



Application Note

Bell 206L Series

Main Rotor Track and Balance

Part Number: 11-200-0231

AppNote Number: A-BE206L-4040-MR (Rev. 3.0, Dec 2009)

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Application Note

Application Note Number	A-BE206L-4040-MR
Revision	3.0 (From Airframe Manual, L-1 R27, L-3 R1-, L-4 R5)
Function	Main Rotor Track and Balance
Airframe	Bell 206L Series
Engine	N/A
E-Setup Number	A-BE206L-4040-MR.asf
ACES Systems Analyzer	Model 4040
Boot/App Version	Boot 3.xx/App 3.xx or later
Procedure	N/A

Introduction

This Application Note covers the required equipment, equipment installation, analyzer setup, data acquisition and solution process for using the ACES Systems Model 4040 Viper Analyzer with the Main Rotor Performance Option to perform main rotor track and balance on the Bell 206L Series. General instructions for the use of the Model 4040 can be found in the Model 4040 User Manual #4040-OM-01 (P/N 75-900-4040) and Optical Tracker Operational Supplement #540-OM-1 (P/N 75-900-2021). All procedures for track and balance and all adjustments should be made in accordance with the Airframe Maintenance Manual.

A. Required Equipment

The following equipment is required to perform a Main Rotor Track and Balance*:

Item	Quantity	Description	Part Number
1.	1	Analyzer, Model 4040	10-100-4040
2.	1	Tachometer, Optical, PhotoTach (New)	10-100-1773
3.	1	Cable, Tach, Generic, 50'	10-320-0126
4.	2	Sensor, Vibe, Accel, 991D-1	69-100-0075
5.	1	Cable, Sensor 991D-1, 25'	10-320-0162
6.	1	Cable, Sensor 991D-1, 50'	10-320-0163
7.	1	Mount, ¼X28 Sensor, Vibe ¼" Hole, S/Stl	22-430-0035
8.	1	Mount, ¼X28 Sensor, Vibe 5/16" Hole, S/Stl	22-430-0036
9.	1	Tape, Reflective, Roll, 10'	10-400-0176
10.	1	Tracker, Optical, Model 540-2	75-900-0542

11.	1	Option, 4040 Main and Tail Rotor	11-900-0005
12.	1	Mount, PhotoTach, Bell 206 M/R	22-430-0087

*This listing shows the latest design parts. It is acceptable to perform this task using previous designs with the appropriate accessories. For compatibility issues, contact ACES Systems.

Optional Equipment

The following equipment may be used as an alternate when accomplishing the job:

Item	Quantity	Description	Part Number
13.	1	Target Assy, Tip	As Required
14.	1	Cable, Interf. Assy, Strobe	10-320-0161
15.	1	Strobelight	As Required
16.	1	Shield, PhotoTach Sun	22-430-0096

Miscellaneous Equipment

Tape or tie wraps to secure cables to airframe.

If adjustments are made to the main rotor balance, use only hardware or balance weights that are specified in the applicable airframe maintenance manual.

List of abbreviations

LDOWN – Let Down	GMS – Grams
T CHD – Target Chord weight location	PTS – Points
B CHD – Blank Chord weight location	DEG – Degrees
FLT/Flt – Flat	PCL – Pitch Change Link

B. Equipment Installation

- Place the analyzer ([Item 1](#)) in the flight compartment.
- Select the appropriate PhotoTach mount installation as described below.
 - Configuration 1 – Install PhotoTach/Sensor Mount ([Item 12](#)) on the top of the transmission at the swashplate support attachment bolts at the 9:00 position. Install PhotoTach ([Item 2](#)) into the Mount with optical eye pointed upward. ([Figure 1](#)) Secure PhotoTach with nylon nut or Sun Shield ([Item 16](#)). Thread the Vibration Sensor ([Item 4](#)) into the threaded insert of the PhotoTach/Sensor mount. Rotate Main Rotor until one Blade is over the nose of the aircraft as shown in [Figure 2](#). The blade

over the nose of the aircraft will become “TARGET” for balancing. The static location of this blade determines the “Aiming Point” for track acquisition. The remaining blade will be identified as, “BLANK” in passing order as shown in below.

- 2.2 Configuration 2 - Install PhotoTach Mount (Item 12) on the top of the transmission at the swashplate support attachment bolt at the 9:00 position. Install PhotoTach (Item 2) into the Mount with optical eye pointed upward. (Figure 1) Secure PhotoTach with nylon nut or Sun Shield (Item 16). Rotate Main Rotor until one Blade is over the nose of the aircraft as shown in Figure 2. The blade over the nose of the aircraft will become “TARGET” for balancing. The static location of this blade determines the “Aiming Point” for track acquisition. The remaining blade will be identified as, “BLANK” in passing order as shown in below.
 - 2.2.1. Install Sensor Mount with 5/16” hole (Item 8) on the swashplate support attachment bolt at the 8:00 position. Install a 991D-1 Sensor (Item 4) and secure in Mount. Sensor should be pointing to the left. (Figure 1)

NOTE

See Paragraph D.3 below for additional installation instructions of PhotoTach and Tape.

3. Install Sensor Mount with 1/4” hole (Item 7) to the left hand side of the center console. Install 991D-1 Sensor (Item 4) into bracket ensuring that the connector faces DOWN. (Figure 3)

NOTE

Secure and route cables as not to interfere with hot or rotating components and aircraft controls. Insure there is adequate slack in the cables to allow full cyclic and collective inputs.

4. Install Tach Cable (Item 3) by connecting the end of the cable identified as “TACH INTERFACE” to the PhotoTach. Safely route the cable to the location of the analyzer. Connect the end of the cable identified as “ANALYZER” to the “TACH 1” connector on the analyzer.
5. Install 25’ Vertical Vibe Sensor Cable (Item 5) by connecting the end of the cable identified as “991D-1” to the Vibration Sensor mounted on the center console. Safely route the cable to the location of the analyzer. Connect the end of the cable identified as “2020” to the “CHANNEL A” connector on the analyzer.
6. Install 50’ Lateral Vibe Sensor Cable (Item 6) by connecting the end of the cable identified as “991D-1” to the Vibration Sensor mounted on the Swashplate Support. Safely route the cable to the location of the analyzer. Connect the end of the cable identified as “2020” to the “CHANNEL B” connector on the analyzer.
7. Connect Optical Tracker (Item 10) to the Aux./Comm port on the Analyzer.
8. Reinstall any previously removed cowlings. Return aircraft to flying configuration.

Equipment Installation Diagram

Figure 1



NOTE

The 22-430-0087 mount pictured is for Configuration 1 and has two holes. This mount will only fit smaller transmission configurations. Newer 22-430-0087 mounts are configured with a single mounting hole. These mounts can be used on any transmission.

Figure 2

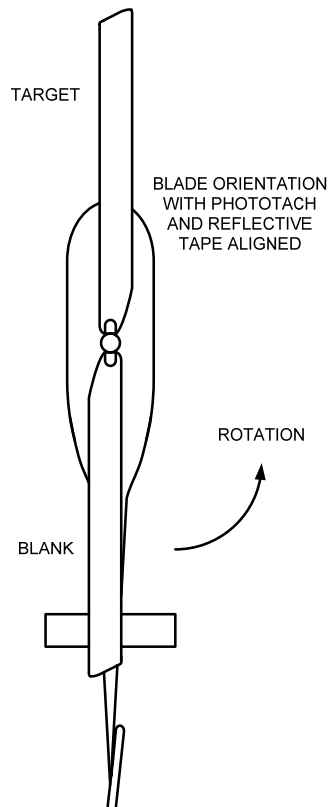
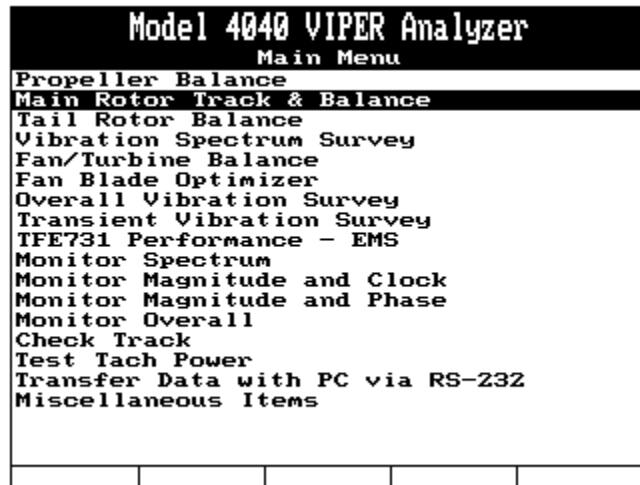


Figure 3



C. Analyzer Set Up

1. Insure the analyzer battery is charged prior to starting the job. See the Model 4040 User Manual #4040-OM-01 (P/N 75-900-4040) Chapter 2 for detailed instructions on battery charging.
2. Turn the analyzer ON by pressing the [ON/OFF] key.
3. From the Main Menu shown below, select “Main Rotor Track & Balance” and press the [ENTER] key.



4. From the Main Rotor Track & Balance Menu shown below, select “Start Job” and press the [ENTER] key.

Model 4040 VIPER Analyzer			
Main Rotor Setup			
Name:	a-be206l-4040-mr		
Vertical Chan:	A		
Lateral Chan:	B		
Sensor:	991D-1		
Tach Type:	Optical	Tach Chan:	1
Number of Weight Positions:	4		
Blades:	2	Relative to:	1
RPM:	394	Trk Units:	in
Conditions			
Ground	Both	Hover	Both
60 KTS	Both	CRUISE	Both
LDOWN	Both		Both

7. The “Tracking Setup” screen will be displayed next. Enter the values as shown in the illustration below. Press **[ENTER]** to continue.

Model 4040 VIPER Analyzer	
Tracking Setup	
Rotor Diameter:	37.00 ft
Lead/Lag Units:	in

8. The “Main Rotor Conds. Setup” screen will appear next as displayed below. The “limit” field under each measurement type will set the point at which the analyzer will determine whether corrections are needed. This is not reflective of a limit imposed by the manufacturer. See the applicable Maintenance Manual for the track and vibration levels required for return to service. Enter the information as indicated in the illustration below. Press **[ENTER]** to continue.

Model 4040 VIPER Analyzer			
Main Rotor Conds. Setup			
Conds.	Vert Chart ID	Lat Chart ID	Track Adj. ID
Ground	0	1	1
Hover	1	1	0
60 KTS	1	0	0
CRUISE	2	0	0
LDOWN	1	0	0
Limit	0.10	0.10	0.15

Enter ID, or 0 if no adjustment.
Different charts use different IDs.

9. The next screen to appear will be the “M/R Adj Symbol & Soln Logic” screen. The function of this screen is to determine the direction of movement for a positive (+) adjustment. In this application, a positive move indication means to ADD weight, sweep a blade AFT, and move the blade UP with both Pitch Change Link (BLADE) and Trim Tab (TAB). Enter the values as shown below. When completed press [ENTER]. Next, the balance charts will be entered into the analyzer.

Model 4040 VIPER Analyzer	
M/R Adj Symbol & Soln Logic	
Adjustment	Positive Value Meaning
Weight:	ADD
Sweep:	AFT
Blade:	UP
TAB:	UP
Soln:	MAX

10. The first balance chart to define will be the “Vert: Hover-LDOWN” chart. Enter the information as presented below. Press [ENTER] to continue.

Model 4040 VIPER Analyzer				
Main Rotor Chart Setup				
Name:	Vert Hover-LDOWN			
Type:	Regular	Sweep Only:	No	
No Adjustment Bld/Pos:	None			
Max ICF Update:	150	% R(°):	45	
Adj Unit:	FLI	Adj/IPS:	8.000	
Bld/Pos MoveLine Bld/Pos				
TARGET	12	:	30	
BLANK	6	:	30	
Bld/Pos: in CW or CCW order				
+Adj = WtAdd/SwAft/BldUp/TabUp				
Help				

11. The next balance chart to define will be the “Vert: CRUISE” chart. Enter the information as presented below. Press [ENTER] to continue.

Model 4040 VIPER Analyzer				
Main Rotor Chart Setup				
Name:	Vert CRUISE			
Type:	Regular	Sweep Only:	No	
No Adjustment Bld/Pos:	None			
Max ICF Update:	150	% R(°):	45	
Adj Unit:	DEG	Adj/IPS:	3.500	
Bld/Pos MoveLine Bld/Pos				
TARGET	12	:	30	
BLANK	6	:	30	
Bld/Pos: in CW or CCW order				
+Adj = WtAdd/SwAft/BldUp/TabUp				
Help				

12. The next chart to define will be the “Lat: Ground-Hover” chart. Enter the information as shown below and press [ENTER] to continue.

Model 4040 VIPER Analyzer				
Main Rotor Chart Setup				
Name:	Lat Ground-Hover			
Type:	Irregular	Sweep Only:	No	
No Adjustment Bld/Pos:	None			
Max ICF Update:	150	% R(°):	45	
Bld/Pos	Unit	Adj	IPS	MoveLn
TARGET	GMS	750.00	1.00	3 : 10
T CHD	PTS	5.00	1.00	12 : 10
BLANK	GMS	750.00	1.00	9 : 10
B CHD	PTS	5.00	1.00	6 : 10
+Adj = WtAdd/SwAft/BldUp/TabUp				
Help				

13. Finally, the “Tracking Influence Setup” screen data will be entered as shown below. When completed, press [ENTER] to continue.

Model 4040 VIPER Analyzer				
Tracking Influence Setup				
	Conds	Adj	Max	
	Name	Unit	Adj/in	Upd%
Ground	PCL	Flt	16.000	150
No Adjustment Bld/Pos: None				
Blades:				
	Name			
1.	TARGET			
2.	BLANK			
+Adj = WtAdd/SwAft/BldUp/TabUp				

D. Data Acquisition

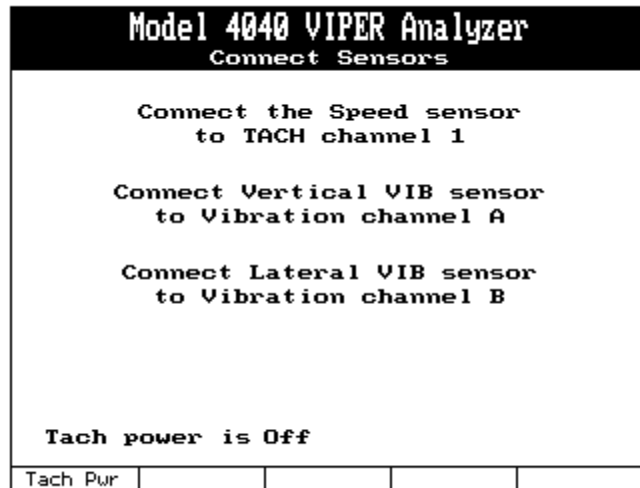
- The “Job Identification” screen will be displayed, as shown below. Use the analyzer keypad to enter a customer name in the “Name:” field. The analyzer will maintain a list of customer names as new names are entered. If names have been previously entered into this analyzer, you may press the [F1] “Names” key and select a customers name from the provided list. Press the [↓] key to move to the next field and use the analyzer keypad to enter the optional aircraft registration and aircraft total time as required. When all fields are complete, press the [ENTER] key to accept and continue.

Model 4040 VIPER Analyzer				
Job Identification				
Name: CUSTOMER NAME				
A/C Registration: N1234				
A/C Total Time: 123.4				
Press ENTER to continue				
Names				

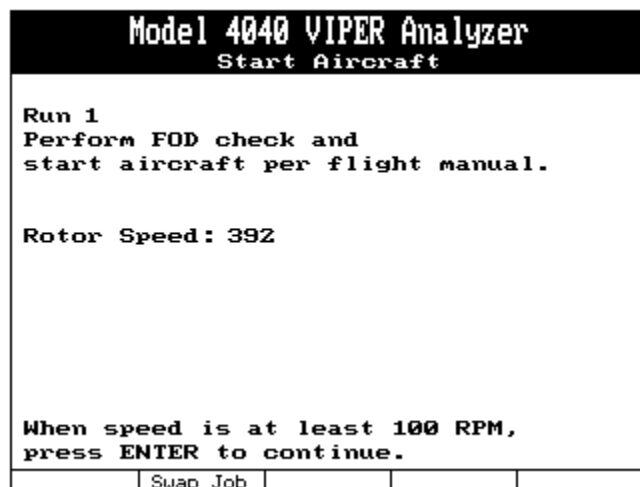
- The next screen to be displayed is the “Tracking Selections”, as shown below. Complete the first two fields as shown below. Then, rotate the Main Rotor head so that the Magnetic Pickup and Interrupter align (Figure 2). Measure the distance from the location where the Optical Tracker will be held to the tip of the “TARGET” blade. Enter the distance, in inches, into the “Inches To Blade Tip” field. When all fields are complete, press the [ENTER] key to continue.

Model 4040 VIPER Analyzer				
Tracking Selections				
Track Device: Tracker				
- For Optical Tracking Only -				
Number of Rotations: 20				
Inches To Blade Tip: 135				

- The next screen to be displayed will be the “Connect Sensors” screen as illustrated below. This screen gives instructions on installing sensors and cables. The Tach will be automatically energized when this screen is exited. You may install the reflective tape and check the PhotoTach alignment by pressing the [F1] “Tach Pwr” key which supplies power to the optical tachometer for tape alignment.



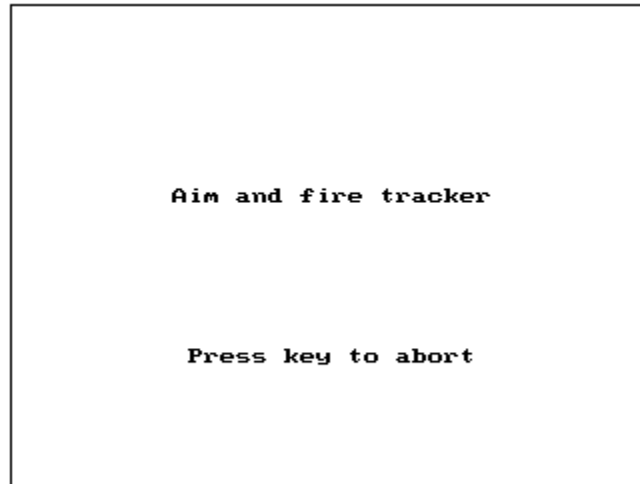
- 3.1 Press **[F1]** “Tach Pwr”. Position one blade over the aircraft’s nose. (See Section B [Figure 2](#) above)
 - 3.2 Hold a 2-inch piece of reflective tape, reflective surface facing the PhotoTach, against the bottom side of the swashplate. Do not remove backing at this point.
 - 3.3 The red “Gate” light on the back of the PhotoTach should illuminate as the reflective tape is properly aligned in front of the LED. Clean an area of the swashplate in preparation for mounting the reflective tape.
 - 3.4 Remove the backing and install the reflective tape on the clean swashplate surface.
 - 3.5 Press **[ENTER]** when finished with Tape installation.
4. The “Start Aircraft” screen will be displayed with instructions to “Perform FOD check and start aircraft per flight manual”. When the aircraft is started and normal operating conditions have been established, press the **[ENTER]** key to continue. Use the **[F2]** “Swap Job” key to return directly to the Main Menu without rebooting the analyzer.



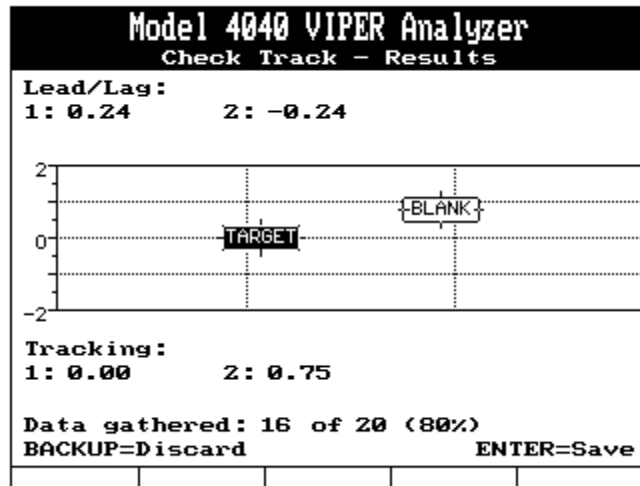
5. The analyzer will display the “Select Aircraft Condition” screen as displayed below. Select the condition that you want to gather data for using the [↑] [↓] arrows and press [ENTER]. Pressing [F5] “Chk Track” will allow you to view the track picture but will not save the reading as part of the highlighted condition. See [Paragraph 7 below](#) to record the track picture with the condition’s vibration readings.

Model 4040 VIPER Analyzer			
Select Condition			
[]	[]	Ground	
[]	[]	Hover	
[]	[]	60 KTS	
[]	[]	CRUISE	
[]	[]	LDOWN	
End Run			Chk Track

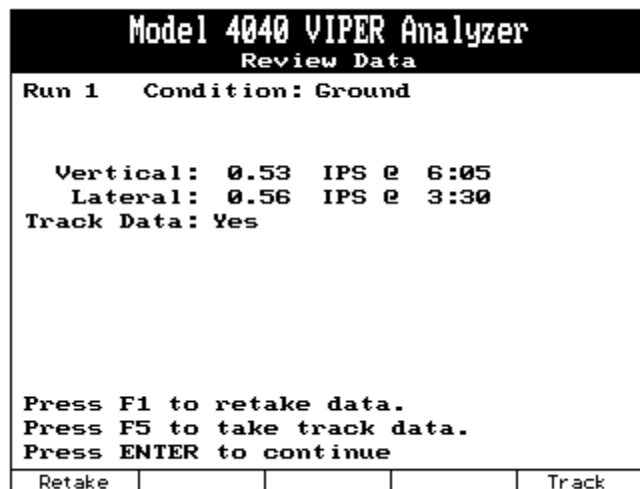
6. The analyzer will present the data acquisition screen as shown below. This screen allows you to monitor both the current and averaged vibration readings. Operate the aircraft in the configuration for the selected condition and allow the analyzer to collect data. While monitoring the measurement, you may press the [F1] “Reset” key to restart the averaging process. Use this feature as a way to validate the quality of the measurement. If the averaged readings return to a value similar to the displayed value prior to being “Reset”, the measurement can be considered good. If the measurement is not similar, you may choose to “Reset” the average again. If the “Error” at the bottom of the text portion of the screen is not “0”, this is not an indication of failure or fault, only that the vibration averaging errors cannot be resolved below the displayed level. This “Error” value will typically be higher as the balancing process reduces the vibration amplitude. The “Error” indication should be as steady as possible with very little change before you press the [ENTER] key to stop acquisition.



- 8.1 Raise the tracker until the three green LED lights are illuminated.
 - 8.2 Raise the tracker further to verify the upper set of three red LEDs illuminate. Illumination of the three upper LEDs verifies there is enough contrast to operate the tracker. If the upper set of red LEDs does not illuminate, there is not enough contrast for the tracker to operate properly.
 - 8.3 If sufficient contrast is verified, slowly lower the tracker to a point where the center green LED is illuminated. Hold the tracker steady in this position.
 - 8.4 To activate the tracker, press and release the trigger one time. It is not necessary to hold the trigger down. Continue to hold the tracker steady (green lights illuminated) while acquiring data. The amber light will pulsate during data acquisition.
 - 8.5 When the amber light extinguishes, data acquisition is complete and you may lower the tracker.
9. The track picture will be displayed on the “Check Track – Results” screen. Lead/lag readings will be displayed at the top of the screen. A negative number (-) indicates a “Lead” condition as this blade is the indicated measurement less than the average interval. A positive number (no sign) indicates a “Lag” condition as this blade is the indicated measurement more than the average interval. Readings will be displayed graphically in the center of the screen. Lead readings will be indicated to the Left of the average interval marking vertical line. Lag readings will be displayed to the Right of the line. Track readings will be displayed above or below the line relative to the average of all blades or in relation to the blade specified in the setup, [Paragraph C.6 above](#). The bottom of the screen will give a numeric reading of the blade track elevation. The bottom line will display the number of data samples gathered. If the total number of data samples gathered is less than 75% of the total number of samples requested the results are questionable and should be retaken. When you are happy with the quality of the data, press **[ENTER]** to continue.



10. The “Review Data” screen will reappear as shown in the example below. This time the “Track Data” line will read “Yes” indicating that track data has been taken and stored in this condition. You may retake vibration data by pressing the [F1] “Retake” function key as indicated at the bottom of the screen. You may retake the track data by pressing the [F5] “Track” key. If you are satisfied with the current measurements, press [ENTER] to continue.



11. The “Select Aircraft Condition” screen will reappear as shown in the example below. This time any condition that has stored vibration and/or track data will have an [x] preceding the condition name. Repeat sequence through all flight regimes. You can choose to “End Run” at any time by pressing the [F1] “End Run” key. This sequence will allow you to review all previous measurements before proceeding to the suggested solutions. If a condition has recorded a vibration or track reading that is in excess of the limits defined in [Paragraph C.8 above](#), the word “Adjust” will appear above the [F2] key. Pressing [F2] “Adjust” will bypass the review process and move directly to the suggested solution screens. In either case you will be taken to [Paragraph 12 below](#).

Model 4040 VIPER Analyzer			
Select Condition			
<input checked="" type="checkbox"/>	Ground		
<input type="checkbox"/>	Hover		
<input type="checkbox"/>	60 KTS		
<input type="checkbox"/>	CRUISE		
<input type="checkbox"/>	LDOWN		
End Run	Adjust		Chk Track

NOTE

The [F1] “End Run” and [F2] “Adjust” keys are the only ways to exit this screen. Pressing [ENTER] will restart the data collection process for the highlighted condition.

12. The analyzer will display the “Shut Down Aircraft” screen as shown below. Use the [F2] “Swap Job” key to return directly to the Main Menu without rebooting the analyzer. When the engine shut down process is complete, press the [F5] “Continue” key to review the data or view the suggested solutions.

Model 4040 VIPER Analyzer			
Shut Down Engines			
Shut down engine(s) per manual instructions			
	Swap Job		Continue

NOTE

It is important to remember that when installing or removing weights and recording their positions the influence used for the next run will be updated by the result from the previous run’s solution.

Therefore, be as accurate as possible when recording adjustments made regardless whether the recommended solution is implemented. The only entries on these screens should reflect the actual solution implemented.

13. The analyzer will present all of the solutions possible from the data gathered. It is possible for the analyzer to give two adjustments that would adversely affect the other. The user is

ultimately responsible for determining which adjustments to implement and which to discard. If a suggested correction is determined unnecessary, use “Inst=None” [F2] to eliminate data in the “Installed” column. Sample solution screens are shown in [Section E. below](#). Make the desired adjustments to the rotor system as called for by analyzer and press [ENTER]. The user will now be prompted to start the engine and continue with Run #2.

NOTE

It is important to remember that when installing or removing weights and recording their positions the influence used for the next run will be updated by the result from the previous run’s solution. Therefore, be as accurate as possible when recording adjustments made regardless whether the recommended solution is implemented. The only entries on these screens should reflect the actual solution implemented.

E. Solution Examples

This section contains samples of the solution screens possibly encountered during the job. The corrections are examples only and do not reflect actual aircraft data. The actual solution screens encountered by the user will vary depending upon data acquired. Additional solutions may be required that are not displayed on the analyzer.

CAUTION

At no point should a correction be made that contradicts information in the maintenance manual. The analyzer will attempt to resolve the vibration and/or track level to 0.00. This may require adjustments that are not practical to duplicate. The technician must determine the closest possible match to the suggestion.

NOTE

Solutions will only be presented for readings that exceed the limits set in [Paragraph C.8 above](#). It is necessary to add the closest measurable amount of correction and record the actual correction in the “Installed” column.

The Model 4040 analyzer can only update internal Influence Coefficients when one solution per run is implemented. Even though multiple solution screens are presented, entering solutions from multiple screens on the same run will disable the Influence Coefficient Update during the job.

1. The first possible solution screen is the “Vert: Hover-LDOWN, FLT” solution. This screen will suggest adjustments to the Pitch Change Links in Flats (FLT) based on the measured vertical vibration readings in HOVER, 60 KTS, and LDOWN.

In the example below, it is suggested to adjust the “BLANK” PCL up by 4.11 FLT. The closest possible adjustment was to adjust “BLANK” up by 4.00 FLT. This adjustment was made and entered into the analyzer.

Model 4040 VIPER Analyzer			
M/R Suggested/Installed Adjustments			
Run 2			
Name: Vert Hover-LDOWN, FLT			
Bld/Pos	Suggested	Installed	
TARGET	0.00	0.00	
BLANK	4.11	4.00	
+Adj = WtAdd/SwAft/BldUp/TabUp			
Inst=Sugg	Inst=None		Quit Job

2. The second possible solution screen available is from the “Vert: CRUISE, DEG” chart. The analyzer will present a suggested Outboard Trim Tab correction in Degrees (DEG) to reduce the measured vertical vibration readings at CRUISE.

In this case, adjusting the “BLANK” Blade up by 1.80 DEG should reduce the vibration. The closest measurable adjustment is determined to be 2.00 DEG up on the “BLANK” blade. This adjustment is made on the aircraft and entered into the analyzer.

Model 4040 VIPER Analyzer			
M/R Suggested/Installed Adjustments			
Run 3			
Name: Vert CRUISE, DEG			
Bld/Pos	Suggested	Installed	
TARGET	0.00	0.00	
BLANK	1.80	2.00	
+Adj = WtAdd/SwAft/BldUp/TabUp			
Inst=Sugg	Inst=None		Quit Job

3. The next possible solution comes from the “Lat: Ground-Hover, GMS, PTS” screen. This screen will suggest weight and sweep adjustments based on the measured lateral vibration readings in GROUND and HOVER.

In the example below, it is suggested to add 396.95 Grams (GMS) to the “TARGET” blade and to sweep the “BLANK” Chord (B CHD) location AFT by 0.65 Points (PTS). The closest possible adjustment was to add 400.00 GMS to the “TARGET” blade and sweep the B CHD location by 0.50 PTS. This adjustment was made on the aircraft and entered into the analyzer.

Model 4040 VIPER Analyzer			
M/R Suggested/Installed Adjustments			
Run 1			
Name: Lat Ground-Hover, GMS, P			
Bld/Pos	Suggested	Installed	
TARGET	396.95	400.00	
T CHD	0.00	0.00	
BLANK	0.00	0.00	
B CHD	0.65	0.50	
+Adj = WtAdd/SwAft/BldUp/TabUp			
Inst=Sugg	Inst=None		Quit Job

- The final possible solution comes from the “Tracking Influence Setup” chart. The analyzer will present a suggested correction to the Pitch Change Link (PCL) in flats (Flt) to bring the track within limits. In this case, adjusting the “BLANK” Blade DOWN by 12.00 flats should correct the track split. The adjustment is made and entered into the analyzer. To enter a negative (-) number press the [SPACE] key once.

Model 4040 VIPER Analyzer			
M/R Suggested/Installed Adjustments			
Run 1			
Name: Trk Ground, PCL, Flt			
Bld/Pos	Suggested	Installed	
TARGET	0.00	0.00	
BLANK	-12.00	-12.00	
+Adj = WtAdd/SwAft/BldUp/TabUp			
Inst=Sugg	Inst=None		Quit Job

F. Quit Job

- Repeat [Steps D.4](#) through [D.13](#) above applying the solutions as necessary. If all measurements in all conditions are below the limits set in [Paragraph C.8](#) above, the message below will appear. Pressing the [BACKUP] key will allow you to return to review the measurements from all runs. Pressing the [ENTER] key will allow you to take additional readings if you choose. Pressing [F5] “Quit Job” will mark the job as complete and take you to [Paragraph 2](#) below.

Model 4040 VIPER Analyzer				
M/R Track & Balance				
No solutions are recommended.				
Press BACKUP to view data.				
Press F5 to quit job.				
Press ENTER for next Run.				
				Quit Job

2. From the screen shown below, decide if you would like to update the ICF used in the original setup. Pressing [F1] "Yes" will add the chart corrections from this job to the ICF from the original setup. This can be a powerful tool when using this setup in the future. The chart corrections learned as a result of the previous job will be applied from the beginning of the next job that uses the same setup. This can reduce the number of runs required to balance the helicopter. If you select [F5] "No" any chart corrections applied during the previous job will be discarded. The setup will revert to the chart settings in place before the job was started. This can be useful if the helicopter didn't respond as others of the same model or if a mistake was made somewhere during the job that caused extra runs to balance the helicopter.

Model 4040 VIPER Analyzer				
Update Setup ICFs?				
Do you want to update the setup's influence coefficients based on the result of this job?				
Yes				No