

**MARITIME HELICOPTERS
PUBLICATIONS
ROUTING MEMORANDUM**

DATE: 03/30/18

TO: All Employees

FROM: Quality and safety memo

SUBJECT: Feb/March Safety memo

Please complete the verification of receipt below and return this form to the Records Department in Fairbanks via email to faiaadmin@maritimehelicopters.com or by fax to (907)452-4539

BY SIGNING THIS FORM I ACKNOWLEDGE I have reviewed and will comply with the memo listed above

EMPLOYEE SIGNATURE

DATE



Maritime Helicopters

FEB/MAR 2018 Quality & Safety Notes



Spring Cleaning

So here I sit on the eighth day of spring wondering about how to get all the audit preparation and safety work for the year, while being especially busy in the air. We've had a busy winter, which is great for the company, but it sure seems like some things have been put on the back burner! Not good! Checking some aircraft logbooks in anticipation of some more external audits, we've found some errors, including the fact that we're getting lazy on engine power checks. (We'll cover that topic here in a bit). It seems like we have some work to do on our sling and bucket equipment before the busy summer season starts. And our own internal auditing needs some sprucing up. Valdez, Kodiak, & the Glenallen Response base crews are excelling at getting their monthly station audits back to me (Thank-You!) Some of the other sites, not so excellent!

Let's get started on some spring cleaning!

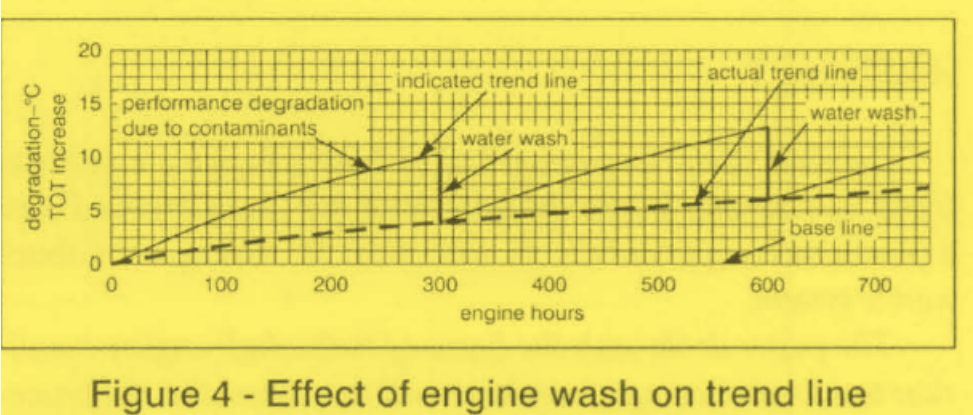
Engine Power Checks

For those of you whom haven't gotten the chance to hear me blather on about the CH-47 Chinook, you may not know that I wasn't "The Safety Guy" in the Army. I was a Maintenance Officer. My pet peeve? Pilots and Maintenance pilots not doing their engine power checks.

Why do Power Checks matter? Engine condition trend monitoring is an integral part of maintenance on the basis of condition, and it is based on the fact that, during an extended period of time it is possible to tell the difference between normal and faster degradation of engine performances. The engines on these Bell helicopters are great! And our great mechanics and records department make sure that we are flying them within Bell's/Rolls-Royce's guidelines. However, on a day to day basis, when you get the aircraft **today** that I landed on a gravel bar **yesterday**, how do you know I didn't ingest a heap of sand right through the compressor?

That does beg the question...What is the most consistent engine degradation, power trend that we can find by doing our engine power checks??? The answer: The need for an engine wash. The figure I've included is from an Allison engine study from the 1990s. It very applicable today. Engine temperatures go up (degraded performance) as engines get dirty, plain and simple.

And every time I've seen an engine with FOD damage *in between* time-before-overhaul? It was first identified by higher than normal temperatures on power checks.



Please, please, please! Do your engine power checks! I am going to have the CAS memo and pertinent data attached to this safety letter in the form of forwarded emails from the Chief Pilot. Pilots! Please review those documents from 2015.

New, New, New Station Checklist.

Always in a state of revision! The newest version of the Monthly Station Checklist is on the Maritime Portal and include here as an attachment. I'll keep improving the number and quality of the references as we go along. But I wanted to get this version out because it has the Fuel Quality blocks that I've discussed in past months (please note those changes in section 500. Please use this for your shift/monthly checklist at all the remote sites.

Maritime Helicopters Inc. Internal Evaluation Program

Station Checklist

Location: _____ Date: _____

Criteria	Reference	Y	N	N/A
100. AIRCRAFT				
1. Aircraft Information				
a. Type				
b. Tail Number				
c. Total Time				
2. Does the aircraft conform to contract requirements?				
3. Are the aircraft Airworthiness and Registration Certificates present and serviceable?				
4. Is the weight and balance with equipment list correct?				
5. Are there any airworthiness discrepancies noted?				
6. Is the MEL status correct?	206/407/MEL			
7. Is the MEL/NEF system being utilized?	206/407/MEL			
8. Are the aircraft logbook entries complete?				
9. Do the aircraft placards conform to the Flight Manuals?				
10. Are additional safety items particular to this aircraft serviceable (floats, life rafts, PFDs, flares, Aiyemka kits, etc.)				
11. Do the aircraft have a fuel sampling kit?				
12. Are the aircraft fuel samples taken daily?				
13. Are aircraft being properly secured at night?				
14. Is the aircraft clean inside and out?				
15. Is there a Hazmat Booklet on board the aircraft/IPOD/PAD?				
16. Are seats, seat belts and harnesses in good condition and secure?				
17. Are the trim, cargo net area and tub liners in good condition?				
18. Are there sufficient passenger briefing cards available?				
19. Is the interior paint in good condition and clean?				
20. Are the hearing protectors in proper quantity and good condition?				
21. Is the exterior paint in good condition and clean? Free from corrosion, working rivets, cracks and other damage?				
22. Are doors seals in good working condition and sealing properly?				
23. Is the cargo/baggage door(s) and compartments in good condition, clean, seals tight and free from corrosion?				
24. Is there any evidence of obvious external oil leakage?				

Revision: 18-1 28 Feb 2018 Page D-1

The new Station Checklist will be attached to this Safety letter from the FAI Admin’s office!

Mechanic Toolbox Talk



I was going to say a few words about fire safety, but I think I'll just leave it at the picture... There is an arson joke here, but I don't think it would 'catch'. **How not to dry paint.**

Incident Reporting for Feb/Mar

FIR: 201801, 2/5/2018/1355: Bell 206L4, Faulty N1 Gauge

During engine Start with a ground power unit at one of the remote stations, the Gas Producer (N1) gauge was fluctuating and making audible "clicking" sounds. Customers were delayed as pilot and mechanic attempted troubleshooting, including the swapping of the N1 Tachometer Generator. After determining that the problem was the gas itself, the customer flight was cancelled and a new N1 Gauge was ordered. The parts were sent and then received (by both air and boat) on the 7th. New N1 Gauge fixed the issue. Aircraft was returned to service.

Not much to say about this one. When a gauge goes bad, you just have to do the best troubleshooting you can and then get the parts ordered as quickly as possible (as the crew did in this case). It's Alaska, sometimes parts take a while.

FIR: 201804, 3/7/2018 Bell 206L4, Hydraulic Actuator Failure

I'm still awaiting the Irregularity Report on this one. Just a quick note to mention that a copy of the FIR should be kept in each aircraft logbook can. The FIRs can also be found on the Maritime Web Portal. Thanks.

SDS of the Month: Imron Paints! (A bit of a family...all have similar qualities. I'll be picking on Imron Elite Productive.)

2. Hazards identification

This preparation is hazardous per the following GHS criteria

GHS-Classification

Flammable liquids	Category 2
Skin sensitization	Category 1
Target Organ Systemic Toxicant - Single exposure	Category 3

GHS-Labeling

Hazard symbols

Signal word: Danger

Hazard statements

Highly flammable liquid and vapor.

May cause an allergic skin reaction.

May cause drowsiness or dizziness.

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/ vapors/ spray.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN: Wash with plenty of soap and water.

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

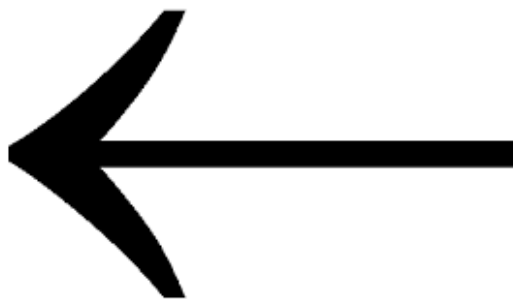
IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.

Specific treatment (see supplemental first aid instructions on this label).

If skin irritation or rash occurs: Get medical advice/ attention.



*This slide doubles as
your eyewash station
training for the year!*



4. First aid measures

Eye contact

Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

Skin contact

Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

Inhalation

Avoid inhalation of vapor or mist. Move to fresh air in case of accidental inhalation of vapors. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Ingestion

If swallowed, seek medical advice immediately and show this safety data sheet (SDS) or product label. Do NOT induce vomiting. Keep at rest.

Most Important Symptoms/effects, acute and delayed

Inhalation

Ingestion

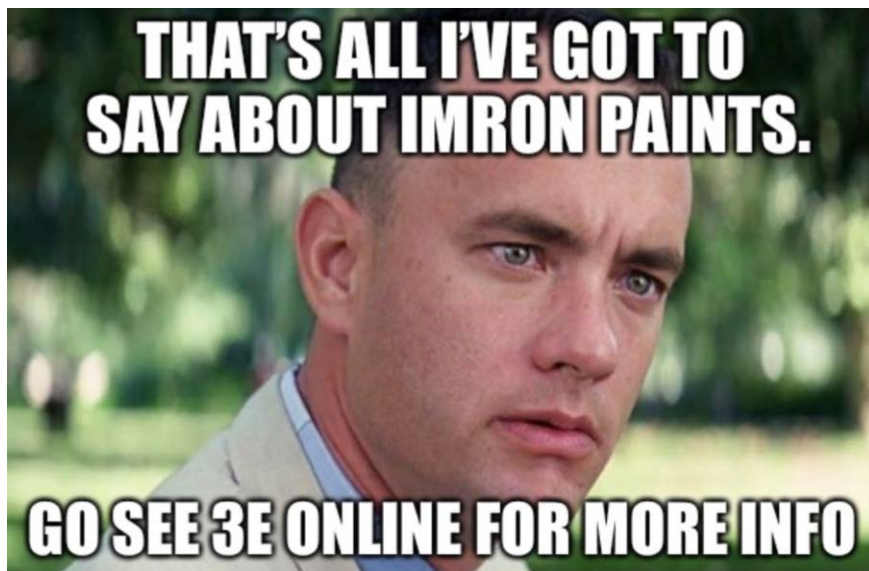
May result in gastrointestinal distress.

Skin or eye contact

May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Indication of Immediate medical attention and special treatment needed if necessary

No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.



New Hire Safety Briefings

I still need to round up the following individuals for the New Hire Safety Briefing. You can run, but you can't hide!

Keaton Molt

Ben Johnson

Bryan Minnear

Scott McCollum

Scott Dye



Dennis S. Busch

Quality and Safety Manager

safety@maritimehelicopters.com



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MODEL 206L3 OR 206L1 WITH ENGINE UPGRADE KIT

POWER ASSURANCE CHECK

ROLLS-ROYCE 250 - C30P ENGINE

WITH SNOW DEFLECTOR

LEVEL FLIGHT
POWER TURBINE (N₂) - 100% RPM
DC LOAD - 17.5%

90 TO 100 KIAS (NOT TO EXCEED V_{NE})
ENGINE ANTI-ICE - OFF
HEATER / ECS - OFF

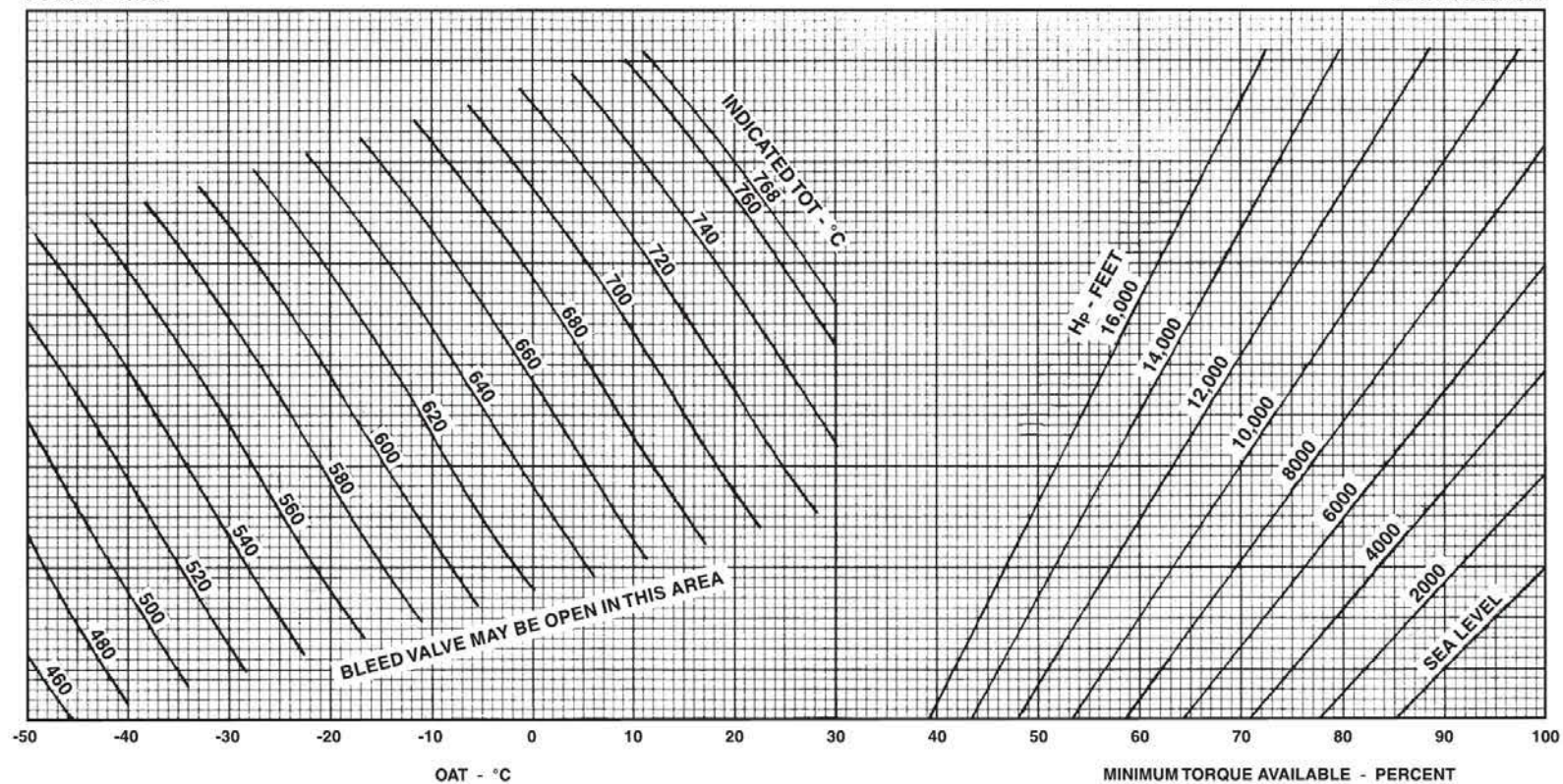


Figure 4-1. Power Assurance Check (Sheet 1 of 2)

MODEL 206L3 OR 206L1 WITH ENGINE UPGRADE KIT
POWER ASSURANCE CHECK
ROLLS-ROYCE 250 - C30P ENGINE

LEVEL FLIGHT
 POWER TURBINE (N₂) - 100% RPM
 DC LOAD - 17.5%

85 TO 105 KIAS (NOT TO EXCEED V_{NE})
 ENGINE ANTI-ICE - OFF
 HEATER / ECS - OFF

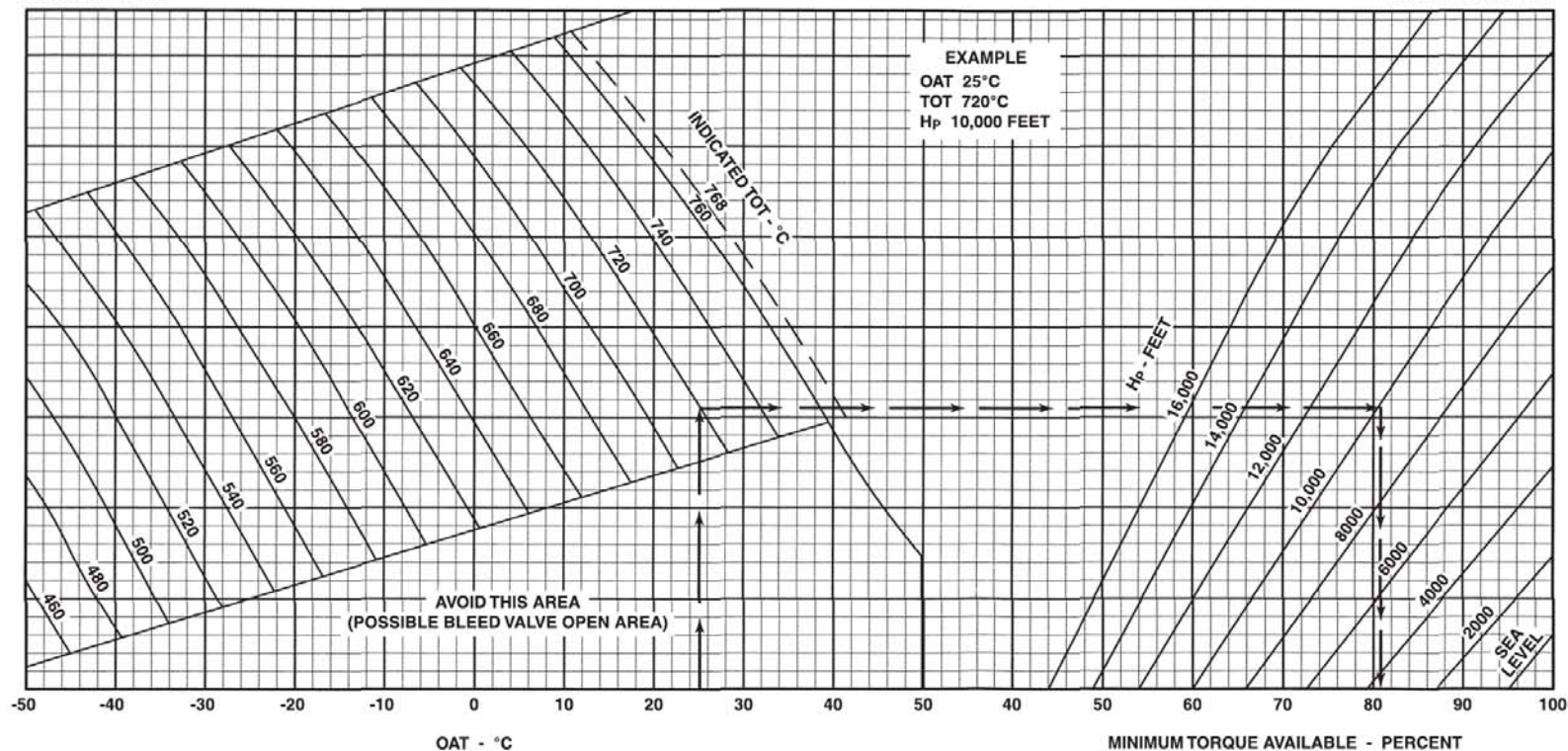
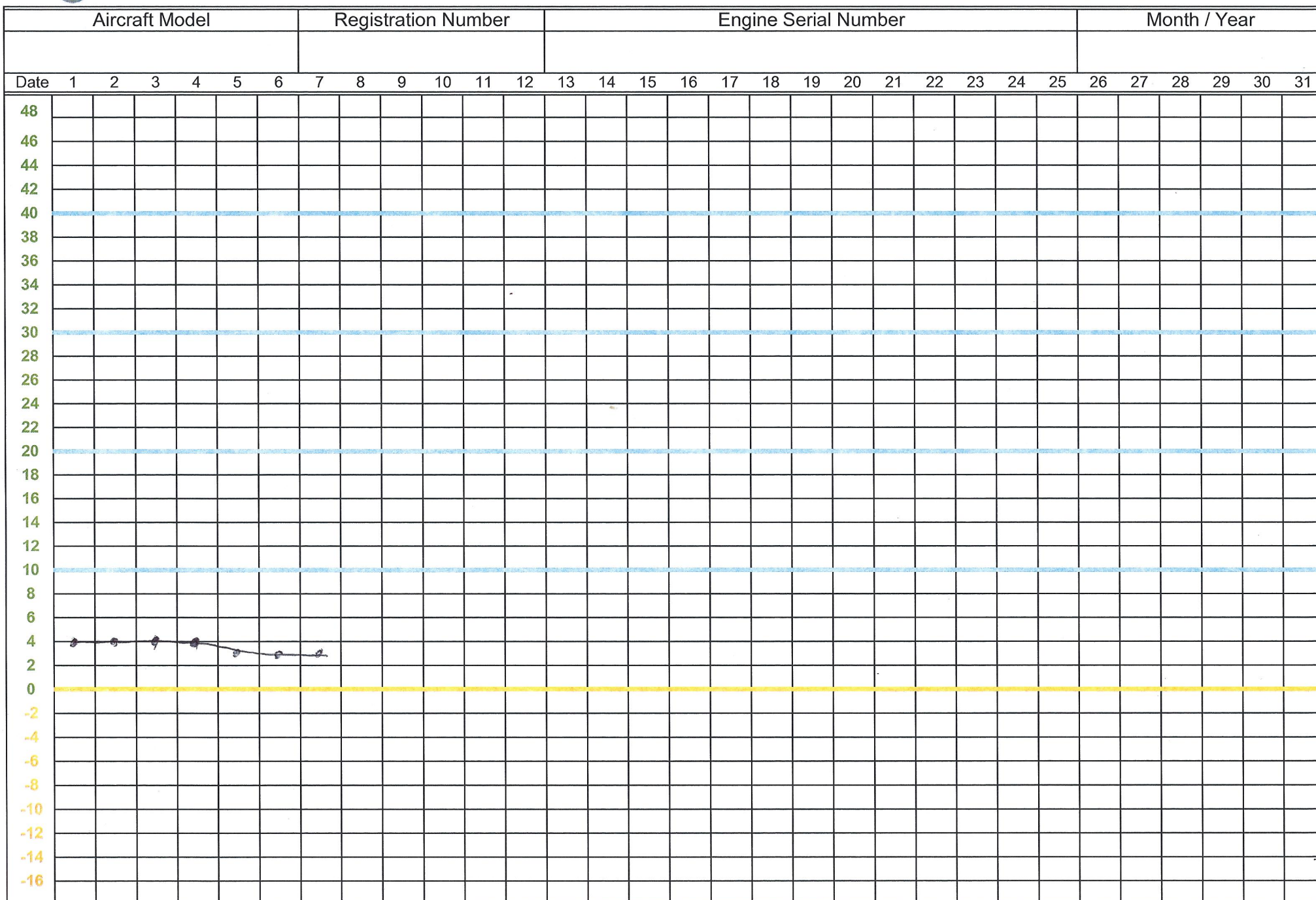


Figure 4-1. Power Assurance Check

Rolls Royce Engine Performance Trend Chart



Station Checklist

Location: _____

Date: _____

Criteria	Reference	Y	N	N/A
100. AIRCRAFT				
1. Aircraft Information				
a. Type				
b. Tail Number				
c. Total Time				
2. Does the aircraft conform to contract requirements?				
3. Are the aircraft Airworthiness and Registration Certificates present and serviceable?				
4. Is the weight and balance with equipment list correct?				
5. Are there any airworthiness discrepancies noted?				
6. Is the MEL status correct?	206/407MEL			
7. Is the MEL/NEF system being utilized?	206/407MEL			
8. Are the aircraft logbook entries complete?				
9. Do the aircraft placards conform to the Flight Manuals?				
10. Are additional safety items particular to this aircraft serviceable (floats, life rafts, PFDs, flares, Alyeska kits, etc.)				
11. Do the aircraft have a fuel sampling kit?				
12. Are the aircraft fuel samples taken daily?				
13. Are aircraft being properly secured at night?				
14. Is the aircraft clean inside and out?				
15. Is there a Hazmat Booklet on board the aircraft/IPOD/IPAD?				
16. Are seats, seat belts and harnesses in good condition and secure?				
17. Are the trim, cargo net area and tub liners in good condition?				
18. Are there sufficient passenger briefing cards available?				
19. Is the interior paint in good condition and clean?				
20. Are the hearing protectors in proper quantity and good condition?				
21. Is the exterior paint in good condition and clean? Free from corrosion, working rivets, cracks and other damage?				
22. Are doors seals in good working condition and sealing properly?				
23. Is the cargo/baggage door(s) and compartments in good condition, clean, seals tight and free from corrosion?				
24. Is there any evidence of obvious external oil leakage?				

Station Checklist

Criteria	Reference	Y	N	N/A
100. AIRCRAFT				
24. Is the Rotorcraft Flight Manual at the current revision level and in the aircraft?				
25. Are all the required Flight Manual supplements installed?				
26. Is the compass card installed and legible?				

Criteria	Reference	Y	N	N/A
200. AIRCRAFT MANUALS/FORMS (follow specifics when you can: otherwise simply self-audit records as they apply to your site)				
1. Are maintenance and support manuals available? (Bell, Rolls Royce, Airbus, Company Manuals) (Or readily available online?)				
2. Are revisions current IAW Maritime's Master Publication List?				
3. Are personnel A&P certificates and RII cards available for inspection?				
4. Have deferred discrepancy write-ups been checked?				
5. Is there adequate communications between pilots and mechanics concerning write-ups?				
6. Are the flight sheets completed properly and the flight times added accurately?				
7. Are all folders of aircraft IPAD current with latest changes? Are Foreflight updates current? Fully charged and all charging equipment serviceable?	Chapter 21 Maritime SOP			

Criteria	Reference	Y	N	N/A
300. AIRCRAFT SPARE PARTS				
1. Are serviceable and unserviceable aircraft parts stored separately?	Maritime Repair Station Manual			
2. Are aircraft parts protected with bags and openings plugged as required?	"			
3. Are all parts tagged to identify item and source as required	"			
4. Are all tags properly signed?	"			
5. Are all spare tubes and hoses capped?	"			
6. Are shelf life items within expiration dates?	"			
7. Is a parts inventory available and up to date?	"			

Station Checklist

Criteria	Reference	Y	N	N/A
400. AIRCRAFT SUPPLEMENTAL EQUIPMENT (sling, aux tank, uninstalled equipment, etc.)				
1. Is the equipment stored with openings covered, lines properly capped and electrical connectors protected?	"			
2. Is the litter kit in serviceable condition?				
3. Are dual controls in serviceable condition?				
4. Is the sling gear serviceable with load tags installed?				
5. Are Aircraft Computers, diagnostic computers, iPods all fully charged and complete with cords, chargers, etc.?				

Criteria	Reference	Y	N	N/A
500. FUEL SYSTEM				
If there is no fuel system to maintain, mark N/A here. Akutan Personnel must inspect fuel tanker.	Maritime FQM			
1. Are the tanks properly grounded and labeled? Or, are tanker grounding cables in good working order?	Maritime FQM			
2. Are fire extinguishers available and serviceable with current inspection tags?	NFPA 407			
3. Are daily, weekly, and monthly fuel system inspections being complied with?	Maritime FQM			
4. Are fuel sump jars being used properly on a daily basis?	Maritime GoM			
5. Are proper refueling procedures being followed?	NFPA 407			
6. Is the Daily Fuel Quality Form completed daily?	Maritime FQM			
7. Fuel Change Date on pump or truck _____	Maritime FQM			
8. Filter Type/Part Number at this site _____ _____	Maritime FQM			

Criteria	Reference	Y	N	N/A
600. SUPPORT EQUIPMENT & FACILITIES				
1. Is the oil and chemical storage area neat and orderly?	OSHA 1926.152			
2. Has a FOD ramp check been performed?	FAA AC No. 150/5210-24 NAS 412			
3. Do the compressor water/air separator and air pressure gauges function properly?				
4. Are battery carts being properly maintained and functional?				
5. Are all ground handling wheels operational and functional?				

6. Do powered carts (Tug-a-Lug) operate properly, no loose parts, electrical connections clean, no frayed wires, wheels inflated and drive shafts tight, battery at proper fluid level, and hydraulic at proper fluid level?				
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Station Checklist

Criteria		Reference	Y	N	N/A
600. SUPPORT EQUIPMENT & FACILITIES					
7.	Are aircraft grounding leads in good condition and being used?				
8.	Is the hangar facility clean, neat and orderly?				
9.	Are the large tools (i.e. brakes, band saws, presses, etc.) in good condition?	OSHA 1910.211-.244			
10.	Are all open oil/solvent containers removed from the hangar and stored in a flameproof cabinet at the end of each day?	OSHA 1910. Part H			
11.	Are the exterior of the buildings clean?				
12.	Is there sufficient parking for customers and employees?				
13.	Is the parking ramp in good condition?				
14.	Is the customer waiting area large enough?				
15.	Is the customer waiting area clean and neat?				
16.	Are the restroom facilities in proper working order and are they kept clean?				
17.	Are customers kept off the flight line except to board or de-board an aircraft?				
18.	Is the aircraft ramp in good condition?				
19.	Is the ramp area clean, free of oil and fuel spills?				
20.	Are the flight line markings clear? Are the lights in working order				
21.	Is the windsock in acceptable condition?	FAA AC 150/5345.27D			
22.	Are work stands & ladders stored properly when not in use?	OSHA 1910.23			
23.	Is there a spring scale available for use to weigh in customers and baggage?	GoM			
24.	Is there a spring scale available for aircraft weight and balance use in the field?	GoM			
25.	Is a copy of Maritime's Alaska Air Carrier Certificate posted?	14 CFR			
27.	Are standard HR and OSHA workplace posters posted?	OSHA 1903.2			
28.	Is the aircraft battery charger in good condition?				
29.	Is the pneumatic leak checker in good condition?				

Station Checklist

Criteria		Reference	Y	N	N/A
700. OSHA & FIRE SAFETY					
1.	Are in-use flammable materials stored in separate fireproof containers?				
2.	Are fire extinguishers available and serviceable with a current inspection tag?	NFPA 407 & OSHA			
3.	Are exit signs clearly marked?	OSHA 1910 Part E			
4.	Is lighting adequate and working properly?	OSHA 1910 Part E			
5.	Are eyewash stations available and in proper working order with current inspection tag?	<u>1910.151(c)</u>			
6.	Are inoperative items removed from service?				
7.	Are electrical control panels serviceable with no visible damage?				
8.	Are protective guards present for machines with rotating parts?				
9.	Are the eye and face shields present in the vicinity of the grinder, drill press or other machines with rotating parts and are they being used?				
10.	Are safety signs posted requiring protective gear to be used on the machinery?				
11.	Is hearing protection available and visible?				
12.	Is a first aid kit available? Has it been inspected, restocked and signed off?				
13.	SDS- 3E Company Site being utilized? Telephone Backup? (Safety Data Sheets)				
14.	Are portable fire extinguishers maintained in a fully charged and operable condition?	NFPA 408			

Criteria		Reference	Y	N	N/A
800. PRECISION TOOLS					
1.	Are tools properly stored?				
2.	Are special tools properly tagged and within calibration?	Maritime GoM			

Station Checklist

Criteria	Reference	Y	N	N/A
900. COMPANY VEHICLES				
1. Do the Company vehicles contain:				
a. Registration?				
b. Current registration tags?				
c. Insurance information?				
d. Accident information?				
e. Road hazard kit?				
f. Survival kit?				
2. Are Company vehicles clean and fluids at acceptable levels?				
3. Is the vehicle in good condition with no safety hazards?				
4. Are Forklifts/Skid loaders or other Powered Industrials Trucks Clean, well maintained (oil changes, battery, etc.)	29 CFR 1910.178			
5. Is all Safety equipment on Powered Industrial Trucks intact And functional (cages, seat belts, etc.)	29 CFR 1910.178			

The following are Discrepancies/Deficiencies that were discovered and corrected (if applicable)

Item #	Discrepancy / Deficiency	Corrective Action

Ideas/Concerns/Need or Want List Items

Item #	Concern	Corrective Action

FOR ON-SHIFT/ON-SITE PERSONNEL INSPECTIONS (ATTEMPT TO ALTERNATE PILOT AND MECHANIC)

This inspection was performed by:

Pilot (Printed Name)

OR

Mechanic (Printed Name)

Pilot (Signed)

Mechanic (Signed)