

# WEIGHT & BALANCE REPORT

**Original as Weighed on: 21-Apr-04**

Registration: C-FGHT  
 Manufacturer: MD HELICOPTERS INC.  
 Model: 500D  
 Serial No: 1099D

Scales P/N: 85-00914-01  
 S/N: 1308-3C  
 Weighed with: All oils full  
 Zero Fuel

Weighing points  
 Fwd Jackpoint, L/H  
 Fwd Jackpoint, R/H  
 Aft Jackpoint

Scale	Tare	Net Weight	Arm	Moment
700.0	0.0	700.0	96.9	67830.0
681.0	0.0	681.0	96.9	65988.9
203.0	0.0	203.0	197.2	40031.6
		<b>1584.0</b>	<b>109.75</b>	<b>173850.5</b>

	Longitudinal			Lateral	
	Weight	Arm	Moment	Arm	Moment
	1584.0	109.8	173850.5	-0.32	-486.4
<b>Empty Weight &amp; C of G</b>	<b>1584.0</b>	<b>109.8</b>	<b>173850.5</b>	<b>-0.31</b>	<b>-486.4</b>

**Most Forward C of G**

Empty Weight	1584.0	109.8	173850.5	-0.31	-486.4
Pilot	200.0	73.5	14700.0	-13.00	-2600.0
Passenger (Fwd)	200.0	71.5	14300.0	2.60	520.0
Passenger (Fwd)	200.0	73.5	14700.0	18.10	3620.0
Critical Fuel	40.0	90.6	3624.0	0.00	0.0
	<b>2224.0</b>	<b>99.4</b>	<b>221174.5</b>	<b>0.47</b>	<b>1053.6</b>

**Most Aft C of G**

Empty Weight	1584.0	109.8	173850.5	-0.31	-486.4
Pilot	200.0	73.5	14700.0	-13.00	-2600.0
Passenger (Aft)	200.0	105.0	21000.0	12.10	2420.0
Passenger (Aft)	200.0	105.0	21000.0	-12.10	-2420.0
Baggage under Seat	20.0	110.0	2200.0	0.00	0.0
	<b>2204.0</b>	<b>105.6</b>	<b>232750.5</b>	<b>-1.40</b>	<b>-3086.4</b>

The maintenance described above has been performed in accordance with airworthiness requirements. All configuration calculations have been reviewed for accuracy.

Signature & Licence # \_\_\_\_\_

AMO158-90

## Install KANNAD 406 AF-Compact ELT & Antenna

Empty Weight as per W & B:	Longitudinal			Lateral	
	Weight	Arm	Moment	Arm	Moment
Original	1584.00	109.75	173850.50	-0.31	-486.40
Remove ACK ELT E-01	-3.50	38.65	-135.28	6.50	-22.75
Install KANNAD 406 ELT	1.87	44.65	83.50	6.50	12.16
Remove ELT Antenna	-0.09	82.50	-7.43	-25.75	2.32
Install KANNAD ELT Antenna	0.38	82.50	30.94	-25.75	-9.66
<b>New Empty Weight</b>	<b>1582.4</b>	<b>109.83</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>

### Most Forward C of G

Empty Weight	1582.4	109.8	173798.7	12.69	-497.0
Pilot	200.0	73.5	14700.0	-13.00	-2600.0
Passenger (Fwd)	200.0	71.5	14300.0	2.60	520.0
Passenger (Fwd)	200.0	73.5	14700.0	18.10	3620.0
Critical Fuel	40.0	90.6	3624.0	0.00	0.0
	<b>2222.4</b>	<b>99.5</b>	<b>221122.7</b>	<b>0.47</b>	<b>1043.0</b>

### Most Aft C of G

Empty Weight	1582.4	109.8	173798.7	12.69	-497.0
Pilot	200.0	73.5	14700.0	-13.00	-2600.0
Passenger (Aft)	200.0	105.0	21000.0	12.10	2420.0
Passenger (Aft)	200.0	105.0	21000.0	-12.10	-2420.0
Baggage under Seat	15.0	110.0	1650.0	0.00	0.0
	<b>2197.4</b>	<b>105.6</b>	<b>232148.7</b>	<b>-1.41</b>	<b>-3097.0</b>

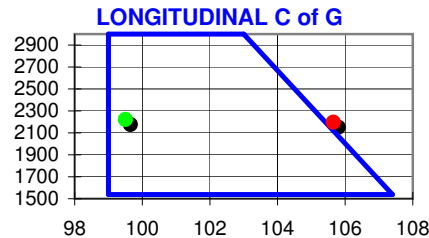
The maintenance described above has been performed in accordance with airworthiness requirements. All configuration calculations have been reviewed for accuracy.

## AIRCRAFT CONFIGURATIONS

### WEIGHT & BALANCE CONFIGURATION NO. 1

**Purpose:** To Establish a Basic Aircraft Configuration  
Refer to the Equipment List

Empty Weight as per W & B:	Longitudinal			Lateral	
	Weight	Arm	Moment	Arm	Moment
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>
<b>New Empty Weight</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>-0.31</b>	<b>-497.0</b>
<b>Most Forward C of G</b>	2222.4	99.5	221122.7	0.37	812.01
<b>Most Aft C of G</b>	2197.4	105.6	232148.7	-1.23	-2707.0



### WEIGHT & BALANCE CONFIGURATION NO. 2

**Purpose:** Addition of Inlet Diverter

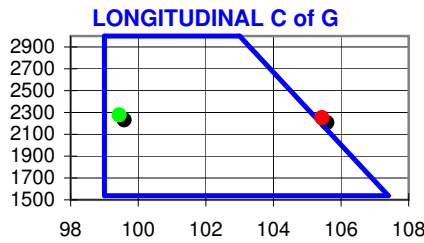
Empty Weight as per W & B:	Longitudinal			Lateral	
	Weight	Arm	Moment	Arm	Moment
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>
Add Inlet Diverter	2.0	92.8	185.6	0.00	0.0
<b>New Empty Weight</b>	<b>1584.4</b>	<b>109.8</b>	<b>173984.3</b>	<b>-0.31</b>	<b>-497.0</b>
<b>Most Forward C of G</b>	2224.4	99.5	221308.3	0.37	812.01
<b>Most Aft C of G</b>	2199.4	105.6	232334.3	-1.23	-2707.0

### WEIGHT & BALANCE CONFIGURATION NO. 3

**Purpose:** Addition of Skyrotors Pods

Selective Loading Required

Empty Weight as per W & B:	Longitudinal			Lateral	
	Weight	Arm	Moment	Arm	Moment
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-496.99</b>
Add Sky Pods	56.0	96.9	5426.4	0.00	0.00
<b>New Empty Weight</b>	<b>1638.4</b>	<b>109.4</b>	<b>179225.1</b>	<b>-0.30</b>	<b>-497.0</b>
<b>Most Forward C of G</b>	2278.4	99.4	226549.1	0.36	812.01
<b>Most Aft C of G</b>	2253.4	105.4	237575.1	-1.20	-2707.0

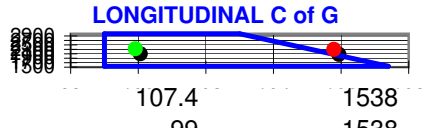


### WEIGHT & BALANCE CONFIGURATION NO. 4

**Purpose:** Addition of Tower Aux Tank (Only)

Selective loading in this configuration

Empty Weight as per W & B:	Longitudinal			Lateral	
	Weight	Arm	Moment	Arm	Moment
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>
Add Aux Tank	104.3	108.7	11337.4	0.00	0.00
<b>New Empty Weight</b>	<b>1686.7</b>	<b>109.8</b>	<b>185136.1</b>	<b>-0.29</b>	<b>-497.0</b>
<b>Most Forward C of G</b>	2326.7	99.9	232460.1	0.35	812.01
<b>Most Aft C of G</b>	2301.7	105.8	243486.1	-1.18	-2707.0



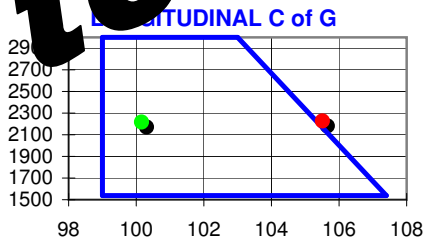
### WEIGHT & BALANCE CONFIGURATION NO. 5

**Purpose:** Addition of Viking Cargo Pod

Selective Loading Required

	Weight	Longitudinal Arm	Moment	Lateral Arm	Moment
Amendment #2	1582.4	109.8	173798.7	12.69	-497.0
Add Viking Pod	85.8	85.5	73193.3	0.00	0.0
<b>New Empty Weight</b>	<b>1668.2</b>	<b>100.7</b>	<b>181392.0</b>	<b>-0.30</b>	<b>-497.0</b>
Most Forward C of G	2190.4	100.2	222161.0	0.37	812.01
Most Aft C of G	2200.4	105.5	235087.0	-1.21	-2707.0

NIA to Aircraft

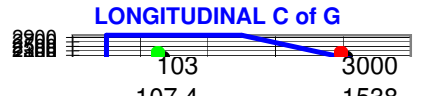


### WEIGHT & BALANCE CONFIGURATION NO. 6

**Purpose:** Addition of Inlet Diverter & Sky Pods

Selective Loading Required

Empty Weight as per W & B:	Weight	Longitudinal Arm	Moment	Lateral Arm	Moment
<b>New Empty Weight</b>	<b>1582.4</b>	<b>109.83</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>
Add Inlet Diverter	2.0	92.80	185.6	0.00	0.0
Add Sky Pods	56.0	96.90	5426.4	0.00	0.0
<b>New Empty Weight</b>	<b>1640.4</b>	<b>109.4</b>	<b>179410.7</b>	<b>-0.30</b>	<b>-497.0</b>
Most Forward C of G	2190.4	100.5	220179.7	0.37	812.01
Most Aft C of G	2200.4	105.9	233105.7	-1.23	-2707.0

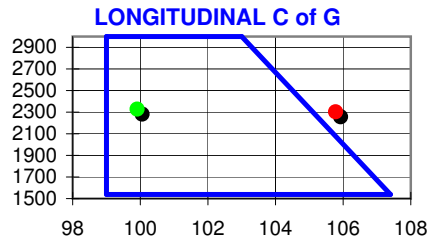


## WEIGHT & BALANCE CONFIGURATION NO. 7

**Purpose:** Addition of Inlet Diverter & Tower Aux Tank

Selective Loading Required

	Longitudinal			Lateral		
	Weight	Arm	Moment	Arm	Moment	
Empty Weight as per W & B:						
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>	
Add Inlet Diverter	2.0	92.8	185.6	0.00	0.0	
Add Aux Tank	104.3	108.7	11337.4	0.00	0.00	
<b>New Empty Weight</b>	<b>1688.7</b>	<b>109.7</b>	<b>185321.7</b>	<b>-0.29</b>	<b>-497.0</b>	
<b>Most Forward C of G</b>	●	2328.7	99.9	232645.7	0.35	812.01
<b>Most Aft C of G</b>	●	2303.7	105.8	243671.7	-1.18	-2707.0

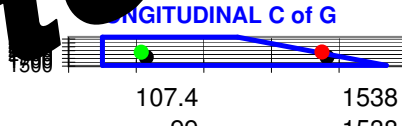


## WEIGHT & BALANCE CONFIGURATION NO. 8

**Purpose:** Addition of Inlet Diverter & Viking Cargo Pod

Selective Loading Required

	Longitudinal			Lateral		
	Weight	Arm	Moment	Arm	Moment	
Empty Weight as per W & B:						
<b>Empty Weight</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>	
Add Inlet Diverter	2.0	92.8	185.6	0.00	0.0	
Add Viking Cargo Pod	85.8	89.1	7593.3	0.00	0.0	
<b>New Empty Weight</b>	<b>1670.2</b>	<b>109.7</b>	<b>181577.6</b>	<b>-0.30</b>	<b>-497.0</b>	
<b>Most Forward C of G</b>	●	220.2	100.1	222346.6	0.37	812.01
<b>Most Aft C of G</b>	●	30.2	105.5	235272.6	-1.21	-2707.0



NIA to Aircraft

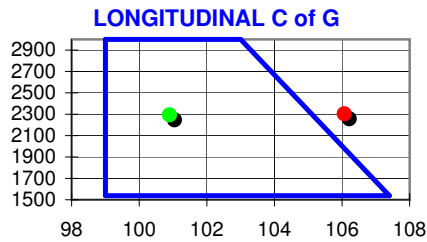
## WEIGHT & BALANCE CONFIGURATION NO. 9

Selective Loading Required

**Purpose:** Addition of Inlet Diverter, Tower Aux Tank & Sky Pods

	Longitudinal			Lateral	
	Weight	Arm	Moment	Arm	Moment
Empty Weight as per W & B:	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>
<b>Most Aft C of G</b>					
Add Inlet Diverter	2.0	92.8	185.6	0.00	0.0
Add Aux Tank	104.3	108.7	11337.4	0.00	0.00
Add Sky Pods	56.0	96.9	5426.4	0.00	0.0
<b>New Empty Weight</b>	<b>1744.7</b>	<b>109.3</b>	<b>190748.1</b>	<b>-0.28</b>	<b>-497.0</b>

<b>Most Forward C of G</b>	●	2294.7	100.9	231517.1	0.35	812.01
<b>Most Aft C of G</b>	●	2304.7	106.1	244443.1	-1.17	-2707.0



## WEIGHT & BALANCE CONFIGURATION NO. 10

**Purpose:** Addition of Inlet Diverter, Tower Aux Tank & Viking Pod

Note: Selective Loading Required

	Longitudinal			Lateral	
	Weight	Arm	Moment	Arm	Moment
Empty Weight as per W & B:	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-496.99</b>
<b>Pilot</b>					
Add Inlet Diverter	2.0	92.8	185.6	0.00	0.00
Add Aux Tank	104.3	108.7	11337.4	0.00	0.00
Add Viking Cargo Pod	85.8	89.3	7593.3	0.00	0.00
<b>New Empty Weight</b>	<b>1774.5</b>	<b>108.7</b>	<b>192915.0</b>	<b>-0.28</b>	<b>-496.99</b>

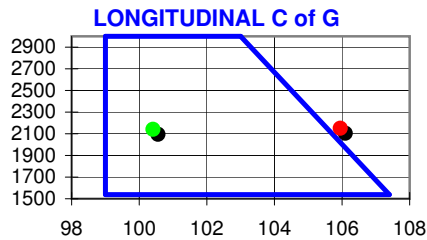
<b>Most Forward C of G</b>	●	2294.5	100.5	233684.0	0.35	812.01
<b>Most Aft C of G</b>	●	2334.5	105.6	246610.0	-1.16	-2707.0

NIA to Aircraft

## WEIGHT & BALANCE CONFIGURATION NO. 11

**Purpose:** Addition of Dual Controls

Empty Weight as per W & B:	Longitudinal			Lateral	
	Weight	Arm	Moment	Arm	Moment
<b>Pilot</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>
Add Dual Controls	9.4	51.0	479.4	0.00	0.0
<b>New Empty Weight</b>	<b>1591.8</b>	<b>109.5</b>	<b>174278.1</b>	<b>-0.31</b>	<b>-497.0</b>
<b>Most Forward C of G</b>	● 2141.8	100.4	215047.1	0.38	812.01
<b>Most Aft C of G</b>	● 2151.8	105.9	227973.1	-1.26	-2707.0

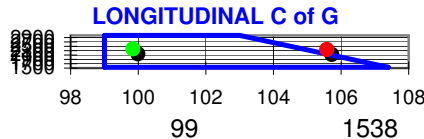


## WEIGHT & BALANCE CONFIGURATION NO. 12

**Purpose:** Addition of Tower Aux Tank & Sky Pods

Note: Selective Loading Required

Empty Weight as per W & B:	Longitudinal			Lateral	
	Weight	Arm	Moment	Arm	Moment
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>
Add Aux Tank	104.3	108.7	11337.4	0.00	0.00
Add Sky Pods	56.0	96.9	5426.4	0.00	0.0
<b>New Empty Weight</b>	<b>1742.7</b>	<b>109.4</b>	<b>190562.5</b>	<b>-0.29</b>	<b>-497.0</b>
<b>Most Forward C of G</b>	● 2382.7	99.8	237886.5	0.34	812.01
<b>Most Aft C of G</b>	● 2357.7	105.6	248912.5	-1.15	-2707.0





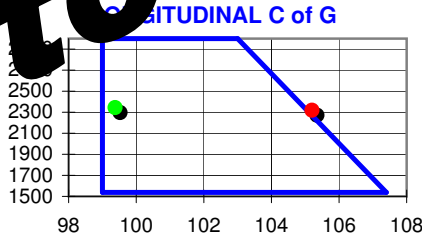
## WEIGHT & BALANCE CONFIGURATION NO. 13

**Purpose:** Addition of Fargo Aux Tank & Viking Cargo Pod

Selective Loading Required

	Longitudinal			Lateral	
	Weight	Arm	Moment	Arm	Moment
Empty Weight as per W & B:					
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-496.99</b>
Add Fargo Aux Tank	36.5	17.3	630.9	0.00	0.00
Add Viking Cargo Pod	85.8	8.7	7593.3	0.00	0.00
<b>New Empty Weight</b>	<b>1704.7</b>	<b>136.3</b>	<b>185674.9</b>	<b>-0.29</b>	<b>-496.99</b>
<b>Most Forward C of G</b>	2344.7	99.4	232998.9	0.35	812.01
<b>Most Aft C of G</b>	2199.7	105.2	244024.9	-1.17	-2707.0

NIA to Aircraft

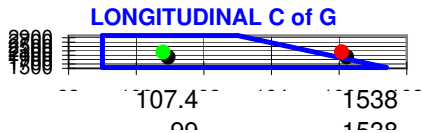


## WEIGHT & BALANCE CONFIGURATION NO. 14

**Purpose:** Addition of Dual Controls & Tower Aux Tank

Selective Loading Required

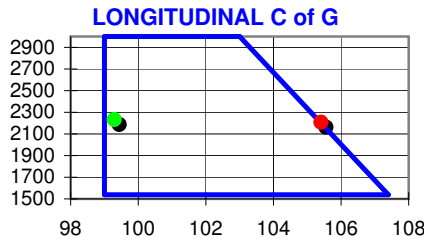
	Longitudinal			Lateral	
	Weight	Arm	Moment	Arm	Moment
Empty Weight as per W & B:					
<b>Passenger (Aft)</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>
Add Dual Controls	9.4	51.0	479.4	0.00	0.0
Add Aux Tank	104.3	108.7	11337.4	0.00	0.00
<b>New Empty Weight</b>	<b>1696.1</b>	<b>109.4</b>	<b>185615.5</b>	<b>-0.29</b>	<b>-497.0</b>
<b>Most Forward C of G</b>	2246.1	100.8	226384.5	0.36	812.01
<b>Most Aft C of G</b>	2256.1	106.1	239310.5	-1.20	-2707.0



## WEIGHT & BALANCE CONFIGURATION NO. 15

**Purpose:** Addition of Dual Controls & Inlet Diverter

Empty Weight as per W & B:	Longitudinal			Lateral		
	Weight	Arm	Moment	Arm	Moment	
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>	
Add Dual Controls	9.4	51.0	479.4	0.00	0.0	
Add Inlet Diverter	2.0	92.8	185.6	0.00	0.0	
<b>New Empty Weight</b>	<b>1593.8</b>	<b>109.5</b>	<b>174463.7</b>	<b>-0.31</b>	<b>-497.0</b>	
<b>Most Forward C of G</b>	●	2233.8	99.3	221787.7	0.36	812.01
<b>Most Aft C of G</b>	●	2208.8	105.4	232813.7	-1.23	-2707.0



## WEIGHT & BALANCE CONFIGURATION NO. 16

**Purpose:** Addition of Dual Controls, Tower Aux Tank & Inlet Diverter

Selective Loading Required

Selective Loading Required

Empty Weight as per W & B:	Longitudinal			Lateral		
	Weight	Arm	Moment	Arm	Moment	
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>	
Add Dual Controls	9.4	51.0	479.4	0.00	0.0	
Add Aux Tank	104.3	108.7	11337.4	0.00	0.0	
Add Inlet Diverter	2.0	92.8	185.6	0.00	0.0	
<b>New Empty Weight</b>	<b>1698.1</b>	<b>109.4</b>	<b>185801.1</b>	<b>-0.29</b>	<b>-497.0</b>	
<b>Most Forward C of G</b>	●	2338.1	99.7	233125.1	0.35	812.01
<b>Most Aft C of G</b>	●	2313.1	105.6	244151.1	-1.17	-2707.0

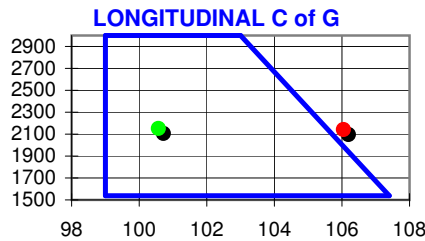
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## WEIGHT & BALANCE CONFIGURATION NO. 17

Selective Loading Required

**Purpose:**            **Addition of Dynaflight System**  
**LSTC # C-LSH01-132/D**

Empty Weight as per W & B:	Weight	Longitudinal Arm	Moment	Lateral Arm	Moment
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>
Add Dynabyte	15.0	111.6	1674.0	0.00	0.0
Add Dynavix	2.0	46.8	93.6	-21.00	-42.0
Add Collective Switch Box	1.0	58.6	58.6	-21.00	-21.0
Add GPS Antenna	2.0	32.0	64.0	8.50	17.0
<b>New Empty Weight</b>	<b>1602.4</b>	<b>109.6</b>	<b>175688.9</b>	<b>-0.34</b>	<b>-543.0</b>
<b>Most Forward C of G</b>	2152.4	100.6	216457.9	0.36	766.01
<b>Most Aft C of G</b>	2142.4	106.0	227183.9	-1.29	-2753.0



## WEIGHT & BALANCE CONFIGURATION NO. 18

Selective Loading Required

**Purpose:**            **Addition of Dynaflight System and Inlet Diverter**  
**LSTC # C-LSH01-132/D**

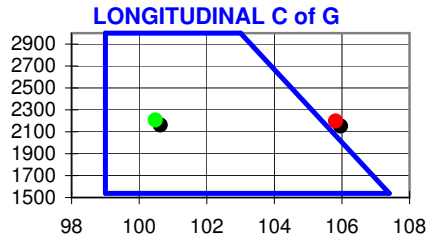
Empty Weight as per W & B:	Weight	Longitudinal Arm	Moment	Lateral Arm	Moment
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>
Add Inlet Diverter	2.0	92.8	185.6	0.00	0.0
Add Dynabyte	15.0	111.6	1674.0	0.00	0.0
Add Dynavix	2.0	46.8	93.6	-21.00	-42.0
Add Collective Switch Box	1.0	58.6	58.6	-21.00	-21.0
Add GPS Antenna	2.0	32.0	64.0	8.50	17.0
<b>New Empty Weight</b>	<b>1604.4</b>	<b>109.6</b>	<b>175874.5</b>	<b>-0.34</b>	<b>-543.0</b>
<b>Most Forward C of G</b>	2154.4	100.6	216643.5	0.36	766.01

## WEIGHT & BALANCE CONFIGURATION NO. 19

Selective Loading Required

**Purpose:**            **Addition of Dynaflight System and Skyrotor Pods**  
**LSTC # C-LSH01-132/D**

Empty Weight as per W & B:	Weight	Longitudinal Arm	Moment	Lateral Arm	Moment	
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>	
Add Sky Pods	56.0	96.90	5426.4	0.00	0.0	
Add Dynabyte	15.0	111.6	1674.0	0.00	0.0	
Add Dynavix	2.0	46.8	93.6	-21.00	-42.0	
Add Collective Switch Box	1.0	58.6	58.6	-21.00	-21.0	
Add GPS Antenna	2.0	32.0	64.0	8.50	17.0	
<b>New Empty Weight</b>	<b>1658.4</b>	<b>109.2</b>	<b>181115.3</b>	<b>-0.33</b>	<b>-543.0</b>	
<b>Most Forward C of G</b>	<span style="color: green;">●</span>	2208.4	100.5	221884.3	0.35	766.01
<b>Most Aft C of G</b>	<span style="color: red;">●</span>	2198.4	105.8	232610.3	-1.25	-2753.0



## WEIGHT & BALANCE CONFIGURATION NO. 20

Selective Loading Required

**Purpose:**            **Addition of Dynaflight System, Inlet Diverter and Skyrotor Pods**  
**LSTC # C-LSH01-132/D**

Empty Weight as per W & B:	Weight	Longitudinal Arm	Moment	Lateral Arm	Moment
<b>Amendment #2</b>	<b>1582.4</b>	<b>109.8</b>	<b>173798.7</b>	<b>12.69</b>	<b>-497.0</b>
Add Inlet Diverter	2.0	92.8	185.6	0.00	0.0
Add Sky Pods	56.0	96.90	5426.4	0.00	0.0
Add Dynabyte	15.0	111.6	1674.0	0.00	0.0
Add Dynavix	2.0	46.8	93.6	-21.00	-42.0
Add Collective Switch Box	1.0	58.6	58.6	-21.00	-21.0
Add GPS Antenna	2.0	32.0	64.0	8.50	17.0

