

Attachment 2

to Organizational Factors Group Chairman's Factual Report

CHI04MA182

**National Transportation Safety Board
Office of Aviation Safety**

CHI04MA182

Organizational Factors

November 18, 2004

Interview Summary: Director of Maintenance

Location: Med-Trans Corporation (MTC)
Bismarck, ND

Interviewers: Georgia Struhsaker NTSB NWRA, Seattle, WA
Aaron Sauer NTSB CMRA, Denver, CO
Robert Drake FAA AAI-100, Washington, DC

Interviewee: Mr. Russ Braddock MTC, Director of Maintenance

During the interview, Mr. Russ Braddock stated the following:

He went to UND for four semesters in aviation administration and got his private pilot license. He did not want to borrow all the money to get flight ratings, so he decided to become a mechanic. He got his A&P at Spartan School of Aeronautics.

In August 1977, he started as a mechanic with Exec Air. He got his IA in 1980. He was with Exec Air for 14 years. In 81 or 82, Exec Air started an HEMS operation in Bismarck and Fargo. He started doing helicopter maintenance on the Bell 206L1. Exec Air sent him to Bell 206 field maintenance and component overhaul courses. He also maintained a couple of other helicopters; all 4 he maintained were Bell 206L1s.

In 1991, he went to Medical Air Rescue, Rapid City. They needed a King Air mechanic; he was there for 14 months.

Med Trans was not started until 1995.

He got on with Omniflight in Aberdeen, and spent 1 yr there taking care of a 206. He went to AZ, then to Blythe, CA, and took care of flight school aircraft. This was the scariest job of his life. Their philosophy was if it could get off ground, it was good to fly. He decided to get out of there. In the spring of 94, he went back to Omniflight taking care of a King Air. He became a field base supervisor for them and spent 3 years with them.

He was DM for Careflight in Ft. Worth for 1.5 years. Then back to Omniflight, as Asst DM, Acting DM, Asst DM. He spent 9 years in TX between Omniflight and Careflight. Dennis was looking for a new DM for Med Trans, and he wanted to get back to ND. In April 2003, he joined Med Trans. He replaced Dick Bier, who he did not know; Dick was being replaced without his knowledge.

He has been to the following training: field maintenance on Bell 212, Allison 250 series engines and LTS engine. After rehire by Med Trans, he went to Bell 407 field maintenance, PT6 class, and P&W trend monitoring class. He wants to go to C47 (FADEC) course at Allison.

Dennis came looking for him. He assumed this meant Dennis needed help. He looked things over in order to see where to concentrate his efforts. Rapid growth was happening at the time. He tried to make sure there were enough qualified maintenance people to take care of this.

Med Trans opened Aberdeen about time he was hiring on. Spartanburg had opened a month before. Then Odessa program, 3 aircraft in KY, Beaumont last February, and McCook last Memorial day. He was aware of some growth planned before he started. KY popped up.

At some bases, it is easy to get mechanics, and at some, it is more difficult. It is hard to find the right people for a rural area.

Med Trans hiring criteria are a minimum of 2 to 3 years helicopter experience, civilian or military. A good mechanic can pick up a new model quickly. They need to be self-motivated, believe they are going to learn something new every day, have a good work ethic, have the ability to work on their own, because they don't have constant supervision at a remote base, also good troubleshooting knowledge. He tries to find someone with a stable life.

There is one mechanic per base. TN has two mechanics taking care of 3 aircraft. They have a repair station at Greenville, SC base and are preparing to take in outside work.

Aberdeen aircraft comes to Bismarck for major maintenance. Exec Air does the maintenance. The Aberdeen mechanic comes along. Minot does not have a mechanic. The aircraft comes to Bismarck.

Minot - 206L3, no mechanic
Johnson City - 1 mechanic
Tucson - 1 mechanic
Greenville - 1 mechanic
Madera - 1 mechanic
Morristown - 1 mechanic
Aberdeen - 1 mechanic

Spartanburg - 1 mechanic
Odessa - 1 mechanic
Beaumont - 1 mechanic
Nebraska - 1 mechanic, mechanic moving to C Springs

There is an assistant DM, Ed Atwood. He is based in Bismarck. He plans to attend Bell school. He is writing a plan for fuel quality control. Med Trans did not have a program. Russ feels this is something company should be doing; he was accustomed to it from other companies.

What training are mechanics given? If they have 407 school or experience, the training concerns MTC policies, procedures, paperwork, familiarization with aircraft on site, where equip is located. If not, the mechanic in Johnson City has tons of Bell experience, he wrote a training manual for 407. Robert Reese goes on site and does training, a 7-day hands on course. All mechanics are sent to 407 school at Bell. He would like to start sending people to other courses at Bell, such as electrical or component overhaul.

Is there recurrent training for mechanics? A program is being set up. It will involve a quarterly test for mechanics. Ed, the assistant DM will visit each base once a year. Russ will visit each base once a year, and he will try to put together some recurrent training to give during each visit.

What is his opinion about the Med Trans preventative maintenance training for pilots? The program includes a lot of stuff he does not agree with, but it is all legal under FAR. There is no written training program to train pilots on this. Russ has limited it to training on chip detectors and servicing the oxygen system. The program pre-dated Russ. At Omniflight, if it required tools, a pilot could not touch it. The mechanic on site does the training, and the mechanic who does the training signs an authorization. Russ knows of only one instance where a pilot has checked a chip detector plug and found a piece of trash. He is planning to write a training program for this.

The records department needs help. Russ plans to spend about a week in AZ after Thanksgiving. The record keeper has made mistakes in calculating times. He wants to clean up the way that things are filed and work on better organization.

He is going to find a better regular status sheet program. They are using a homemade Excel spreadsheet. Anyone with knowledge of Excel can now make changes to the program. He wants better control.

The AAIP needs to be brought up to date. He is planning to submit a new AAIP to the PMI during his visit to AZ. There have been no instances of maintenance not getting done. The issues are more with paperwork than with maintenance not being done. The mechanics were doing things recommended by current manufacturer's maintenance programs that were not in AAIP. AAIP needed to be updated.

Do you have any difficulty with records being in Tucson vs. in Bismarck? He has only minor difficulties. When he personally wants to look something up, he has to call down and have someone look up the information. He has looked at computer-based records, but the cost is astronomical. He is researching electronic logbook programs that include a laptop for each aircraft; the cost would be about \$70,000 for the fleet.

Do you feel rapid expansion compromised safety? No, everything was being covered from an airworthiness standpoint. He spent a lot of time away from home as did others during this time. That has improved a lot.

He would like to hire a roving mechanic someday.

How are mechanics compensated? They draw a monthly salary, no overtime, and no workover. At Omniflight, there was no time and a half, any time over 40 hours you got paid hourly salary for extra hours; this is workover. Overtime hours are required infrequently. Some weeks there is less than 30 hours work, some weeks if an inspection is on going, there is 50 hours work. Mechanics do keep a time sheet. They average 35 hours per week. Salaries are slightly under to mid range for industry. With helicopter experience, a mechanic will start at 42 to 43 k. Salary varies with cost of living in area.

The mechanics are on call 24/7. He tries to keep backup mechanics available in area to provide weekends off. The mechanics are provided with cell phones and pagers. Usually, they do a daily in the morning. If no work needs to be done, they are free to leave so they will be rested for a night call.

How are mechanics evaluated? A yearly performance appraisal is done. There are merit increases once a year. The DM writes the evaluations. The mechanic does a self evaluation first. The DM tries to visit with each mechanic once a week to see how things are going. The DM reviews the appraisals with Dennis and comptroller. A decision is made regarding how much money there is to work with for increases. He is going to start doing performance appraisals at the same time for all employees.

There is no formal way for mechanics to report safety problems. Mechanics normally call the DM to report these types of problems.

How much turnover of mechanics is there? He has removed two mechanics. One had a drug problem and confessed without getting caught on a test. He completed a treatment program, passed an initial test to return to duty, but a random test showed a definite positive, so he was removed. The other case was alcohol related. He was sent to FTW to help oversee completion of a helicopter, but he never showed up in FTW. He got involved in a drunk driving accident. Another guy could not get along with anybody. Other turnover was due to base closings in KY.

At this time, he has an adequate number of mechanics on board.

Med Trans has three dedicated backup aircraft. Currently, one is in Tucson doing training with FAA, and the other two are in Texas covering so dedicated aircraft can go to the Texas EMS show. One of these aircraft will stay in Texas to provide backup (this is an excess aircraft), as the Texas aircraft fly a lot, and the other will go back east. The standard rule is to have 1 backup aircraft for each 4 to 5 programs and to keep one on each side of the country.

How are his relations with Dennis? Dennis has been responsive to requests for money to be spent on maintenance. The DM does not have a set budget; this is not like other companies he has worked with. Currently, he can't tell what operating costs are for helicopters; many of the helicopters are still under warranty and replacement parts are covered. On the last five ships bought, the warranty was 1,500 hours or 3 years, and their average flying time is 500 to 600 hours per year. The standard warranty is 1,000 hours or 2 years.

He feels comfortable that the company is on a sound financial footing. He has no worries for job security barring a major mistake on his part.

How are relations with FAA? Relations have been pretty good. The PMI when he joined Med Trans was experienced with helicopters; however, he had cancer, and the PMI they have now is inexperienced with helicopter ops, but is very teachable. It is not that the new PMI lets them get away with things, as he asks questions and learns. The new PMI became temporary last December and quickly became permanent.

Today, FAA is at AZ base and is asking questions about original findings letter. There were no showstoppers in findings.

The battle he and the DO have been fighting since he got here is that the marketing people go out and sell a program, and then they had 30 days to get it up and running. Now he has them convinced they need 90 to 120 days to startup a program, particularly if the aircraft has not been completed. Even with aircraft completed, it still takes a minimum of 60 days to set up program. There were some embarrassing episodes where the marketing person had to eat crow because the program was not up and running when he said it was going to be.

What changes were underway when he came on board? There were changes in responsibilities of marketing department. Also, Exec Air wanted to do completions on the helicopters themselves. He helped Exec Air get set up to install STCs. This involved teaching airplane mechanics how to work on helicopters. This is the first time the Exec Air shop has done some of this type of work. A lot of what is happening at Med Trans is a result of a small company that is currently growing and catching its infrastructure up to where it needs to be. These types of changes are occurring across the industry. He knows of another company that could not find a mechanic and ended up hiring a brand new A&P and training him.

Even before the accident, he was told safety is a priority. The pilots were under no pressure to take a flight. Since the accidents, management (Dennis) has backed up a couple of pilots who have turned down flights due to weather, even when the program complained. He has known Dennis since 1977, and Dennis was proud of his no accident record.