

## Career Profile: Hydraulics Technician

Ever seen the large cement mixers and trucks that haul away big containers filled with rubbish from the streets? These are examples of hydraulic power. Hydraulic power is used to keep a mixer turning or to lift and lower big containers. A hydraulics technician normally works with particular types of heavy equipment and machinery, especially lifting equipment. Hydraulics is the term applied to engineering compressed liquid. A pump or compressor is used to exert pressure on a liquid (frequently hydraulic fluid) in order to add energy to it that operates rams (a sealed cylinder attached to a piston), or drives fluid powered motors. Another common use of hydraulic power is for water pumps, used for example in agriculture, water supply and waste water management.

As a hydraulics technician you could work in a factory, a laboratory, or an office. Some of the hydraulics companies send their technicians out to customer sites. You could be involved in maintenance or research and development and possibly help engineers to design, test and install a fluid power system for a machine. Other possibilities include working in a workshop repairing items such as hydraulic cylinders used in farm equipment or bulldozers, or being a service representative for a company making hydraulic or pneumatic equipment.

Hydraulics technicians can also work in the aircraft industry and in civil engineering related to water management.

## Education Requirements

### National Senior Certificate (NSC)

For a career in hydraulics engineering students are advised to select English, Mathematics, and Physical Science.

### National Diploma / BTech

#### Offered at:

- [University of Johannesburg](http://www.uj.ac.za/Default.aspx?alias=www.uj.ac.za/mechtech)<sup>1</sup> (Department of Mechanical Engineering)
- [University of South Africa](http://brochure.unisa.ac.za/brochure/showprev.aspx?d=1_4_23&f=p_NDEMC)<sup>2</sup> (College of Science, Engineering and Technology)
- [Tshwane University of Technology](http://www.fe.tut.ac.za/FormalCourses.aspx?id=391)<sup>3</sup> (Faculty of Engineering and the Built Environment)
- [Vaal University of Technology](http://www.vut.ac.za/new/images/stories/mech_eng.pdf)<sup>4</sup> (Faculty of Engineering and Technology)

---

<sup>1</sup> <http://www.uj.ac.za/Default.aspx?alias=www.uj.ac.za/mechtech>

<sup>2</sup> [http://brochure.unisa.ac.za/brochure/showprev.aspx?d=1\\_4\\_23&f=p\\_NDEMC](http://brochure.unisa.ac.za/brochure/showprev.aspx?d=1_4_23&f=p_NDEMC)

<sup>3</sup> <http://www.fe.tut.ac.za/FormalCourses.aspx?id=391>

<sup>4</sup> [http://www.vut.ac.za/new/images/stories/mech\\_eng.pdf](http://www.vut.ac.za/new/images/stories/mech_eng.pdf)

## Registration as a professional technician

The purpose of professional registration is to ensure that only properly qualified people influence the health and safety of the population. Therefore, while registration is not compulsory, many tasks can only be performed by people registered at an appropriate level for the task.

A person who has obtained a recognised National Diploma is eligible for registration as Candidate Engineering Technician. After gaining at least 3 years of appropriate practical experience a mechanical engineering technician may qualify as a Professional Engineering Technician under the auspices of the Engineering Council of South Africa.

## Possible Employers

- Government departments
- Provincial administrations
- Municipalities
- Hydraulics companies (see the [South African Fluid Power Association](#)<sup>5</sup> in Hints and Tips)
- Mines

## Find out more

Find out more about hydraulics and mechanical engineering, bursaries and jobs:

- The [South African Fluid Power Association](#)<sup>6</sup> (SAFPA) has approximately 60 members and publishes the magazine *Motion Control in South Africa*.
- Creamer Media's [Engineering News](#)<sup>7</sup> deals with, among other things, Hydraulics and Pneumatics.
- [More information](#)<sup>8</sup> on other companies in the hydraulics field.
- [ASW](#)<sup>9</sup> looks at the diversity and range of pumps and hydraulics and the various industries using a variety of equipment and applications.
- [Arnschell](#) is an hydraulics company based in Port Elizabeth that works with a wide range of companies.
- [Presentation](#)<sup>10</sup> from the South African Quality Assurance website by G Malan on the need for artisans in the auto industry.

---

<sup>5</sup> <http://www.safpa.org.za/>

<sup>6</sup> <http://www.safpa.org.za/aboutus.htm>

<sup>7</sup> <http://www.engineeringnews.co.za/page/hydraulics-pneumatics>

<sup>8</sup> <http://www.fluidpower.co.za/index.html>

<sup>9</sup> [http://www.asw.co.za/index.php?option=com\\_content&view=article&id=119&Itemid=110](http://www.asw.co.za/index.php?option=com_content&view=article&id=119&Itemid=110)

<sup>10</sup> [http://www.saqqa.org.za/docs/events/q\\_africa07/presentations/malan\\_g.pdf](http://www.saqqa.org.za/docs/events/q_africa07/presentations/malan_g.pdf)

## Are you suited to this career?

This quick quiz can help you to identify whether you are suited for this occupation.

QUIZ	YES	NO
Do you have an inquiring, analytical mind?		
Do you enjoy Mathematics and Science?		
Are you good at analysing problems and finding solutions?		
Do you want a career that makes extensive use of science and technology?		
Can you think creatively and come up with original ideas?		
Do you enjoy working with your hands?		
Can you communicate clearly orally and in writing?		
Do you work well with other people?		
Do you have good health and stamina?		
Are you computer literate?		

If you have mainly yes answers it may be an indication that this is an occupation to consider.