

**Joint Dissent to the CARC from the
Fatigue Risk Management Working Group Report
By
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Association québécoise du transport aérien (AQTA)
Aviation Alberta (AA)
British Columbia Aviation Council (BCAC)
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Executive Summary

The Working Group report's most significant recommendations were developed in the absence of any consensus on the part of the Working Group's members. The signatory associations believe the report's recommendations are being driven by the needs of organized labour, and CAR 705 scheduled international passenger-carrying operators represented by NACC. Should these recommendations proceed to implementation, they will radically distort the competitive landscape for non-unionized commercial and business aviation operators in Canada. The recommendations would have the effect of imposing elements of certain airline collective bargaining agreements on many other segments of the Canadian aviation industry without any ability for them to gain the offsetting employee productivity that is frequently the result of the collective bargaining process.

There is little scientific support for most of the recommendations contained in the report, and in many cases its authors have not fairly characterized the ambiguous fatigue-related science, or the changing views of the Working Group's consultant, Dr. Greg Belenky.

Repeatedly and in writing, the original signatory associations objected to the flawed process in the Working Group. The Co-Chairs wrote that they "reject the notion that different sectors of the industry are so different that rules should be written differently for each sector". Our concerns relating to other elements of the process and to this significant bias on the part of the Co-Chairs were clearly articulated in writing. After making two separate written submissions to the Co-Chairs dated March 9 2011 and June 11 2011, in writing on July 29 2011 the signatory members of the Working Group asked the Director General to amend the Terms of Reference to correct the behavior of the Chairs. ATAC, CBAA, HAC, NATA and CBAAC believe that the Working Group's deliberations were badly mismanaged by the two Co-Chairs, and because their bias went unchecked, the Working Group's recommendations are fundamentally flawed.

While the Terms of Reference for the Working Group call for industry segment-specific solutions, there are very few recommendations contained in the report that accommodate other-than the needs of Canada's CAR 705 scheduled international passenger-carrying operators represented by NACC. The Co-Chairs have taken a one-size-fits-all approach that defies the structure of the CARs. Our current regulations were

drafted to accommodate the complexity and breadth of aviation in Canada. In the very few instances where the Working Group's authors provide options for parts of the commercial and business aviation communities, they are completely ill suited to the operational and safety requirements of those industry-segments. The signatory associations agree that pilots of all aircraft-types are affected by fatigue, but the working environment of an airline pilot, a business aviation pilot, and an Air Taxi pilot for example, are very different – and that fatigue needs to be mitigated in different ways to accommodate different industry-segments.

Not only are the recommendations a retrograde step for safety, but if they were to proceed to implementation, they would devastate many Canadian commercial and business aviation operators and the businesses and passengers they serve. This is evidenced in the example set out in Appendix A. If implemented, the recommendations would hugely increase the requirement for flight crews – in an industry already suffering from a shortage. There is no evidence that the increase would improve safety. Small, seasonal, remote, northern, on-demand, business aviation, regional, and even many domestic CAR 705 passenger-carrying and cargo operations would be hard-hit – the recommendations would be extremely costly to implement, convoluted, and completely unsuitable for most small Canadian business and commercial operators and many large ones. Many communities and remotely-located operations would lose air services because they would become impractical or prohibitively expensive to serve.

There is no justification for such sweeping changes to Canada's Flight & Duty Time regulatory regime. The TSB has not produced accident reports or recommendations that suggest the current flight and duty time regulations are unsafe, and no risk assessment has been conducted by Transport Canada to suggest that these recommendations would enhance safety in any way.

The Working Group Co-Chairs relied heavily on controversial EASA recommendations, the new US FARs, and ICAO SARPS – *all of which* were only intended to apply to large airlines and in the case of the SARPS, - to large airlines conducting international, flag operations. It is interesting to note that since the FRM Working Group concluded its deliberations, EASA has embarked on discussions with NBAA to develop flight and duty time regulations that are suited to the European Business aviation community.

The recommendations contained in the report are so completely unsuitable for many parts of the commercial and business aviation communities, that they are unsalvageable through deliberations in the same forum. In fact, they appear to be *only suitable* for the scheduled international CAR 705 passenger-carrying operators represented by NACC and their unions who appeared to be driving the agenda on the FRM Working Group.

The signatory associations urge the CARC to reject the Working Group Report, and we recommend that a new Working Group should be convened under new leadership with Chairs that are prepared to give serious consideration to industry segment-specific solutions suitable for other parts of the commercial and business aviation communities.

Introduction

The Fatigue Risk Management Working Group began its deliberations in August of 2010. The group held a series of 14 meetings and a variety of sub-committee meetings that officially ended in December of 2011, culminating in a Final Working Group Report dated August 15 2012. The original signatory Associations objected to the conduct of the Working Group's Co-Chairs and the direction of the working group in multiple submissions to the Co-Chairs, a submission to the Director General, and our dissent to the CARAC Technical Committee.

ATAC, CBAA, HAC, MAC, and NATA, as members of the FRM Working Group have stood together in opposition to the process as it was applied by the Co-Chairs, and now we stand together opposed to the Final Working Group report and its recommendations before the CARC.

Other, regional associations, namely the Association québécoise du transport aérien (AQTA) Aviation Alberta (AA), the British Columbia Aviation Council (BCAC), and the Saskatchewan Aviation Council (SAC), who were unable to participate in the deliberations of the Working Group have been made aware of the recommendations have also recently chosen to join us in this dissent to the Regulatory Committee. Their participation in this joint submission is limited to the Working Group Report's recommendations, and their prospective impact on the commercial and business aviation communities in Canada. Since they did not participate on the FRM Working Group, they are not in a position to comment on the process or the conduct of the Co-Chairs.

What began as an effort to fine-tune and up-date the regulations in light of the most recent fatigue-related science and recent industry segment-specific operational experience, turned in to a proposed overhaul of the flight and duty time regulations using issues advanced by the participating pilot's unions and NACC. The Working Group Report suggests that Transport Canada should impose those recommendations on the rest of the commercial and business aviation communities.

It is the view of the signatory associations that the current Flight & Duty Time regulations have served the commercial aviation community, including its pilots, very well over the years. There is no accident data and the Canadian TSB has very rarely identified fatigue-related causal factors in Canadian accidents. While the signatory associations appreciate that there are always some areas that can be improved upon, the proposals contained in the Working Group's Final Report would be a retrograde step for safety, and would be completely inappropriate for all Canadian business and commercial aviation, except for the CAR 705 scheduled international passenger-carrying operators represented by the NACC.

One-Size-Does-Not-Fit-All

Admittedly, a one-size-fits-all approach made for less complicated recommendations - but recommendations that - if they were forced to adopt them - would have catastrophic consequences for many segments of the Canadian commercial and business aviation communities without any demonstrated improvements to flight safety.

Repeatedly, the five original signatory associations have requested in writing that the recommendations flowing from the Working Group Chairs should apply only to CAR 705 scheduled international passenger-carrying operations, and the rest of the industry should be allowed to debate the issues relating to flight crew fatigue in an environment where the Working Group chairs were truly prepared to consider industry segment-specific solutions.

Both the Europeans and the Americans, using a similar Working Group process including the whole commercial aviation community have chosen to consider and implement airline solutions *first* - to allow different regulatory solutions to be developed that are sensitive to the needs of different segments of the regulated community – something that the Co-Chairs in the Canadian Working Group have steadfastly refused to do. Instead, they have focused on developing rules of broad application with a few small variations, ill-suited to the industry segments they were developed to accommodate.

The signatory associations cannot understand why, in spite of the directions contained in the “Purpose” section of our Terms of Reference¹; and in spite of the consensus that seems to have been achieved between the unions and the scheduled international CAR 705 operators represented by NACC on the working group; and in spite of the common sense that is being applied in other countries facing a similar dilemma - why Transport Canada would not first move forward with that consensus and later return to consider those fatigue-related principles in the context of other industry segments separately now, or at some future time.

Straying from the Science

Early in the Working Group’s deliberations, the five original associations made it clear that there was a very short list of issues that could be supported unequivocally by the fatigue-related scientific literature. They were:

1. The importance of Minimum Rest
2. The fatiguing effect of intrusions on the Window of Circadian Low (WOCL)
3. Split Duty and the recuperative benefits of less than four hours rest during a Duty Period
4. The fatiguing effect (or lack thereof) of Stand-by or Reserve Duty
5. The recuperative effect of a few consecutive days off as it relates to “zeroing” accumulated flight time fatigue
6. The need for a small addition to the minimum rest period of eight hours to

¹ “3. To determine the commonalities and differences with respect to the FDT &RP and FRMS approach to the management of fatigue in order to develop recommendations for regulatory proposals which might include:

- a) identifying and analysing differences that consider the current Canadian operational environment and;
- b) suggesting alternate recommendations in respect to, for example, fatigue and the operational environment.”

- contemplate meals, personal hygiene, etc.
7. The ability of flight crews to work multiple consecutive duty-days without erosion of the minimum rest, and without any attendant erosion of performance [provided there is a regular period of eight hours rest, without disruption of the circadian rhythm]
 8. The fatiguing effect of operations involving disruptions of the circadian rhythm

Proposals on all of these issues were advanced by the signatory associations – none of them – even in a modified form – were incorporated in the Final Report.

The Working Group never carried out a structured comparative examination of the CAR 604, 702, 703, and 704 operations with other regulatory jurisdictions as part of their discussions, but instead focused almost exclusively on the science relating to CAR 705 operations. Very little of the applied science or scientific studies considered by the Working Group had any applicability to the type of operations conducted under CAR 604, 702, 703, or 704.

Instead of focusing on those areas where the fatigue-related science is clear, the Working Group Co-Chairs have strayed in to many other often unrelated areas at the request of Organized Labour, and borrowed extensively from other regulatory jurisdictions, and their recommendations aimed only at the scheduled international long-haul airline community. They then proceeded to apply these concepts in their recommendations to the entire Canadian aviation community without regard for the impact of these recommendations in a Canadian domestic, or business aviation context.

The Co-Chairs have not done justice to the conflicting and ambiguous scientific evidence, or even to the changing views of their consulting fatigue expert, Dr. Belenky. The science on many of the issues giving rise to the recommendations in the report were far from conclusive and the Co-Chairs have selectively referred to science in support of the proposals that they have advanced without presenting a balanced perspective. In this sense, the Working Group Chairs have essentially become activists for more conservative limits, and have stepped out of their role as unbiased Co-Chairs.

Furthermore, in those areas where they have strayed from the unequivocal science, rather than present both sides of the issue, they have selected and advanced only the science that supports the recommendations that they have presented. While this is practice that may be expected from Working Group members who will naturally align themselves with the experts that share their views, the signatory associations believe that this conduct is further evidence that the Co-Chairs, were not impartial and did not present a balanced and complete view of the fatigue-related science.

A clear example of this bias, is the decision by the Co-Chairs to eliminate the “zeroing of accumulated flight time” provisions in the CARs - even though there is strong support for the concept in the fatigue-related science, without even referencing the concept or the rationale for the decision in the Final Working Group Report.

Another example of the unbalanced presentation in the Final Report is where the Co-Chairs have recommended the adoption of a new Cumulative Duty Hour concept notwithstanding that the Working Group’s scientific adviser, Dr. Belenky, said that it had no value in reducing fatigue.

“Q: Does having a rolling limit of total duty time provide any insight into a crew’s fatigue? Is there any value to that figure?”

“Dr. Belenky: No because the work load could be stacked at the beginning or end leading to fatigue in portions of the allotted time, or the work load could be evenly distributed leading to no fatigue.”

Early in the Working Group’s deliberations, Dr. Belenky made it quite clear that as long as 8-hours rest was protected, and there was no disruption of the circadian rhythm, individuals were capable of working successive days “indefinitely”. Later in the Working Group’s deliberations, for reasons that are unclear, he adopted a more conservative position however, the authors of the Working Group report have not accurately reported his changing views on this subject.

Furthermore, notwithstanding the importance of this issue to safety and the fact that the FAA spent a considerable amount of effort addressing the issue in their new regulations, the Working Group proposals do not address the issue of “commuting pilots” who frequently travel long distances before commencing duty. This very issue was cited by the US National Transportation Safety Board as a contributing cause in the Colgan Airways Q400 accident.

Science and Operational Experience-Only in the Final Report

While the Working Group’s Terms of Reference made specific reference to the use of fatigue-related science and operational experience, the Working Group and the Final Working Group Report avoided any reference to the operational or economic consequences of the recommendations under discussion. That is, any reference in the context of the Working Group’s deliberations or in the Final Report to the practicality of the recommendations or the cost associated with adopting them were specifically excluded in favour of those issues that the Co-Chairs felt could be supported by the scientific literature.

Now that the Working Group report has been tabled in the CARAC Technical Committee, it is our view that a broader range of issues is now open to be considered by the Regulatory Committee, including (in no particular order):

1. The economic impact of the Final Report’s recommendations and the “Stacking” Effect of the Proposals

The Working Group Co-Chairs have recommended a series of new and significantly more restrictive additions to the current regime of Flight & Duty Time Limitations set out in the CARs which would apply to the members of our respective associations. They are:

- Cumulative Duty Hour Requirements, which are completely new to the CARs
- Sector Limits requiring a reduction in the Flight Duty Period, which are completely new to the CARs
- New, more conservative 7-day (down from 70 to 56 hours) 28-day (down from 140 to 112 hours) and 365-day (down from 1200 to 1000 hours) Cumulative Flight Time Limits

- New, less-flexible Rest Period requirements that impose a 10 or 12-hour minimum rest period (depending on whether the pilot is deployed or at home-base), rather than simply imposing a requirement on the air operator to ensure that 8-hours of uninterrupted sleep is protected. By doing this, operators have lost the ability to adjust the rest period to accommodate nearby rest facilities and amenities.
- New, Maximum Daily Flight Duty Periods which vary depending on when the flight crew member starts his/her day - completely new to the CARs
- Removal of the current industry segment-specific Standards which applied to non-scheduled and helicopter operations and to Heli-Logging Operations
- New more conservative Time Free from Duty Requirements for rotational crews, down from a maximum of five-off after 42 consecutive days to 5 days off after *15 days!*
- A new, and lower, maximum Flight Duty Period, down from 14 hours to 13 hours
- In spite of strong scientific evidence that multiple consecutive days free from duty will serve to significantly reduce fatigue, the Co-Chairs have eliminated the “zeroing” of accumulated flight time for five days-off, without providing any reasons for the change.

The report’s recommendations, if they were implemented in their current form would have a devastating effect on many commercial and business aviation operators. The proposed changes to the Canadian flight and duty time landscape are so radical, that crew costs and crew-change costs would skyrocket. Please see the example in Appendix A from the Air Taxi community.

2. The “fit” of the Working Group Report’s Recommendations insofar as the existing structure of the CARs is concerned

The CARs, when they were originally drafted contemplated that as the number of seats in the commercial aircraft being operated grew, so should the regulatory requirements. The higher, more complicated requirements contemplated a greater ability on the part of the operator and more sophisticated aircraft, crew management systems, and equipment. The proposals set out in the Working Group report, with few exceptions call for regulations that would be largely impractical for smaller, on-demand business and commercial operations and their crews to comply with.

The recommendations will expect pilots in small companies and their employers to manage a complicated system of regulatory requirements that were designed for operators with Crew Scheduling, Crew Tracking and Dispatch systems - largely absent in small on-demand commercial, helicopter, and business operations.

3. The “fit” of the recommendations insofar as industry segments other-than CAR 705 scheduled international passenger-carrying members of NACC are concerned

Clearly, these requirements were targeted for more complex operations. In a scheduled international flag-carrier airline environment, schedules are set in advance and have tightly controlled variations usually restricted by collective bargaining provisions. Routes

are planned and manning levels calculated months in advance, the aircraft that need crew augmentation are built with that capability in advance, and dedicated scheduling departments accommodate the tracking and record-keeping demands imposed by these new rules via automation. Therefore, the complexities of the proposed scheme can be made to work in a scheduled environment. Schedulers can input formulas into crew's schedules to ensure their compliance well in advance, due to the more predictable nature of their operations.

The vast majority of Canadian business aviation operations and many of the small commercial operations are single aircraft and often owner-operated with few staff who often have more than one job. These regulations would require that for each trip that arises someone must go through the tables to calculate the eligibility of each crew member. On demand operations schedules are never the same; therefore, these requirements restrict operating flexibility, and become very onerous. The ability to predict and plan is not available in a non-scheduled environment, and the mission is such that the long trips or the overnight trips are exceptions not the norm, often bracketed by several days free from flying. The continued existence of an on-demand flight department is determined by the flexibility offered passengers, as opposed to rigid airline schedules. They are staffed to meet their current needs. The imposition of an onerous and costly administrative burden that would accompany the proposed new regulation will make it very difficult for such flight departments to comply. They simply do not have the financial or personnel resources, and cannot justify the cost of adding the resources to meet the process, procedures, and documentation requirements proposed in this report. A suggestion by one of the Working Group Co-Chairs that Transport Canada may be in a position to develop and provide tools to industry for this purpose, was not only naïve, but simply inconceivable.

For small Canadian operators this is an overly bureaucratic and excessive unfunded regulatory burden unsubstantiated by any risk analysis that would waste operator and Transport Canada resources for no identifiable or measurable safety gain. It would require the addition of staff for process development, documentation and audit on at least a part-time basis that would call into question the economic viability and cost benefit of using business aviation. Compliance with the proposed regulations on a day-to-day basis would require the establishment of a centralized scheduling and tracking department that would present significant and crippling expenditures - again for no measurable safety benefit.

The CARs were founded on the principle that different regulations and requirements would apply to different sub-parts of the regulations. That is, the operators of larger aircraft and their flight crews would have different regulatory requirements. While "pilots-are-pilots" as they say, unless the science is unequivocal (e.g. the average human needs 8 hours sleep each night), then there must be some recognition that small operators, by virtue of their less-structured operating environment for example, need different rules. The proposals contained in the Working Group depart from this principle in many very significant ways.

4. The segment-specific consequences of the recommendations and their potential to distort the competitive environment of the aviation industry in Canada in favour of NACC's members

Not only are the recommendations contained in the report unsuited to CAR 604, 702, 703, 704 and many regional CAR 705 operators, they would distort the competitive landscape in Canada by imposing regulations and costs more suited to the NACC's CAR 705 members, on other industry segments.

The proposals would implicitly force the rest of the industry to incur the costs and other adverse restrictions of the policies that may be contained in one or more of the collective agreements of the National Airlines Council of Canada's members. This would crush business aviation and smaller commercial operators in Canada to the detriment of the Canadians that depend on them. There would be many remote communities where air service would be rendered economically unviable to business aviation, regional air carriers, and to smaller air taxi, and helicopter operations. This is a critical issue in Canada where our citizens depend on resource-related operations and on air service as a life-line in remote work sites and communities.

5. The extent to which the Co-Chairs made an effort to find segment-specific solutions

After months of discussion with the Co-Chairs, at the eleventh-hour in the group's deliberations, and only after an appeal to the Director General, the Co-Chairs reluctantly agreed to hold industry segment-specific sub-group meetings, and then refused to incorporate a single proposal emanating from these groups in the Final Working Group report in favour of concepts that had largely been agreed upon by the NACC and Organized Labour.

Only a very few significant elements of the Working Group were advanced to accommodate industry segment specific needs, including the "Option 2" "Deployed Operations" provisions of "Time Free from Duty" and the associated Cumulative Duty Hour provisions. These, and the other proposals aimed by the Co-Chairs at being "segment-specific" absolutely do not accommodate the needs of these other industry segments. In short, the Working Group Report pays lip-service to the concept of developing a few segment-specific solutions, but simply does not follow-through with recommendations that accommodate their divergent needs.

6. No Risk Assessment

None of the proposals for regulatory change made by the co-chairs are supported by a simple, objective risk analysis, let alone the rigorous risk analysis required by Transport Canada and Treasury Board policy. Current government and departmental practice has been to precede regulatory change proposals by a risk assessment to substantiate the proposal's benefits to air safety. The recommendations contained in the Working Group report were driven rather by organized labour's demands for regulatory change, to bring them more in to line with their collective bargaining agreements. The effect of this tactic if it is successful will be to make it more difficult to negotiate those provisions out of their collective agreements in the future.

Joint Dissent to the CARAC Technical Committee from the Original Signatory Associations that were Members of the Working Group

The associations that participated on the Working Group advanced proposals as alternatives to the main airline-centric proposals contained in the Working Group report.

A selection of the proposals from the Signatory Associations, and selected comments from our operator-members on the Working Group Report are set out at pages 14-19 in our joint Dissent to the CARAC Technical Committee, at the link, below:

http://www.h-a-c.ca/Final_F&DT_Joint_MAC_ATAC_NATA_CBAA_HAC_Dissent_to_the_CARAC_Technical_Committee_September_3_2012.pdf

In summary, the signatory associations urge the CARC to recognize that the Working Group report does not adequately address the needs of the traveling public or the needs of large segments of the Canadian commercial and business aviation communities. With the exception of National Airlines Council of Canada members, the report does not represent the views or interests of commercial and business aviation in Canada. A failure on the part of the Working Group's Co-Chairs to develop any consensus or to develop industry segment-specific solutions has caused the signatory associations to recommend that the CARC reject the Working Group Report.

We further recommend that a new Working Group be convened under new leadership with Chairpersons that are prepared to give serious consideration to industry segment-specific recommendations that recognize the scope and diversity of aviation in Canada – not aimed primarily at satisfying the needs of NACC and organized labour. The signatory associations would be pleased to reconvene for this purpose now, or at a future date.

Appendix A

An Example from Operations in the Unscheduled Air Taxi (Fixed-Wing & Helicopter) Community

Flight crews can currently work as long as a 14-hour Duty Day, and can work a 42-day tour (with five days-off before and after). The Working Group Report's proposed new limits would reduce that to *15-day tours from 42 days* – potentially tripling crew costs and increasing crew-change costs in remote locations considerably more.

The current maximum 14-hour Duty Day would be eclipsed by a new Cumulative Duty Hour requirement that would limit crews to 70 Duty Hours in seven days in deployed operations (10 hours/day average) and limit them to 190 hours in 28 days (10 hours/day average – since 19 of those 28 days could be working days, since seven days off would be required during the period, and notionally two days off would be required to travel to and from the job).

These two new rules for tour-length and cumulative duty day, considered together, would mean that the seasonal air taxi community would have to double-crew their aircraft to cover the same working day (even though there may be very little flying involved) AND would have to rotate those crews out of remote locations three times as frequently – hugely increasing their crew and transportation costs and the associated cost of the service to their customers.

The proposed new flight time limits also limit the productivity of Air Taxi flight crews when they *are* working by reducing the current flight time limit of “140 hours in 28 days” by 20% to “112 hours in 28 days”.

The proposals contained in the Working Group Report go on to reduce the maximum Basic Duty Day from 14 to 13 hours and then further reduce it based on start-Time. The list goes on and the stacking effect of these new rules exponentially aggravates the damage that they could potentially cause to the commercial and business aviation communities in Canada, particularly in a seasonal industry that relies largely on long summer days to serve their customers.