including the Illumination Compositions, and Related Methods	14/218547	18-Mar-2014	Alliant Techsystems Inc.
44.	Method of Manufacturing Heat Exchanger Cooling Passages in Aero Propulsion Structure	14/225926 (Patent No. 9108282)	26-Mar-2014	Alliant Techsystems Inc.
45.	Composites for Antennas and Other Applications	14/228627	28-Mar-2014	Alliant Techsystems Inc.
46.	Methods and Apparatuses for Autonomous Flight Termination	14/335651	18-Jul-2014	Alliant Techsystems Inc.
47.	Methods and Apparatus for Downhole Propellant-Based Stimulation with Wellbore Pressure Containment	14/491246	19-Sep-2014	Alliant Techsystems Inc.
48.	Downhole Stimulation Tools and Related Methods of Stimulating a Producing Formation	14/491518	19-Sep-2014	Alliant Techsystems Inc.
49.	Space Storable, Thrust-Vectorable Rocket Motor Nozzle andRelated Methods	14/495063	24-Sep-2014	Alliant Techsystems Inc.
50.	Connectors For Separable Firing Unit Assemblies, Firing Unit Assemblies and Related Methods	14/519748	21-Oct-2014	Alliant Techsystems Inc.
51.	Compositions Usable as Flare Compositions, Countermeasure Devices Containing the Flare Compositions, and Related Methods	14/553785	25-Nov-2014	Alliant Techsystems Inc.
52.	Methods of Producing Energetic Polymers, Energetic Binders, and Energetic Compositions	14/567334	11-Dec-2014	Alliant Techsystems Inc.

No.	Title	Application Number	Filing Date	Owner
53.	Articles and Armor Materials Incorporating Fiber-Free Compositions and Methods of Forming Same	14/599395	16-Jan-2015	Alliant Techsystems Inc.
54.	Fire Suppression Systems and Methods of Suppressing a Fire	14/629065	23-Feb-2015	Alliant Techsystems Inc.
55.	Methods of Forming Flexible Structures for a Rocket Motor Assembly, Related Flexible Structures, and Related Assemblies Including the Flexible Structures	14/629297	23-Feb-2015	Alliant Techsystems Inc.
56.	Stun Grenades and Methods of Assembling Stun Grenades	14/692175	21-Apr-2015	Alliant Techsystems Inc.
57.	Methods of Preparing Nitrocellulose Based Propellants and Propellants Made Therefrom	62/043975	29-Aug-2014	Alliant Techsystems Inc.
58.	Compositions Usable as Flare Compositions, Countermeasure Devices Containing the Flare Compositions, and Related Methods	62/064910	16-Oct-2014	Alliant Techsystems Inc.
59.	O-Nitro Compounds and Pharmaceutical Compositions Including Same	13/951720 (Patent No. 9133150)	26-Jul-2013	Alliant Techsystems Inc./RadioRx, Inc.
60.	Ceramic Composite Matrix Material Bonded Assembly and Processes Thereof	13/736723	08-Jan-2013	COI Ceramics, Inc.
61.	Methods of Forming Ceramic Composite Structures, and Related Systems, Apparatuses, and Ceramic Matrix Composite Structures	13/741052 (Patent No. 9102571)	14-Jan-2013	COI Ceramics, Inc.
62.	Methods for Forming Ceramic Matrix Composite Structures	14/644062	10-Mar-2015	COI Ceramics, Inc.
63.	Non-Circular Cross Section Missile Components, Missiles Incorporating Same, and Methods of Operation	12/410283	24-Mar-2009	Orbital ATK, Inc.
64.	Automated Bias-Ply Preparation Device and Process	12/759333	13-Apr-2010	Orbital ATK, Inc.
65.	Strain Measurement Device, a Solid Rocket Motor Including Same, and Related Methods	13/271416	12-Oct-2011	Orbital ATK, Inc.
66.	Flares, Consumable Weight Components Thereof, and Methods of Fabricating and Use	13/289669	04-Nov-2011	Orbital ATK, Inc.
67.	Methods and Apparatuses for Active Protection From Aerial Threats	13/455831	25-Apr-2012	Orbital ATK, Inc.
68.	Radial Firing Warhead System and Method	13/486941	01-Jun-2012	Orbital ATK, Inc.

No.	Title	Application Number	Filing Date	Owner
69.	Imaging Satellite System and Method	13/559321	26-Jul-2012	Orbital ATK, Inc.
70.	High Voltage Firing Unit, Ordnance System, and Method of Operating Same	13/608571 (Patent No. 9115970)	10-Sep-2012	Orbital ATK, Inc.
71.	Distributed Ordnance System, Multiple Stage Ordnance System, and Related Methods	13/608824 (Patent No. 9127918)	10-Sep-2012	Orbital ATK, Inc.
72.	Out-of-Autoclave and Alternative Oven Curing Using a Self-Heating Tool	13/651814	15-Oct-2012	Orbital ATK, Inc.
73.	Downhole Combustor	13/745196	18-Jan-2013	Orbital ATK, Inc.
74.	Method and Apparatus for Ballistic Tailoring of Propellant Structures and Operation Thereof for Downhole Stimulation	13/781217	28-Feb-2013	Orbital ATK, Inc.
75.	High Pressure Combustor with Hot Surface Ignition	13/782865	01-Mar-2013	Orbital ATK, Inc.
76.	High Efficiency Direct Contact Heat Exchanger	13/793891	11-Mar-2013	Orbital ATK, Inc.
77.	Guard Assembly	13/803361	14-Mar-2013	Orbital ATK, Inc.
78.	Solar Arrays, Deployment Mechanisms Therefor, and Related Methods	13/804331	14-Mar-2013	Orbital ATK, Inc.
79.	UT Phased Array Inspection Fixture	13/829988	14-Mar-2013	Orbital ATK, Inc.
80.	Methods and Apparatuses for Engagement Management of Aerial Threats	13/839176	15-Mar-2013	Orbital ATK, Inc.
81.	Methods and Apparatuses for Aerial Interception of Aerial Threats	13/839637	15-Mar-2013	Orbital ATK, Inc.
82.	Fracturing Apparatus	13/840672	15-Mar-2013	Orbital ATK, Inc.
83.	Flexible Work Holding Fixture	13/841794	15-Mar-2013	Orbital ATK, Inc.
84.	Stimulation Devices, Initiation Systems for Stimulation Devices and Related Methods	14/227988	27-Mar-2014	Orbital ATK, Inc.
85.	Gas Generators, Launch Tubes Including Gas Generators and Related Systems and Methods	14/606601	27-Jan-2015	Orbital ATK, Inc.
86.	Methods of Forming Fragmentation Bodies, Warheads, and Ordnance	14/641214	06-Mar-2015	Orbital ATK, Inc.
87.	Backing For Pre-Preg Material	14/679341	06-Apr-2015	Orbital ATK, Inc.
88.	Inertial Extraction System	13/599709	30-Aug-2012	Orbital ATK, Inc./ACENT Laboratories
89.	Cyclic Nitro Compounds, Pharmaceutical Compositions Thereof and Uses Thereof	14/584177	29-Dec-2014	Orbital ATK, Inc./EpicentRX, Inc.

No.	Title	Application Number	Filing Date	Owner
90.	Systems and Methods for Mitigating Disturbances in a Dual Gridded Reflector Antenna	13/558080	25-Jul-2012	Orbital Sciences Corporation
91.	Secondary Payload Interface	13/740672	14-Jan-2013	Orbital Sciences Corporation
92.	Systems and Methods for Reconfigurable Faceted ReflectorAntennas	13/834214	15-Mar-2013	Orbital Sciences Corporation
93.	Electronic Safe/Arm System and Methods of Use Thereof	13/858438	08-Apr-2013	Orbital Sciences Corporation
94.	Protection of Commercial Communications	14/211271	14-Mar-2014	Orbital Sciences Corporation
95.	Hybrid-Cycle Liquid Propellant Rocket Engine	14/212397	14-Mar-2014	Orbital Sciences Corporation
96.	Ground-Based Satellite Antenna Pointing System	14/496071	25-Sep-2014	Orbital Sciences Corporation
97.	Communications Bandwidth Enhancement Using Orthogonal Spatial Division Multiplexing	14/642225	09-Mar-2015	Orbital Sciences Corporation
98.	Systems and Methods for Satellite Constellation Launch Using Air-Launched Vehicles	62/151969	23-Apr-2015	Orbital Sciences Corporation