Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day217_90515	08/05/2021	217	

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
LaRocque	Cessna 404 N532NM	6	08:28:00	14:28:00	CPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Denham	Leica Terrain Mapper - 90515	10.2	12:56:00	18:56:00	CPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
240	7	8		Clear	17	8	30.19

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150		12,346	5,344

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
		40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
14	N	15:06:00	15:22:00		18	1.4	Blk11 MR 15:13,15:17
49	S	15:34:00	15:36:00		20	1.2	Blk11
63	N	15:46:00	15:48:00	00:02:00	20	1,2	Blk11
29	N	15:59:00	16:01:00	00:02:00	18	1.3	Blk10
34	N	16:17:00	16:24:00	00:07:00	22	1.2	Blk9
1	S	17:13:00	17:30:00	00:17:00	21	1.2	Blk6 MR17:13
2	N	17:33:00	17:50:00	00:17:00	20	1.4	MR 17:36
3	S	17:53:00	17:59:00	00:06:00	21	1.1	MR 17:53,17:57 Cloud 17:58
							Sensor Stopped 17:59

Verify S-Turns After Mission	Yes

Additional Comments

Block 9,10,11 ReFlights. Block 6 MR= Mount Roll

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day225_90513	08/13/2021	225	

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Connolly	Cessna 404 Titan - N7079F	3174	08:00:00	14:00:00	CPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Denham	Leica Terrain Mapper - 90513	3178.9	13:14:00	19:14:00	CPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
300	5	10		Clear	16	6	30.34

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150		15,000	5,344

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
		40	80	670	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
14	N	14:34:00	14:42:00		17	1.4	BLK11 RF
57	N	15:27:00	15:29:00		18	1.2	BLK5 RF
31	S	15:40:00	15:42:00	00:02:00	19	1.2	BLK5 RF
15	N	15:51:00	15:53:00	00:02:00	19	1.1	BLKK5 RF
10	S	16:00:00	16:02:00	00:02:00	19	1.2	BLK5 RF
6	N	16:14:00	16:31:00	00:17:00	19	1.2	BLK4
5	S	16:35:00	16:51:00	00:16:00	20	1.1	BLK4
4	N	16:55:00	17:12:00	00:17:00	17	1.4	BLK4
3	S	17:16:00	17:32:00	00:16:00	20	1.1	BLK4
2	N	17:36:00	17:53:00	00:17:00	22	1.2	BLK4
1	S	17:57:00	18:14:00	00:17:00	23	1.1	BLK4

Verify S-Turns After Mission	Yes

Additional Comments

BLOCK 11 ReFlight, BLOCK 5 ReFlights, BLOCK 4 Thin Smoke Layer in Mission Areas.

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day180_90515_A	06/29/2021	180	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
LaRocque	Cessna 404 Titan - N532NM	1000.7	09:47:00	15:47:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	1002.9	10:57:00	16:57:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10	12,000	Clear	17	9.4	30.28

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,153	14,500	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
88	N	15:47:00	15:53:00		17	1.3	Block 12
86	S	16:01:00	16:12:00		18	1.3	
85	N	16:15:00	16:25:00	00:10:00	18	1.4	Clouds
67	S	16:32:00	16:43:00	00:11:00	18	1.4	
68	N	16:46:00	16:57:00	00:11:00	21	1	Clouds

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day181_90515_A	06/30/2021	181	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
LaRocque	Cessna 404 Titan - N532NM	1002.9	08:07:00	14:07:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	1007.6	11:51:00	17:51:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10	12,000	Clear	14	9	30.22

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,153	14,500	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
87	S	14:07:00	14:18:00		24	1	Block 12
84	N	14:20:00	14:30:00		22	1.1	
83	S	14:33:00	14:44:00	00:11:00	23	1	
82	N	14:47:00	15:57:00	01:10:00	1	1	
81	S	15:00:00	15:11:00	00:11:00	23	1	
80	N	15:14:00	15:24:00	00:10:00	21	1	
79	S	15:27:00	15:37:00	00:10:00	16	1.2	
78	N	15:39:00	15:50:00	00:11:00	17	1.2	
77	S	15:53:00	16:03:00	00:10:00	16	1.5	
76	N	16:06:00	16:17:00	00:11:00	16	1.5	Clouds northern 2 miles
27	N	16:35:00	16:52:00	00:17:00	17	1.4	Block 10
28	S	16:56:00	17:12:00	00:16:00	19	1.1	
29	N	17:15:00	17:32:00	00:17:00	16	1.3	
34	S	17:35:00	17:51:00	00:16:00	16	1.3	Clouds southern 2 miles

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY Converse BLK 12	Day181_90511_A	06/30/2021	181	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Hagen	Cessna 404 Titan - N404CP	8426.9	08:44:00	14:44:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Ryan	Leica Terrain Mapper - 90511	8431.1	11:45:00	17:45:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10+		Clear	14	9	3022

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,842	14,432	5,345

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
66	N	15:37:00	15:51:00	00:14:00	17	1.2	PAV errors begin before start of line
65	S	15:54:00	16:09:00	00:15:00	16	1.3	
64	N	16:11:00	16:26:00	00:15:00	16	1.5	
63	S	16:29:00	16:45:00	00:16:00	17	1.4	
62	N	16:49:00	17:05:00	00:16:00	19	1	
61	S	17:08:00	17:26:00	00:18:00	16	1.2	clouds 7 miles south end
60	N	17:28:00	17:45:00	00:17:00	16	1.3	clouds 7 miles south end

Verify S-Turns After Mission	

Additional Comments

PAV stabiliazion performance low, Mount obstruction, mount rotation range obstructed, calibration file out of date, CH Nadir:Geometric calibration file out of date, in addition to these errors the touch screen buttons on the console are extremely slow to respond.

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day182_90515_A	07/01/2021	182	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
LaRocque	Cessna 404 Titan - N532NM	1007.6	08:03:00	14:03:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	1010.9	10:25:00	16:25:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
20	3	10	12,000	Scattered	18	11.7	30.15

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,153	14,500	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
75	S	14:03:00	14:14:00		21	1	Block 12
74	N	14:17:00	14:27:00		18	1.1	
73	S	14:30:00	14:41:00	00:11:00	19	1	
72	N	14:43:00	14:54:00	00:11:00	20	0.9	
71	S	14:56:00	15:07:00	00:11:00	22	0.9	
70	N	15:09:00	15:20:00	00:11:00	19	1.2	
69	S	15:23:00	15:33:00	00:10:00	19	1.1	
50	N	15:47:00	16:05:00	00:18:00	16	1.4	
49	S	16:07:00	16:25:00	00:18:00	16	1.5	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY Converse BLK 12	Day182_90511_A	07/01/2021	182	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Hagen	Cessna 404 Titan - N404CP	8431.1	09:19:00	15:19:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Ryan	Leica Terrain Mapper - 90511	8433.6	09:54:00	15:54:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
20	3	10	9,000	Scattered	17	12	3015

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,842	14,432	5,345

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
59	S	14:17:00			15	1.1	NG System reboot
59	S	15:19:00	15:36:00	00:17:00	19	1.1	low returns 82-89%
60	N	15:39:00	15:43:00	00:04:00	16	1.3	reflight south 8 miles for clouds
61	N	15:50:00	15:54:00	00:04:00	15	1.5	reflight south 8 miles for clouds

Page 1	Verify S-Turns After Mission	Yes

Additional Comments

scrambled readout on sensor, low returns, PAV errors, motor overload, 3 reboots

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day183_90515_A	07/02/2021	183	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
LaRocque	Cessna 404 Titan - N532NM	1010.9	08:39:00	14:39:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	1015.5	12:29:00	18:29:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10	12,000	Clear	16	12.2	30.12

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,153	14,500	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
48	S	14:39:00	14:58:00		20	1	Block 12
47	N	15:01:00	15:19:00		18	1.1	
46	S	15:22:00	15:40:00	00:18:00	19	1.1	
45	N	15:43:00	16:01:00	00:18:00	17	1.5	
44	S	16:04:00	16:22:00	00:18:00	17	1.5	
43	N	16:25:00	16:43:00	00:18:00	17	1.5	
42	S	16:45:00	17:04:00	00:19:00	24	1.1	
41	N	17:06:00	17:13:00	00:07:00	21	1.3	Scrubbed clouds
20	N	17:23:00	17:38:00	00:15:00	21	1.4	Clouds on Block
30	N	17:51:00	18:08:00	00:17:00	23	1.2	Block 10
31	S	18:11:00	18:29:00	00:18:00	21	1.3	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day184_90515_A	07/03/2021	184	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
LaRocque	Cessna 404 Titan - N532NM	1015.5	07:56:00	13:56:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	1020.4	12:12:00	18:12:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
220	10	10	12,000	Clear	20	10	30.1

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,153	14,500	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
20	S	13:56:00	14:11:00		22	1.1	Block 12
19	N	14:14:00	14:29:00		21	1.2	
18	S	14:32:00	14:46:00	00:14:00	20	1.2	
17	N	14:49:00	15:04:00	00:15:00	20	1	
16	S	15:06:00	15:21:00	00:15:00	20	1.1	
15	N	15:24:00	15:38:00	00:14:00	17	1.3	
14	S	15:41:00	15:56:00	00:15:00	15	1.6	
13	N	15:58:00	16:13:00	00:15:00	15	1.7	
12	S	16:16:00	16:31:00	00:15:00	18	1.4	
11	N	16:33:00	16:47:00	00:14:00	18	1.6	
10	S	16:50:00	17:05:00	00:15:00	17	1.3	
9	N	17:07:00	17:21:00	00:14:00	17	1.4	
8	S	17:24:00	17:39:00	00:15:00	20	1.3	
7	N	17:41:00	17:55:00	00:14:00	22	1.1	
6	S	17:57:00	18:12:00	00:15:00	20	1.3	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY Converse BLK 12	Day184_90511_A	07/03/2021	184	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Hagen	Cessna 404 Titan - N404CP	8433.6	08:11:00	14:11:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Ryan	Leica Terrain Mapper - 90511	8438.1	12:11:00	18:11:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
220	10	10		Clear	20	10	3010

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,842	14,432	5,345

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
58	S	14:11:00	14:28:00	00:17:00	23	1.2	
57	N	14:32:00	14:50:00	00:18:00	21	1.1	
56	S	14:54:00	15:11:00	00:17:00	19	1.1	
55	N	15:14:00	15:31:00	00:17:00	19	1.1	
54	S	15:34:00	15:51:00	00:17:00	17	1.4	PAV errors start 15:36
53	N	15:55:00	16:13:00	00:18:00	17	1.7	
52	S	16:16:00	16:33:00	00:17:00	18	1.6	sm clouds 5 miles south end
51	N	16:36:00	16:54:00	00:18:00	19	1.3	
30	S	17:04:00	17:18:00	00:14:00	18	1.3	
29	N	17:21:00	17:35:00	00:14:00	18	1.3	
2	S	17:42:00	17:56:00	00:14:00	23	1.1	
1	N	18:00:00	18:11:00	00:11:00	21	1.3	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day185_90515_A	07/04/2021	185	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
LaRocque	Cessna 404 Titan - N532NM	1020.4	08:19:00	14:19:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	1024.3			KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10	12,000	Clear	18	12	30.11

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,153	14,500	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
28	S	14:19:00	14:33:00		19	1.1	Block 12
27	N	14:36:00	14:50:00		18	1.1	
26	S	14:53:00	15:08:00	00:15:00	17	1.1	
25	N	15:11:00	15:25:00	00:14:00	18	1.1	
24	S	15:28:00	15:43:00	00:15:00	16	1.5	
23	N	15:46:00	16:01:00	00:15:00	16	1.7	
22	S	16:03:00	16:18:00	00:15:00	16	1.7	
21	N	16:21:00	16:35:00	00:14:00	17	1.6	possible reflight 7 mi from north end
5	S	16:40:00	16:54:00	00:14:00	17	1.5	
4	N	16:57:00	17:12:00	00:15:00	17	1.3	
3	S	17:15:00	17:30:00	00:15:00	1	1.3	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY Converse BLK 12	Day185_90511_A	07/04/2021	185	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Hagen	Cessna 404 Titan - N404CP	8438.1	08:24:00	14:24:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Ryan	Leica Terrain Mapper - 90511	8442.9	12:14:00	18:14:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10		Clear	18	12	3011

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,842	14,432	5,345

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
41	S	14:24:00	14:37:00	00:13:00	20	1.1	stopped line last 10mi S. end for virga
35	N	14:43:00	14:57:00	00:14:00	21	1.2	
34	S	15:00:00	15:14:00	00:14:00	20	1.1	
33	N	15:17:00	15:31:00	00:14:00	17	1.3	
32	S	15:34:00	15:48:00	00:14:00	17	1.5	
31	N	15:52:00	16:06:00	00:14:00	17	1.7	
36	S						PAV error/system reboot
36	N	16:34:00	16:48:00	00:14:00	19	1.1	
37	S	16:51:00	17:05:00	00:14:00	19	1.2	
38	N	17:08:00	17:22:00	00:14:00	20	1.3	
39	S	17:24:00	17:39:00	00:15:00	22	1.4	
41	N	17:44:00	17:49:00	00:05:00	25	1.2	partial line/south 12 miles
40	N	17:57:00	18:14:00	00:17:00	22	1.2	

Verify S-Turns After Mission	Yes

Additional Comments

Did not overfly the base station after the reboot

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY Converse BLK 11	Day186_90511_A	07/05/2021	186	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Hagen	Cessna 404 Titan - N404CP	8442.9	08:19:00	14:19:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Ryan	Leica Terrain Mapper - 90511	8447.1	11:50:00	17:50:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
80	3	10	12,000	Scattered	19	11	3011

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	8,202	12,395	5,345

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
4	S	14:19:00	14:32:00	00:13:00	19	1.1	
5	N	14:35:00	14:52:00	00:17:00	22	1	
6	S	14:55:00	15:12:00	00:17:00	22	1	
7	N	15:15:00	15:32:00	00:17:00	19	1.2	
8	S	15:34:00	15:51:00	00:17:00	19	1.4	
9	N	15:54:00	16:10:00	00:16:00	18	1.6	
10	S	16:14:00	16:31:00	00:17:00	19	1.5	
11	N	16:34:00	16:50:00	00:16:00	23	1	
12	S	16:53:00	17:10:00	00:17:00	21	1.2	
13	N	17:13:00	17:29:00	00:16:00	24	1.2	
14	S	17:32:00	17:50:00	00:18:00	25	1	PAV errors start: see notes at bottom

Page 1	Verify S-Turns After Mission	Yes

Additional Comments

Mount rotation range obstructed, PAV stabilization Performance low, PAV control loop detected high frequency vibrations, PAV motor overload. We continued to fly the line and terminated the flight once finished rather than reboot. RTB for a normal static and shut down

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day188_90515_A	07/07/2021	188	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Hagan	Cessna 404 Titan - N532NM	1024.3	08:30:00	14:30:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	1028.4	11:46:00	17:46:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10	12,000	Clear	17	13	30.16

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,153	14,500	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
40	N	14:30:00	14:48:00		23	1	Block 11
41	S	14:51:00	15:07:00		21	1	
42	N	15:10:00	15:28:00	00:18:00	16	1.3	
43	S	15:31:00	15:47:00	00:16:00	17	1.3	
44	N	15:50:00	16:08:00	00:18:00	17	1.4	
45	S	16:10:00	16:27:00	00:17:00	17	1.4	
46	N	16:30:00	16:48:00	00:18:00	19	1	
47	S	16:50:00	17:06:00	00:16:00	16	1.2	
48	N	17:09:00	17:27:00	00:18:00	17	1.2	
49	S	17:30:00	17:46:00	00:16:00	18	1.1	Roll issue 18mi from end of line

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY Converse BLK 11	Day188_90511_A	07/07/2021	188	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Swain	Cessna 404 Titan - N404CP	8448.4	09:45:00	15:49:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Ryan	Leica Terrain Mapper - 90511	8452.7	13:18:00	19:18:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10		Clear	21	13	3016

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	8,202	12,395	5,345

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
25	S	15:49:00			18	1.3	PAV error/system reboot
25	N						N.G.
25	N	16:18:00	16:37:00	00:19:00	20	1	
24	S	16:46:00	17:04:00	00:18:00	16	1.2	
23	N	17:07:00	17:25:00	00:18:00	16	1.2	
22	S	17:28:00	17:45:00	00:17:00	18	1.1	
21	N	17:48:00	17:51:00	00:03:00	17	1.2	NG/PAV errors/system reboot
21	S	18:13:00	18:30:00	00:17:00	20	1.1	
20	N	18:32:00	18:50:00	00:18:00	20	1.1	
19	S	18:55:00	19:11:00	00:16:00	21	1.2	
18	N	19:15:00	19:18:00	00:03:00	21	1.1	NG/PAV errors/stopped line RTB

Page 1	Verify S-Turns After Mission	Yes

Additional Comments

PAV errors: mount rotation range obstructed, reboot, PAV stabiliazition perf low,mount rotation range obstructed,PAV motor overload, reboot, PAV stabilization perf low, PAV motor overload, stopped the line and RTB for normal static and system shut down. We did not overfly the base station for any of the reboots

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day189_90515_A	07/08/2021	189	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Canady	Cessna 404 Titan - N532NM	1028.4	08:49:00	14:19:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	1032.6	12:04:00	18:04:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10	12,000	Clear	16	12	30.02

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,153	14,500	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
50	N	14:49:00	15:06:00		21	1.1	Block 11
51	S	15:09:00	15:25:00		19	1.2	
52	N	15:29:00	15:46:00	00:17:00	16	1.5	
53	S	15:49:00	16:06:00	00:17:00	17	1.4	
54	N	16:09:00	16:26:00	00:17:00	20	1.1	
55	S	16:29:00	16:46:00	00:17:00	22	1	
56	N	16:49:00	17:06:00	00:17:00	18	1.2	
57	S	17:09:00	17:26:00	00:17:00	19	1.3	
58	N	17:29:00	17:45:00	00:16:00	20	1.1	
59	S	17:48:00	18:04:00	00:16:00	18	1.2	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY Converse BLK 11	Day189_90511_A	07/08/2021	189	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Swain	Cessna 404 Titan - N404CP	8452.7	09:03:00	15:03:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Ryan	Leica Terrain Mapper - 90511	8457.6	12:58:00	18:58:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
240	13	10	9,000	Few	19	11	3002

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	8,202	12,395	5,345

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
39	N	15:03:00	15:20:00	00:17:00	18	1.2	
38	S						NG/PAV motor overload/Reboot
38	S						NG/Internal PAV error/Reboot
38	S	15:51:00	16:08:00	00:17:00	17	1.4	
37	N	16:11:00			22	1	NG/PAV motor overload/Reboot
37	N	16:39:00	16:57:00	00:18:00	18	1.2	
36	S	17:00:00	17:16:00	00:16:00	18	1.3	
35	N	17:21:00	17:37:00	00:16:00	21	1	
34	S	17:43:00	18:00:00	00:17:00	18	1.2	
33	N	18:02:00	18:19:00	00:17:00	17	1.4	
32	S	18:21:00	18:38:00	00:17:00	20	1.2	
31	N	18:40:00	18:58:00	00:18:00	20	1.2	

Verify S-Turns After Mission	Yes

Additional Comments

Did not overfly the Base station between reboots

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day190_90515_A	07/09/2021	190	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Canady	Cessna 404 Titan - N532NM	1032.6	07:56:00	13:56:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	1037.3	11:47:00	17:47:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10	12,000	Clear	15	11	30.16

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,153	14,500	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
60	N	13:56:00	14:13:00		20	1	Block 11
61	S	14:16:00	14:32:00		20	1	
62	N	14:36:00	14:52:00	00:16:00	20	1.2	
63	S	14:56:00	15:12:00	00:16:00	19	1.3	
64	N	15:16:00	15:32:00	00:16:00	17	1.4	
65	S	15:35:00	15:51:00	00:16:00	17	1.4	
66	N	15:54:00	16:11:00	00:17:00	17	1.5	
67	S	16:13:00	16:30:00	00:17:00	20	1.1	
68	N	16:33:00	16:49:00	00:16:00	20	1.2	
69	S	16:52:00	17:08:00	00:16:00	19	1.4	
70	N	17:11:00	17:27:00	00:16:00	22	1.2	
71	S	17:30:00	17:47:00	00:17:00	22	1.2	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY Converse BLK 11	Day190_90511_A	07/09/2021	190	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Swain	Cessna 404 Titan - N404CP	8457.6	08:26:00	14:26:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Ryan	Leica Terrain Mapper - 90511	8462.1	12:14:00	18:14:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10		Clear	18	9	3016

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	8,202	12,395	5,345

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
30	N	14:26:00	14:44:00	00:18:00	21	1.1	
29	S	14:47:00	15:04:00	00:17:00	21	1.2	
28	N	15:07:00			18	1.4	PAV errors/reboot/reboot
							see notes below
28	N	15:51:00	16:08:00	00:17:00	18	1.5	
27	S	16:12:00	16:29:00	00:17:00	20	1.1	
26	N	16:33:00	16:50:00	00:17:00	19	1.3	
18	S	16:54:00	17:11:00	00:17:00	19	1.4	
17	N	17:15:00	17:32:00	00:17:00	22	1.1	
16	S	17:35:00	17:52:00	00:17:00	21	1.3	
15	N	17:58:00	18:14:00	00:16:00	17	1.4	
3	S						practice to establish online for new pilot

Verify S-Turns After Mission	Yes

Additional Comments

2 errors upon start up causing 2 reboots before the static: preallocating ADQ memory failed and a scrambled readout on the sensor, the start of line 28 had mount rotation range obstructed, PAV stabilization perform low and PAV motor overload causing a reboot. the sensor wouldn't reboot so a hard shut down was needed to turn off the sensor. Once the sensor rebooted we flew over the base station. No further errors for the remainder of the flight.

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day191_90515_A	07/10/2021	191	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Canady	Cessna 404 Titan - N532NM	1037.3	08:44:00	14:44:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	1041.4	10:56:00	16:56:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
220	5	10	12,000	Clear	13	9	30.34

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,153	14,500	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
72	N	14:44:00	15:04:00		18	1.1	Block 11
73	S	15:06:00	15:22:00		16	1.4	
74	N	15:25:00	15:40:00	00:15:00	15	1.5	
75	S	15:44:00	15:56:00	00:12:00	16	1.5	
76	N	15:59:00	16:11:00	00:12:00	19	1.1	Clouds/Roll north 10mi
32	N	16:25:00	16:43:00	00:18:00	17	1.3	Block 10
33	S	16:46:00	16:56:00	00:10:00	17	1.4	Clouded out

Page 1	Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY Converse BLK 10	Day191_90511_A	07/10/2021	191	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Swain	Cessna 404 Titan - N404CP	8462.1	08:32:00	14:32:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Ryan	Leica Terrain Mapper - 90511	8466	11:17:00	17:17:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
220	5	10		Clear	13	9	3034

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	8,202	12,303	5,345

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
65	N	14:32:00	14:51:00	00:19:00	20	1.1	
64	S	14:55:00	15:12:00	00:17:00	19	1.3	
63	N	15:16:00	15:33:00	00:17:00	18	1.3	
62	S	15:37:00	15:54:00	00:17:00	17	1.5	
61	N	15:58:00	16:15:00	00:17:00	17	1.5	
60	S	16:18:00	16:35:00	00:17:00	22	1.1	
59	N	16:39:00	16:55:00	00:16:00	19	1.3	
58	S	17:00:00	17:17:00	00:17:00	19	1.3	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day192_90515_A	07/11/2021	192	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Canady	Cessna 404 Titan - N532NM	1041.4	08:22:00	14:22:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	1046.5	12:15:00	18:15:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10	12,000	Clear	12	8	30.25

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	7,053	12,400	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
76	N	14:22:00	14:37:00		18	1.1	Block 11
77	S	14:39:00	14:51:00		18	1.1	
78	N	14:54:00	15:10:00	00:16:00	18	1.5	
79	S	15:13:00	15:25:00	00:12:00	17	1.5	
80	N	15:28:00	15:43:00	00:15:00	17	1.6	
81	S	15:46:00	15:59:00	00:13:00	18	1.4	
82	N	16:02:00	16:17:00	00:15:00	17	1.1	
83	S	16:28:00	16:41:00	00:13:00	17	1.3	
84	N	16:44:00	16:57:00	00:13:00	17	1.4	
85	S	17:01:00	17:15:00	00:14:00	21	1.1	
33	N	17:39:00	17:57:00	00:18:00	20	1.4	Block 10
34	S	17:59:00	18:15:00	00:16:00	23	1.1	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY Converse BLK 10	Day192_90511_A	07/11/2021	192	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Kirkland	Cessna 404 Titan - N404CP	8466.7	08:33:00	14:33:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Ryan	Leica Terrain Mapper - 90511	8471.2	11:49:00	17:49:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10		Clear	12	8	3025

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	8,202	12,303	5,345

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
57	N	14:33:00	14:50:00	00:17:00	20	1	
56	S	14:54:00	15:10:00	00:16:00	18	1.3	
55	N	15:15:00	15:33:00	00:18:00	19	1.4	
54	S	15:36:00	15:42:00	00:06:00	19	1.5	PAV overload error/reboot/reboot
54	S	16:04:00	16:20:00	00:16:00	19	1.3	Lidar unit:no answer from display/blank window
							reboot
54	N	16:43:00	17:01:00	00:18:00	21	1.4	
53	S	17:05:00	17:21:00	00:16:00	22	1.3	
52	N	17:26:00	17:44:00	00:18:00	23	1.3	
51	S	17:48:00	17:49:00	00:01:00			N.G./PAV error/RTB for normal shutdown

Page 1	Verify S-Turns After Mission	Yes

Additional Comments

reboot upon start up-system would not shut down properly and had to force shut down, Reboot on line 54 for PAV error-sensor shut down ok but would not reboot. Had to do another forced shut down, Rebooted again-had a blank display in the screen on the sensor in front of the emergency button yet the laser was active and emmitting , error message of Lidar unit no answer from display. Rebooted again, system ran fine with no errors for 3 lines. PAV motor overload error occured on line 51 and we RTB for a normal shut down.

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day194_90515_A	07/13/2021	194	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Canady	Cessna 404 Titan - N532NM	1051.9	08:17:00	14:17:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	1056.1	11:12:00	17:12:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
100	15	10	12,000	Clear	18	8	30.16

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	7,053	12,400	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
35	N	14:17:00	14:35:00		19	1.1	Block 10
36	S	14:38:00	14:56:00		16	1.4	
37	N	14:59:00	15:16:00	00:17:00	16	1.4	
38	S	15:19:00	15:36:00	00:17:00	15	1.6	
39	N	15:39:00	15:55:00	00:16:00	16	1.5	
40	S	15:58:00	15:19:00	23:21:00	19	1	
41	N	16:18:00	16:34:00	00:16:00	16	1.2	
42	S	16:37:00	16:53:00	00:16:00	17	1.2	
43	N	16:56:00	17:12:00	00:16:00	22	1.2	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY Converse BLK 12 reflights	Day194_90511_A	07/13/2021	194	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Kirkland	Cessna 404 Titan - N404CP	8473	08:39:00	14:39:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Ryan	Leica Terrain Mapper - 90511	8475.6	10:23:00	16:23:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
70	19	10	12,000	Scattered	17	7	3016

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	9,842	14,432	5,345

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
86	S	14:39:00	14:41:00	00:02:00	17	1.2	
76	N	14:47:00	14:49:00	00:02:00	17	1.2	
68	S	14:55:00	14:57:00	00:02:00	15	1.4	
61	S	15:09:00	15:13:00	00:04:00	14	1.6	
60	N	15:18:00	15:22:00	00:04:00	14	1.6	
52	S	15:26:00	15:28:00	00:02:00	15	1.6	
29	N	15:37:00	15:40:00	00:03:00	16	1.5	
14	S	15:45:00	15:46:00	00:01:00	17	1.2	
13	N	15:50:00	15:52:00	00:02:00	19	1	
12	S	15:59:00	16:03:00	00:04:00	18	1	
10	N	16:06:00	16:09:00	00:03:00	18	1	
5	S	16:13:00	16:15:00	00:02:00	16	1.2	
3	N	16:20:00	16:23:00	00:03:00	16	1.2	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	WY North Converse	Day196_90515_A	07/15/2021	196	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Canady	Cessna 404 Titan - N532NM	1056.1	09:20:00	15:20:00	KCPR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515		11:54:00	17:54:00	KCPR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
0	0	10	12,000	Clear	16	13	30.11

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	7,053	12,400	5,347

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
44	N	15:20:00	15:36:00		20	1.3	Block 10
45	S	15:39:00	15:56:00		22	1.1	
46	N	15:59:00	16:16:00	00:17:00	19	1.3	
47	S	16:19:00	16:36:00	00:17:00	19	1.3	
48	N	16:39:00	16:55:00	00:16:00	19	1.2	
49	S	16:58:00	17:15:00	00:17:00	18	1.3	
50	N	17:18:00	17:34:00	00:16:00	17	1.5	
51	S	17:37:00	17:54:00	00:17:00	21	1.2	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	North Converse WY	Day264_90511_A	09/20/2020	264	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Diepenbroek	Cessna 404 Titan - N404CP	8029.3	08:34:00	14:34:00	LAR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Stanton	Leica Terrain Mapper - 90511	8033.7	13:15:00	19:15:00	LAR

Conditions

Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
170	7	10	40,000	Clear	14	5	30.01

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	8,202	12,303	4,365

Settings

Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
1	S	15:08:00	15:25:00		21	1.1	Block 10, Clear with lt haze from smoke
2	N	15:28:00	15:44:00		20	1.1	
3	S	15:47:00	16:03:00	00:16:00	22	1.2	
4	N	16:06:00	16:23:00	00:17:00	23	1.1	
5	S	16:25:00	16:43:00	00:18:00	20	1.2	
6	N	16:45:00	17:01:00	00:16:00	21	1.1	
7	S	17:04:00	17:21:00	00:17:00	19	1.2	
8	N	17:23:00	17:40:00	00:17:00	16	1.2	
9	S	17:42:00	17:59:00	00:17:00	15	1.3	
10	N	18:02:00	18:18:00	00:16:00	16	1.2	
11	S	18:20:00	18:37:00	00:17:00	16	1.4	
12	N	18:40:00	18:56:00	00:16:00	17	1.2	

Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
81328	North Converse WY	Day265_90511_A	09/21/2020	265	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Diepenbroek	Cessna 404 Titan - N404CP	8033.7	07:33:00	13:33:00	LAR
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
Stanton	Leica Terrain Mapper - 90511	8038.7	12:45:00	18:45:00	LAR

Conditions							
Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
190	3	10	40,000	Clear	7	2	30.16

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
150	8,202	12,303	4,365

Settings					
Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.7	2	40	90	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
13	S	14:02:00	14:19:00		22	1.1	Block 10, Clear with lt haze from smoke
14	N	14:22:00	14:39:00		23	1.1	
15	S	14:41:00	14:58:00	00:17:00	20	1.2	
16	N	15:01:00	15:18:00	00:17:00	20	1.1	
17	S	15:20:00	15:36:00	00:16:00	18	1.4	
18	N	15:39:00	15:56:00	00:17:00	21	1.2	
19	S	15:58:00	16:15:00	00:17:00	21	1.2	
20	N	16:17:00	16:34:00	00:17:00	20	1.2	
21	S	16:36:00	16:53:00	00:17:00	19	1.4	
22	N	16:55:00	17:12:00	00:17:00	19	1.3	
23	S	17:14:00	17:31:00	00:17:00	18	1.4	
24	N	17:33:00	17:50:00	00:17:00	18	1.3	
25	S	17:52:00	18:09:00	00:17:00	19	1.2	
26	N	18:11:00	18:27:00	00:16:00	19	1	

Page 1	Verify S-Turns After Mission	Yes

Additional Comments

Woolpert Lidar Acquisition Log

Project Info			Date		
Project #	Project Name	Unique ID	Flight Date (UTC)	Day of Year	Flight #
80997	Wyoming Converse	Day290_90515_A	10/16/2020	290	A

Crew	Equipment	Time			Airports
Pilot	Aircraft Make / Model / Tail #	Hobbs Start	Local Start	UTC Start	Departing
Gebhart	Cessna 404 Titan - N7079F	2968.1	09:46:00	15:46:00	GCC
Operator	Sensor Make / Model / Serial #	Hobbs End	Local End	UTC End	Arriving
DeHart	Leica Terrain Mapper - 90515	2970	10:36:00	16:36:00	GCC

Conditions							
Wind Dir (°)	Wind Speed (kts)	Visibility (mi)	Ceiling (ft)	Cloud Cover	Temp. (°C)	Dew Point (°C)	Pressure ("Hg)
210	14	10	12,000	Broken	3	-4.4	30.11

Air Speed (kts)	Altitude AGL (ft)	Altitude MSL (ft)	Airfield Elevation (ft)
160	7,306	14,590	7,284

Settings					
Point Spacing (m)	Point Density (ppsm)	Scan Angle/FOV (°)	Scan Frequency (Hz)	Pulse Rate (kHz)	Laser Power (%)
0.35	10	40	89	600	100

Verify S-Turns Before Mission	Yes

Line #	Direction	Start Time (UTC)	End Time (UTC)	Time On-Line	Satellite	PDOP	Line Notes/Comments
1	S	15:46:00	16:00:00		21	1.3	Block 11
2	N	16:02:00	16:17:00		21	1.2	
3	S	16:20:00	16:33:00	00:13:00	23	1.1	
4	N	16:35:00	16:36:00	00:01:00	21	1.4	Error sending heartbeat to Lidar unit, T0 Inactive

Page 1	Verify S-Turns After Mission	Yes

Additional Comments