

UMD Balloon Payload Program

Van Inspection Checklist

License plate: 24293

Flight: NS-71

Date: 10/NOV/17

Inspectors: Luis Jonathan Blaine

Visual Inspection:

- Suspension/undercarriage
- Serpentine belt
- Oil in engine bay
- Corroded battery terminals
- Tire tread
- Glass damage
- ~~Tire pressure (4)~~
- Spare tire
- Mirrors
- Walk-around with Motor Pool

Electrical:

- Brake lights (3)
- Turn signals (4)
- Headlights
- High-beams
- Fog lamps
- Tail lights
- Outlets *1 outlet works, one done 11/17*
- HVAC (as seasonally appropriate) *done 11/17*

Fluids:

- Oil
- Coolant
- Wiper fluid

Notes:

*cracks suspension
v/b-ates some*

Miscellaneous:

- Registration
- Insurance
- MTS paperwork
- Backup alarm *6.0.12.6*
- Fire extinguisher
- Wipers
- License plate
- EZ-pass
- Tire change tools

Test Drive (to 50 mph):

- Sound of engine
- Excessive vibration
- Steering alignment
- Suspension over bumps
- Control of vehicle
- Braking ability
- Moving/correct gauges
- Engine temp *not checked*
- Battery voltage stable (alternator) *not checked*
- Excessive or discolored exhaust
- Parking brake *not checked*

UMD Balloon Payload Program

Van Inspection Checklist

License plate: 24284

Flight: N5-71

Date: 10/NOV/17

Inspectors: L. Remy, J. Molter

Visual Inspection:

- Suspension/undercarriage
- Serpentine belt
- Oil in engine bay
- Corroded battery terminals
- Tire tread
- Glass damage
- Tire pressure (4)
- Spare tire
- Mirrors
- Walk-around with Motor Pool

Electrical:

- Brake lights (3)
- Turn signals (4)
- Headlights
- High-beams
- Fog lamps
- Tail lights
- Outlets
- HVAC (as seasonally appropriate)

Fluids:

- Oil
- Coolant
- Wiper fluid

Notes:

2 outlets, both good
Backup alarm is one tone

Miscellaneous:

- Registration
- Insurance
- MTS paperwork
- Backup alarm
- Fire extinguisher
- Wipers
- License plate
- EZ-pass
- Tire change tools

Test Drive (to 50 mph):

- Sound of engine
- Excessive vibration
- Steering alignment
- Suspension over bumps
- Control of vehicle
- Braking ability
- Moving/correct gauges
- Engine temp
- Battery voltage stable (alternator) *not checked*
- Excessive or discolored exhaust
- Parking brake

UMD Balloon Payload Program

Van Inspection Checklist

License plate: SG 23723

Flight: NS-71

Date: 9/10/17

Inspectors: Quinn, Shailesh, Dale

Visual Inspection:

- Suspension/undercarriage
- Serpentine belt
- Oil in engine bay
- Corroded battery terminals
- Tire tread
- Glass damage
- Tire pressure (4)
- Spare tire
- Mirrors
- Walk-around with Motor Pool

Electrical:

- Brake lights (3)
- Turn signals (4)
- Headlights
- High-beams
- Fog lamps
- Tail lights
- Outlets
- HVAC (as seasonally appropriate)

Fluids:

- Oil
- Coolant
- Wiper fluid

Notes:

Miscellaneous:

- Registration
- Insurance
- MTS paperwork
- NA* Backup alarm
- NA* Fire extinguisher
- Wipers
- License plate
- EZ-pass
- NA* Tire change tools

Test Drive (to 50 mph):

- Sound of engine
- Excessive vibration
- Steering alignment
- Suspension over bumps
- Control of vehicle
- Braking ability
- Moving/correct gauges
- Engine temp
- NA* Battery voltage stable (alternator) *not*
- Excessive or discolored exhaust
- Parking brake

UMD Balloon Payload Program

Van Inspection Checklist

License plate: SG 27964

Flight: NS 71

Date: 9/10/17

Inspectors: Quinn, Shailesh // Walker

Visual Inspection:

- Suspension/undercarriage
- Serpentine belt
- Oil in engine bay
- Corroded battery terminals
- Tire tread
- Glass damage
- Tire pressure (4)
- Spare tire
- Mirrors
- Walk-around with Motor Pool

Electrical:

- Brake lights (3)
- Turn signals (4)
- Headlights
- High-beams
- Fog lamps
- Tail lights
- Outlets
- HVAC (as seasonally appropriate)

Fluids:

- Oil
- Coolant
- Wiper fluid

Notes:

Miscellaneous:

- Registration
- Insurance
- MTS paperwork
- Backup alarm
- Fire extinguisher
- Wipers
- License plate
- EZ-pass
- Tire change tools

Test Drive (to 50 mph):

- Sound of engine
- Excessive vibration
- Steering alignment
- Suspension over bumps
- Control of vehicle
- Braking ability
- Moving/correct gauges
- Engine temp
- Battery voltage stable (alternator)
- Excessive or discolored exhaust
- Parking brake

Command Module Checklist

NS-71

Pre-Flight Checklist

Cell Tracker

- Tighten Cell Tracker GPS Connection
- Cell Tracker SD Card
- Tighten Cell tracker cellular connection
- Power connection
- Clear SD card

Habduino (Top Plate)

- Tighten Habduino GPS Connection
- Tighten 2M RF Connector (Out the back)
- Power connection

Habduino (Bottom Plate)

- Tighten Habduino GPS Connection
- Tighten 2M RF Connector (Out the front)
- Power connection

Link

- Tighten Antenna Connection (bottom)
- Tighten Antenna Connection (side) N/A
- Power connection

Systems Check

-Top Plate

- Top LVC Switched on
- Cell Tracker On
- Habduino On
- Receive Text from cell tracker
- Received Packets from Hab
- Place desiccants

-Bottom Plate

- Bottom LVC Switched on
- Habduino On
- LINK On N/A
- Received Packets from Hab N/A
- Ground receiving packets from Link and all payloads
- Place desiccants

- Seal Box

Launch Director Checklist

NS- 71

Launch Location: Everett PA

Launch date: Nov 11 2017

Payload Lineup: Cmd

ASCII

PARM

TEASE

Spider

Forkenes +

Tape

Balloon Size(s): 1600g

Callsigns: W3EAX-8, -12
-10 backup

Pre-Flight Checklist

Charge:

Car battery

Wi-fi hotspot(s)

Walkie-Talkie(s)

Tracking laptops

Check Inventory of:

BLT Bucket

Inflation Bucket

Recovery Bucket

Launch Kit

Main tracking box

Launch Equipment

Balloons x 2

Helium tanks

Tarp (Big and Small)

Parachute and Ring

Command Module kit

Broom

Trash Bag

Square Plywood Bases

Scale for Measuring Payloads

Recovery

Bow Saw

Extension Pole

Scythe

Sling Shot

Payloads

Car battery

- Battery box
- ~~_____ Battery Charger~~
- Payloads
- Soldering Iron & wire *← solder*
- ~~_____ Spare LVCs~~
- Tyler's Weather Ground Station

Tracking/Communications

- Tracking Laptop(s)
- Tracking Antennas
- ~~_____ 900s Ground station~~
- Radios (Tracking)
- Walkie-Talkies
- Wi-Fi hotspot(s) *✓ bill paid*
- Power Inverter
- Power Strip(s)
- Car magnets

Other:

- Swag bag
- Van checklists
- Card checklist

Launch Checklist

Launch/Inflation Setup

- Pre-launch setup meeting (See PAO)
- Tarp setup (indicate full or half configuration)
- Place BLT in optimal launch location
- Indication direction of payload string from balloon
- Parachute-to-balloon lanyard configured
- Parachute and ring untangled
- Command Module in place
- Harmless payload stickers on each payload
- Payload string lined up and assembled

Pre-Inflation Checklist

Hook lanyard from parachute around balloon neck before connecting to inflation tube

Tethers in Place

Brief 2 tether handlers (See PAO) (Per ~~to do~~)

Did Dr. Bowden call the tower? (See Dr. Bowden)

Balloon in BLT ready to go (See BLT Engineer)

Pre-Release Checklist

Check payloads are ready

Final communications check

Countdown & Release

Inform payload PoCs to hold payloads above the launch pad

Tether handlers ready

Slowly raise payload string

Measure Total Free Lift = _____ (optional)

Countdown from 10 (Final Countdown Song Optional)

Release!

Release Time Mark = _____

Name	Weight	Point of Contact	Email	Phone Number	Battery?	Payload specific hardware
T.A.P.E	1.54	Gilad Gensler	giladgensler@icloud.com	845-538-3679	Yes	6 AAs
PARM (Plastic Analysis Research Module)	1.15	James Hall	jhall717@terpmail.umd.edu	301-717-8939	9V	9V
TEASE	1.7	Shane Velez	shanemv4@gmail.com	443-876-0070	Yes	Peltier module
SPIDER	1.5	Derek A. Safieh	dsafieh@umd.edu	704-451-3121	Yes	Epoxy
ASCII						
Atmospheric State and Composition Investigative Instrument	1.6	Shailesh Murali	smurali1@terpmail.umd.edu	732-822-9441	9V	9V

<p>Payload Assembly Procedure</p> <p>Turned on; make sure everything is working. Check that it powers on and the code works.</p> <p>Turn on arduino board, seal the payload</p> <p>Put hand warmers in the box</p> <p>Turn switch on, put camera in box and start recording</p> <p>Pre launch- 1. Insert Payload string and paperclips 2. Screw in antenna</p> <p>Launch Morning- 1. Turn on Camera, Secure Camera, Turn on Arduino</p> <p>Record time when LED blinks, seal payload with tape, pray</p>	<p>Payload Recovery Procedure</p> <p>Turn it off. Make sensors on bottom are unharmed.</p> <p>power off the payload, make sure that all parts (all 3D printed components) are returned with the payload</p> <p>Turn off payload with switch. Take out handwarmers.</p> <p>Turn switch off, stop camera recording</p> <p>Turn off camera, Turn off Arduino, disconnect battery</p>
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100K

Quinn	80K
Lo	86k
Junette	82K
Shailesh	89k
Ji	95k
Jackson	96k
Jonathan	87k
Steve	90K
Camden	88k
Dale	84k
Michael O	83k
Blaire	88k
Aravind	83k
Michael W	84k
Mark	82.5k
Axel	94k
David	93k
Gilad	92.5k
Nassif	85k
Ryland	93k
Robbie	88k
Doug	84.5k
Shane	87k
Trevor	92.5k
Ryan	84k
Luke	96.5k
Zach L	89k
Jessica	89k
James	91k
Joseph	81k
Ola	90.5k
Bunden	86.5k
Rachel	92k
Jessica	84.5
Derek	90.5
Chris	89.5
Pat	88.5