



March 24, 2017

Reference: GV Aircraft Upgrade Options

This memorandum has been prepared by Essex Aviation ("Essex") for Elysium ("Elysium") to provide an overview of the options available to upgrade from the current 2002 GV to a pre-owned G550 or G650 aircraft. Essex has prepared an overview of the various levels of capital requirements necessary in order to upgrade to various aircraft types and ages and a commentary of anticipated refurbishment and or upgrade work that may need to be completed.

For the purposes of this analysis, the assumption that will be used concerning the net proceeds Elysium could receive for the sale of the GV is \$11.0M. The FANS/1A upgrade will assume to either have been completed or a slot will be in place for the upgrade to be completed at the time of the sale.

All of the G550 aircraft are configured with the Honeywell Primus Epic Plane View avionics package that meets all the future avionics requirements and mandates. The majority of upgrades being done to G550 pre-owned aircraft revolve around exterior paint, interior refurbishments, upgrades to cabin entertainment and management systems, Wi-Fi systems and various other new technology features that are available. The G550 is currently scheduled to no longer be produced as of the end of 2018 and is being replaced by the G600.

The G650 aircraft are configured with an enhanced Honeywell Primus Epic Plane View II avionics package that also meets all the future avionics requirements and mandates. As with the G550, most upgrades considered for pre-owned aircraft revolve around either incorporating options that were not selected by the prior owner or new technology features that are available.

Below is an overview of the various capital investment levels and the range of aircraft that can be acquired for both the G550 and G650 along with market information on the GV.

### **Gulfstream G550**

One item of note concerning the G550 market is although there is a large number of aircraft for sale, the number of aircraft configured with a forward galley and crew rest is very limited and is currently considered the highest demand configuration of buyers.

### **\$5M - \$8M Capital Investment Representing a \$16M - \$19M Acquisition Cost**

2004 – 2007 (17 Aircraft)

- All aircraft will have had their first 96 month or 8 year major airframe inspection completed
- Aircraft with original paint would need to be stripped and re-painted (estimated cost \$275,000)



- Aircraft with original interior would need at a minimum a full soft goods replacement or refurbishment and veneer touch-ups and repairs (estimated cost range \$250,000 - \$400,000)
- Equipment or technology upgrades would need to be evaluated independently depending upon the aircraft's current systems and configuration

\$9M - \$16M Capital Investment Representing a \$20M - \$27M Acquisition Cost

2008 – 2010 (13 Aircraft)

- 2008 aircraft will have had their first 96 month or 8 year major airframe inspection completed
- 2009 – 2010 aircraft will have their first 96 month or 8 year major airframe due or coming due in the next 18 months
- Aircraft with original paint will likely need to be stripped and re-painted (estimated cost \$275,000)
- Aircraft that have had new paint or touch-up paint done would need to be evaluated independently unless a new paint scheme is desired
- Aircraft with original interior would likely need at a minimum a full soft goods replacement or refurbishment and veneer touch-ups and repairs (estimated cost range \$250,000 - \$400,000)
- Equipment or technology upgrades would need to be evaluated independently depending upon the aircraft's current systems and configuration

\$19M - \$24M Capital Investment Representing a \$30M - \$35M Acquisition Cost

2011 – 2014 (8 Aircraft)

- The first 96 month or 8 year major airframe inspections will be due within a 2 – 5 year period
- Aircraft with original paint may be approaching the need to be stripped and re-painted (estimated cost \$275,000)
- Aircraft that have had new paint or touch-up paint done would need to be evaluated independently unless a new paint scheme is desired
- Interiors would need to be evaluated on a case by case basis and repairs and refurbishments quoted independently
- Equipment or technology upgrades would need to be evaluated independently depending upon the aircraft's current systems and configuration

No pre-owned G550 aircraft are currently listed for sale with a YOM of 2015 or newer. As part of every acquisition Essex communicates their exclusive representation of a buyer to the market and very often "Off-Market" aircraft opportunities are proposed as additional candidates for consideration. The last acquisitions completed by Essex have involved Off-Market aircraft identified through this process and we would anticipate additional candidate aircraft would be presented for consideration.



The last quarterly data (Q4 2016) published on the G550 market reported the following:

Available For Sale / 24 Month High – 40 in Q4 2016

Available For Sale / 24 Month Low – 23 in Q1 2015

Transactions in 2016 – 31 Aircraft

Transactions in 2015 – 27 Aircraft

Advertised Price Reductions during Q4 2016 – 9

Average Price Reduction – (5.7%)

Average Sale Price Q4 2016 - \$25.2M

Sale Price Range Q4 2016 - \$17.5M - \$38.0M

Average Days on Market – 250

% Equipped with Crew Rest Area – 55%

Below is a summary of the last seven (7) G550 aircraft currently sold, specifically of YOM 2010 and newer:

January 2017

2014 – S/N 5482

Sell Price \$37.5M

Hours 373

Fwd Galley

16 Passengers

December 2016

2013 – S/N 5421

Sell Price \$31.25M

Hours 1,184

Fwd Galley

16 Passengers

November 2016

2010 – S/N 5304

Sell Price \$31M+

Hours 2,226

Fwd Galley

14 Passengers

November 2016

2010 – S/N 5221

Sell Price \$25M

Hours 2,378

Fwd Galley

TBD Passengers



November 2016  
2010 – S/N 5259  
Sell Price \$28.5M  
Hours 1,443  
Fwd Galley  
16 Passengers

October 2016  
2014 – S/N 5492  
Sell Price \$38M  
Hours 253  
Aft Galley  
14 Passengers

August 2016  
2013 – S/N 5416  
Sell Price \$38M  
Hours 1,037  
Fwd Galley  
14 Passengers

### **Gulfstream G650**

Items of note concerning the G650 market include a steady decrease in available aircraft from the peak of 21 aircraft for sale in Q1 2016. There is currently a lack of “like-new” or “ferry-time” aircraft for sale currently versus a peak of 8 in the beginning of 2016. A majority of the aircraft on the market has been listed for sale for an extended period of time and the feeling is that these sellers will be motivated to move the aircraft especially ones with higher total time.

Any upgrade work being done on G650 pre-owned aircraft are normally standard options that were not selected as part of the original specification process for the aircraft.

No pre-owned G650 aircraft are currently listed for sale with a YOM of 2010 or 2011 and none are a YOM of 2016 or newer.

### **\$34M - \$44M Capital Investment Representing a \$45M - \$55M Acquisition Cost**

2012 – 2015 (10 Aircraft)

- First 96 month or 8 year major airframe inspection will be due within a 3 – 6 year period
- Aircraft with original paint should only require touch-up paint unless a new paint scheme is desired
- Aircraft that have had new paint or touch-up paint done would need to be evaluated independently
- Interiors would need to be evaluated on a case by case basis and repairs and refurbishments quoted independently
- Equipment or technology upgrades would need to be evaluated independently depending upon the aircraft’s current systems and configuration



The latest quarterly data (Q4 2016) published on the G650 market reported the following:

Available For Sale 24 Month High – 21 in Q1 2016

Available For Sale 24 Month Low – 4 in Q1 2015

Transactions in Q4 2016 – 4 Aircraft

Transactions in Q4 2015 – 2 Aircraft

Advertised Price Reductions – 5

Average Price Reduction – Data Not Available

Average Sale Price - 2016 Year to Date (includes G650ER) - \$60.6M

Average Day on Market – 314

% Available with Forward Galley – 85%

% Equipped with Crew Rest Area – 85%

Below is a summary of the last eight (8) G650 aircraft currently sold:

March 2017  
2015 – S/N 6109  
Sell Price \$52M  
Hours 544  
Fwd Galley  
15 Passengers

March 2017  
2013 – S/N 6047  
Sell Price \$TBD  
Hours TBD  
TBD Galley  
16 Passengers

February 2017  
2013 – S/N 6028  
Sell Price \$52M  
Hours 700  
Fwd Galley  
11 Passengers

January 2017  
2016 – S/N 6204  
Sell Price \$642M  
Hours 31  
Fwd Galley  
13 Passengers



December 2016  
2014 – S/N 6099  
Sell Price \$54M  
Hours 400  
Fwd Galley  
14 Passengers

October 2016  
2016 – S/N 6196  
Sell Price \$TBD  
Hours 37  
Fwd Galley  
15 Passengers

October 2016  
2013 – S/N 6043  
Sell Price \$50.2M  
Hours 743  
Fwd Galley  
16 Passengers

October 2016  
2013 – S/N 6006  
Sell Price \$TBD  
Hours 37 TBD  
Fwd Galley  
13 Passengers

#### **Gulfstream GV Market Data**

Items of note concerning the GV market include that it continues to be the most stable market of the large cabin pre-owned Gulfstream. Although there were a couple of new GV's brought to the market in Q4, the pricing continues to be stable with no price reductions indicated by sellers during Q4.

The last quarterly data (Q4 2016) published on the GV market reported the following:

Available For Sale 24 Month High – 23 in Q2 2015  
Available For Sale 36 Month Low – 7 in Q3 2016  
Transactions in Year to Date 2016 – 16 Aircraft  
Transactions in Year to Date 2015 – 26 Aircraft

Advertised Price Reductions – 0

Average Sale Price Q4 2016 - \$9.7M  
Average Days on Market – 314



% Available with Forward Galley – 55%

% Equipped with Engine Program – 77%

Below is a summary of the last five (5) GV aircraft that were sold:

December 2016

2000 - S/N 572 – Austrian Registered

Sell Price \$10.25M

Hours 7,282

Forward Galley

16 Passengers

November 2016

2000 - S/N 601 – United States Registered

NetJets Aircraft

Sell Price \$8.6M

Hours 14,579

Aft Galley

14 Passengers

November 2016

2003 - S/N 687 – Austrian Registered

Sell Price \$11.25M

Hours 8,221

Forward Galley

14 Passengers

September 2016

2001 - S/N 629 – United States Registered

Sell Price \$10.6M

Hours 4,606

Aft Galley

12 Passengers

September 2016

2002 - S/N 672 – United States Registered

Sell Price \$11.5M

Hours 7,339

Aft Galley

14 Passengers