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## **THE IMPACT OF COMMUTE TIMES ON THE FATIGUE AND SAFETY OF LOCOMOTIVE ENGINEERS & CONDUCTORS: DRAFT QUESTIONNAIRE**

### **1. How old are you?**

- Less than 25 years
- 25 to 34 years
- 35 to 44 years
- 45 to 54 years
- 55 to 64 years
- 65 + years

### **2. What is your gender?**

- Male
- Female

### **3. Are you a:**

- Locomotive engineer
- Conductor

### **4. Do you work on a:**

- Freight train
- Passenger train

### **5. In total, how long have you worked as a locomotive engineer or conductor?**

- \_\_\_\_\_ years \_\_\_\_\_ months

### **6. In total, how long have you worked in the rail industry?**

- \_\_\_\_\_ years \_\_\_\_\_ months

**ANSWER THE NEXT SET OF QUESTIONS THINKING ABOUT THE LAST MONTH OF WORK:**

**7. In the LAST MONTH, how many *hours per day* did you usually worked (i.e., sign on to sign off)?**

\_\_\_\_\_ hours

**8. In the LAST MONTH, how many *days per week* did you usually worked?**

\_\_\_\_\_ days

**9. In the LAST MONTH, which category best describes your usual work?**

- Majority of work is at night
- Majority of work is in the day
- Regular rotating work (*tours of duty switch between day and night on a regular roster*)
- Very irregular work (*i.e., tours of duty have no regular pattern*)

**10. In the LAST MONTH, how many times were you called in for work on your days off?**

\_\_\_\_\_ number of times called in for work

**11. In the LAST MONTH, how much did the start time of your tours of duty vary from day to day?**

- Less than 2 hours
- 2 hours or more, but less than 4 hours
- 4 hours or more, but less than 8 hours
- 8 hours or more

**12. In the LAST MONTH, how often did your tours of duty change from day work to night work during a one-week period?**

- Zero times
- Once
- Twice
- More than two times

**13. On average, in the LAST MONTH, how many hours did you sleep per day (i.e., in a 24-hour period) during your work week?**

\_\_\_\_\_ hours

**14. Was this sleep typically during the daytime or nighttime?**

- Day
- Night

**The following statements are about your experience of FATIGUE and STRAIN at work OVER THE LAST FEW MONTHS.**

**Choose from “Strongly Disagree” to “Strongly Agree” which best indicates your response.**

**15. I never have enough time between work shifts to recover my energy completely**

\_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_  
Strongly Disagree    Disagree    Slightly Disagree    Neither Agree or Disagree    Slightly Agree    Agree    Strongly Agree

**16. I usually feel exhausted when I get home from work**

\_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_  
Strongly Disagree    Disagree    Slightly Disagree    Neither Agree or Disagree    Slightly Agree    Agree    Strongly Agree

**17. Even if I’m tired from one shift, I’m usually refreshed by the start of the next shift**

\_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_  
Strongly Disagree    Disagree    Slightly Disagree    Neither Agree or Disagree    Slightly Agree    Agree    Strongly Agree

**18. I rarely recover my energy fully between work shifts**

\_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_  
Strongly Disagree    Disagree    Slightly Disagree    Neither Agree or Disagree    Slightly Agree    Agree    Strongly Agree

**19. Recovering from work fatigue between work shifts isn’t a problem for me**

\_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_  
Strongly Disagree    Disagree    Slightly Disagree    Neither Agree or Disagree    Slightly Agree    Agree    Strongly Agree

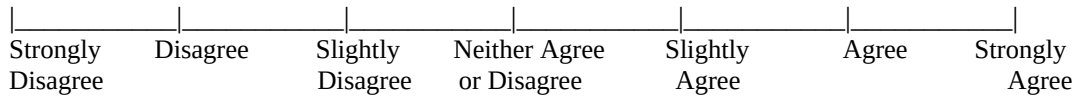
Disagree

Disagree or Disagree

Agree

Agree

**20. I'm often still feeling fatigued from one shift by the time I start the next one**



**21. In the LAST MONTH, how did you normally commute from home to work/from work to home? (Tick main mode of transport)**

- Drive my own car
- Drive my own motorcycle
- Public transportation (train, bus, etc.)
- Car/van pool
- Ride a bicycle
- Walk
- Other

**22. In the LAST MONTH, if you drove your own car, did you normally commute to/from work alone?**

- Usually alone
- Not usually alone
- N/A – I didn't drive my own car

**23. In the LAST MONTH, on how many days during a work week did you commute from home to work?**

- 1
- 2
- 3
- 4
- 5
- 6
- 7

**24. In the LAST MONTH, on days when you commuted to work, how long did it usually take you to get:**

- To work from home? \_\_\_\_\_ minutes
- To home from work? \_\_\_\_\_ minutes

**25. Did you typically make stops or detours during your commute to work from home? (e.g., stop at shops, pick up/drop off children)**

- Yes
- No

**26. Did you typically make stops or detours during your commute to home from work? (e.g., stop at shops, pick up/drop off children)**

- Yes
- No

**27. In the LAST MONTH, approximately how many miles was your commute, one way?**

\_\_\_\_\_ miles

**ANSWER THE NEXT SET OF QUESTIONS THINKING ABOUT THE LAST SIX MONTHS OF WORK:**

**28. In the LAST 6 MONTHS, how frequently have you felt too tired to drive home after work?**

- After every tour of duty
- Several times a week
- About once a week
- Once every few weeks
- Once every couple of months
- Rarely (i.e., once in 6 months)
- Never

**29. In the LAST 6 MONTHS, during your commute to work from home have you: (Tick all that apply)**

<input type="checkbox"/> Crashed	<input type="checkbox"/> Fallen asleep while driving
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<input type="checkbox"/> Felt drowsy	<input type="checkbox"/> Pulled over to take a nap
<input type="checkbox"/> Nearly had a crash	<input type="checkbox"/> Fallen asleep while stopped at a red light
<input type="checkbox"/> Fallen asleep while stopped in traffic	<input type="checkbox"/> Had to have a nap at home before driving to work
<input type="checkbox"/> Drifted out of the lane of traffic	<input type="checkbox"/> Run off the road in your vehicle

**30. In the LAST 6 MONTHS, during your commute to home from work have you: (Tick all that apply)**

<input type="checkbox"/> Crashed	<input type="checkbox"/> Fallen asleep while driving
<input type="checkbox"/> Felt drowsy	<input type="checkbox"/> Pulled over to take a nap
<input type="checkbox"/> Nearly had a crash	<input type="checkbox"/> Fallen asleep while stopped at a red light
<input type="checkbox"/> Fallen asleep while stopped in traffic	<input type="checkbox"/> Had to have a nap at work before driving home
<input type="checkbox"/> Drifted out of the lane of traffic	<input type="checkbox"/> Run off the road in your vehicle

**31. In the LAST 6 MONTHS, how often have you experienced fatigue while operating a train?**

- Every tour of duty
- On most tours of duty
- About half the tours of duty
- Occasionally
- Rarely
- Never

**32. To what degree do you think fatigue impacts your operation of a train?**

- No impact
- A minimal impact
- Moderate impact
- A significant impact

**33. In the LAST 6 MONTHS, when were you most likely to experience fatigue while operating a train? Tick all that apply**

<input type="checkbox"/> Early morning (3am to 6am)	<input type="checkbox"/> If I'm feeling bored
<input type="checkbox"/> Morning (6am to 12pm)	<input type="checkbox"/> If I haven't had enough sleep
<input type="checkbox"/> Early afternoon (12pm to 3pm)	<input type="checkbox"/> If I started work really early in the morning
<input type="checkbox"/> Late afternoon (3pm to 6pm)	<input type="checkbox"/> Towards the end of a long tour of duty
<input type="checkbox"/> Evening (6pm to 9pm)	<input type="checkbox"/> If I operate on the same route a few times in a row
<input type="checkbox"/> Night (9pm to 12am)	<input type="checkbox"/> If I started work late in the evening
<input type="checkbox"/> Late night (12am to 3am)	<input type="checkbox"/> After a long commute to work
<input type="checkbox"/> After extended limbo or deadheading time	<input type="checkbox"/> Other: _____

**34. In the LAST 6 MONTHS, how long after the start of your tour of duty were you most likely to feel fatigued?**

\_\_\_\_\_ hours

**35. In the LAST 6 MONTHS, what factors contributed most to your fatigue at work? Tick all that apply**

<input type="checkbox"/> Night work	<input type="checkbox"/> Irregular work
<input type="checkbox"/> Long work hours	<input type="checkbox"/> Not enough sleep before work
<input type="checkbox"/> Long commute to work	<input type="checkbox"/> Work starting early morning (i.e., before dawn)
<input type="checkbox"/> Long commute to home	<input type="checkbox"/> Boredom / monotony
<input type="checkbox"/> Stress	<input type="checkbox"/> Insufficient rest away from home
<input type="checkbox"/> Not enough time off between work	<input type="checkbox"/> Poor train cab design
<input type="checkbox"/> Social life during days off	<input type="checkbox"/> Not enough rest breaks
<input type="checkbox"/> Excessive limbo or deadheading time	<input type="checkbox"/> Being called into work on days off

**36. In the LAST 6 MONTHS, have you experienced a fatigue-related safety incident when operating a train?**

- Yes
- No

**37. If yes, what happened?**

- Missed signal
- Crash
- Near miss
- Nodded off while controlling the train
- Missed designated stop
- Late braking for designated stop
- Going too fast
- Other: \_\_\_\_\_

**38. Did you report the incident?**

- Yes
- No

**39. Does your company offer an anonymous reporting system for fatigue-related or safety-related incidents?**

- Yes
- No
- Not sure

**40. In the LAST 6 MONTHS, how often do you use each of the following strategies to cope with fatigue when operating a train? (Rate each strategy separately)**

Listen to music					



Eat or snack while operating train					
Drink caffeine (e.g., coffee, black tea)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Make additional effort to focus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjust the ventilation (e.g., turn on air con or open window)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use over the counter stimulant (e.g., NoDoze)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Take a quick nap	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink energy drinks (e.g., Red Bull, Monster, 5-Hour Energy)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Talk to conductor or engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stand while operating train	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Talk on cell phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Move body (i.e., walk, stretch, exercise)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Play games/use apps on cell phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smoke/chew tobacco	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**41. In your opinion, how effective are the following strategies to reduce fatigue while operating a train (i.e., regardless of whether you use the strategy)? (Rate each strategy separately)**

Listen to music					
Eat or snack while operating train					
Drink caffeine (e.g., coffee, black tea)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Make additional effort to focus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjust the ventilation (e.g., turn on air con or open window)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use over the counter stimulant (e.g., NoDoze)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Take a quick nap	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink energy drinks (e.g., Red Bull, Monster, 5-Hour Energy)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Talk to conductor or engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Stand while operating train	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Talk on cell phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Move body (i.e., walk, stretch, exercise)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Play games/use apps on cell phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smoke/chew tobacco	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**42. Does your company provide you with a computer train line-up?**

- Yes
- No
- Not sure

**43. How reliable is the information provided in the computer train line-up?**

- Very reliable
- Somewhat reliable
- Not particularly reliable or unreliable
- Somewhat unreliable
- Very unreliable

**44. In the LAST MONTH, what percentage of computer train line-ups you received were accurate?**

- \_\_\_\_\_ %

**45. Does your current company have a fatigue management policy?**

- Yes
- No
- Not sure

**46. Does your current company educate employees about fatigue?**

- Yes
- No
- Not sure

**47. How much of a problem is fatigue for YOU PERSONALLY in your job?**

- A major problem
- A substantial problem
- A minor problem
- Not a problem at all

**48. How much of a problem is fatigue for locomotive engineers and conductors IN GENERAL?**

- A major problem
- A substantial problem
- A minor problem
- Not a problem at all

**49. How well do you believe fatigue is managed in the rail industry?**

- Extremely badly
- Quite badly
- Ok
- Quite well
- Extremely well