



# Discover our

# RECONDITIONED PARTS



With a few decades of experience, TVH is now able to offer you a unique range of reconditioned parts, at the best price and same warranty as our new parts. Electric motors, internal combustion engines, transmissions, torque converters, radiators, steering axles, printed circuit boards, chargers, joysticks ...

Over the years, TVH has invested in a wide range of test devices which allow us to pass stringent quality controls on various spare parts. The tests are designed in such a manner that a realistic work situation is generated during the tests.

Buying one of our reconditioned parts is the perfect alternative to buying a new spare part.

### WHAT ARE RECONDITIONED PARTS?

We repair parts that, after extensive testing, are placed in stock. This is done according to strict quality standards. We offer you reconditioned parts for material handling, industrial vehicles and agricultural equipment.



These reconditioned parts are automatically shown on your offer whenever you inquire about a new part in MyTotalSource. On the printscreen shown here, you recognise the reconditioned part by the icon in the bottom right-hand corner of the image. This way, we automatically inform you if such a part is available.

**S** MyTotalSource

TVH is strongly committed to the environment. We invested in solar panels and other durable green projects. Even our reconditioned parts contribute to a hetter environment.

We recycle parts and recondition them in an environment-friendly way. This way you win twice: you pay a lower price and contribute to a greener society.

Right from the start of TVH in 1969, reconditioned parts have been a vital part of our range and our service. Needless to say that we have already gathered the necessary know-how.



# **3 DIFFERENT WAYS TO ORDER** RECONDITIONED PARTS

#### 1. Reconditioned parts with return of old unit

When you purchase a reconditioned part, and you indicate you will return your old unit, a surcharge amount will appear on your invoice. When you return your old part (subject to normal wear) to us, this surcharge is refunded to you. This is also shown on your offer. Common reconditioned parts are: printed circuit boards, valve assemblies, electric motors, reductors ...

#### 2. Reconditioned parts without return of old unit

These are reconditioned parts that don't demand the return of an old unit. As a result, no surcharge unit is mentioned on the offer. Common reconditioned parts are: covers, stub axles, front axle housings ...

#### 3. Repair of parts

If no reconditioned part is available, then you can send us your faulty part for repair by our specialised engineers. These repaired parts receive the same warranties as our reconditioned parts. You can find the repair request forms on our website: www.tvh.com/repairform



# **TYPES OF RECONDITIONED PARTS**

**Electrical parts** 











**Hydraulic** parts











**Drive train parts** 











**Steering parts** 











**Chassis parts** 











Lifting accessories & attachments











# **KEY FIGURES**



> 100 000 parts in stock



20 000 different references in stock



100 reconditioning experts



> 10 test configurations

# **3 DIFFERENT SERVICES**



With return of old unit



Without return of old unit



Repair of old unit

# **RANGE**







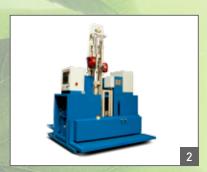


## We offer you a wide range of reconditioned parts for different makes and types of machines:

- · from old to new machines
- · from harder-to-find makes to more popular makes
- Linde
- Jungheinrich
- Still
- Toyota
- Mitsubishi
- Hyster
- BT
- Nissan
- Caterpillar
- Clark
- Lansing
- JLG
- ...











#### QUALITY

#### **Test configurations**

Quality is key in your business. That is why we have invested considerably in test configurations and in people. TVH collaborates closely with surrounding colleges and universities. As a result we now have the most versatile and unique test benches to test our parts. All of the below test configurations were developed internally.

From reductors over valves, to hydraulic cylinders and printed circuit boards: we can test all types of parts in our test centre in Belgium. All electric motors and transmissions are supplied with a test report. This way you can see what aspects the motor or transmission was tested on. The test reports also receive a stamp of authenticity.

#### A selection from our range of test configurations:

#### 1/ Test bench for hydraulic valves

We have internally developed a test bench which allows us to test almost every hydraulic valve in a way that is very close to the normal working situation. The test bench allows us to read the operating pressure, contained pressure and possible internal leakage at any time. After every test, a report is generated with the results and a copy is sent to the customers.

#### 2/ Test bench for hydraulic cylinders

This test bench, which was also developed internally, allows us to check all types of hydraulic cylinders for internal and external leakage as well as pressure. The tests can be performed statically and dynamically. By means of hydraulic oil pressure, we can continuously move the piston rod from a compressed position to a fully extended position.

#### 3/ Test bench for reductors

This unique machine allows us to thoroughly test the functioning of the gearboxes that provide the mechanical transmission between the electric motor and the wheels in electric lift trucks. We test under load to simulate the actual situation in the machine in the best possible way.

#### 4/ Test benches for electronic parts

Our electronics department has an ATB (Automated power Test Bench) and multiple FTBs (Functional Test Benches). These two types of test benches are complementary.

The FTB (see picture 4B) is a flexible platform on which we can perform functional tests for high-power devices like motor controllers, and a complete functional test for low-power products like joysticks,



displays, timer modules ... We test all in- and outputs as well as every function of the parts, by simulating its functioning in the different machines it could be installed in.

The ATB (see picture 4A) on the other hand, is used to perform high-power functional and endurance tests on electronic motor controllers.

In addition to the automated test benches we also have 32 universal test benches (see picture 4C) for the manual testing of motor controllers under load.



#### 5/ Charger tester

All types of chargers, including high-frequency chargers, are repaired at our facility and tested on a special power test bench. Regardless of the voltage or current, the tester is capable of simulating any type of battery. The in-house developed software allows us to print the charging curve.

#### 6/ Linde test truck for hydrostatic transmissions and orbitrols

Every hydrostatic transmission from the Linde brand is fitted into the test truck and adjusted by our experienced mechanics before it leaves the workplace. The following functions are checked: driving, braking, accelerating, balance between left and right wheel, standing still. Orbitrols can also be verified quickly via the test trucks. Every repair is assigned a code with which we can quarantee you a high-quality product.

#### 7/ Test bench for large automatic transmissions

On this test bench, an industrial automatic transmission is coupled to a V8 diesel engine and tested. Operating pressure, torque converter pressure, pump pressure and gear change pressure are shown at the same time. During gear change, the pressure build-up or the pressure drop can easily be visualised.

The transmission will not be delivered in case of a major speed reduction or in case a certain pressure is not achieved.

#### 8/ Test bench for smaller automatic transmissions

On this test bench, an industrial automatic transmission is coupled to a hydraulic unit and the electronics needed in order to continuously adjust the rotational frequency and the gear. The old regular pressure gauges were replaced by sensitive speed, pressure and temperature sensors so that now, the test can easily be carried out in a few clicks.











#### **PEOPLE**

We invest considerably in our human capital. Our **people** are the heart of our company. In our **Training Centre** our engineers regularly receive **further training** about the latest technical developments. This keeps them up-to-date and ensure you get the best service.

#### WARRANTY

Thanks to the investments in people and test configurations, we can offer our reconditioned parts with the same warranty conditions as our new parts.

#### **WE BUY YOUR CORES**

We are interested in your old parts!

You can find the 'Core Purchase' form on our website: www.tvh.com/corepurchase

Fill in our 'Core Purchase' document and mail it to: cores.electronics@tvh.com for electronic parts, cores@tvh.com for other parts.

#### **SERVICE**

We offer technical support to our customers in various languages, i.e. Dutch, French, English, German, Spanish, Italian ...

Do you have any problems with parts you bought from us, such as error codes, connection problems ...?

We will search for the appropriate solution for you. Your contact person at TVH will put you in contact with one of our specialists who will help you out and will solve your issue quickly.

# **MOVIE**

Scan the code to watch the film that guides you through the reconditioned parts or go to downloads on www.tvh.com.

