QUEENSLAND GOVERNMENT

Division of Workplace Health & Safety

Department of Employment, Training and Industrial Relations

FRONT-END LOADER OF A SKID STEER TYPE

ASSESSMENT INSTRUMENT

NATIONAL GUIDELINES FOR OCCUPATIONAL HEALTH AND SAFETY COMPETENCY STANDARDS FOR THE OPERATION OF LOADSHIFTING EQUIPMENT AND OTHER TYPES OF SPECIFIED EQUIPMENT

[NOHSC: 7019 (1992)]

May 1994

Loadshifting Equipment

Front-end Loader of a Skid Steer Type

ASSESSMENT

Part 1 Performance
Part 2 Oral/Written

May 1994

Contents

Assessor guidelines – general

1. Introduction

1.1 Scope

These general guidelines apply to all the assessment instruments for the certificates of competency prescribed by the National Guidelines for Occupational Health and Safety Competency Standards for the Operation of Loadshifting Equipment and Other Types of Specified Equipment.

Assessors should also be familiar with the publication Assessment guidelines for National Occupational Health and Safety Certification Standard for users and operators of industrial equipment.

1.2 Additional guidelines

Guidelines which provide additional specific information to certificate assessors are also included in each assessment instrument. Included, where appropriate, are specific instructions on the usefulness of training records (such as log books) and other certificates with overlapping competencies.

1.3 Evidence of competence

Evidence of competence is established in a number of ways. The methods used in the following instruments involve:

- assessment of practical performance
- written and/or oral answers to questions on underpinning knowledge.

2. Preparing for the assessment

2.1 Study the instruments

You need to read the assessment instruments and specific instructions carefully before beginning an assessment.

2.2 Confirm appointments

Prior to an assessment, you need to confirm the date, time and location of the assessment with the applicants and any other relevant people.

2.3 Equipment availability

The availability of equipment, materials and a suitable working area must be organised and confirmed, prior to the assessment.

2.4 Workplace factors

Because procedures and processes vary greatly between workplaces, it is important for assessors to plan their approaches to meet the requirements of the individual workplace.

Make sure you take the timeframe into account when planning the assessment and also make applicants aware of any time limits.

2.5 Selecting questions

Questions for the written/oral assessment should be randomly selected, either by hand or using the computer system, if applicable.

3. Conducting the assessment

3.1 Provide an explanation

Begin by explaining clearly to the applicants what is required of them. Check that applicants have provided (or have been provided with) the necessary tools and equipment.

3.2 Practical performance

Complete the performance checklist, as the applicant works through the required tasks. Wherever possible, this should be done in a normal working environment.

Do not ask the applicant questions while he or she is performing a task, as this can be distracting, and may affect the time taken to complete the assessment.

If, at any time, the applicant is endangering himself/herself or others, stop the assessment immediately. This indicates that the applicant is not yet competent and may require further training, before being reassessed.

Assessments should also be stopped, if equipment or property are likely to be damaged.

3.3 Knowledge

The knowledge assessment covers both oral and written exercises. The model answers provided with the knowledge assessment instruments are not necessarily exhaustive. Use your own judgement when scoring alternative answers.

3.4 Recording responses

Each item and question on the assessment forms you use is accompanied by a box. Assessors must complete every box as follows:

☐ CORRECT PERFORMANCE/ANSWER

☐ NOT YET ACHIEVED

☐ NOT APPLICABLE

If a box is marked incorrectly, cross out the mistake, mark the correct response alongside, and initial the change.

4. Determining competencies

4.1 Assessment summary

A specific assessment summary is given for each certificate class. This is to be filled in and signed by the assessor, and countersigned by the applicant.

The original and duplicate are given to the applicant. The applicant provides the original to the certifying authority. The triplicate is retained by the assessor.

4.2 Competency requirements

In order for you to deem an applicant competent, he or she must have completed each section of the assessment to the standard required. You should note any time constraints when arriving at your decision.

The standard required for each instrument is specified in the specific guidelines and/or on the summary page at the end of each assessment.

In the case of a repeat assessment, the assessor can decide to apply the whole or only part of the assessment.

4.3 Additional comments

Where an applicant fails to meet the standard of competence, you should add a written comment on the Assessment Summary, which briefly explains the problem.

Advice to the applicant, on the appropriate remedial action should also be included. This will also assist the certificate assessor, in the event that the applicant undergoes future reassessment.

Likewise, if an applicant demonstrates outstanding or remarkable performance, this should be noted.

4.4 Further investigation

As a certificate assessor, it is your role to determine whether or not an applicant has achieved the standard necessary for the certifying authority to be able to grant a certificate of competency.

Whenever you are unsure of the applicant's performance or knowledge or performance, ask additional questions, and obtain additional evidence, before making your final decision.

National Guidelines for OHS Competency Standards

Loadshifting Equipment

Front-end Loader of a Skid Steer Type

Performance Assessment

May 1994

FRONT-END LOADER OF A SKID STEER TYPE

(Performance assessment)

Assessor guidelines - Specific

ASSESSMENT INSTRUMENT
- SPECIFICATIONS

The performance assessment covers the following Loadshifting elements.

1.1, 1.2, 1.3, 2.1, 3.1 & 3.2

1. The assessment requires the operator to check the equipment, plan the work and to safely and competently operate the front-end loader of a skid steer type.

   The assessment is performed in eight sections:

   1.1 Conduct routine pre-operational check on the front-end loader of a skid steer type and equipment and inspect attachments for security.

   1.2 Inspect the site, plan work and select and fit appropriate attachments.

   1.3 Conduct pre-operational and post start up checks.

   1.4 Drive to the work area.

   1.5 Backfill the trench and load or simulate loading a truck.

   1.6 Spread soil and level a surface.

   1.7 Pick up and shift material in the bucket.

   1.8 Shut down the equipment and secure site.

2. Prior learning and experience

   2.1 An applicant who holds a front-end loader, front-end loader/backhoe, excavator, dragline or dozer certificate does not require assessment in sections 2, 3 and 4.

   2.2 Applicant who produces satisfactory documentary evidence (such as a log book) which establishes 50 days experience in front-end loader of a skid steer type operations specifically covering competencies tested in assessment sections 2, 3 and 4 does not require assessment in those sections.

3. The performance assessment can be conducted at any location which has:

   - sufficient clear space to operate the machine
   - ground suitable for levelling and shifting soil

4. Equipment and Resources Required:

   - A front-end loader of a skid steer type and equipment.

   - Suitable site on which to use the front-end loader and equipment to shift and level soil and to load or simulate loading of a truck.

5. Unless other arrangements are agreed to by the assessor, it will be the responsibility of the applicant, applicant's employer or trainer to provide the required equipment and resources.

6. To be assessed an applicant must wear:

   - safety helmet(where required)
   - appropriate footwear
   - other protective clothing and equipment as appropriate.

7. The performance of each applicant is to be recorded on the assessor's checklist.

8. Safety of personnel:

   When an applicant is working dangerously, recklessly or without the necessary co-ordination, the assessor must direct the applicant to cease work and terminate those parts of the assessment immediately.

9. The items in the shaded boxes are of critical importance. Failing to get any of these correct means that competency has not been achieved.

10. Where an applicant is assessed as `not yet competent' he/she must be informed of the reason(s) in order to gain further appropriate training.

11. The full performance assessment can take up to 1 hour.

12. The general assessment requirements are set out in Assessor's guidelines - general.

13. The applicant's competence in each unit is to be summarised for both performance and knowledge on the summary sheet. Competence is achieved for a unit when the required number of boxes for that unit have been ticked or marked `N/A'.

    Overall competence is achieved when competence in all units has been assessed.

CONDUCT ROUTINE CHECKS:

Performance Criteria 1.1.1 and 1.1.2

1. Conducts routine checks on vehicle/equipment:
   - Tyre condition and inflation ☐

   Checks liquid levels -
   - Fuel ☐
   - hydraulic oil ☐
   - engine oil ☐
   - battery ☐
   - coolant ☐

   Checks structure for defects -
   - damaged or broken parts ☐
   - loose nuts, bolts and couplings ☐

   Checks attachments for defects -
   - damage ☐
   - bucket for missing, worn
   - or loose teeth ☐
   - hoses, fittings, hydraulic rams
   - for oil leaks ☐
   - connections for missing pins
   - or keepers ☐
   - grease holes and grease pins ☐
   - checks attachments for security ☐

PLAN WORK AND CHECK EQUIPMENT:

Performance Criteria 1.2.1, 1.2.3 and 1.2.5

2. Inspects site and plans work:

   Identifies hazards -
   - power lines ☐
   - phone lines ☐
   - service drains ☐
   - obstructions ☐

   Access and path of movement is indicated -
   - to work area ☐
   - for loads ☐

   Appropriate equipment for the task -
   - equipment is appropriate for the task ☐

Performance Criteria 1.3.1.

3. Conducts pre-operational and post start-up checks in accordance with manufacturer's specifications/ operating manual.
   - mounts correctly ☐
   - adjusts seat ☐
   - in neutral ☐
   - warning device ☐
   - engine start ☐
   - gauges ☐

- warm up allowed ☐
- attachment movement ☐
- clear for travel ☐
- foot brake ☐
- holding brake ☐
- steering ☐

SHIFT LOAD:

Performance criteria 2.1.1 and 2.1.3

4. Drives to the work area:
   - raises attachments smoothly ☐
   - secures backhoe bucket (where applicable) ☐
   - ensures travel direction clear ☐
   - selects appropriate route ☐
   - travels at safe speed ☐

Performance Criteria 2.1.2

5. Backfills trench and loads truck:
   - bucket at correct level and angle ☐
   - uses sufficient revs and speed ☐
   - avoids excessive wheel spin ☐
   - crowds bucket to fill ☐
   - ensures direction of travel clear ☐
   - travels with bucket low ☐
   - acceptable and safe speed ☐
   - minimises spillage and ground damage ☐
   - uses appropriate path of travel ☐
   - approaches trench or truck correctly ☐
   - smoothly raises and dumps load ☐
   - repositions bucket ready for reload ☐
   - maintains stockpile and working surface ☐
6. Spread soil and level surface:
   - spreads soil with bucket blade ☐
   - levels surface with bucket blade ☐
   - leaves soil for natural compaction ☐
   - maintains level surface to work from ☐
7. Picks up and moves material in the bucket:
   - picks up material ☐
   - carries material in bucket ☐

Performance criteria 2.1.1, 2.1.4, 2.1.5 and 2.1.6

General performance for sections 2, 3, 4, 5, 6 and 7

- bucket suitable for the work ☐
- machine suitable for ground conditions ☐
- competently shifts material ☐
- equipment operated at a safe speed ☐
- instructions and signals are correctly interpreted and complied with. ☐
- loads placed to ensure stability ☐
- loads placed to avoid causing hazard ☐

SHUT DOWN EQUIPMENT AND SECURE SITE:

Performance criteria 3.1.1, 3.1.2, 3.1.3 and 3.2.1

8. Shuts down equipment and secures site:

Parks equipment -

- machine parked in suitable area ☐
- attachments lowered to ground ☐
- cutting edge of bucket on ground ☐

Shuts down equipment -

- neutralises controls ☐
- applies holding brake ☐
- idles to stop, locks ignition ☐
- moves controls to release pressure ☐

Post operational check -

- minor service ☐
- checks and reports any damage ☐

Avoids hazards -

- parks away from danger areas ☐
- removes keys ☐

National Guidelines for OHS Competency Standards

Loadshifting Equipment

Front-end Loader of a Skid Steer Type

Oral/Written Assessment

May 1994

FRONT-END LOADER OF A SKID STEER TYPE

(Knowledge)

Assessor guidelines—specific

ASSESSMENT INSTRUMENT – SPECIFICATIONS

The knowledge assessment covers the following Loadshifting elements

1.1, 1.2, 1.3, 2.1, 3.1 & 3.2

1. Knowledge assessment for Front-end Loader of a Skid Steer Type is divided into three units and seventeen sections (performance criteria 1.1.1, 1.1.2, 1.2.1 etc).

2. To satisfy the requirements for competency the applicant must correctly answer (either in writing or orally) the specified number of questions in each of the following sections:

Unit 1.0

1.1 Conduct routine checks

- 1.1.1 (select 3)
- 1.1.2 (select 1)

1.2 Plan work

- 1.2.1 (select 1)
- 1.2.2 (select 3)
- 1.2.3 (select 1)
- 1.2.4 (select 1)
- 1.2.5 (select 1)

1.3 Check controls and equipment

- 1.3.1 (select 1)
- 1.3.2 (select 1)

Unit 2.0

2.1 Shift load

- 2.1.1 (select 1)
- 2.1.2 (select 1)
- 2.1.3 (select 1)
- 2.1.5 (select 1)
- 2.1.7 (select 1)

Unit 3.0

3.1 Shut down equipment

- 3.1.1 (select 1)
- 3.1.3 (select 1)

3.2 Secure site

- 3.2.1 (select 1)

3. Prior learning and experience:

An applicant who holds a front-end loader, front-end loader/backhoe, excavator, dragline or dozer certificate who answers questions for performance criteria 1.1.1, 2.1.2 and 2.1.5 satisfactorily is not required to complete the rest of the assessment.

4. The full knowledge assessment of twenty-one questions can take up to thirty minutes.

5. The items in the shaded boxes are of critical importance. Failing to get any of these correct means that competency has not been achieved.

6. The applicant's competence in each unit is to be summarised for both performance and knowledge on the summary sheet. Competence is achieved for a unit when the required number of boxes for that unit have been ticked or marked `N/A'.

   Overall competence is achieved when competence in all units has been assessed

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CONDUCT ROUTINE CHECKS:

Performance criteria 1.1.1 (select 3 including 1 with a shaded box)

1. What precautions must be taken when an inspection or work has to be performed under a raised bucket or attachment?
   Provision provided to prevent the bucket or attachment from descending. ☐

2. Name three defects that you would look for when conducting a routine check on the hydraulic system of the front-end loader of the skid steer type.
   Hydraulic oil leaks, loose connections and hoses for splits, fractures or bulges. ☐

3. Should loadshifting equipment be refuelled while the engine is running? Explain your answer.
   No. The fuel could be ignited by therunning engine. ☐

4. Why should you not completely fill the hydraulic storage tank?
   To allow for expansion and displacement in the system. ☐

5. What problem could be indicated by bubbles or milky engine oil in the sump?
   Water leaking into the sump. ☐

6. When changing a battery which battery clamp should be removed first?
   The earth battery clamp. ☐

Performance criteria 1.1.2 (select 1)

7. What would you look for to ensure that the bucket of the front-end loader of the skid steer type is securely attached to the machine?
   Ensure that all moving joints are not worn and that safety pins or clips are not damaged or lost. ☐

PLAN WORK:

Performance criteria 1.2.1 (select 1)

8. In built-up areas what checks should be made under the ground before excavation commences?
   Check for power, telephone, gas and water services etc. ☐

9. To establish the location of existing underground services what would you refer to?
   Supply authority or council maps. ☐

Performance criteria 1.2.2 (select 3 including two shaded boxes)

10. What shall be provided to prevent persons falling into an excavation?
    Barricades or guard rails. ☐

11. When should an operator wear ear protection?
    When the noise could contribute to a loss of hearing. ☐

12. What is the danger of loading a truck across a sloping surface?
    The machine could overturn. ☐

Performance criteria 1.2.3 (select 1)

13. Which is the safest route of travel, diagonally across or directly down the sloping surface?
    Directly down the sloping surface. ☐

14. For stability which direction and how should a rubber tyred skid steer loader be driven up a steep ramp onto a truck?
    Slowly with the rear of the machine facing up the ramp and bucket low. ☐

Performance criteria 1.2.4 (select 1)

15. What would you be required to obtain from the Relevant Authority to operate a machine in a hazardous working area?
The required permits. ☐

16. What must be obtained to drive unregistered rubber tyred loadshifting equipment along a public road?
An unregistered vehicle permit or other document required in jurisdiction as applicable. ☐

Performance criteria 1.2.5 (select 1)

17. Why would you select a loader of a skid steer type instead of a conventional front-end loader to work in a small confined space?
Because of the manoeuvrability of the machine. ☐

18. Name three operations which a clam type bucket (4 in 1 bucket) is designed to perform.
Scooping up a load, carrying a load, picking up an object, levelling a surface etc. ☐

CHECK CONTROLS AND EQUIPMENT:

Performance criteria 1.3.1 (select 1)

19. On the post start-up check you notice a bulge form in a hydraulic hose. What action would you take?
Switch off the machine and have the hose replaced. ☐

20. When should tests, checks and inspections be made by the operator on the loadshifting equipment that is to be operated?
Daily before use. ☐

Performance criteria 1.3.2 (select 1)

21. What action would you take with damage and defects found on the machine?
Report the damage or defects to an authorised person and ensure safety is not jeopardised. ☐

SHIFT LOAD:

Performance criteria 2.1.1 (select 1)

22. Is it permissible to hoist persons with the bucket of loadshifting equipment?
No. ☐

Performance criteria 2.1.2 (select 1)

23. What is the approximate weight of a cubic metre of wet sand?
1.5 tonnes. ☐

24. Of top soil or clay which is more cohesive and harder to excavate, push and spread?
Clay. ☐

Performance criteria 2.1.3 (select 1)

25. Why should the seat belt be worn or the pull down bars be in place before operating the machine?
So that the operator cannot be bounced out of the machine while operating. ☐

Performance criteria 2.1.5 (select 1)

26. Applicant to state the meaning of the hand signal for "Stop" demonstrated by the assessor.
Stop. ☐

Performance criteria 2.1.7 (select 1)

27. If a hydraulic hose sprung a leak when a loaded bucket was raised what action would you take?
Lower the loaded bucket to the ground and have repairs carried out. ☐

28. If the machine contacted a live power line which could not be released or the power turned off, how would you dismount the machine?
Jump clear ensuring not to be in contact with the machine and ground at the same time. ☐

SHUT DOWN EQUIPMENT:

Performance criteria 3.1.1 (select 1)

29. Name at least three (3) areas where you would not park a front-end loader of the skid steer type.
Access ways, near overhangs, refuelling sites, tidal or flood areas,adjacent to an excavation. ☐

30. Before leaving the controls of the machine what should be done with all hydraulically raised attachments?
Attachments lowered and pressure removed from hydraulic lines. ☐

Performance criteria 3.1.3 (select 1)

31. What post-operational checks should be carried out by the operator on the loadshifting equipment to prepare it ready to be reoperated?
Check the structure and equipment for defects and wear and the oil, fuel and water levels. ☐

SECURE SITE:

Performance criteria 3.2.1 (select 1)

32. What shall be provided when a front-end loader of the skid steer type has to be parked on or protrudes onto an access way?
Barricades lights and signs. ☐

33. For what reason should the keys be removed from the ignition of the machine?
To prevent unauthorised movement of the machine. ☐

34. Before leaving the site what must be provided to restrict access to the site?
Barricades or fences. ☐

Assessment summary

FRONT-END LOADER OF A SKID STEER TYPE

Unit	Form of assessment	Total number of boxes in the assessment	Number of boxes given ✔ or NA	Number of boxes required to meet standard	Were all critical boxes given ✔ or NA?		Assessment standard requirements achieved *		
1	Performance	33		29	Yes	No	Yes	No	
	Knowledge	13		8	Yes	No	Yes	No	
	Assessment completed within time allowed						Yes	No	NA
2	Performance	31		28	Yes	No	Yes	No	
	Knowledge	5		3	Yes	No	Yes	No	
	Assessment completed within time allowed						Yes	No	NA
3	Performance	11		9	Yes	No	Yes	No	
	Knowledge	3		2	Yes	No	Yes	No	
	Assessment completed within time allowed						Yes	No	NA

* Performance standard = Number of items required to meet standard (including all critical boxes)

Knowledge standard = Number of questions required to meet standard (including all critical boxes)

Summary

Candidate is: **(circle the result obtained)**

- **COMPETENT**
- **NOT YET COMPETENT**

Date:

Name of assessor .....

Name of candidate .....

Signature .....

Signature .....

Comments/feedback
(assessors to make any additional comments which clarify the assessment)

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