



AMERICAN SOCIETY OF
SAFETY PROFESSIONALS

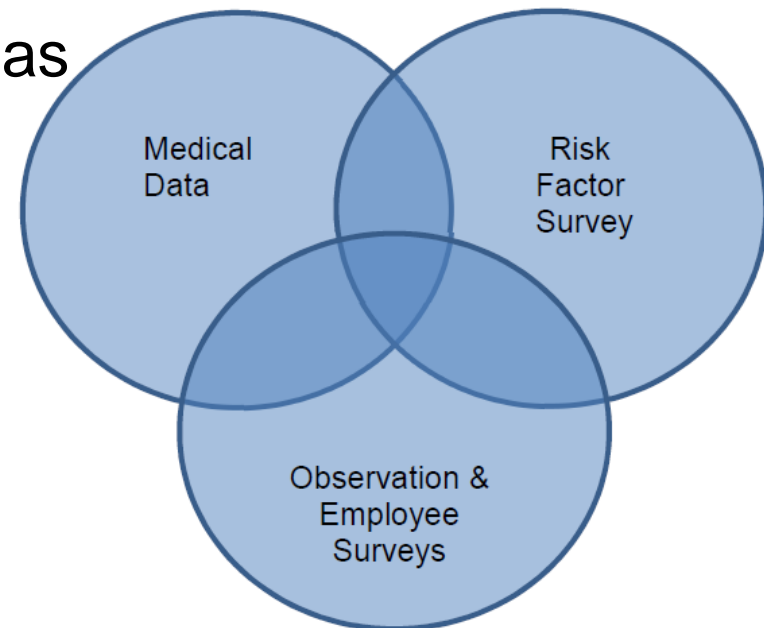
Wisconsin Chapter

Ergonomic Risk Assessment Quick Exposure Check

Sharon McFarren
CPE, CSP

Why the Quick Exposure Check

- Non-copyrighted, publically available
- Evaluated for reliability and validity
- Assesses ALL major risk factors for WMSDs
- User friendly
- Involves both the assessor and the worker being assessed
- Provides scoring for major body areas



Assessment Methods (QEC)



Quick Exposure Check (QEC)

QEC has been designed to:

- assess the changes in exposure to musculoskeletal risk factors of and arms, hands and wrists, and neck before and after an ergono
- involve the practitioner (i.e. the observer) who conducts the asses and the worker who has direct experience of the task
- indicate change in exposure scores following an intervention

The QEC Guide gives more detailed information about each question

Worker's name:

Worker's job title:

Task:

Assessment conducted by:

Date:

Time:

Action(s) required:

Worker's name _____ Date _____

Observer's Assessment

Back

A When performing the task, is the back (select worse case situation)

A1 Almost neutral?
 A2 Moderately flexed or twisted or side bent?
 A3 Excessively flexed or twisted or side bent?

B Select **ONLY ONE** of the two following task options:
EITHER
 For seated or standing stationary tasks. Does the back remain in a static position most of the time?
 B1 No
 B2 Yes
OR
 For lifting, pushing/pulling and carrying tasks (i.e. moving a load), is the movement of the back

B3 Infrequent (around 3 times per minute or less)?
 B4 Frequent (around 8 times per minute)?
 B5 Very frequent (around 12 times per minute or more)?

Shoulder/Arm

C When the task is performed, are the hands (select worst case situation)

C1 At or below waist height?
 C2 At about chest height?
 C3 At or above shoulder height?

D Is the shoulder/arm movement

D1 Infrequent (some intermittent movement)?
 D2 Frequent (regular movement with some pauses)?
 D3 Very frequent (almost continuous movement)?

Wrist/Hand

E Is the task performed with (select worse case situation)

E1 An almost straight wrist?
 E2 A deviated or bent wrist?

F Are similar motion patterns repeated

F1 10 times per minute or less?
 F2 11 to 20 times per minute?
 F3 More than 20 times per minute?

NECK

G When performing the task, is the head/neck

G1 Yes, occasionally
 G2 Yes, continuously
 G3 Yes, continuously

Worker's Assessment

Workers

H Is the maximum weight handled **MANUALLY BY YOU** in this task?

H1 Light (5 kg or less)
 H2 Moderate (6 to 10 kg)
 H3 Heavy (11 to 20kg)
 H4 Very heavy (more than 20 kg)

J On average, how much time do you spend per day on this task?

J1 Less than 1 hour
 J2 2 to 4 hours
 J3 More than 4 hours

K When performing this task, is the maximum level exerted by one hand?

K1 Low (e.g. less than 1 kg)
 K2 Medium (e.g. 1 to 4 kg)
 K3 High (e.g. 5 to 10 kg)
 K4 Very high (e.g. 10 to 20 kg)

L How often do you use a vehicle for transport?

L1 Never
 L2 Driven less than 4 hours per day?
 L3 More than 4 hours per day?

M At work do you use vibrating tools for

M1 Less than one hour per day or Never?
 M2 Between 1 and 4 hours per day?
 M3 More than 4 hours per day?

P Do you have difficulty keeping up with the work?

P1 Never
 P2 Sometimes
 P3 Often
 *If Other, please give details in the box below

Q On average, how do you find this job

Q1 Not at all stressful?
 Q2 Mildly stressful?
 Q3 Moderately stressful?
 Q4 Very stressful?
 *If Moderately or Very, please give details in the box below

Risk Factor Survey

Observations and employee surveys

Exposure Scores Worker's name _____ Date _____

Back	Shoulder/Arm	Wrist/Hand	Neck
<p>Back Posture (A) & Weight (H)</p> <p>A1 A2 A3 H1 H2 H3 H4</p> <p>2 4 6 8 10 12</p> <p>Score 1</p>	<p>Height (C) & Weight (H)</p> <p>C1 C2 C3 H1 H2 H3 H4</p> <p>2 4 6 8 10 12</p> <p>Score 1</p>	<p>Repeated Motion (F) & Force (K)</p> <p>F1 F2 F3 K1 K2 K3</p> <p>2 4 6 8 10</p> <p>Score 1</p>	<p>Neck Posture (G) & Duration (J)</p> <p>G1 G2 G3 J1 J2 J3</p> <p>2 4 6 8 10</p> <p>Score 1</p>
<p>Back Posture (A) & Duration (J)</p> <p>A1 A2 A3 J1 J2 J3</p> <p>2 4 6 8 10</p> <p>Score 2</p>	<p>Height (C) & Duration (J)</p> <p>C1 C2 C3 J1 J2 J3</p> <p>2 4 6 8 10</p> <p>Score 2</p>	<p>Repeated Motion (F) & Duration (J)</p> <p>F1 F2 F3 J1 J2 J3</p> <p>2 4 6 8 10</p> <p>Score 2</p>	<p>Visual Demand (L) & Duration (J)</p> <p>L1 L2 J1 J2 J3</p> <p>2 4 6 8</p> <p>Score 2</p>
<p>Duration (J) & Weight (H)</p> <p>J1 J2 J3 H1 H2 H3 H4</p> <p>2 4 6 8 10 12</p> <p>Score 3</p>	<p>Duration (J) & Weight (H)</p> <p>J1 J2 J3 H1 H2 H3 H4</p> <p>2 4 6 8 10 12</p> <p>Score 3</p>	<p>Duration (J) & Force (K)</p> <p>J1 J2 J3 K1 K2 K3</p> <p>2 4 6 8 10</p> <p>Score 3</p>	<p>Total score for Neck Sum of Scores 1 to 2</p> <p>Driving</p> <p>M1 M2 M3</p> <p>1 4 9</p>
<p>Static Posture (B) & Duration (J)</p> <p>B1 B2 J1 J2 J3</p> <p>2 4 6 8 10</p> <p>Score 4</p>	<p>Frequency (D) & Weight (H)</p> <p>D1 D2 D3 H1 H2 H3 H4</p> <p>2 4 6 8 10 12</p> <p>Score 4</p>	<p>Wrist Posture (E) & Force (K)</p> <p>E1 E2 K1 K2 K3</p> <p>2 4 6 8 10</p> <p>Score 4</p>	<p>Total for Driving</p> <p>Vibration</p> <p>N1 N2 N3</p> <p>1 4 9</p>
<p>Frequency (B) & Weight (H)</p> <p>B3 B4 B5 H1 H2 H3 H4</p> <p>2 4 6 8 10 12</p> <p>Score 5</p>	<p>Frequency (D) & Duration (J)</p> <p>D1 D2 D3 J1 J2 J3</p> <p>2 4 6 8 10</p> <p>Score 5</p>	<p>Wrist Posture (E) & Duration (J)</p> <p>E1 E2 J1 J2 J3</p> <p>2 4 6 8 10</p> <p>Score 5</p>	<p>Total for Vibration</p> <p>Work pace</p> <p>P1 P2 P3</p> <p>1 4 9</p>
<p>Frequency (B) & Duration (J)</p> <p>B3 B4 B5 J1 J2 J3</p> <p>2 4 6 8 10</p> <p>Score 6</p>	<p>Frequency (D) & Duration (J)</p> <p>D1 D2 D3 J1 J2 J3</p> <p>2 4 6 8 10</p> <p>Score 6</p>	<p>Total score for Back Sum of scores 1 to 4 plus 5 and 6</p> <p>Total score for Shoulder/Arm Sum of Scores 1 to 5</p> <p>Total score for Wrist/Hand Sum of Scores 1 to 5</p> <p>Total for Work pace</p> <p>Stress</p> <p>Q1 Q2 Q3 Q4</p> <p>1 4 9 16</p> <p>Total for Stress</p>	

Geoffrey David, Valerie Woods and Peter Buckle
 Robens Centre for Health Ergonomics
 University of Surrey

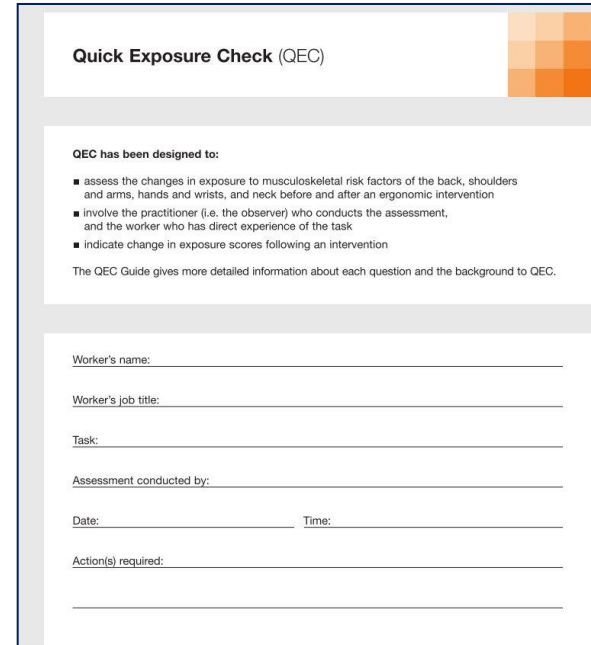
QEC - What is it?

- Developed for use by those responsible for health and safety
- Assesses exposure of 4 body areas
 - Back
 - Shoulder/arm
 - Wrist/hand
 - Neck
- Involves both the observer and the worker



QEC – How it Works

- One assessment is completed per task
- The first page is mostly for identification of the task you've picked
- The left side of the next page contains the Observer's Assessment
- The right side of that page contains the Worker's Assessment
- The last page contains the exposure scores



Quick Exposure Check (QEC)

QEC has been designed to:

- assess the changes in exposure to musculoskeletal risk factors of the back, shoulders and arms, hands and wrists, and neck before and after an ergonomic intervention
- involve the practitioner (i.e. the observer) who conducts the assessment, and the worker who has direct experience of the task
- indicate change in exposure scores following an intervention

The QEC Guide gives more detailed information about each question and the background to QEC.

Worker's name: _____

Worker's job title: _____

Task: _____

Assessment conducted by: _____

Date: _____ Time: _____

Action(s) required: _____



QEC – Observer's Assessment

Worker's name _____	Date _____
Observer's Assessment	Worker's Assessment
Back	Workers
A When performing the task, is the back <i>(select worse case situation)</i>	H Is the maximum weight handled MANUALLY BY YOU in this task?
A1 <input type="checkbox"/> Almost neutral?	H1 <input type="checkbox"/> Light (5 kg or less)
A2 <input type="checkbox"/> Moderately flexed or twisted or side bent?	H2 <input type="checkbox"/> Moderate (6 to 10 kg)
A3 <input type="checkbox"/> Excessively flexed or twisted or side bent?	H3 <input type="checkbox"/> Heavy (11 to 20 kg)
B Select ONLY ONE of the two following task options:	H4 <input type="checkbox"/> Very heavy (more than 20 kg)
EITHER	J On average, how much time do you spend per day on this task?
For seated or standing stationary tasks. Does the back remain in a static position most of the time?	J1 <input type="checkbox"/> Less than 2 hours
B1 <input type="checkbox"/> No	J2 <input type="checkbox"/> 2 to 4 hours
B2 <input type="checkbox"/> Yes	J3 <input type="checkbox"/> More than 4 hours
OR	K When performing this task, is the maximum force level exerted by one hand?
For lifting, pushing/pulling and carrying tasks (i.e. moving a load). Is the movement of the back	K1 <input type="checkbox"/> Low (e.g. less than 1 kg)
B3 <input type="checkbox"/> Infrequent (around 3 times per minute or less)?	K2 <input type="checkbox"/> Medium (e.g. 1 to 4 kg)
B4 <input type="checkbox"/> Frequent (around 8 times per minute)?	K3 <input type="checkbox"/> High (e.g. more than 4 kg)
B5 <input type="checkbox"/> Very frequent (around 12 times per minute or more)?	L Is the visual demand of this task
Shoulder/Arm	L1 <input type="checkbox"/> Low (almost no need to view fine details)?
C When the task is performed, are the hands <i>(select worse case situation)</i>	L2 <input type="checkbox"/> High (need to view some fine details)?
C1 <input type="checkbox"/> At or below waist height?	<i>* If High, please give details in the box below</i>
C2 <input type="checkbox"/> At about chest height?	M At work do you drive a vehicle for
C3 <input type="checkbox"/> At or above shoulder height?	M1 <input type="checkbox"/> Less than one hour per day or Never?
D Is the shoulder/arm movement	M2 <input type="checkbox"/> Between 1 and 4 hours per day?
D1 <input type="checkbox"/> Infrequent (some intermittent movement)?	M3 <input type="checkbox"/> More than 4 hours per day?
D2 <input type="checkbox"/> Frequent (regular movement with some pauses)?	N At work do you use vibrating tools for
D3 <input type="checkbox"/> Very frequent (almost continuous movement)?	N1 <input type="checkbox"/> Less than one hour per day or Never?
Wrist/Hand	N2 <input type="checkbox"/> Between 1 and 4 hours per day?
E Is the task performed with <i>(select worse case situation)</i>	N3 <input type="checkbox"/> More than 4 hours per day?
E1 <input type="checkbox"/> An almost straight wrist?	P Do you have difficulty keeping up with this work?
E2 <input type="checkbox"/> A deviated or bent wrist?	P1 <input type="checkbox"/> Never
F Are similar motion patterns repeated	P2 <input type="checkbox"/> Sometimes
F1 <input type="checkbox"/> 10 times per minute or less?	P3 <input type="checkbox"/> Often
F2 <input type="checkbox"/> 11 to 20 times per minute?	<i>* If Often, please give details in the box below</i>
F3 <input type="checkbox"/> More than 20 times per minute?	Q In general, how do you find this job
Neck	Q1 <input type="checkbox"/> Not at all stressful?
G When performing the task, is the head/neck bent or twisted?	Q2 <input type="checkbox"/> Mildly stressful?
G1 <input type="checkbox"/> No	Q3 <input type="checkbox"/> Moderately stressful?
G2 <input type="checkbox"/> Yes, occasionally	Q4 <input type="checkbox"/> Very stressful?
G3 <input type="checkbox"/> Yes, continuously	<i>* If Moderately or Very, please give details in the box below</i>

QEC – Observer's Assessment

Observer's Assessment

Back

A When performing the task, is the back
(select worse case situation)

- A1 Almost neutral?
- A2 Moderately flexed or twisted or side bent?
- A3 Excessively flexed or twisted or side bent?

Worker's name _____ Date _____

Observer's Assessment | **Worker's Assessment**

Back

A When performing the task, is the back (select worse case situation)?

- A1 Almost neutral?
- A2 Moderately flexed or twisted or side bent?
- A3 Excessively flexed or twisted or side bent?

B Select **ONLY ONE** of the two following task options:

For seated or standing stationary tasks. Does the back remain in a static position most of the time?

- B1 No
- B2 Yes

For lifting, pushing/pulling and carrying tasks (i.e. moving a load, in the movement of the back)

- B3 Infrequent (around 3 times per minute or less)?
- B4 Frequent (around 8 times per minute)?
- B5 Very frequent (around 12 times per minute or more)?

Shoulder/Arm

C When the task is performed, are the hands (select worse case situation)?

- C1 At or below waist height?
- C2 At about chest height?
- C3 At or above shoulder height?

D In the shoulder/arm movement

- D1 Infrequent (some movement movement)?
- D2 Frequent (regular movement with some pauses)?
- D3 Very frequent (almost continuous movement)?

Wrist/Hand

E Is the task performed with (select worse case situation)?

- E1 An almost straight wrist?
- E2 A deviated or bent wrist?

F Are similar motion patterns repeated?

- F1 10 times per minute or less?
- F2 11 to 20 times per minute?
- F3 More than 20 times per minute?

Neck

G When performing the task, is the head/neck bent or twisted?

- G1 No
- G2 Yes, occasionally
- G3 Yes, continuously

Workers

H Is the maximum weight handled **MANUALLY BY YOU** in this task?

- H1 Light (5 kg or less)
- H2 Moderate (6 to 10 kg)
- H3 Heavy (11 to 20kg)
- H4 Very heavy (more than 20 kg)

J On average, how much time do you spend per day on this task?

- J1 Less than 2 hours
- J2 2 to 4 hours
- J3 More than 4 hours

K When performing this task, is the maximum force level exerted by one hand?

- K1 Low (e.g. less than 1 kg)
- K2 Medium (e.g. 1 to 4 kg)
- K3 High (e.g. more than 4 kg)

L Is the visual demand of this task?

- L1 Low (almost no need to view fine details)?
- L2 High (need to view some fine details)?

* If High, please give details in the box below

M At work do you drive a vehicle for

- M1 Less than one hour per day or Never?
- M2 Between 1 and 4 hours per day?
- M3 More than 4 hours per day?

N At work do you use vibrating tools for

- N1 Less than one hour per day or Never?
- N2 Between 1 and 4 hours per day?
- N3 More than 4 hours per day?

P Do you have difficulty keeping up with this work?

- P1 Never
- P2 Sometimes
- P3 Often

* If Often, please give details in the box below

Q In general, how do you find this job?

- Q1 Not at all stressful?
- Q2 Mildly stressful?
- Q3 Moderately stressful?
- Q4 Very stressful?

* If Moderately or Very, please give details in the box below



QEC – Observer's Assessment

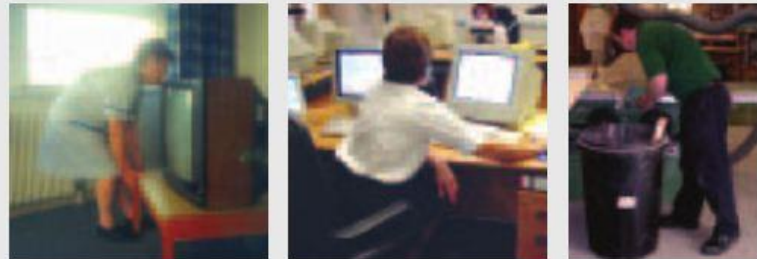
Almost neutral (A1)

- The back is defined as almost neutral (A1) if it is in less than 20° of flexion/extension, twisting, or side bending.



Moderately flexed/twisted side bent (A2)

- The back is defined as moderately flexed or twisted or side bent (A2) if it is in more than 20° but less than 60° of flexion/extension, twisting or side bending.



Excessively flexed/twisted side bent (A3)

- The back is defined as excessively flexed or twisted or side bent (A3) if it is in more than 60° of flexion, twisting or side bending.



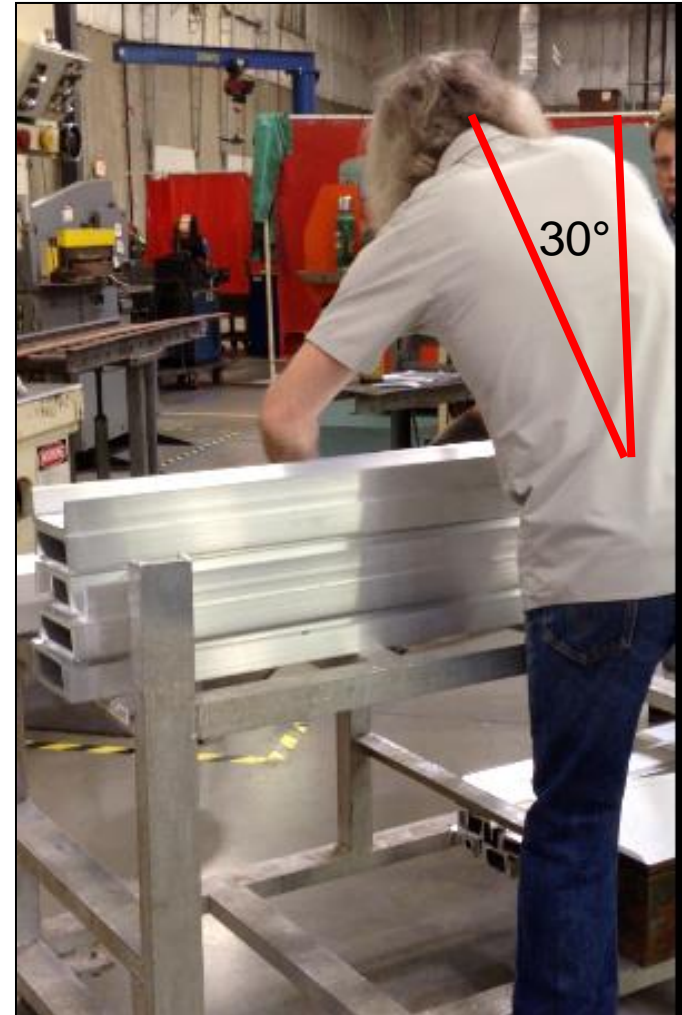
QEC Example

Observer's Assessment

Back

A When performing the task, is the back
(select worse case situation)

- A1 Almost neutral?
- A2 Moderately flexed or twisted or side bent?
- A3 Excessively flexed or twisted or side bent?



QEC Example

Worker's name _____ Date _____

Observer's Assessment	Worker's Assessment
<p>Back</p> <p>A When performing the task, is the back (select upper case letter)?</p> <p>A1 <input type="radio"/> Almost neutral?</p> <p>A2 <input type="radio"/> Moderately flexed or twisted or side bent?</p> <p>A3 <input type="radio"/> Excessively flexed or twisted or side bent?</p> <p>B Select ONLY ONE of the two following task options:</p> <p>B1 For seated or standing stationary tasks. Does the back remain in a <u>static</u> position most of the time?</p> <p>B1 <input type="radio"/> No</p> <p>B2 <input type="radio"/> Yes</p> <p>B2 For lifting, pushing/pulling and carrying tasks (i.e. moving a load, in the <u>opposite</u> of the back)</p> <p>B3 <input type="radio"/> Infrequent (around 3 times per minute or less)?</p> <p>B4 <input type="radio"/> Frequent (around 8 times per minute)?</p> <p>B5 <input type="radio"/> Very frequent (around 12 times per minute or more)?</p> <p>Shoulder/Arm</p> <p>C When the task is performed, are the hands (select upper case letter)?</p> <p>C1 <input type="radio"/> At or below waist height?</p> <p>C2 <input type="radio"/> At about chest height?</p> <p>C3 <input type="radio"/> At or above shoulder height?</p> <p>D Is the shoulder/arm movement?</p> <p>D1 <input type="radio"/> Infrequent (some intermittent movement)?</p> <p>D2 <input type="radio"/> Frequent (regular movement with some pauses)?</p> <p>D3 <input type="radio"/> Very frequent (almost continuous movement)?</p> <p>Wrist/Hand</p> <p>E Is the task performed with (select upper case letter)?</p> <p>E1 <input type="radio"/> An almost straight wrist?</p> <p>E2 <input type="radio"/> A deviated or bent wrist?</p> <p>F Are similar motion patterns repeated?</p> <p>F1 <input type="radio"/> 10 times per minute or less?</p> <p>F2 <input type="radio"/> 11 to 20 times per minute?</p> <p>F3 <input type="radio"/> More than 20 times per minute?</p> <p>Neck</p> <p>G When performing the task, is the head/neck bent or twisted?</p> <p>G1 <input type="radio"/> No</p> <p>G2 <input type="radio"/> Yes, occasionally</p> <p>G3 <input type="radio"/> Yes, continuously</p>	<p>Workers</p> <p>H Is the maximum weight handled MANUALLY BY YOU in this task?</p> <p>H1 <input type="radio"/> Light (5 kg or less)</p> <p>H2 <input type="radio"/> Moderate (6 to 10 kg)</p> <p>H3 <input type="radio"/> Heavy (11 to 20 kg)</p> <p>H4 <input type="radio"/> Very heavy (more than 20 kg)</p> <p>J On average, how much time do you spend per day on this task?</p> <p>J1 <input type="radio"/> Less than 2 hours</p> <p>J2 <input type="radio"/> 2 to 4 hours</p> <p>J3 <input type="radio"/> More than 4 hours</p> <p>K When performing this task, is the maximum force level exerted by one hand?</p> <p>K1 <input type="radio"/> Low (e.g. less than 1 kg)</p> <p>K2 <input type="radio"/> Medium (e.g. 1 to 4 kg)</p> <p>K3 <input type="radio"/> High (e.g. more than 4 kg)</p> <p>L Is the visual demand of this task?</p> <p>L1 <input type="radio"/> Low (almost no need to view the details?)</p> <p>L2 <input type="radio"/> High (need to view some fine details?)</p> <p>* If Yes, please give details in the box below</p> <p>M At work do you drive a vehicle for?</p> <p>M1 <input type="radio"/> Less than one hour per day or never?</p> <p>M2 <input type="radio"/> Between 1 and 4 hours per day?</p> <p>M3 <input type="radio"/> More than 4 hours per day?</p> <p>N At work do you use vibrating tools for?</p> <p>N1 <input type="radio"/> Less than one hour per day or never?</p> <p>N2 <input type="radio"/> Between 1 and 4 hours per day?</p> <p>N3 <input type="radio"/> More than 4 hours per day?</p> <p>P Do you have difficulty keeping up with this work?</p> <p>P1 <input type="radio"/> Never</p> <p>P2 <input type="radio"/> Sometimes</p> <p>P3 <input type="radio"/> Often</p> <p>* If Often, please give details in the box below</p> <p>Q In general, how do you find this job?</p> <p>Q1 <input type="radio"/> Not at all stressful?</p> <p>Q2 <input type="radio"/> Mildly stressful?</p> <p>Q3 <input type="radio"/> Moderately stressful?</p> <p>Q4 <input type="radio"/> Very stressful?</p> <p>* If Moderately or Very, please give details in the box below</p>

B Select **ONLY ONE** of the two following task options:

EITHER

For seated or standing stationary tasks. Does the back remain in a static position most of the time?

B1 No

B2 Yes

OR

For lifting, pushing/pulling and carrying tasks (i.e. moving a load). Is the movement of the back

B3 Infrequent (around 3 times per minute or less)?

B4 Frequent (around 8 times per minute)?

B5 Very frequent (around 12 times per minute or more)?

QEC Example

Back movement (B1-B5)

Select ONLY one of the two task options:

- If you are assessing a standing or seated stationary task (e.g. sedentary work, repetitive tasks), assess B1-B2 and ignore B3-B5. If the back is static for most of the time, select B2.

- If you are assessing a lifting, pushing/pulling or carrying task (i.e. moving a load by moving the back), assess B3-B5 and ignore B1-B2. This question refers to how often the person needs to bend or rotate the back when performing these types of manual handling tasks. For example, when unloading boxes from a pallet, count the number of times per minute the individual's back moves to lift and lower the load. Then select the most appropriate category B3-B5.



QEC Example

Each pieces takes about 30 seconds
(two lifts per minute)

B Select **ONLY ONE** of the two following task options:

EITHER

For seated or standing stationary tasks. Does the back remain in a static position most of the time?

B1 No

B2 Yes

OR

For lifting, pushing/pulling and carrying tasks (i.e. moving a load). Is the movement of the back

B3 Infrequent (around 3 times per minute or less)?

B4 Frequent (around 8 times per minute)?

B5 Very frequent (around 12 times per minute or more)?



QEC Example

Shoulder/Arm

C When the task is performed, are the hands
(select worse case situation)

- C1 At or below waist height?
- C2 At about chest height?
- C3 At or above shoulder height?

D Is the shoulder/arm movement

- D1 Infrequent (some intermittent movement)?
- D2 Frequent (regular movement with some pauses)?
- D3 Very frequent (almost continuous movement)?

Worker's name	Date
Observer's Assessment	Worker's Assessment
Back	Workers
A When performing the task, is the back <i>(select worse case situation)</i>	H Is the maximum weight handled MANUALLY BY YOU in this task?
A1 <input type="checkbox"/> Almost neutral?	H1 <input type="checkbox"/> Light (5 kg or less)
A2 <input type="checkbox"/> Moderately flexed or twisted or side bent?	H2 <input type="checkbox"/> Moderate (6 to 10 kg)
A3 <input type="checkbox"/> Excessively flexed or twisted or side bent?	H3 <input type="checkbox"/> Heavy (11 to 20kg)
A4 <input type="checkbox"/> Very heavy (more than 20 kg)	
B Select ONLY ONE of the two following task options:	J On average, how much time do you spend per day on the task?
B1 For seated or standing stationary tasks. Does the back remain in a static position most of the time?	J1 <input type="checkbox"/> Less than 2 hours
B1 <input type="checkbox"/> No	J2 <input type="checkbox"/> 2 to 4 hours
B1 <input type="checkbox"/> Yes	J3 <input type="checkbox"/> More than 4 hours
B2 For lifting, pushing/pulling and carrying tasks <i>(ie. moving a load, in the distances)</i> of the back	K When performing this task, is the maximum force level exerted by one hand?
B2 <input type="checkbox"/> Infrequent (around 3 times per minute or less)?	K1 <input type="checkbox"/> Low (eg. less than 1 kg)
B2 <input type="checkbox"/> Frequent (around 8 times per minute)?	K2 <input type="checkbox"/> Medium (eg. 1 to 4 kg)
B2 <input type="checkbox"/> Very frequent (around 12 times per minute or more)?	
Shoulder/Arm	L Is the visual demand of this task
C When the task is performed, are the hands <i>(select worse case situation)</i>	L1 <input type="checkbox"/> Low (almost no need to view fine details)?
C1 <input type="checkbox"/> At or below waist height?	L2 <input type="checkbox"/> High (need to view some fine details)?
C2 <input type="checkbox"/> At about chest height?	<i>* If High, please give details in the box below</i>
C3 <input type="checkbox"/> At or above shoulder height?	
D Is the shoulder/arm movement	M At work do you drive a vehicle for
D1 <input type="checkbox"/> Infrequent (some intermittent movement)?	M1 <input type="checkbox"/> Less than one hour per day or Never?
D2 <input type="checkbox"/> Frequent (regular movement with some pauses)?	M2 <input type="checkbox"/> Between 1 and 4 hours per day?
D3 <input type="checkbox"/> Very frequent (almost continuous movement)?	M3 <input type="checkbox"/> More than 4 hours per day?
Wrist/Hand	N At work do you use vibrating tools for
E Is the task performed with <i>(select worse case situation)</i>	N1 <input type="checkbox"/> Less than one hour per day or Never?
E1 <input type="checkbox"/> An almost straight wrist?	N2 <input type="checkbox"/> Between 1 and 4 hours per day?
E2 <input type="checkbox"/> A deviated or bent wrist?	N3 <input type="checkbox"/> More than 4 hours per day?
F Are similar motion patterns repeated	P Do you have difficulty keeping up with this work?
F1 <input type="checkbox"/> 10 times per minute or less?	P1 <input type="checkbox"/> Never
F2 <input type="checkbox"/> 11 to 20 times per minute?	P2 <input type="checkbox"/> Sometimes
F3 <input type="checkbox"/> More than 20 times per minute?	P3 <input type="checkbox"/> Often
Neck	<i>* If Often, please give details in the box below</i>
G When performing the task, is the head/neck bent or twisted?	Q In general, how do you find this job
G1 <input type="checkbox"/> No	Q1 <input type="checkbox"/> Not at all stressful?
G2 <input type="checkbox"/> Yes, occasionally	Q2 <input type="checkbox"/> Mildly stressful?
G3 <input type="checkbox"/> Yes, continuously	Q3 <input type="checkbox"/> Moderately stressful?
	Q4 <input type="checkbox"/> Very stressful?
	<i>* If Moderately or Very, please give details in the box below</i>

Assessment of the shoulder/arm

Shoulder/arm position (C1-C3)

The assessment should be based upon the position of the hands when the shoulder/arms are most heavily loaded during work.

This may not necessarily be at the same time as when the exposure of the back is assessed. For example, the load on the shoulder may not be at the highest level when the person bends down to pick up a box from the floor, but may become greater subsequently when the box is placed at a higher level.



Hands at or below waist height (C1)



Hands at about chest height (C2)



Hands at or above shoulder height (C3)

Shoulder/arm movement (D1-D3)

The movement of the shoulder/arm is defined as:

- Infrequent (D1) if there is some intermittent movement.
- Frequent (D2) if there is a regular movement with some pauses.
- Very frequent (D3) if there is almost continuous movement.

QEC Example

Shoulder/Arm

C When the task is performed, are the hands
(select worse case situation)

- C1 At or below waist height?
- C2 At about chest height?
- C3 At or above shoulder height?

D Is the shoulder/arm movement

- D1 Infrequent (some intermittent movement)?
- D2 Frequent (regular movement with some pauses)?
- D3 Very frequent (almost continuous movement)?



QEC Example

Wrist/Hand

E Is the task performed with
(select worse case situation)

E1 An almost straight wrist?

E2 A deviated or bent wrist?

F Are similar motion patterns repeated

F1 10 times per minute or less?

F2 11 to 20 times per minute?

F3 More than 20 times per minute?

Observer's name	Date
Observer's Assessment	Worker's Assessment
<p>Back</p> <p>A When performing the task, is the back <i>(select worse case situation)</i></p> <p>A1 <input type="checkbox"/> Almost neutral?</p> <p>A2 <input type="checkbox"/> Moderately flexed or twisted or side bent?</p> <p>A3 <input type="checkbox"/> Excessively flexed or twisted or side bent?</p> <p>B Select ONLY ONE of the two following task options:</p> <p>B1/B2</p> <p>For seated or standing stationary tasks. Does the back remain in a static position most of the time?</p> <p>B1 <input type="checkbox"/> No</p> <p>B2 <input type="checkbox"/> Yes</p> <p>OR</p> <p>For lifting, unloading/loading and carrying tasks (i.e. moving a load, to the opposite of the back)</p> <p>B3 <input type="checkbox"/> Infrequent (around 3 times per minute or less)?</p> <p>B4 <input type="checkbox"/> Frequent (around 8 times per minute)?</p> <p>B5 <input type="checkbox"/> Very frequent (around 12 times per minute or more)?</p> <p>Shoulder/Arm</p> <p>C When the task is performed, are the hands <i>(select worse case situation)</i></p> <p>C1 <input type="checkbox"/> At or below waist height?</p> <p>C2 <input type="checkbox"/> At about chest height?</p> <p>C3 <input type="checkbox"/> At or above shoulder height?</p> <p>D Is the shoulder/arm movement</p> <p>D1 <input type="checkbox"/> Infrequent (some intermittent movement)?</p> <p>D2 <input type="checkbox"/> Frequent (regular movement with some pauses)?</p> <p>D3 <input type="checkbox"/> Very frequent (almost continuous movement)?</p> <p>Wrist/Hand</p> <p>E Is the task performed with <i>(select worse case situation)</i></p> <p>E1 <input type="checkbox"/> An almost straight wrist?</p> <p>E2 <input type="checkbox"/> A deviated or bent wrist?</p> <p>F Are similar motion patterns repeated</p> <p>F1 <input type="checkbox"/> 10 times per minute or less?</p> <p>F2 <input type="checkbox"/> 11 to 20 times per minute?</p> <p>F3 <input type="checkbox"/> More than 20 times per minute?</p> <p>Neck</p> <p>G When performing the task, is the head/neck bent or twisted?</p> <p>G1 <input type="checkbox"/> No</p> <p>G2 <input type="checkbox"/> Yes, occasionally</p> <p>G3 <input type="checkbox"/> Yes, continuously</p>	<p>Workers</p> <p>H Is the maximum weight handled MANUALLY BY YOU in this task?</p> <p>H1 <input type="checkbox"/> Light (5 kg or less)</p> <p>H2 <input type="checkbox"/> Moderate (6 to 10 kg)</p> <p>H3 <input type="checkbox"/> Heavy (11 to 20kg)</p> <p>H4 <input type="checkbox"/> Very heavy (more than 20 kg)</p> <p>J On average, how much time do you spend per day on this task?</p> <p>J1 <input type="checkbox"/> Less than 2 hours</p> <p>J2 <input type="checkbox"/> 2 to 4 hours</p> <p>J3 <input type="checkbox"/> More than 4 hours</p> <p>K When performing this task, is the maximum force level exerted by one hand?</p> <p>K1 <input type="checkbox"/> Low (e.g. less than 1 kg)</p> <p>K2 <input type="checkbox"/> Medium (e.g. 1 to 4 kg)</p> <p>K3 <input type="checkbox"/> High (e.g. more than 4 kg)</p> <p>L Is the visual demand of this task</p> <p>L1 <input type="checkbox"/> Low (almost no need to view the details?)</p> <p>L2 <input type="checkbox"/> High (need to view some fine details?)</p> <p><i>* If High, please give details in the box below</i></p> <p>M At work do you drive a vehicle for</p> <p>M1 <input type="checkbox"/> Less than one hour per day or Never?</p> <p>M2 <input type="checkbox"/> Between 1 and 4 hours per day?</p> <p>M3 <input type="checkbox"/> More than 4 hours per day?</p> <p>N At work do you use vibrating tools for</p> <p>N1 <input type="checkbox"/> Less than one hour per day or Never?</p> <p>N2 <input type="checkbox"/> Between 1 and 4 hours per day?</p> <p>N3 <input type="checkbox"/> More than 4 hours per day?</p> <p>P Do you have difficulty keeping up with this work?</p> <p>P1 <input type="checkbox"/> Never</p> <p>P2 <input type="checkbox"/> Sometimes</p> <p>P3 <input type="checkbox"/> Often</p> <p><i>* If Often, please give details in the box below</i></p> <p>Q In general, how do you find this job</p> <p>Q1 <input type="checkbox"/> Not at all stressful?</p> <p>Q2 <input type="checkbox"/> Mildly stressful?</p> <p>Q3 <input type="checkbox"/> Moderately stressful?</p> <p>Q4 <input type="checkbox"/> Very stressful?</p> <p><i>* If Moderately or Very, please give details in the box below</i></p>

QEC Example

Assessment of the wrist/hand

Wrist/hand posture (E1-E2)

This posture is assessed during the task when the most awkward wrist posture is adopted. This may be wrist flexion/extension, side bending (ulnar/radial deviation).

The wrist is regarded as almost straight (E1) if the movement is limited within a small angular range (e.g. less 15° of the neutral wrist posture). Otherwise, if an obvious wrist angle can be observed during the performance of the task, the wrist is considered to be deviated or bent (E2).

Wrist/hand movement (F1-F3)

This refers to the movement of the wrist/hand and forearm, excluding the movement of the fingers. One motion is counted every time the same or similar motion pattern is repeated over a set period of time (e.g. 1 minute).



The wrist is deviated or bent (E2)

QEC Example

Wrist/Hand

E Is the task performed with
(select worse case situation)

E1 An almost straight wrist?

E2 A deviated or bent wrist?

F Are similar motion patterns repeated

F1 10 times per minute or less?

F2 11 to 20 times per minute?

F3 More than 20 times per minute?



QEC Example

Neck

G When performing the task, is the head/neck bent or twisted?

- G1 No
- G2 Yes, occasionally
- G3 Yes, continuously

Worker's name _____	Date _____
Observer's Assessment	Worker's Assessment
<p>Back</p> <p>A When performing the task, is the back (select worse case situation)?</p> <p>A1 <input type="checkbox"/> Almost neutral?</p> <p>A2 <input type="checkbox"/> Moderately flexed or rotated or side bent?</p> <p>A3 <input type="checkbox"/> Excessively flexed or twisted or side bent?</p> <p>B Select ONLY ONE of the two following task options:</p> <p>BT/ST/SA</p> <p>For seated or standing stationary tasks. Does the back remain in a static position most of the time?</p> <p>B1 <input type="checkbox"/> No</p> <p>B2 <input type="checkbox"/> Yes</p> <p>OR</p> <p>For lifting, pushing/pulling and carrying tasks (i.e. moving a load. Is the approximate) of the back</p> <p>B3 <input type="checkbox"/> Infrequent (around 3 times per minute or less)?</p> <p>B4 <input type="checkbox"/> Frequent (around 8 times per minute)?</p> <p>B5 <input type="checkbox"/> Very frequent (around 12 times per minute or more)?</p> <p>Shoulder/Arm</p> <p>C When the task is performed, are the hands (select worse case situation)?</p> <p>C1 <input type="checkbox"/> At or below waist height?</p> <p>C2 <input type="checkbox"/> At about chest height?</p> <p>C3 <input type="checkbox"/> At or above shoulder height?</p> <p>D Is the shoulder/arm movement?</p> <p>D1 <input type="checkbox"/> Infrequent (some intermittent movement)?</p> <p>D2 <input type="checkbox"/> Frequent (regular movement with some pauses)?</p> <p>D3 <input type="checkbox"/> Very frequent (almost continuous movement)?</p> <p>Wrist/Hand</p> <p>E Is the task performed with (select worse case situation)?</p> <p>E1 <input type="checkbox"/> An almost straight wrist?</p> <p>E2 <input type="checkbox"/> A deviated or bent wrist?</p> <p>F Are similar motion patterns repeated?</p> <p>F1 <input type="checkbox"/> 10 times per minute or less?</p> <p>F2 <input type="checkbox"/> 11 to 20 times per minute?</p> <p>F3 <input type="checkbox"/> More than 20 times per minute?</p> <p>Neck</p> <p>G When performing the task, is the head/neck bent or twisted?</p> <p>G1 <input type="checkbox"/> No</p> <p>G2 <input type="checkbox"/> Yes, occasionally</p> <p>G3 <input type="checkbox"/> Yes, continuously</p>	<p>Workers</p> <p>H Is the maximum weight handled MANUALLY BY YOU in this task?</p> <p>H1 <input type="checkbox"/> Light (5 kg or less)</p> <p>H2 <input type="checkbox"/> Moderate (5 to 10 kg)</p> <p>H3 <input type="checkbox"/> Heavy (11 to 20kg)</p> <p>H4 <input type="checkbox"/> Very heavy (more than 20 kg)</p> <p>J On average, how much time do you spend per day on this task?</p> <p>J1 <input type="checkbox"/> Less than 2 hours</p> <p>J2 <input type="checkbox"/> 2 to 4 hours</p> <p>J3 <input type="checkbox"/> More than 4 hours</p> <p>K When performing this task, is the maximum force level exerted by one hand?</p> <p>K1 <input type="checkbox"/> Low (e.g. less than 1 kg)</p> <p>K2 <input type="checkbox"/> Medium (e.g. 1 to 4 kg)</p> <p>K3 <input type="checkbox"/> High (e.g. more than 4 kg)</p> <p>L Is the visual demand of this task</p> <p>L1 <input type="checkbox"/> Low (almost no need to view fine details)?</p> <p>L2 <input type="checkbox"/> High (need to view some fine details)?</p> <p>* If High, please give details in the box below.</p> <p>M At work do you drive a vehicle for</p> <p>M1 <input type="checkbox"/> Less than one hour per day or never?</p> <p>M2 <input type="checkbox"/> Between 1 and 4 hours per day?</p> <p>M3 <input type="checkbox"/> More than 4 hours per day?</p> <p>N At work do you use vibrating tools for</p> <p>N1 <input type="checkbox"/> Less than one hour per day or never?</p> <p>N2 <input type="checkbox"/> Between 1 and 4 hours per day?</p> <p>N3 <input type="checkbox"/> More than 4 hours per day?</p> <p>P Do you have difficulty keeping up with this work?</p> <p>P1 <input type="checkbox"/> Never</p> <p>P2 <input type="checkbox"/> Sometimes</p> <p>P3 <input type="checkbox"/> Often</p> <p>* If Often, please give details in the box below.</p> <p>Q In general, how do you find this job</p> <p>Q1 <input type="checkbox"/> Not at all stressful?</p> <p>Q2 <input type="checkbox"/> Mildly stressful?</p> <p>Q3 <input type="checkbox"/> Moderately stressful?</p> <p>Q4 <input type="checkbox"/> Very stressful?</p> <p>* If Moderately or Very stressful, give details in the box below.</p>

Assessment of the neck (G)

The neck posture is defined as excessively bent or twisted if the angle is greater than 20° relative to the torso. If this angle is exceeded select either G2 or G3 dependent upon the duration. Otherwise select G1.



Neck excessively bent (G)

QEC Example

Neck

G When performing the task, is the head/neck bent or twisted?

- G1 No
- G2 Yes, occasionally
- G3 Yes, continuously



QEC – Worker’s Assessment

Worker's name _____ Date _____

Observer's Assessment

Back

A When performing the task, is the back (select worse case situation)

A1 Almost neutral?
 A2 Moderately flexed or twisted or side bent?
 A3 Excessively flexed or twisted or side bent?

B Select **ONLY ONE** of the two following task options:

EITHER

For seated or standing stationary tasks. Does the back remain in a **static** position most of the time?

B1 No
 B2 Yes

OR

For lifting, pushing/pulling and carrying tasks (i.e. moving a load). Is the **movement** of the back

B3 Infrequent (around 3 times per minute or less)?
 B4 Frequent (around 8 times per minute)?
 B5 Very frequent (around 12 times per minute or more)?

Shoulder/Arm

C When the task is performed, are the hands (select worse case situation)

C1 At or below waist height?
 C2 At about chest height?
 C3 At or above shoulder height?

D Is the shoulder/arm movement

D1 Infrequent (some intermittent movement)?
 D2 Frequent (regular movement with some pauses)?
 D3 Very frequent (almost continuous movement)?

Wrist/Hand

E Is the task performed with (select worse case situation)

E1 An almost straight wrist?
 E2 A deviated or bent wrist?

F Are similar motion patterns repeated

F1 10 times per minute or less?
 F2 11 to 20 times per minute?
 F3 More than 20 times per minute?

Neck

G When performing the task, is the head/neck bent or twisted?

G1 No
 G2 Yes, occasionally
 G3 Yes, continuously

Worker's Assessment

Workers

H Is the maximum weight handled **MANUALLY BY YOU** in this task?

H1 Light (5 kg or less)
 H2 Moderate (6 to 10 kg)
 H3 Heavy (11 to 20kg)
 H4 Very heavy (more than 20 kg)

J On average, how much time do you spend per day on this task?

J1 Less than 2 hours
 J2 2 to 4 hours
 J3 More than 4 hours

K When performing this task, is the maximum force level exerted by one hand?

K1 Low (e.g. less than 1 kg)
 K2 Medium (e.g. 1 to 4 kg)
 K3 High (e.g. more than 4 kg)

L Is the visual demand of this task

L1 Low (almost no need to view fine details?)
 *L2 High (need to view some fine details?)
** If High, please give details in the box below*

M At work do you drive a vehicle for

M1 Less than one hour per day or Never?
 M2 Between 1 and 4 hours per day?
 M3 More than 4 hours per day?

N At work do you use vibrating tools for

N1 Less than one hour per day or Never?
 N2 Between 1 and 4 hours per day?
 N3 More than 4 hours per day?

P Do you have difficulty keeping up with this work?

P1 Never
 P2 Sometimes
 *P3 Often
** If Often, please give details in the box below*

Q In general, how do you find this job

Q1 Not at all stressful?
 Q2 Mildly stressful?
 *Q3 Moderately stressful?
 *Q4 Very stressful?
** If Moderately or Very, please give details in the box below*



QEC – Worker’s Assessment

Worker’s Assessment

Workers

H Is the maximum weight handled **MANUALLY BY YOU** in this task?

- H1 Light (5 kg or less)(**< 11 lbs**)
- H2 Moderate (6 to 10 kg)(**12 lbs – 22 lbs**)
- H3 Heavy (11 to 20kg)(**23 lbs – 44 lbs**)
- H4 Very heavy (more than 20 kg)(**> 44 lbs**)

Worker's name _____ Date _____

Observer's Assessment

Back

A When performing the task, is the back **select worst case situation?**

A1 Almost neutral?

A2 Moderately flexed or twisted or side bent?

A3 Excessively flexed or twisted or side bent?

B Select **ONLY ONE** of the two following task options:

B1/B2 For seated or standing stationary tasks. Does the back remain in a **static** position most of the time?

B1 No

B2 Yes

OR

B3/B4/B5 For lifting, pushing/pulling and carrying tasks (i.e. moving a load). Is the movement of the back

B3 Infrequent (around 3 times per minute or less)?

B4 Frequent (around 6 times per minute)?

B5 Very frequent (around 12 times per minute or more)?

Shoulder/Arm

C When the task is performed, are the hands

C1 select worst case situation?

C2 At or below waist height?

C3 At about chest height?

C4 At or above shoulder height?

D Is the shoulder/arm movement

D1 Infrequent (some intermittent movement)?

D2 Frequent (regular movement with some pauses)?

D3 Very frequent (almost continuous movement)?

Wrist/Hand

E Is the task performed with

E1 select worst case situation?

E2 An almost straight wrist?

E3 A deviated or bent wrist?

F Are similar motion patterns repeated

F1 10 times per minute or less?

F2 11 to 20 times per minute?

F3 More than 20 times per minute?

Neck

G When performing the task, is the head/neck bent or twisted?

G1 No

G2 Yes, occasionally

G3 Yes, continuously

Worker's Assessment

Workers

H Is the maximum weight handled **MANUALLY BY YOU** in this task?

H1 Light (5 kg or less)

H2 Moderate (6 to 10 kg)

H3 Heavy (11 to 20kg)

H4 Very heavy (more than 20 kg)

J On average, how much time do you spend per day on this task?

J1 Less than 2 hours

J2 2 to 4 hours

J3 More than 4 hours

K When performing this task, is the maximum force level exerted by one hand?

K1 Low (e.g. less than 1 kg)

K2 Medium (e.g. 1 to 4 kg)

K3 High (e.g. more than 4 kg)

L Is the visual demand of this task

L1 Low (almost no need to view the details)?

L2 High (need to view some fine details)?

* If High, please give details in the box below

M At work do you drive a vehicle for

M1 Less than one hour per day or Never?

M2 Between 1 and 4 hours per day?

M3 More than 4 hours per day?

N At work do you use vibrating tools for

N1 Less than one hour per day or Never?

N2 Between 1 and 4 hours per day?

N3 More than 4 hours per day?

P Do you have difficulty keeping up with this work?

P1 Never

P2 Sometimes

P3 Often

* If Often, please give details in the box below

Q In general, how do you find this job

Q1 Not at all stressful?

Q2 Mildly stressful?

Q3 Moderately stressful?

Q4 Very stressful?

* If Moderate or Very, please give details in the box below



Maximum weight handled (H1-H4)

This question refers to the weight borne by the worker, and not the maximum weight handled in the task or the load handled with the use of equipment.

The worker’s perception of the load weight may differ from the actual weight category, e.g. a light load may seem heavy if held at full reach. The actual weight of the load can be measured by the observer if required, to inform any intervention that may be introduced. However, this measure should be used to supplement the exposure assessment and not to replace the worker’s assessment of the load.



QEC Example

Piece weighs 13 lbs

Worker's Assessment

Workers

H Is the maximum weight handled
MANUALLY BY YOU in this task?

- H1 Light (5 kg or less) (< 11 lbs)
- H2 Moderate (6 to 10 kg) (12 lbs – 22 lbs)
- H3 Heavy (11 to 20kg) (23 lbs – 44 lbs)
- H4 Very heavy (more than 20 kg) (> 44 lbs)



QEC Example

J On average, how much time do you spend per day on this task?

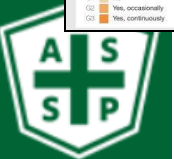
- J1 Less than 2 hours
- J2 2 to 4 hours
- J3 More than 4 hours

Time spent on task (J1-J3)

This question examines the amount of time per day the worker spends conducting the task being assessed.

Worker's name _____ Date _____

Observer's Assessment	Worker's Assessment
Back A When performing the task, is the back (select worst case situation)? A1 <input type="radio"/> Almost neutral? A2 <input type="radio"/> Moderately flexed or twisted or side bent? A3 <input type="radio"/> Excessively flexed or twisted or side bent? B Select ONLY ONE of the following task options: Stationary For seated or standing stationary tasks. Does the back remain in a static position most of the time? B1 <input type="radio"/> No B2 <input type="radio"/> Yes On For lifting, pushing/pulling and carrying tasks (i.e. moving a load). Is the position of the back B3 <input type="radio"/> Infrequent (around 3 times per minute or less)? B4 <input type="radio"/> Frequent (around 8 times per minute)? B5 <input type="radio"/> Very frequent (around 12 times per minute or more)? Shoulder/Arm C When the task is performed, are the hands (select worst case situation)? C1 <input type="radio"/> At or below waist height? C2 <input type="radio"/> At about chest height? C3 <input type="radio"/> At or above shoulder height? D Is the shoulder/arm movement D1 <input type="radio"/> Infrequent (some intermittent movement)? D2 <input type="radio"/> Frequent (regular movement with some pauses)? D3 <input type="radio"/> Very frequent (almost continuous movement)? Wrist/Hand E Is the task performed with (select worst case situation)? E1 <input type="radio"/> An almost straight wrist? E2 <input type="radio"/> A deviated or bent wrist? F Are similar motion patterns repeated? F1 <input type="radio"/> 10 times per minute or less? F2 <input type="radio"/> 11 to 20 times per minute? F3 <input type="radio"/> More than 20 times per minute? Neck G When performing the task, is the head/neck bent or twisted? G1 <input type="radio"/> No G2 <input type="radio"/> Yes, occasionally G3 <input type="radio"/> Yes, continuously	Workers H Is the maximum weight handled MANUALLY BY YOU in this task? H1 <input type="radio"/> Light (5 kg or less) H2 <input type="radio"/> Moderate (6 to 10 kg) H3 <input type="radio"/> Heavy (11 to 15kg) H4 <input type="radio"/> Very heavy (more than 20 kg) J On average, how much time do you spend per day on this task? J1 <input type="radio"/> Less than 2 hours J2 <input type="radio"/> 2 to 4 hours J3 <input checked="" type="radio"/> More than 4 hours K When performing this task, is the maximum force exerted by one hand? K1 <input type="radio"/> Low (e.g. less than 1 kg) K2 <input type="radio"/> Medium (e.g. 1 to 4 kg) K3 <input type="radio"/> High (e.g. more than 4 kg) L Is the visual demand of this task L1 <input type="radio"/> Low (almost no need to view fine details)? L2 <input type="radio"/> High (need to view some fine details)? <i>* If 'High' please give details in the box below</i> M At work do you drive a vehicle for M1 <input type="radio"/> Less than one hour per day or fewer? M2 <input type="radio"/> Between 1 and 4 hours per day? M3 <input type="radio"/> More than 4 hours per day? N At work do you use vibrating tools for N1 <input type="radio"/> Less than one hour per day or fewer? N2 <input type="radio"/> Between 1 and 4 hours per day? N3 <input type="radio"/> More than 4 hours per day? P Do you have difficulty keeping up with this work? P1 <input type="radio"/> Never P2 <input type="radio"/> Sometimes P3 <input type="radio"/> Often <i>* If 'Often' please give details in the box below</i> O In general, how do you find this job O1 <input type="radio"/> Not at all stressful? O2 <input type="radio"/> Mildly stressful? O3 <input type="radio"/> Moderately stressful? O4 <input type="radio"/> Very stressful? <i>* If 'Moderately or Very' please give details in the box below</i>



QEC Example

K When performing this task, is the maximum force level exerted by one hand?

K1 Low (e.g. less than 1 kg) (< 2.2 lbs)

K2 Medium (e.g. 1 to 4 kg) (≥ 2.2 lbs, but < 8.8 lbs)

K3 High (e.g. more than 4 kg) (≥ 8.8 lbs)

Maximum force level (K1-K3)

This question refers to the maximum force level exerted by one hand when performing the task. Even if the task is performed with two hands, ask the worker about the force for one hand only.

Measures of the forces involved can be made by the observer to inform any intervention that may be introduced. However, this measure should be used to supplement the exposure assessment and not to replace the worker's perception of the force required to perform the task.

Worker's name _____ Date _____

Observer's Assessment	Worker's Assessment
Back A When performing the task, is the back flexed or twisted (select worst case situation)? A1 <input type="checkbox"/> Almost never? A2 <input type="checkbox"/> Moderately flexed or twisted or side bent? A3 <input type="checkbox"/> Occasionally flexed or twisted or side bent? B Select ONLY ONE of the two following task options: B1 For seated or standing stationary tasks. Does the back remain in a static position most of the time? B1 <input type="checkbox"/> No B2 <input type="checkbox"/> Yes C For lifting, pushing/pulling and carrying tasks (i.e. moving a load, in the direction of the back) C1 <input type="checkbox"/> Infrequent (around 3 times per minute or less)? C2 <input type="checkbox"/> Frequent (around 8 times per minute)? C3 <input type="checkbox"/> Very frequent (around 13 times per minute or more)?	Workers H Is the maximum weight handled MANUALLY BY YOU in this task? H1 <input type="checkbox"/> Light (0 kg or less) H2 <input type="checkbox"/> Moderate (6 to 10 kg) H3 <input type="checkbox"/> Heavy (11 to 20kg) H4 <input type="checkbox"/> Very heavy (more than 20 kg) J On average, how much time do you spend per day on this task? J1 <input type="checkbox"/> Less than 2 hours J2 <input type="checkbox"/> 2 to 4 hours J3 <input type="checkbox"/> More than 4 hours K When performing this task, is the maximum force level exerted by one hand? K1 <input type="checkbox"/> Low (e.g. less than 1 kg) K2 <input type="checkbox"/> Medium (e.g. 1 to 4 kg) K3 <input type="checkbox"/> High (e.g. more than 4 kg)
Shoulder/Arm C When the task is performed, are the hands flexed or extended (select worst case situation)? C1 <input type="checkbox"/> At or below wrist height? C2 <input type="checkbox"/> At about chest height? C3 <input type="checkbox"/> At or above shoulder height? D Is the shoulder/arm movement D1 <input type="checkbox"/> Infrequent (some intermittent movements)? D2 <input type="checkbox"/> Frequent (regular movement with some pauses)? D3 <input type="checkbox"/> Very frequent (almost continuous movement)?	L Is the visual demand of this task L1 <input type="checkbox"/> Low (almost no need to view the details)? L2 <input type="checkbox"/> High (need to view some few details)? * If High , please give details in the box below: M At work do you drive a vehicle for M1 <input type="checkbox"/> Less than one hour per day or Never? M2 <input type="checkbox"/> Between 1 and 4 hours per day? M3 <input type="checkbox"/> More than 4 hours per day? N At work do you use vibrating tools for N1 <input type="checkbox"/> Less than one hour per day or Never? N2 <input type="checkbox"/> Between 1 and 4 hours per day? N3 <input type="checkbox"/> More than 4 hours per day?
Wrist/Hand E Is the task performed with repetitive motion (select worst case situation)? E1 <input type="checkbox"/> An almost straight wrist? E2 <input type="checkbox"/> A deviated or bent wrist? F Are similar motion patterns repeated F1 <input type="checkbox"/> 10 times per minute or less? F2 <input type="checkbox"/> 11 to 20 times per minute? F3 <input type="checkbox"/> More than 20 times per minute?	P Do you have difficulty keeping up with this work? P1 <input type="checkbox"/> Never P2 <input type="checkbox"/> Sometimes P3 <input type="checkbox"/> Often * If Often , please give details in the box below: Q In general, how do you find this job? Q1 <input type="checkbox"/> Not at all stressful? Q2 <input type="checkbox"/> Mildly stressful? Q3 <input type="checkbox"/> Moderately stressful? Q4 <input type="checkbox"/> Very stressful? * If Moderately or Very , please give details in the box below:
Neck G When performing the task, is the head/neck bent or twisted? G1 <input type="checkbox"/> No G2 <input type="checkbox"/> Yes, occasionally G3 <input type="checkbox"/> Yes, continuously	



QEC Example

Grip force on vice grips is approx 15 lbs

K When performing this task, is the maximum force level exerted by one hand?

- K1 Low (e.g. less than 1 kg) (< 2.2 lbs)
- K2 Medium (e.g. 1 to 4 kg) (≥ 2.2 lbs, but < 8.8 lbs)
- K3 High (e.g. more than 4 kg) (≥ 8.8 lbs)



QEC Example

Worker's name _____ Date _____

Observer's Assessment	Worker's Assessment
<p>Back</p> <p>A When performing the task, is the back (check worker case situation)</p> <p>A1 <input type="checkbox"/> Almost neutral?</p> <p>A2 <input type="checkbox"/> Moderately flexed or twisted or side bent?</p> <p>A3 <input type="checkbox"/> Excessively flexed or twisted or side bent?</p> <p>B Select ONLY ONE of the two following task options:</p> <p>BTHER</p> <p>For seated or standing stationary tasks. Does the back remain in a static position most of the time?</p> <p>B1 <input type="checkbox"/> No</p> <p>B2 <input type="checkbox"/> Yes</p> <p>OR</p> <p>For lifting, pushing/pulling and carrying tasks (i.e. moving a load, in the opposite of the back)</p> <p>B3 <input type="checkbox"/> Infrequent (around 3 times per minute or less)?</p> <p>B4 <input type="checkbox"/> Frequent (around 8 times per minute)?</p> <p>B5 <input type="checkbox"/> Very frequent (around 12 times per minute or more)?</p> <p>Shoulder/Arm</p> <p>C When the task is performed, are the hands (check worker case situation)</p> <p>C1 <input type="checkbox"/> At or below waist height?</p> <p>C2 <input type="checkbox"/> At about chest height?</p> <p>C3 <input type="checkbox"/> At or above shoulder height?</p> <p>D Is the shoulder/arm movement (i.e. moving a load, in the opposite of the back)</p> <p>D1 <input type="checkbox"/> Infrequent (some intermittent movement)?</p> <p>D2 <input type="checkbox"/> Frequent (angular movement with some pauses)?</p> <p>D3 <input type="checkbox"/> Very frequent (almost continuous movement)?</p> <p>Wrist/Hand</p> <p>E Is the task performed with (check worker case situation)</p> <p>E1 <input type="checkbox"/> An almost straight wrist?</p> <p>E2 <input type="checkbox"/> A flexed or bent wrist?</p> <p>F Are similar motion patterns repeated?</p> <p>F1 <input type="checkbox"/> 10 times per minute or less?</p> <p>F2 <input type="checkbox"/> 11 to 20 times per minute?</p> <p>F3 <input type="checkbox"/> More than 20 times per minute?</p> <p>Neck</p> <p>G When performing the task, is the head/neck bent or twisted?</p> <p>G1 <input type="checkbox"/> No</p> <p>G2 <input type="checkbox"/> Yes, occasionally</p> <p>G3 <input type="checkbox"/> Yes, continuously</p>	<p>Workers</p> <p>H Is the maximum weight handled MANUALLY BY YOU in this task?</p> <p>H1 <input type="checkbox"/> Light (5 kg or less)</p> <p>H2 <input type="checkbox"/> Moderate (6 to 10 kg)</p> <p>H3 <input type="checkbox"/> Heavy (11 to 20kg)</p> <p>H4 <input type="checkbox"/> Very heavy (more than 20 kg)</p> <p>J On average, how much time do you spend per day on this task?</p> <p>J1 <input type="checkbox"/> Less than 2 hours</p> <p>J2 <input type="checkbox"/> 2 to 4 hours</p> <p>J3 <input type="checkbox"/> More than 4 hours</p> <p>K When performing this task, is the maximum force level exerted by one hand?</p> <p>K1 <input type="checkbox"/> Low (kg, less than 1 kg)</p> <p>K2 <input type="checkbox"/> Medium (e.g. 1 to 4 kg)</p> <p>K3 <input type="checkbox"/> High (e.g. more than 4 kg)</p> <p>L Is the visual demand of this task</p> <p>L1 <input type="checkbox"/> Low (almost no need to view fine details)?</p> <p>L2 <input type="checkbox"/> High (need to view some fine details)?</p> <p>* If High, please give details in the box below:</p> <p>M At work do you drive a vehicle for</p> <p>M1 <input type="checkbox"/> Less than one hour per day or Never?</p> <p>M2 <input type="checkbox"/> Between 1 and 4 hours per day?</p> <p>M3 <input type="checkbox"/> More than 4 hours per day?</p> <p>N At work do you use vibrating tools for</p> <p>N1 <input type="checkbox"/> Less than one hour per day or Never?</p> <p>N2 <input type="checkbox"/> Between 1 and 4 hours per day?</p> <p>N3 <input type="checkbox"/> More than 4 hours per day?</p> <p>P Do you have difficulty keeping up with this work?</p> <p>P1 <input type="checkbox"/> Never</p> <p>P2 <input type="checkbox"/> Sometimes</p> <p>P3 <input type="checkbox"/> Often</p> <p>* If Often, please give details in the box below:</p> <p>Q In general, how do you find this job</p> <p>Q1 <input type="checkbox"/> Not at all stressful?</p> <p>Q2 <input type="checkbox"/> Mildly stressful?</p> <p>Q3 <input type="checkbox"/> Moderately stressful?</p> <p>Q4 <input type="checkbox"/> Very stressful?</p> <p>* If Moderately or Very, please give details in the box below:</p>

L Is the visual demand of this task

L1 Low (almost no need to view fine details)?

*L2 High (need to view some fine details)?

* If High, please give details in the box below

M At work do you drive a vehicle for

M1 Less than one hour per day or Never?

M2 Between 1 and 4 hours per day?

M3 More than 4 hours per day?

Visual demand (L1-L2)

Ask the worker to specify if the level of visual demand of the task is 'low' (almost no need to view fine details) or 'high' (need to view some fine details). If the requirement is 'high', ask for more information about this aspect of the task. Record this in the space at the bottom of the page.

Driving (M1-M3)

This question investigates whole-body vibration that may result from driving a vehicle at work. The worker is asked to estimate total time spent driving a vehicle during the working day. If the worker does not drive, do not leave the answer blank, place a tick in M1 'Less than one hour per day or Never'. This question only refers to driving at work, do not include driving to and from work.

QEC Example

L Is the visual demand of this task

L1 Low (almost no need to view fine details)?

*L2 High (need to view some fine details)?

* *If High, please give details in the box below*

M At work do you drive a vehicle for

M1 Less than one hour per day or Never?

M2 Between 1 and 4 hours per day?

M3 More than 4 hours per day?



QEC Example

Worker's name _____ Date _____

Observer's Assessment	Worker's Assessment
<p>Back</p> <p>A When performing the task, is the back (select worst case situation)?</p> <p>A1 <input type="checkbox"/> Almost never?</p> <p>A2 <input type="checkbox"/> Moderately flexed or twisted or side bent?</p> <p>A3 <input type="checkbox"/> Excessively flexed or twisted or side bent?</p> <p>B Select ONLY ONE of the two following task options:</p> <p>Static</p> <p>For seated or standing stationary tasks, does the back remain in a static position most of the time?</p> <p>B1 <input type="checkbox"/> No</p> <p>B2 <input checked="" type="checkbox"/> Yes</p> <p>Car</p> <p>For lifting, pushing/pulling and carrying tasks (i.e. moving a load), is the <u>position</u> of the back:</p> <p>B3 <input type="checkbox"/> Infrequent (around 2 times per minute or less)?</p> <p>B4 <input type="checkbox"/> Frequent (around 8 times per minute)?</p> <p>B5 <input type="checkbox"/> Very frequent (around 12 times per minute or more)?</p> <p>Shoulder/Arm</p> <p>C When the task is performed, are the hands (select worst case situation)?</p> <p>C1 <input type="checkbox"/> At or below waist height?</p> <p>C2 <input type="checkbox"/> At about chest height?</p> <p>C3 <input type="checkbox"/> At or above shoulder height?</p> <p>D Is the shoulder/arm movement:</p> <p>D1 <input type="checkbox"/> Infrequent (some intermittent movement)?</p> <p>D2 <input type="checkbox"/> Frequent (regular movement with some pauses)?</p> <p>D3 <input type="checkbox"/> Very frequent (almost continuous movement)?</p> <p>Wrist/Hand</p> <p>E Is the task performed with (select worst case situation)?</p> <p>E1 <input type="checkbox"/> An almost straight wrist?</p> <p>E2 <input type="checkbox"/> A deviated or bent wrist?</p> <p>F Are similar motion patterns repeated?</p> <p>F1 <input type="checkbox"/> 10 times per minute or less?</p> <p>F2 <input type="checkbox"/> 11 to 20 times per minute?</p> <p>F3 <input type="checkbox"/> More than 20 times per minute?</p> <p>Neck</p> <p>G When performing the task, is the head/neck bent or twisted?</p> <p>G1 <input type="checkbox"/> No</p> <p>G2 <input type="checkbox"/> Yes, occasionally</p> <p>G3 <input type="checkbox"/> Yes, continuously</p>	<p>Workers</p> <p>H Is the maximum weight handled MANUALLY BY YOU in this task?</p> <p>H1 <input type="checkbox"/> Light (5 kg or less)</p> <p>H2 <input type="checkbox"/> Moderate (6 to 10 kg)</p> <p>H3 <input type="checkbox"/> Heavy (11 to 20kg)</p> <p>H4 <input type="checkbox"/> Very heavy (more than 20 kg)</p> <p>J On average, how much time do you spend per day on this task?</p> <p>J1 <input type="checkbox"/> Less than 2 hours</p> <p>J2 <input type="checkbox"/> 2 to 4 hours</p> <p>J3 <input type="checkbox"/> More than 4 hours</p> <p>K When performing this task, is the maximum force level exerted by one hand?</p> <p>K1 <input type="checkbox"/> Low (i.e. less than 1 kg)</p> <p>K2 <input type="checkbox"/> Medium (i.e. 1 to 4 kg)</p> <p>K3 <input type="checkbox"/> High (i.e. more than 4 kg)</p> <p>L Is the visual demand of this task:</p> <p>L1 <input type="checkbox"/> Low (almost no need to view fine details)?</p> <p>L2 <input type="checkbox"/> High (need to view some fine details)?</p> <p>L3 <input type="checkbox"/> Moderate (need to view some fine details)</p> <p>M At work do you drive a vehicle for:</p> <p>M1 <input type="checkbox"/> Less than one hour per day or Never?</p> <p>M2 <input type="checkbox"/> Between 1 and 4 hours per day?</p> <p>M3 <input type="checkbox"/> More than 4 hours per day?</p> <p>N At work do you use vibrating tools for:</p> <p>N1 <input type="checkbox"/> Less than one hour per day or Never?</p> <p>N2 <input type="checkbox"/> Between 1 and 4 hours per day?</p> <p>N3 <input type="checkbox"/> More than 4 hours per day?</p> <p>P Do you have difficulty keeping up with this work?</p> <p>P1 <input type="checkbox"/> Never</p> <p>P2 <input type="checkbox"/> Sometimes</p> <p>*P3 <input type="checkbox"/> Often</p> <p>*If Often, please give details in the box below</p> <p>Q In general, how do you find this job:</p> <p>Q1 <input type="checkbox"/> Not at all stressful?</p> <p>Q2 <input type="checkbox"/> Mildly stressful?</p> <p>*Q3 <input type="checkbox"/> Moderately stressful?</p> <p>*Q4 <input type="checkbox"/> Very stressful?</p> <p>*If Moderately or Very, please give details in the box below</p> <p>O In general, how do you find this job:</p> <p>O1 <input type="checkbox"/> Not at all stressful?</p> <p>O2 <input type="checkbox"/> Mildly stressful?</p> <p>O3 <input type="checkbox"/> Moderately stressful?</p> <p>O4 <input type="checkbox"/> Very stressful?</p> <p>*If Moderately or Very, please give details in the box below</p>

N At work do you use vibrating tools for

N1 Less than one hour per day or Never?

N2 Between 1 and 4 hours per day?

N3 More than 4 hours per day?

P Do you have difficulty keeping up with this work?

P1 Never

P2 Sometimes

*P3 Often

* If Often, please give details in the box below

Q In general, how do you find this job

Q1 Not at all stressful?

Q2 Mildly stressful?

*Q3 Moderately stressful?

*Q4 Very stressful?

* If Moderately or Very, please give details in the box below

QEC Example

N At work do you use vibrating tools for

- N1 Less than one hour per day or Never?
N2 Between 1 and 4 hours per day?
N3 More than 4 hours per day?

P Do you have difficulty keeping up with this work?

- P1 Never
P2 Sometimes
*P3 Often

** If Often, please give details in the box below*

Q In general, how do you find this job

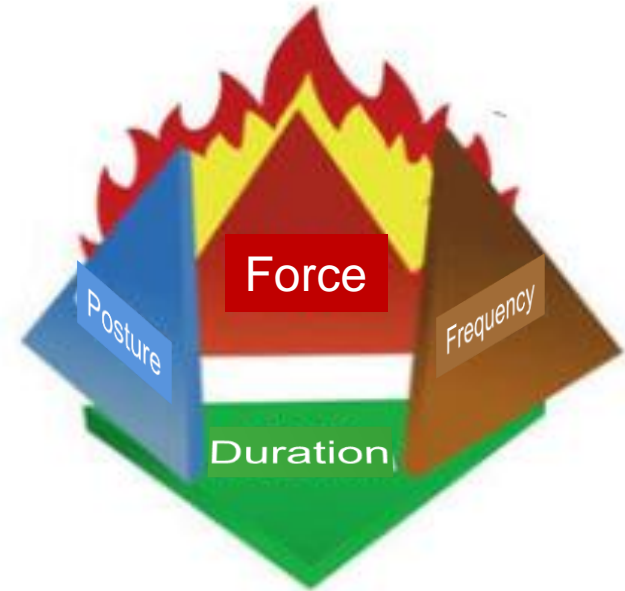
- Q1 Not at all stressful?
Q2 Mildly stressful?
*Q3 Moderately stressful?
*Q4 Very stressful?

** If Moderately or Very, please give details in the box below*



Scoring the QEC

- Scores are based on combinations of risk factors
 - Posture + duration
 - Frequency + duration
 - Frequency + force
 - Duration + force
 - Posture + force
- Represents a relationship between exposure to risk factors and WMSDs



Scoring the QEC

Exposure Scores Worker's name _____ Date _____

Back	Shoulder/Arm	Wrist/Hand	Neck																																																																				
Back Posture (A) & Weight (H) <table border="1"> <tr><th>A1</th><th>A2</th><th>A3</th></tr> <tr><td>H1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>H2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>H3</td><td>6</td><td>8</td><td>10</td></tr> <tr><td>H4</td><td>8</td><td>10</td><td>12</td></tr> </table> <input type="text"/> Score 1	A1	A2	A3	H1	2	4	6	H2	4	6	8	H3	6	8	10	H4	8	10	12	Height (C) & Weight (H) <table border="1"> <tr><th>C1</th><th>C2</th><th>C3</th></tr> <tr><td>H1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>H2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>H3</td><td>6</td><td>8</td><td>10</td></tr> <tr><td>H4</td><td>8</td><td>10</td><td>12</td></tr> </table> <input type="text"/> Score 1	C1	C2	C3	H1	2	4	6	H2	4	6	8	H3	6	8	10	H4	8	10	12	Repeated Motion (F) & Force (K) <table border="1"> <tr><th>F1</th><th>F2</th><th>F3</th></tr> <tr><td>K1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>K2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>K3</td><td>6</td><td>8</td><td>10</td></tr> </table> <input type="text"/> Score 1	F1	F2	F3	K1	2	4	6	K2	4	6	8	K3	6	8	10	Neck Posture (G) & Duration (J) <table border="1"> <tr><th>G1</th><th>G2</th><th>G3</th></tr> <tr><td>J1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>J2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>J3</td><td>6</td><td>8</td><td>10</td></tr> </table> <input type="text"/> Score 1	G1	G2	G3	J1	2	4	6	J2	4	6	8	J3	6	8	10
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Back Posture (A) & Duration (J) <table border="1"> <tr><th>A1</th><th>A2</th><th>A3</th></tr> <tr><td>J1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>J2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>J3</td><td>6</td><td>8</td><td>10</td></tr> </table> <input type="text"/> Score 2	A1	A2	A3	J1	2	4	6	J2	4	6	8	J3	6	8	10	Height (C) & Duration (J) <table border="1"> <tr><th>C1</th><th>C2</th><th>C3</th></tr> <tr><td>J1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>J2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>J3</td><td>6</td><td>8</td><td>10</td></tr> </table> <input type="text"/> Score 2	C1	C2	C3	J1	2	4	6	J2	4	6	8	J3	6	8	10	Repeated Motion (F) & Duration (J) <table border="1"> <tr><th>F1</th><th>F2</th><th>F3</th></tr> <tr><td>J1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>J2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>J3</td><td>6</td><td>8</td><td>10</td></tr> </table> <input type="text"/> Score 2	F1	F2	F3	J1	2	4	6	J2	4	6	8	J3	6	8	10	Visual Demand (L) & Duration (J) <table border="1"> <tr><th>L1</th><th>L2</th></tr> <tr><td>J1</td><td>2</td><td>4</td></tr> <tr><td>J2</td><td>4</td><td>6</td></tr> <tr><td>J3</td><td>6</td><td>8</td></tr> </table> <input type="text"/> Score 2	L1	L2	J1	2	4	J2	4	6	J3	6	8												
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Duration (J) & Weight (H) <table border="1"> <tr><th>J1</th><th>J2</th><th>J3</th></tr> <tr><td>H1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>H2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>H3</td><td>6</td><td>8</td><td>10</td></tr> <tr><td>H4</td><td>8</td><td>10</td><td>12</td></tr> </table> <input type="text"/> Score 3	J1	J2	J3	H1	2	4	6	H2	4	6	8	H3	6	8	10	H4	8	10	12	Duration (J) & Weight (H) <table border="1"> <tr><th>J1</th><th>J2</th><th>J3</th></tr> <tr><td>H1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>H2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>H3</td><td>6</td><td>8</td><td>10</td></tr> <tr><td>H4</td><td>8</td><td>10</td><td>12</td></tr> </table> <input type="text"/> Score 3	J1	J2	J3	H1	2	4	6	H2	4	6	8	H3	6	8	10	H4	8	10	12	Duration (J) & Force (K) <table border="1"> <tr><th>J1</th><th>J2</th><th>J3</th></tr> <tr><td>K1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>K2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>K3</td><td>6</td><td>8</td><td>10</td></tr> </table> <input type="text"/> Score 3	J1	J2	J3	K1	2	4	6	K2	4	6	8	K3	6	8	10	Total score for Neck Sum of Scores 1 to 2 _____															
J1	J2	J3																																																																					
H1	2	4	6																																																																				
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K3	6	8	10																																																																				
Now do ONLY 4 if static OR 5 and 6 if manual handling			Driving																																																																				
Static Posture (B) & Duration (J) <table border="1"> <tr><th>B1</th><th>B2</th></tr> <tr><td>J1</td><td>2</td><td>4</td></tr> <tr><td>J2</td><td>4</td><td>6</td></tr> <tr><td>J3</td><td>6</td><td>8</td></tr> </table> <input type="text"/> Score 4	B1	B2	J1	2	4	J2	4	6	J3	6	8	Frequency (D) & Weight (H) <table border="1"> <tr><th>D1</th><th>D2</th><th>D3</th></tr> <tr><td>H1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>H2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>H3</td><td>6</td><td>8</td><td>10</td></tr> <tr><td>H4</td><td>8</td><td>10</td><td>12</td></tr> </table> <input type="text"/> Score 4	D1	D2	D3	H1	2	4	6	H2	4	6	8	H3	6	8	10	H4	8	10	12	Wrist Posture (E) & Force (K) <table border="1"> <tr><th>E1</th><th>E2</th></tr> <tr><td>K1</td><td>2</td><td>4</td></tr> <tr><td>K2</td><td>4</td><td>6</td></tr> <tr><td>K3</td><td>6</td><td>8</td></tr> </table> <input type="text"/> Score 4	E1	E2	K1	2	4	K2	4	6	K3	6	8	Total for Driving _____																											
B1	B2																																																																						
J1	2	4																																																																					
J2	4	6																																																																					
J3	6	8																																																																					
D1	D2	D3																																																																					
H1	2	4	6																																																																				
H2	4	6	8																																																																				
H3	6	8	10																																																																				
H4	8	10	12																																																																				
E1	E2																																																																						
K1	2	4																																																																					
K2	4	6																																																																					
K3	6	8																																																																					
Frequency (E) & Weight (H) <table border="1"> <tr><th>B3</th><th>B4</th><th>B5</th></tr> <tr><td>H1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>H2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>H3</td><td>6</td><td>8</td><td>10</td></tr> <tr><td>H4</td><td>8</td><td>10</td><td>12</td></tr> </table> <input type="text"/> Score 5	B3	B4	B5	H1	2	4	6	H2	4	6	8	H3	6	8	10	H4	8	10	12	Frequency (D) & Duration (J) <table border="1"> <tr><th>D1</th><th>D2</th><th>D3</th></tr> <tr><td>J1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>J2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>J3</td><td>6</td><td>8</td><td>10</td></tr> </table> <input type="text"/> Score 5	D1	D2	D3	J1	2	4	6	J2	4	6	8	J3	6	8	10	Wrist Posture (E) & Duration (J) <table border="1"> <tr><th>E1</th><th>E2</th></tr> <tr><td>J1</td><td>2</td><td>4</td></tr> <tr><td>J2</td><td>4</td><td>6</td></tr> <tr><td>J3</td><td>6</td><td>8</td></tr> </table> <input type="text"/> Score 5	E1	E2	J1	2	4	J2	4	6	J3	6	8	Vibration																							
B3	B4	B5																																																																					
H1	2	4	6																																																																				
H2	4	6	8																																																																				
H3	6	8	10																																																																				
H4	8	10	12																																																																				
D1	D2	D3																																																																					
J1	2	4	6																																																																				
J2	4	6	8																																																																				
J3	6	8	10																																																																				
E1	E2																																																																						
J1	2	4																																																																					
J2	4	6																																																																					
J3	6	8																																																																					
Frequency (E) & Duration (J) <table border="1"> <tr><th>B3</th><th>B4</th><th>B5</th></tr> <tr><td>J1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>J2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>J3</td><td>6</td><td>8</td><td>10</td></tr> </table> <input type="text"/> Score 6	B3	B4	B5	J1	2	4	6	J2	4	6	8	J3	6	8	10	Total score for Back Sum of scores 1 to 4 OR Scores 1 to 3 plus 5 and 6 _____	Total score for Shoulder/Arm Sum of Scores 1 to 5 _____	Total for Vibration _____																																																					
B3	B4	B5																																																																					
J1	2	4	6																																																																				
J2	4	6	8																																																																				
J3	6	8	10																																																																				
		Total score for Wrist/Hand Sum of Scores 1 to 5 _____	Work pace																																																																				
			<table border="1"> <tr><th>P1</th><th>P2</th><th>P3</th></tr> <tr><td>J1</td><td>2</td><td>4</td><td>6</td></tr> <tr><td>J2</td><td>4</td><td>6</td><td>8</td></tr> <tr><td>J3</td><td>6</td><td>8</td><td>10</td></tr> </table> <input type="text"/> Score 6	P1	P2	P3	J1	2	4	6	J2	4	6	8	J3	6	8	10																																																					
P1	P2	P3																																																																					
J1	2	4	6																																																																				
J2	4	6	8																																																																				
J3	6	8	10																																																																				
			Total for Work pace _____																																																																				
			Stress																																																																				
			<table border="1"> <tr><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr> <tr><td>J1</td><td>2</td><td>4</td><td>6</td><td>8</td><td>16</td></tr> </table> <input type="text"/> Score 6	Q1	Q2	Q3	Q4	J1	2	4	6	8	16																																																										
Q1	Q2	Q3	Q4																																																																				
J1	2	4	6	8	16																																																																		
			Total for Stress _____																																																																				



Scoring the QEC

Worker's name: _____ Date: _____

Back

Back Posture (A) & Weight (H)

	A1	A2	A3
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

Score 1

Back Posture (A) & Weight (H)

	A1	A2	A3
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

Score 2

Back Posture (A) & Weight (H)

	A1	A2	A3
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

Score 3

Back Posture (A) & Weight (H)

	A1	A2	A3
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

Score 4

Back Posture (A) & Weight (H)

	A1	A2	A3
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

Score 5

Total score for Back
Sum of scores 1 to 5
Score 1 to 5 plus 6 plus 1

Back

Back Posture (A) & Weight (H)

	A1	A2	A3
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

6 Score 1



Scoring the QEC

Exposure Scores Worker's name _____ Date _____

Back

Back Posture (A) & Weight (J)

	A1	A2	A3
J1	2	4	6
J2	4	6	8
J3	6	8	10

Score 1 Score 2 Score 3 Score 4 Score 5 Score 6

Shoulder/Arm

Height (C) & Weight (J)

	C1	C2	C3
J1	2	4	6
J2	4	6	8
J3	6	8	10

Score 1 Score 2 Score 3 Score 4 Score 5

Wrist/Hand

Repetitive Motion (F) & Force (J)

	F1	F2	F3
J1	2	4	6
J2	4	6	8
J3	6	8	10

Score 1 Score 2 Score 3 Score 4 Score 5

Neck

Neck Posture (C) & Duration (J)

	C1	C2	C3
J1	2	4	6
J2	4	6	8
J3	6	8	10

Score 1 Score 2 Score 3

Static Posture (C) & Duration (J)

	C1	C2	C3
J1	2	4	6
J2	4	6	8
J3	6	8	10

Score 4

Frequency (C) & Weight (J)

	C1	C2	C3
J1	2	4	6
J2	4	6	8
J3	6	8	10

Score 5

Frequency (C) & Duration (J)

	C1	C2	C3
J1	2	4	6
J2	4	6	8
J3	6	8	10

Score 6

Total score for Back
Sum of scores 1 to 6

Total score for Shoulder/Arm
Sum of scores 1 to 5

Total score for Wrist/Hand
Sum of scores 1 to 5

Total score for Neck
Sum of scores 1 to 3

Driving

M1 M2 M3

1 4 9

Total for Driving

Vibration

N1 N2 N3

1 4 9

Total for Vibration

Work pace

P1 P2 P3

1 4 9

Total for Work pace

Stress

O1 O2 O3 O4

1 4 9 16

Total for Stress

Back Posture (A) & Duration (J)

	A1	A2	A3
J1	2	4	6
J2	4	6	8
J3	6	8	10

8 Score 2



Scoring the QEC

Exposure Scores Worker's name _____ Date _____

Back		Shoulder/Arm		Wrist/Hand		Neck	
Back Posture (A) & Weight (H)		Height (C) & Weight (H)		Repeated Motion (F) & Force (G)		Neck Posture (E) & Duration (L)	
H1	2 4	H1	2 4 6	H1	2 4 6	H1	2 4 6
H2	4 6	H2	4 6 8	H2	4 6 8	H2	4 6 8
H3	6 8	H3	6 8 10	H3	6 8 10	H3	6 8 10
H4	8 10	H4	8 10 12	H4	8 10 12	H4	8 10 12
Score 1		Score 1		Score 1		Score 1	
Back Posture (A) & Duration (L)		Height (C) & Duration (L)		Repeated Motion (F) & Duration (L)		Visual Demand (I) & Duration (L)	
J1	2 4	J1	2 4 6	J1	2 4 6	J1	2 4
J2	4 6	J2	4 6 8	J2	4 6 8	J2	4 6
J3	6 8	J3	6 8 10	J3	6 8 10	J3	6 8
Score 2		Score 2		Score 2		Score 2	
Duration (L) & Weight (H)		Duration (L) & Weight (H)		Duration (L) & Force (G)		Total score for Neck	
H1	2 4 6	H1	2 4 6	H1	2 4 6	Sum of Scores 1 to 2	
H2	4 6 8	H2	4 6 8	H2	4 6 8	Driving	
H3	6 8 10	H3	6 8 10	H3	6 8 10	M1 M2 M3	
Score 3		Score 3		Score 3		1 4 9	
Static Posture (B) & Duration (L)		Frequency (E) & Weight (H)		Wrist Posture (E) & Force (G)		Total for Driving	
J1	2 4	J1	2 4 6	H1	2 4 6	M1 M2 M3	
J2	4 6	J2	4 6 8	H2	4 6 8	1 4 9	
J3	6 8	J3	6 8 10	H3	6 8 10	Total for Driving	
Score 4		Score 4		Score 4		Vibration	
Frequency (E) & Weight (H)		Frequency (E) & Duration (L)		Wrist Posture (E) & Duration (L)		Total for Vibration	
H1	2 4 6	J1	2 4 6	H1	2 4 6	M1 M2 M3	
H2	4 6 8	J2	4 6 8	H2	4 6 8	1 4 9	
H3	6 8 10	J3	6 8 10	H3	6 8 10	Total for Vibration	
Score 5		Score 5		Score 5		Work pace	
Frequency (E) & Duration (L)		Frequency (E) & Duration (L)		Wrist Posture (E) & Duration (L)		Total for Work pace	
J1	2 4 6	J1	2 4 6	H1	2 4 6	M1 M2 M3	
J2	4 6 8	J2	4 6 8	H2	4 6 8	1 4 9	
J3	6 8 10	J3	6 8 10	H3	6 8 10	Total for Work pace	
Score 6		Score 6		Score 6		Stress	
Total score for Back		Total score for Shoulder/Arm		Total score for Wrist/Hand		Total for Stress	
Sum of Scores 1 to 3		Sum of Scores 1 to 3		Sum of Scores 1 to 3		Q1 Q2 Q3 Q4	
Scores 1 to 3 plus 9 Add 9		Scores 1 to 3 plus 9 Add 9		Scores 1 to 3 plus 9 Add 9		1 4 9 14	
Total for Back		Total for Shoulder/Arm		Total for Wrist/Hand		Total for Stress	

Duration (J) & Weight (H)

	J1	J2	J3
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

8 Score 3



Scoring the QEC

Exposure Scores Worker's name _____ Date _____

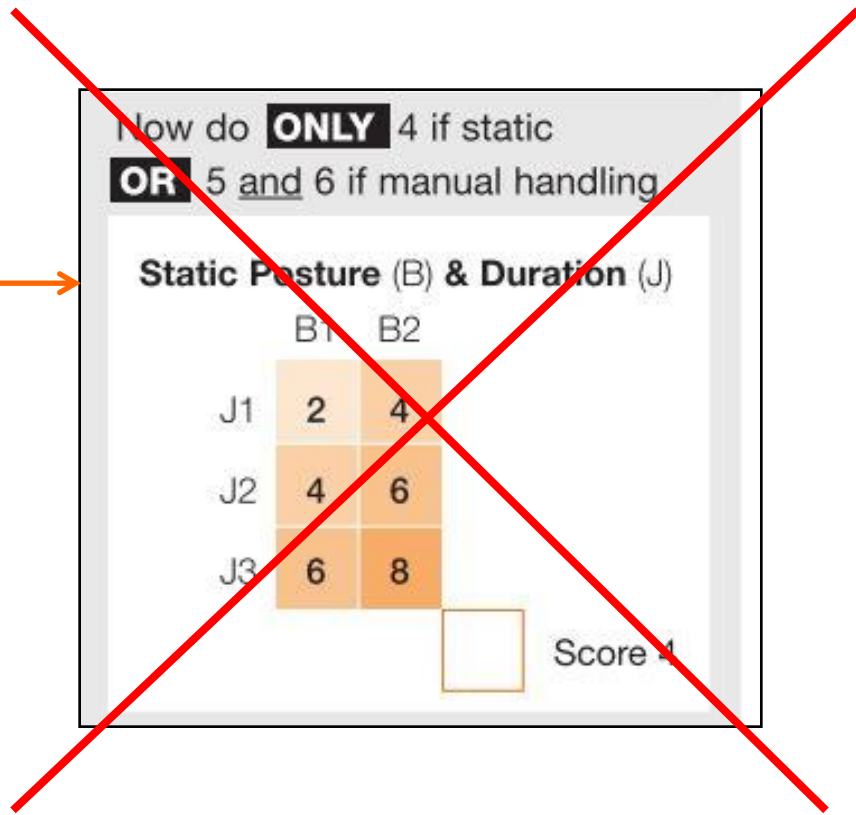
Back	Shoulder/Arm	Wrist/Hand	Neck
Back Posture (I) & Weight (I) H1 2 4 6 8 H2 4 6 8 10 H3 6 8 10 12 H4 8 10 12 14 Score 1	Height (I) & Weight (I) H1 2 4 6 8 H2 4 6 8 10 H3 6 8 10 12 H4 8 10 12 14 Score 1	Repetitive Motion (I) & Force (I) R1 2 4 6 8 R2 4 6 8 10 R3 6 8 10 12 Score 1	Neck Posture (I) & Duration (I) N1 2 4 6 8 N2 4 6 8 10 N3 6 8 10 12 Score 1
Back Posture (I) & Duration (I) J1 2 4 6 8 J2 4 6 8 10 J3 6 8 10 12 Score 2	Height (I) & Duration (I) J1 2 4 6 8 J2 4 6 8 10 J3 6 8 10 12 Score 2	Repetitive Motion (I) & Duration (I) D1 2 4 6 8 D2 4 6 8 10 D3 6 8 10 12 Score 2	Visual Demand (I) & Duration (I) V1 2 4 6 8 V2 4 6 8 10 V3 6 8 10 12 Score 2
Duration (I) & Weight (I) H1 2 4 6 8 H2 4 6 8 10 H3 6 8 10 12 H4 8 10 12 14 Score 3	Duration (I) & Weight (I) J1 2 4 6 8 J2 4 6 8 10 J3 6 8 10 12 Score 3	Duration (I) & Force (I) R1 2 4 6 8 R2 4 6 8 10 R3 6 8 10 12 Score 3	Total score for Neck Sum of Scores 1 to 2 Driving M1 M2 M3 1 4 9
Static Posture (B) & Duration (J) J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 4	Frequency (I) & Weight (I) F1 2 4 6 8 F2 4 6 8 10 F3 6 8 10 12 F4 8 10 12 14 Score 4	Wrist Posture (I) & Force (I) W1 2 4 6 8 W2 4 6 8 10 W3 6 8 10 12 Score 4	Total for Driving Vibration N1 N2 N3 1 4 9
Frequency (I) & Duration (I) F1 2 4 6 8 F2 4 6 8 10 F3 6 8 10 12 F4 8 10 12 14 Score 5	Frequency (I) & Duration (I) J1 2 4 6 8 J2 4 6 8 10 J3 6 8 10 12 Score 5	Wrist Posture (I) & Duration (I) D1 2 4 6 8 D2 4 6 8 10 D3 6 8 10 12 Score 5	Total for Vibration Work place P1 P2 P3 1 4 9
Frequency (I) & Duration (I) F1 2 4 6 8 F2 4 6 8 10 F3 6 8 10 12 F4 8 10 12 14 Score 6	Frequency (I) & Duration (I) J1 2 4 6 8 J2 4 6 8 10 J3 6 8 10 12 Score 6	Total score for Back Sum of Scores 1 to 6 Total score for Shoulder/Arm Sum of Scores 1 to 5 Total score for Wrist/Hand Sum of Scores 1 to 5 Total for Stress S1 S2 S3 S4 1 4 9 16	Total for Work place Stress S1 S2 S3 S4 1 4 9 16

Now do **ONLY** 4 if static
OR 5 and 6 if manual handling

Static Posture (B) & Duration (J)

	B1	B2
J1	2	4
J2	4	6
J3	6	8

Score 4



Scoring the QEC

Exposure Scores Worker's name _____ Date _____

Back	Shoulder/Arm	Wrist/Hand	Neck
Back Posture (L) & Weight (L) A1 A2 A3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Height (L) & Weight (L) C1 C2 C3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Repeated Motion (F) & Force (F) F1 F2 F3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Neck Posture (L) & Duration (L) G1 G2 G3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 1
Back Posture (L) & Duration (L) A1 A2 A3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Height (L) & Duration (L) C1 C2 C3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Repeated Motion (F) & Duration (L) F1 F2 F3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Visual Demand (L) & Duration (L) G1 G2 G3 J1 2 4 J2 4 6 J3 6 8 Score 2
Duration (L) & Weight (L) A1 A2 A3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Duration (L) & Weight (L) C1 C2 C3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Duration (L) & Force (F) F1 F2 F3 K1 2 4 6 K2 4 6 8 K3 6 8 10 Score 3	Total score for Neck Sum of Scores 1 to 2 Driving M1 M2 M3 1 4 9 Total for Driving Vibration N1 N2 N3 1 4 9 Total for Vibration Work pace P1 P2 P3 1 4 9 Total for Work pace Stress O1 O2 O3 O4 1 4 9 16 Total for Stress
Static Posture (L) & Duration (L) B1 B2 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 4	Frequency (L) & Weight (L) D1 D2 D3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 4	Wrist Posture (L) & Force (F) E1 E2 K1 2 4 6 K2 4 6 8 K3 6 8 10 Score 4	
Frequency (L) & Weight (L) D1 D2 D3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 5	Frequency (L) & Duration (L) D1 D2 D3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 5	Wrist Posture (L) & Duration (L) E1 E2 J1 2 4 J2 4 6 J3 6 8 Score 5	
Frequency (L) & Duration (L) D1 D2 D3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 6			
Total score for Back Sum of Scores 1 to 6 Scores 1 to 3 plus 7 add 5	Total score for Shoulder/Arm Sum of Scores 1 to 2	Total score for Wrist/Hand Sum of Scores 1 to 6	

Frequency (B) & Weight (H)

	B3	B4	B5
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

4 Score 5



Scoring the QEC

Exposure Scores Worker's name _____ Date _____

Back	Shoulder/Arm	Wrist/Hand	Neck
Back Posture (I) & Weight (H) A1 A2 A3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Height (C) & Weight (H) C1 C2 C3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Repeated Motion (F) & Force (K) F1 F2 F3 K1 2 4 6 K2 4 6 8 K3 6 8 10 Score 1	Neck Posture (I) & Duration (J) G1 G2 G3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 1
Back Posture (I) & Duration (L) A1 A2 A3 L1 2 4 6 L2 4 6 8 L3 6 8 10 Score 2	Height (C) & Duration (L) C1 C2 C3 L1 2 4 6 L2 4 6 8 L3 6 8 10 Score 2	Repeated Motion (F) & Duration (L) F1 F2 F3 L1 2 4 6 L2 4 6 8 L3 6 8 10 Score 2	Visual Demand (I) & Duration (L) V1 V2 L1 2 4 L2 4 6 L3 6 8 Score 2
Duration (L) & Weight (H) D1 D2 D3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Duration (L) & Weight (H) D1 D2 D3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Duration (L) & Force (K) D1 D2 D3 K1 2 4 6 K2 4 6 8 K3 6 8 10 Score 3	Total score for Neck Sum of Scores 1 to 2 1 4 6
Static Posture (I) & Duration (L) B1 B2 L1 2 4 L2 4 6 L3 6 8 Score 4	Frequency (C) & Weight (H) D1 D2 D3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 4	Wrist Posture (C) & Force (K) E1 E2 K1 2 4 6 K2 4 6 8 K3 6 8 10 Score 4	Driving M1 M2 M3 1 4 6
Frequency (C) & Weight (H) B3 B4 B5 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 5	Frequency (C) & Duration (L) D1 D2 D3 L1 2 4 6 L2 4 6 8 L3 6 8 10 Score 5	Wrist Posture (C) & Duration (L) D1 D2 D3 L1 2 4 6 L2 4 6 8 L3 6 8 10 Score 5	Total for Driving 1 4 6
Frequency (C) & Duration (L) B3 B4 B5 L1 2 4 6 L2 4 6 8 L3 6 8 10 Score 6	Total score for Back Sum of scores 1 to 4 Scores 1 to 5 plus 6	Total score for Shoulder/Arm Sum of Scores 1 to 5	Total for Vibration N1 N2 N3 1 4 6
		Total score for Wrist/Hand Sum of Scores 1 to 5	Work pace P1 P2 P3 1 4 6
			Total for Work pace 1 4 6
			Stress Q1 Q2 Q3 Q4 1 4 6 10

Frequency (B) & Duration (J)

	B3	B4	B5
J1	2	4	6
J2	4	6	8
J3	6	8	10

6 Score 6



Scoring the QEC

Total score for Back
 Sum of scores 1 to 4 **OR**
 Scores 1 to 3 plus 5 and 6 **32**

Exposure Scores		Worker's name	Date
Back	Shoulder/Arm	Wrist/Hand	Neck
Back Posture (1) & Weight (1) H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Height (2) & Weight (1) H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Repetitive Motion (7) & Force (7) R1 2 4 6 R2 4 6 8 R3 6 8 10 Score 1	Neck Posture (2) & Duration (3) N1 2 4 6 N2 4 6 8 N3 6 8 10 Score 1
Back Posture (4) & Duration (3) J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Height (2) & Duration (2) C1 2 4 6 C2 4 6 8 C3 6 8 10 Score 2	Repetitive Motion (7) & Duration (3) F1 2 4 6 F2 4 6 8 F3 6 8 10 Score 2	Visual Demand (1) & Duration (3) L1 2 4 L2 4 6 8 L3 6 8 10 Score 2
Duration (3) & Weight (1) J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 3	Duration (2) & Weight (1) J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 3	Duration (2) & Force (7) J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 3	Total score for Neck Sum of Scores 1 to 3 Driving M1 M2 M3 1 4 8 Total for Driving Vibration N1 N2 N3 1 4 8 Total for Vibration Work pace P1 P2 P3 1 4 8 Total for Work pace Stress S1 S2 S3 S4 1 4 8 16 Total for Stress
Static Posture (2) & Duration (3) J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 4	Frequency (2) & Weight (1) H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 4	Wrist Posture (2) & Force (7) W1 2 4 6 W2 4 6 8 W3 6 8 10 Score 4	
Frequency (2) & Weight (1) H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 5	Frequency (2) & Duration (3) D1 2 4 6 D2 4 6 8 D3 6 8 10 Score 5	Wrist Posture (2) & Duration (3) W1 2 4 6 W2 4 6 8 W3 6 8 10 Score 5	
Frequency (2) & Duration (3) D1 2 4 6 D2 4 6 8 D3 6 8 10 Score 6			
Total score for Back Sum of scores 1 to 4 OR Scores 1 to 3 plus 5 and 6	Total score for Shoulder/Arm Sum of Scores 1 to 5	Total score for Wrist/Hand Sum of Scores 1 to 5	



Scoring the QEC

Exposure Scores		Worker's name	Date
Back	Shoulder/Arm		
Back Posture (I) & Weight (I) A1 A2 A3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Height (I) & Weight (I) C1 C2 C3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Wrist/Hand	Neck
Back Posture (I) & Duration (I) A1 A2 A3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Height (I) & Duration (I) C1 C2 C3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Repeted Motion (I) & Force (I) F1 F2 F3 K1 2 4 6 K2 4 6 8 K3 6 8 10 Score 1	Neck Posture (I) & Duration (I) D1 D2 D3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 1
Duration (I) & Weight (I) H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Duration (I) & Weight (I) H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Repeted Motion (I) & Duration (I) F1 F2 F3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Visual Demand (I) & Duration (I) V1 V2 V3 J1 2 4 J2 4 6 J3 6 8 Score 2
Static Posture (II) & Duration (I) B1 B2 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 4	Frequency (II) & Weight (I) D1 D2 D3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 4	Duration (I) & Force (I) F1 F2 F3 K1 2 4 6 K2 4 6 8 K3 6 8 10 Score 3	Total score for Neck Sum of Scores 1 to 2 Driving M1 M2 M3 1 4 9 Total for Driving
Frequency (II) & Duration (I) H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 5	Frequency (II) & Duration (I) D1 D2 D3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 5	Wrist Posture (II) & Force (I) E1 E2 H1 2 4 6 H2 4 6 8 H3 6 8 10 Score 4	Vibration N1 N2 N3 1 4 9 Total for Vibration
Frequency (II) & Duration (I) H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 6	Frequency (II) & Duration (I) D1 D2 D3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 6	Wrist Posture (II) & Duration (I) E1 E2 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 5	Work pace P1 P2 P3 1 4 9 Total for Work pace
Total score for Back Sum of Scores 1 to 6 Scores 1 to 3 plus 5 and 6	Total score for Shoulder/Arm Sum of Scores 1 to 6	Total score for Wrist/Hand Sum of Scores 1 to 5	Stress O1 O2 O3 O4 1 4 9 16 Total for Stress

Total score for Shoulder/Arm
 Sum of Scores 1 to 5

36



Scoring the QEC

Exposure Scores Worker's name _____ Date _____

Back	Shoulder/Arm	Wrist/Hand	Neck
Back Posture (1) & Weight (1) A1 A2 A3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Height (1) & Weight (1) C1 C2 C3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Repetitive Motion (1) & Force (1) F1 F2 H1 2 4 6 H2 4 6 8 H3 6 8 10 Score 1	Back Posture (2) & Duration (2) G1 G2 G3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 1
Back Posture (2) & Duration (2) A1 A2 A3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Height (2) & Duration (2) C1 C2 C3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Repetitive Motion (2) & Duration (2) F1 F2 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Visual Demand (1) & Duration (1) L1 L2 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2
Duration (1) & Weight (1) D1 D2 D3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Duration (1) & Weight (1) D1 D2 D3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Duration (1) & Force (1) D1 D2 D3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Total score for Neck Sum of Scores 1 to 2 Driving M1 M2 M3 1 4 8 Total for Driving
Static Posture (1) & Duration (1) S1 S2 J1 2 4 J2 4 6 J3 6 8 Score 4	Frequency (1) & Weight (1) F1 F2 F3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 4	Wrist Posture (1) & Force (1) E1 H1 2 4 6 H2 4 6 8 H3 6 8 10 Score 4	Vibration N1 N2 N3 1 4 8 Total for Vibration
Frequency (1) & Weight (1) F1 F2 F3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 5	Frequency (1) & Duration (1) F1 F2 F3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 5	Wrist Posture (1) & Duration (1) E1 J1 2 J2 4 J3 6 Score 5	Work pace P1 P2 P3 1 4 8 Total for Work pace
Frequency (1) & Duration (1) F1 F2 F3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 6	Total score for Back Sum of scores 1 to 3 Scores 1 to 3 are _____	Total score for Shoulder/Arm Sum of Scores 1 to 5 Scores 1 to 5 are _____	Stress Q1 Q2 Q3 Q4 1 4 8 16 Total for Stress

Total score for Wrist/Hand
Sum of Scores 1 to 5

42



Scoring the QEC

Exposure Scores		Worker's name	Date
Back	Shoulder/Arm		
Back Posture (1) & Weight (1) H1 2 4 6 8 H2 4 6 8 10 H3 6 8 10 12 H4 8 10 12 14 Score 1	Height (1) & Weight (1) C1 C2 C3 H1 2 4 6 8 H2 4 6 8 10 H3 6 8 10 12 H4 8 10 12 14 Score 1	Repetitive Motion (1) & Force (1) R1 R2 R3 K1 2 4 6 8 K2 4 6 8 10 K3 6 8 10 12 Score 1	Neck Posture (1) & Duration (1) N1 N2 N3 J1 2 4 6 8 J2 4 6 8 10 J3 6 8 10 12 Score 1
Back Posture (2) & Duration (1) J1 2 4 6 8 J2 4 6 8 10 J3 6 8 10 12 Score 2	Height (2) & Duration (1) C1 C2 C3 J1 2 4 6 8 J2 4 6 8 10 J3 6 8 10 12 Score 2	Repetitive Motion (2) & Duration (1) R1 R2 R3 J1 2 4 6 8 J2 4 6 8 10 J3 6 8 10 12 Score 2	Visual Demand (1) & Duration (1) L1 L2 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2
Duration (1) & Weight (1) J1 J2 J3 H1 2 4 6 8 H2 4 6 8 10 H3 6 8 10 12 H4 8 10 12 14 Score 3	Duration (1) & Weight (1) J1 J2 J3 H1 2 4 6 8 H2 4 6 8 10 H3 6 8 10 12 H4 8 10 12 14 Score 3	Duration (1) & Force (1) J1 J2 J3 K1 2 4 6 8 K2 4 6 8 10 K3 6 8 10 12 Score 3	Total score for Neck Sum of Scores 1 to 2 1 4 9
Static Posture (1) & Duration (1) S1 S2 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 4	Frequency (1) & Weight (1) F1 F2 F3 H1 2 4 6 8 H2 4 6 8 10 H3 6 8 10 12 H4 8 10 12 14 Score 4	Wrist Posture (1) & Force (1) W1 W2 W3 K1 2 4 6 K2 4 6 8 K3 6 8 10 Score 4	Total for Driving D1 D2 D3 N1 N2 N3 1 4 9
Frequency (1) & Weight (1) F1 F2 F3 H1 2 4 6 8 H2 4 6 8 10 H3 6 8 10 12 H4 8 10 12 14 Score 5	Frequency (1) & Duration (1) F1 F2 F3 J1 2 4 6 8 J2 4 6 8 10 J3 6 8 10 12 Score 5	Wrist Posture (2) & Duration (1) W1 W2 W3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 5	Total for Vibration V1 V2 V3 Y 4 9
Frequency (1) & Duration (1) F1 F2 F3 J1 2 4 6 8 J2 4 6 8 10 J3 6 8 10 12 Score 6			Total for Work pace P1 P2 P3 Y 4 9
Total score for Back Sum of scores 1 to 4 Scores 1 to 3 plus 9 add 5	Total score for Shoulder/Arm Sum of Scores 1 to 5	Total score for Wrist/Hand Sum of Scores 1 to 5	Total for Stress S1 S2 S3 S4 1 4 9 16

Total score for Neck
Sum of Scores 1 to 2

14



Scoring the QEC

Exposure Scores Worker's name _____ Date _____

Back	Shoulder/Arm	Wrist/Hand	Neck
Back Posture (1) & Weight (1) A1 A2 A3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Height (2) & Weight (1) C1 C2 C3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Repetitive Motion (7) & Force (5) F1 F2 F3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Neck Posture (1) & Duration (1) G1 G2 G3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 1
Back Posture (1) & Duration (1) A1 A2 A3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Height (2) & Duration (1) C1 C2 C3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Repetitive Motion (7) & Duration (1) F1 F2 F3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Visual Demand (1) & Duration (1) G1 G2 G3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2
Duration (1) & Weight (1) H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Duration (1) & Weight (1) J1 J2 J3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Duration (1) & Force (5) F1 F2 F3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Sum of Scores 1 to 2 M1 M2 M3 1 4 9
Static Posture (1) & Duration (1) B1 B2 B3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 4	Frequency (2) & Weight (1) D1 D2 D3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 4	Wrist Posture (1) & Force (5) E1 E2 E3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 4	Total for Driving M1 M2 M3 1 4 9
Frequency (1) & Weight (1) B3 B4 B5 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 5	Frequency (1) & Duration (1) D1 D2 D3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 5	Wrist Posture (1) & Duration (1) E1 E2 E3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 5	Vibration N1 N2 N3 1 4 9
Frequency (1) & Duration (1) B3 B4 B5 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 6	Frequency (1) & Duration (1) D1 D2 D3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 6	Wrist Posture (1) & Duration (1) E1 E2 E3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 6	Total for Vibration N1 N2 N3 1 4 9
Total score for Back Sum of scores 1 to 3 Scores 1 to 3 plus 1 add 1	Total score for Shoulder/Arm Sum of scores 1 to 3	Total score for Wrist/Hand Sum of scores 1 to 5	Work pace P1 P2 P3 1 4 9
			Total for Work pace P1 P2 P3 1 4 9
			Stress S1 S2 S3 S4 1 4 9 16
			Total for Stress S1 S2 S3 S4 1 4 9 16

Driving

M1 M2 M3
1
4
9

Total for Driving 1



Scoring the QEC

Exposure Scores Worker's name _____ Date _____

Back	Shoulder/Arm	Wrist/Hand	Neck
Back Posture (1) & Weight (1) A1 A2 A3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Height (2) & Weight (1) C1 C2 C3 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 1	Repeated Motion (7) & Force (5) F1 F2 F3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Neck Posture (1) & Duration (3) D1 D2 D3 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 1
Back Posture (1) & Duration (1) A1 A2 A3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Height (2) & Duration (2) C1 C2 C3 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 2	Repeated Motion (7) & Duration (1) F1 F2 F3 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 2	Visual Demand (1) & Duration (1) L1 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 2
Duration (1) & Weight (1) J1 J2 J3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Duration (1) & Weight (1) J1 J2 J3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Duration (1) & Force (1) J1 J2 J3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Total score for neck Sum of Scores = 2 Driving M1 M2 M3 1 4 9 Vibration N1 N2 N3 1 4 9
Static Posture (1) & Duration (1) J1 J2 J3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 4	Frequency (1) & Weight (1) F1 F2 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 4	Wrist Posture (1) & Force (1) E1 E2 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 4	Total for Vibration N1 N2 N3 1 4 9 work pace P1 P2 P3 1 4 9
Frequency (1) & Weight (1) F1 F2 F3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 5	Frequency (1) & Duration (1) D1 D2 D3 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 5	Wrist Posture (1) & Duration (1) E1 E2 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 5	Total for Work pace P1 P2 P3 1 4 9 Stress S1 S2 S3 S4 1 4 9 16 Total for Stress
Total score for Back Sum of scores 1 to 6 = 25 Scores 1 to 3 plus 4 and 5	Total score for Shoulder/Arm Sum of Scores 1 to 5	Total score for Wrist/Hand Sum of Scores 1 to 5	Total for Vibration N1 N2 N3 1 4 9

Vibration

N1	N2	N3
1	4	9

Total for Vibration 4



Scoring the QEC

Exposure Scores Worker's name _____ Date _____

Back	Shoulder/Arm	Wrist/Hand	Neck
Back Posture (1) & Weight (1) A1 A2 A3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Height (2) & Weight (1) C1 C2 C3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Repetitive Motion (1) & Force (1) F1 F2 F3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 1	Neck Posture (2) & Duration (2) O1 O2 O3 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 1
Back Posture (2) & Duration (2) H1 H2 H3 J1 2 4 6 J2 4 6 8 J3 6 8 10 Score 2	Height (2) & Duration (2) C1 C2 C3 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 2	Repetitive Motion (1) & Duration (2) F1 F2 F3 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 2	Visual Demand (2) & Duration (2) V1 V2 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 2
Duration (2) & Weight (1) H1 H2 H3 H4 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 3	Duration (2) & Weight (1) C1 C2 C3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Duration (2) & Force (1) F1 F2 F3 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 3	Total score for Neck Sum of Scores 1 to 2 Driving Vibration
Static Posture (2) & Duration (2) S1 S2 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 4	Frequency (2) & Weight (1) W1 W2 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 4	Wrist Posture (2) & Force (1) W1 W2 H1 2 4 6 H2 4 6 8 H3 6 8 10 H4 8 10 12 Score 4	Total for Driving M1 M2 1 4
Frequency (2) & Duration (2) F1 F2 F3 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 5	Frequency (2) & Duration (2) C1 C2 C3 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 5	Wrist Posture (2) & Duration (2) W1 W2 J1 2 4 6 J2 4 6 8 J3 6 8 10 J4 8 10 12 Score 5	Total for Stress Work pace P1 P2 P3 1 4 9 Stress S1 S2 S3 S4 1 4 9 16
Total score for Back Sum of scores 1 to 3 Scores 1 to 3 plus 5 add 5	Total score for Shoulder/Arm Sum of Scores 1 to 5	Total score for Wrist/Hand Sum of Scores 1 to 5	Total for Work pace _____ Total for Stress _____

Work pace

P1 P2 P3
1
4
9

1

Total for Work pace _____

Stress

Q1 Q2 Q3 Q4
1
4
9
16

1

Total for Stress _____



QEC Scores

- Used to show “before and after” reductions in risk
- Used to determine the levels of exposure for each body area
- Used to prioritize where to spend resources



Before



After



Exposure Level

	Exposure level			
Score	Low	Moderate	High	Very High
Back (static)	8-15	16-22	23-29	29-40
Back (moving)	10-20	21-30	31-40	41-56
Shoulder/arm	10-20	21-30	31-40	41-56
Wrist/hand	10-20	21-30	31-40	41-46
Neck	4-6	8-10	12-14	16-18



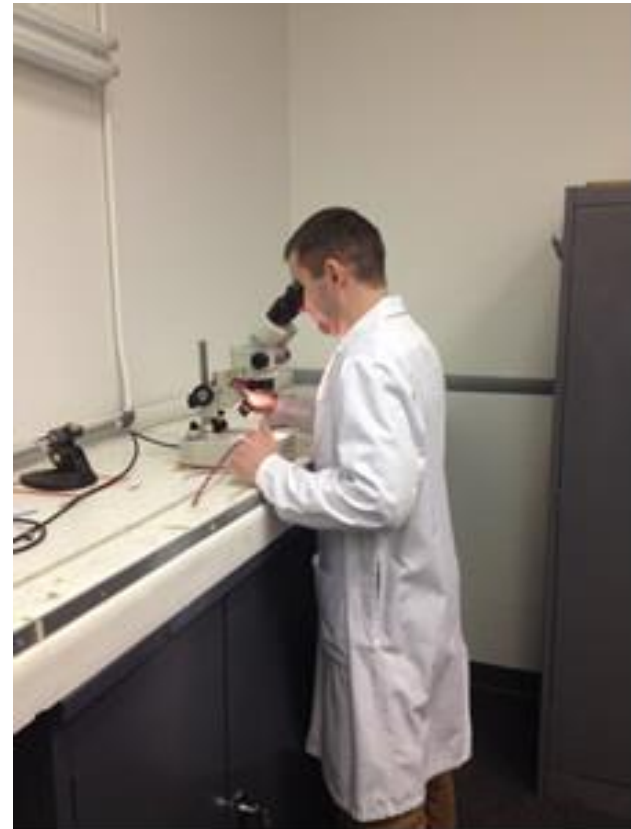
QEC Example - Lab

Observer's Assessment

Back

A When performing the task, is the back
(select worse case situation)

- A1 Almost neutral?
- A2 Moderately flexed or twisted or side bent?
- A3 Excessively flexed or twisted or side bent?



QEC Example - Lab

Shoulder/Arm

C When the task is performed, are the hands
(select worse case situation)

- C1 At or below waist height?
- C2 At about chest height?
- C3 At or above shoulder height?

D Is the shoulder/arm movement

- D1 Infrequent (some intermittent movement)?
- D2 Frequent (regular movement with some pauses)?
- D3 Very frequent (almost continuous movement)?



QEC Example - Lab

Wrist/Hand

E Is the task performed with
(select worse case situation)

E1 An almost straight wrist?

E2 A deviated or bent wrist?

F Are similar motion patterns repeated

F1 10 times per minute or less?

F2 11 to 20 times per minute?

F3 More than 20 times per minute?



Neck

G When performing the task, is the head/neck bent or twisted?

- G1 No
G2 Yes, occasionally
G3 Yes, continuously



QEC Example - Office

Observer's Assessment

Back

A When performing the task, is the back
(select worse case situation)

- A1 Almost neutral?
- A2 Moderately flexed or twisted or side bent?
- A3 Excessively flexed or twisted or side bent?



QEC Example - Office

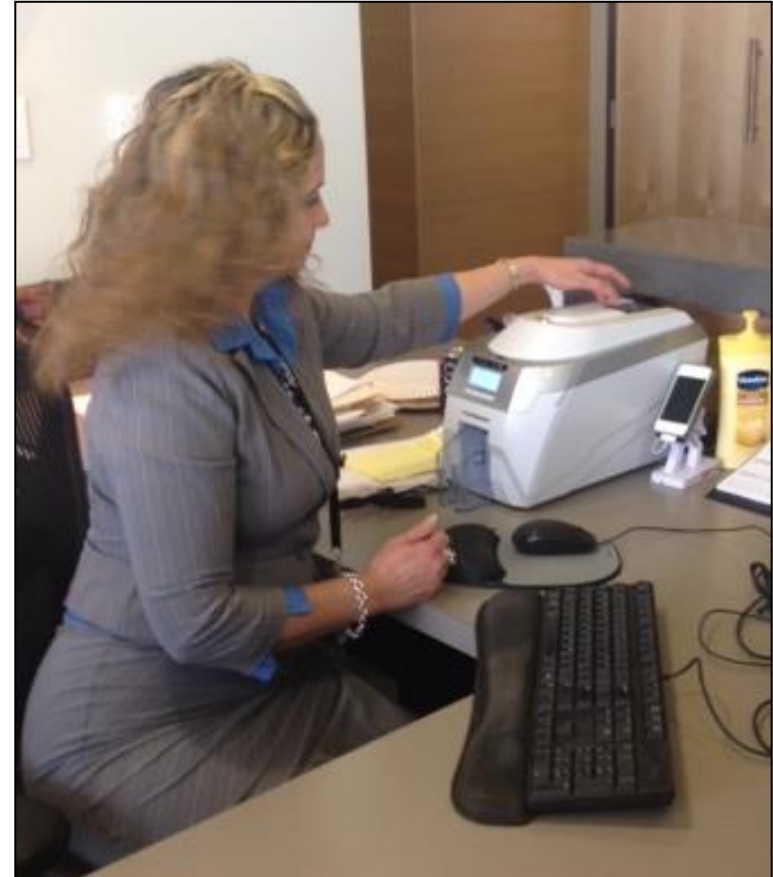
Shoulder/Arm

C When the task is performed, are the hands
(select worse case situation)

- C1 At or below waist height?
- C2 At about chest height?
- C3 At or above shoulder height?

D Is the shoulder/arm movement

- D1 Infrequent (some intermittent movement)?
- D2 Frequent (regular movement with some pauses)?
- D3 Very frequent (almost continuous movement)?



QEC Example - Office

Wrist/Hand

E Is the task performed with
(select worse case situation)

- E1 An almost straight wrist?
E2 A deviated or bent wrist?

F Are similar motion patterns repeated

- F1 10 times per minute or less?
F2 11 to 20 times per minute?
F3 More than 20 times per minute?

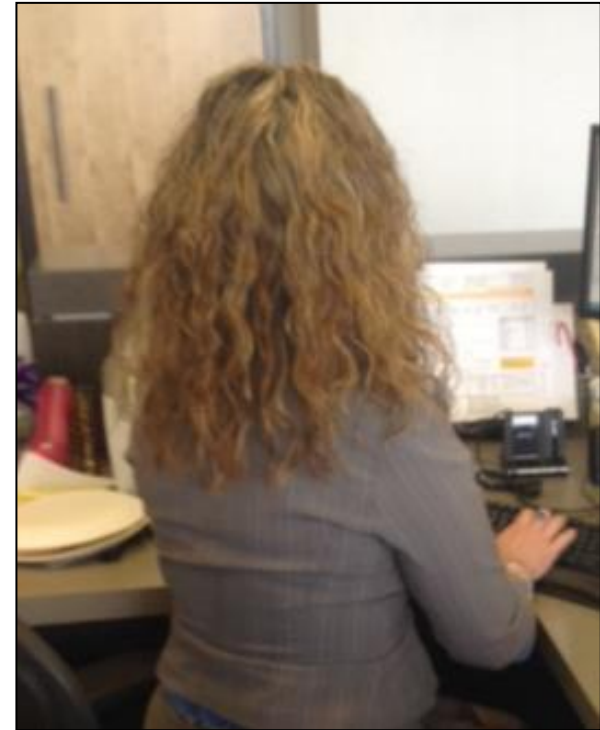


QEC Example - Office

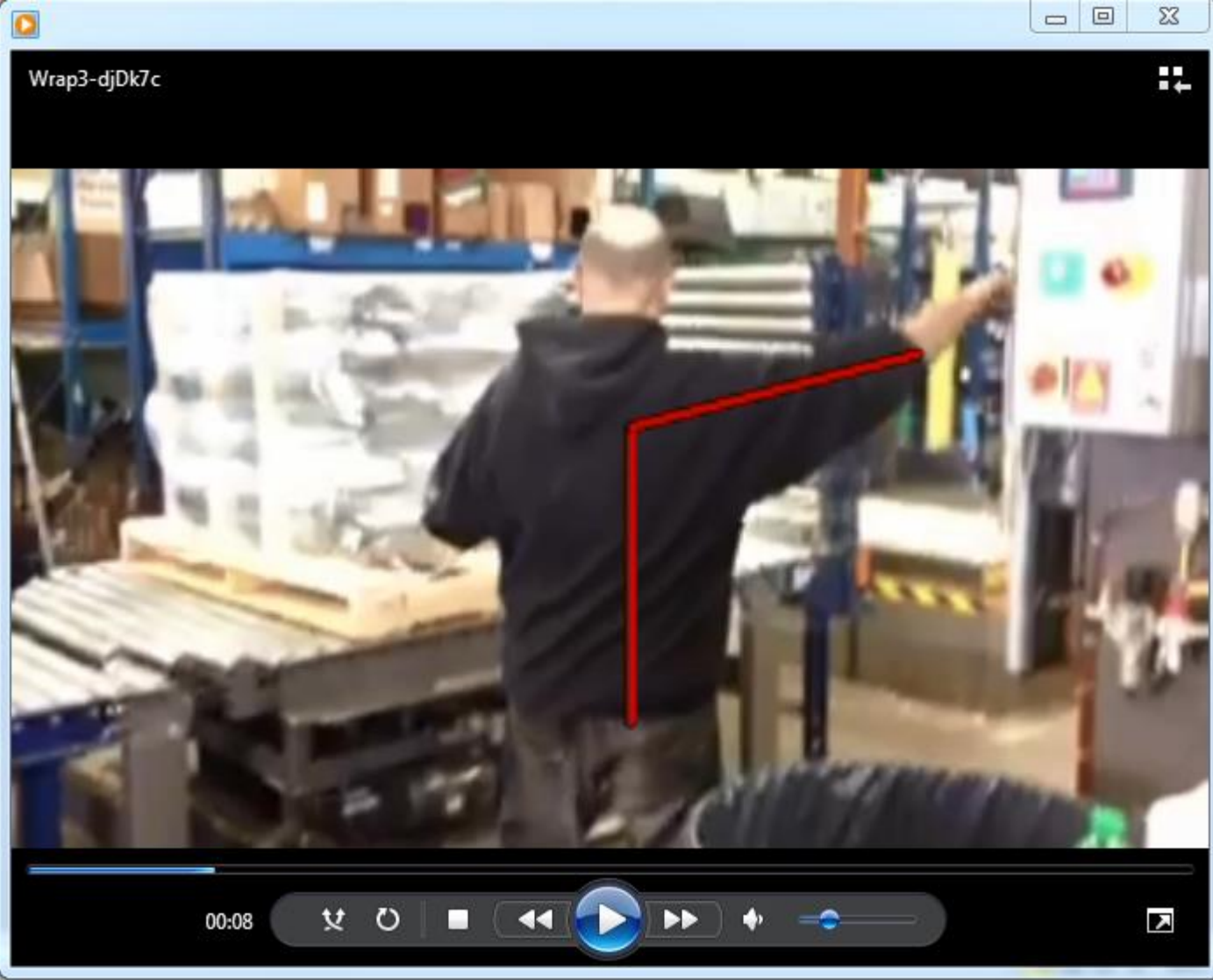
Neck

G When performing the task, is the head/neck bent or twisted?

- G1 No
G2 Yes, occasionally
G3 Yes, continuously



Video Analysis



Current State

Observer's Assessment

Back

A When performing the task, is the back
(select worse case situation)

- A1 Almost neutral?
A2 Moderately flexed or twisted or side bent?
A3 Excessively flexed or twisted or side bent?

B Select **ONLY ONE** of the two following task options:

EITHER

For seated or standing stationary tasks. Does the back remain in a static position most of the time?

- B1 No
B2 Yes

OR

For lifting, pushing/pulling and carrying tasks (i.e. moving a load). Is the movement of the back

- B3 Infrequent (around 3 times per minute or less)?
B4 Frequent (around 8 times per minute)?
B5 Very frequent (around 12 times per minute or more)?

Shoulder/Arm

C When the task is performed, are the hands
(select worse case situation)

- C1 At or below waist height?
C2 At about chest height?
C3 At or above shoulder height?

D Is the shoulder/arm movement

- D1 Infrequent (some intermittent movement)?
D2 Frequent (regular movement with some pauses)?
D3 Very frequent (almost continuous movement)?

Wrist/Hand

E Is the task performed with
(select worse case situation)

- E1 An almost straight wrist?
E2 A deviated or bent wrist?

F Are similar motion patterns repeated

- F1 10 times per minute or less?
F2 11 to 20 times per minute?
F3 More than 20 times per minute?

Neck

G When performing the task, is the head/neck bent or twisted?

- G1 No
G2 Yes, occasionally
G3 Yes, continuously



Current State

Worker's Assessment

Workers

H Is the maximum weight handled **MANUALLY BY YOU** in this task?

- H1 Light (5 kg or less)
H2 Moderate (6 to 10 kg)
H3 Heavy (11 to 20kg)
H4 Very heavy (more than 20 kg)

J On average, how much time do you spend per day on this task?

- J1 Less than 2 hours
J2 2 to 4 hours
J3 More than 4 hours

K When performing this task, is the maximum force level exerted by one hand?

- K1 Low (e.g. less than 1 kg)
K2 Medium (e.g. 1 to 4 kg)
K3 High (e.g. more than 4 kg)

L Is the visual demand of this task

- L1 Low (almost no need to view fine details)?
*L2 High (need to view some fine details)?
** If High, please give details in the box below*

M At work do you drive a vehicle for

- M1 Less than one hour per day or Never?
M2 Between 1 and 4 hours per day?
M3 More than 4 hours per day?

N At work do you use vibrating tools for

- N1 Less than one hour per day or Never?
N2 Between 1 and 4 hours per day?
N3 More than 4 hours per day?

P Do you have difficulty keeping up with this work?

- P1 Never
P2 Sometimes
*P3 Often
** If Often, please give details in the box below*

Q In general, how do you find this job

- Q1 Not at all stressful?
Q2 Mildly stressful?
*Q3 Moderately stressful?
*Q4 Very stressful?
** If Moderately or Very, please give details in the box below*



Current State

Back

Back Posture (A) & Weight (H)

	A1	A2	A3
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

10 Score 1

Back Posture (A) & Duration (J)

	A1	A2	A3
J1	2	4	6
J2	4	6	8
J3	6	8	10

8 Score 2

Duration (J) & Weight (H)

	J1	J2	J3
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

8 Score 3

Frequency (B) & Weight (H)

	B3	B4	B5
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

6 Score 5

Frequency (B) & Duration (J)

	B3	B4	B5
J1	2	4	6
J2	4	6	8
J3	6	8	10

4 Score 6

Total score for Back

Sum of scores 1 to 4 **OR** Scores 1 to 3 plus 5 and 6 **36**



Current State

Shoulder/Arm

Height (C) & Weight (H)

	C1	C2	C3
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

10 Score 1

Height (C) & Duration (J)

	C1	C2	C3
J1	2	4	6
J2	4	6	8
J3	6	8	10

8 Score 2

Duration (J) & Weight (H)

	J1	J2	J3
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

8 Score 3

Frequency (D) & Weight (H)

	D1	D2	D3
H1	2	4	6
H2	4	6	8
H3	6	8	10
H4	8	10	12

8 Score 4

Frequency (D) & Duration (J)

	D1	D2	D3
J1	2	4	6
J2	4	6	8
J3	6	8	10

6 Score 5

Total score for Shoulder/Arm

Sum of Scores 1 to 5

40



Current State

Wrist/Hand

Repeated Motion (F) & Force (K)

	F1	F2	F3
K1	2	4	6
K2	4	6	8
K3	6	8	10

8 Score 1

Repeated Motion (F) & Duration (J)

	F1	F2	F3
J1	2	4	6
J2	4	6	8
J3	6	8	10

6 Score 2

Duration (J) & Force (K)

	J1	J2	J3
K1	2	4	6
K2	4	6	8
K3	6	8	10

8 Score 3

Wrist Posture (E) & Force (K)

	E1	E2
K1	2	4
K2	4	6
K3	6	8

8 Score 4

Wrist Posture (E) & Duration (J)

	E1	E2
J1	2	4
J2	4	6
J3	6	8

6 Score 5

Total score for Wrist/Hand

Sum of Scores 1 to 5

36



Current State

Neck

Neck Posture (G) & Duration (J)

	G1	G2	G3
J1	2	4	6
J2	4	6	8
J3	6	8	10

6 Score 1

Visual Demand (L) & Duration (J)

	L1	L2
J1	2	4
J2	4	6
J3	6	8

4 Score 2

Total score for Neck
Sum of Scores 1 to 2 _____

Driving

M1	M2	M3
1	4	9

Total for Driving 1

Vibration

N1	N2	N3
1	4	9

Total for Vibration 1

Work pace

P1	P2	P3
1	4	9

Total for Work pace 1

Stress

Q1	Q2	Q3	Q4
1	4	9	16

Total for Stress 1

Back Score: 36
Shoulder / Arm Score: 40
Wrist / Hand Score: 36
Neck Score: 10

Driving Score: 1
Vibration Score: 1
Work Pace Score: 1
Stress Score: 1

What should we do?

- Program the wrapper to always return to a lower position (waist height) – Change back posture from high risk to low risk.
- Store knife in holster or lower shelf (lower shoulder risk from high to low)
- Power the conveyor - ensure button location is good (reduce the force requirement from high to low)

Back Score: 14
Shoulder / Arm Score: 16
Wrist / Hand Score: 16
Neck Score: 8
Driving Score: 1
Vibration Score: 1
Work Pace Score: 1
Stress Score: 1



Where can I get the QEC?

- <https://www.lni.wa.gov/Safety/SprainsStrains/pdfs/QECReferenceGuide.pdf>
- <http://www.hse.gov.uk/research/rrpdf/rr211.pdf>



Questions?

