



Australian Government

RIIWSV303D Operate fluid systems

Release: 3

RIIWSV303D Operate fluid systems

Modification History

Release	Comment
1	This is a new unit
2	Corrected incorrect Elements and Performance Criteria that were loaded to TGA in release 1.
3	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit describes a participant's skills and knowledge required to operate fluid systems in Drilling.

This unit is appropriate for those working in operational roles, to the level of a Derrickman.

Licensing, legislative, regulatory and certification requirements that may apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Unit Sector

Drilling (Well Servicing)

Elements and Performance Criteria

1. Plan and prepare for fluid operations	1.1 Access, interpret and apply compliance documentation and ensure the work activity is compliant 1.2 Obtain, read, clarify/confirm and apply work instructions 1.3 Identify and report all potential hazards 1.4 Select and use/wear personal protective equipment and protective clothing 1.5 Coordinate job requirements with others at the site 1.6 Confirm permits required and prepare written permits to work
--	--

2. Maintain and repair fluid pumps	2.1 Check pony rod clamp is fitted correctly 2.2 Lubricate gear end of pump and check oil levels in gear end of pump 2.3 Identify faults and report immediately 2.4 Identify, record and/or report requirement for repair or maintenance of mud pumps 2.5 Maintain and replace defective swabs, liner, valves, seats, gauges and wear plates of the fluid end of pump
3. Operate and monitor fluid pumps	3.1 Carry out pre start checks 3.2 Set or adjust all critical equipment such as pop-off valve and or choke manifold/s to safe operating parameters 3.3 Test operational function of all valves and/or choke manifold/s in the fluid system 3.4 Pressure test system, record in writing and communicate issues identified 3.5 Confirm and identify flow path required for operation and pumping parameters 3.6 Visually inspect and listen to mud pumps for abnormalities
4. Operate, maintain and repair fluid pumps	4.1 Check safety lines/restraints are in place, secure and functional 4.2 Engage and/or adjust appropriate equipment as directed by supervisor 4.3 Clean all equipment and visually inspect for leaks and proper operation, in accordance with specifications 4.4 Identify faults and report immediately 4.5 Identify, record in writing and report requirement for repair or maintenance of fluid conditioning equipment 4.6 Replace screens on shakers or cones on desilters/desanders 4.7 Replace bags/pods in filtration unit/s 4.8 Perform periodic or scheduled preventative maintenance on all fluid treatment units
5. Operate and service transfer valves in fluid pits/tanks or fluid pumps	5.1 Correctly align valves 5.2 Lubricate valve stems 5.3 Clean and inspect transfer valves 5.4 Replace or repair defective parts
6. Identify and act upon variations in circulating	6.1 Monitor, adjust and report pit/tank level

medium during operation	6.2 Monitor and report fluid properties 6.3 Monitor and report size of cuttings 6.4 Monitor and report volume of fluid returns 6.5 Prepare for emergency situations
-------------------------	--

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

No equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIISV303D Operate fluid systems

Modification History

Release	Comment
1	This is a new unit
2	Corrected incorrect Elements and Performance Criteria that were loaded to TGA in release 1.
3	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies relevant legislation, documentation, policies and procedures
- works effectively with others to undertake and complete fluid system operations that meets all of the required outcomes including:
 - complying with written and verbal reporting requirements and procedures
 - communicating clearly and concisely with others to receive and clarify work instructions
 - communicating clearly and concisely with others to resolve coordination requirements throughout work activities
- demonstrates completion of operating fluid systems that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - confirming and preparing required permits
 - carrying out operational maintenance, servicing, lubrication, cleaning and routine servicing of pumps/mud pumps
 - carrying out pre-start checks, set or adjust critical equipment and test operational function
 - carrying out inspection and fault finding on equipment
 - monitoring, reporting and adjusting:
 - pit/tank levels

- fluid properties
- size of cuttings
- volume of fluid returns

Knowledge Evidence

The candidate must demonstrate knowledge of operating fluid systems through:

- accessing, interpreting and applying the organisation and site requirements and procedures
- carrying out rig up procedures
- using rigging and dogging practices
- identifying auxiliary equipment functions and service requirements
- identifying specific auxiliary rig up sequence
- identifying safety and environmental issues
- using communication equipment
- carrying out emergency procedures
- performing preventative maintenance
- complying with workplace relations and award conditions

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit is best assessed in the context of this sector's work environment;
- where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,
- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,

- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 Years
Other sectors	Where this Unit is being assessed outside of the Resources and Infrastructure Sectors assessor and/or Industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no Industry standard is specified should comply with any relevant regulation.	

*Assessors can demonstrate current work experience through employment within Industry in a role relevant to the outcomes of the Unit; or, for external assessors this can be demonstrated through exposure to Industry by conducting frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>