



3. Tools



What do you see or notice in terms of: Note: For background information, see other side.

- how suitable/appropriate are the tools for the work and workers?

- handle shape?

- weight?

- controls?

In conclusion, the current situation

is acceptable

needs improvement

What *specific* improvements can be made?

Should we analyze the situation or the proposed solutions in more detail?

no

yes - more detail on other side





3. Tools

**Ergonomic
design**

We looked at ...	Why be concerned? (consequences)	Recommendations
If tools are suitable or appropriate for the work & workers	If poorly chosen: <ul style="list-style-type: none"> • overwork, poor postures, shoulder problems • hand injuries, blisters, tendonitis, etc. 	<ul style="list-style-type: none"> • Choose the tool that is best suited for the job so that the wrist remains straight and at a normal height • Standardize nuts, bolts, etc. to reduce the number of tools required • Tools that can be used by anyone - women, men, left-handed people • Directly in front of the operator or slightly to the left or right
Handle shape	If poorly suited: <ul style="list-style-type: none"> • poor arm posture - raised, stretched, twisted; twisted wrist etc. • crushed hands /fingers if too small or sharp-edged • more strength required 	<ul style="list-style-type: none"> • Shaped so the wrist remains straight and the handle fits well in the hand • Handle not too smooth/rough/sharp <ul style="list-style-type: none"> - wood or metal coated with rubber/plastic - 10 cm to 12 cm (4" - 5") long - diameter of handle about <ul style="list-style-type: none"> > 60 mm (2.25") for tools requiring strength > 12 mm (0.5") for precision tools • May be used by both left-handed and right-handed people
Weight	If too heavy: <ul style="list-style-type: none"> • tired arms, cramps, tendonitis and other musculoskeletal problems 	<ul style="list-style-type: none"> • For work requiring strength: between about 1.5 kg (3lb) & 2 kg (4.5lb) • For precision work: between 400 g (0.5 lb) and 1.5 kg (3lb) • For heavier tools/special systems: counterbalanced support devices, elbow rests, etc.
Controls	If poorly positioned: <ul style="list-style-type: none"> • poor postures If too stiff: <ul style="list-style-type: none"> • constant exertion and fatigue If too sensitive: <ul style="list-style-type: none"> • risk of mistakes, incidents, injuries 	<ul style="list-style-type: none"> • Controls that are easy to operate without stress for the fingers, hands, or wrists • Controls that are not too stiff nor too sensitive • May be used by left-handed people

Translated and adapted from SOBANE materials, available at www.sobane.be/fr/tms_obs.html

