



**Vocation for service  
and experience**

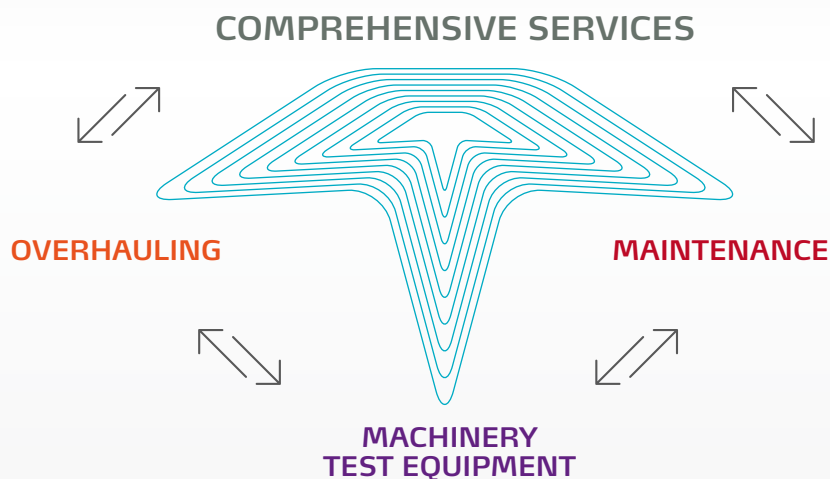
We offer solutions to our customers' needs which will enable them to improve their rail cars in terms of service and effectiveness.

**TRADINSA** is a company of reference on the Spanish railway market within the overhauling, maintenance and equipment manufacturing sector, and the fact that we belong to the CAF Group means that we are able to contribute our knowledge in state-of-the-art railway technology.

The multidisciplinary nature of our work, together with our vocation for service, makes it possible for our customers to find both beneficial and profitable solutions.

The range of services we offer constitutes a complete global solution to ageing problems in trains and to the detection of obsolete equipment.

The combined efforts of the three areas of our activity together with our highly specialized workforce enable us to find a comprehensive solution to all your problems.



Our aim is to offer a comprehensive service ranging from the **transformation** of the rail car to improvements in the efficiency of your equipment via proper **maintenance**, while in turn incorporating all the **equipment** needed to help ensure your work processes and staff **training**.



40.000 m<sup>2</sup> surface area.  
10.000 m<sup>2</sup> of covered premises.  
Access to main RENFE railway line.  
Test rail with overhead power cable.





Jordi Navarro Guitart  
General Manager / Project Manager

At TRADINSA, the management of a project gets underway by pinpointing our customers' needs in order to provide them with better solutions based on our experience, which they can then incorporate in their development.



## Overhauling

Our aim at Tradinsa in terms of overhauling involves not only improving the interior comfort of the train, but also providing state-of-the-art techniques that ensure our customers are able to prolong the working life of their rail cars.

Our experience enables us to offer a comprehensive service that covers the following:

- › Study of needs.
- › Search for and contribution towards finding the best technical solution.
- › Implementation of improvements in the rail car or the equipment.
- › Optimization of top quality work processes.
- › Final delivery in accordance with agreed protocols.

We offer the chance to set in motion turnkey projects by providing solutions for their application at our customers' own premises, as follows:

- › Project engineering.
- › Monitoring and control of the project.
- › Training of our customers' staff.
- › Control and supervision of processes, materials and equipment.

### OVERHAULING

- › Elements of interior design and comfort.
- › Structural modifications in undercarriage well or frame.
- › Installation and improvement of equipment.
- › CCTV, public address system, video entertainment.
- › Air conditioning.
- › Converters and inverters, power control.
- › Traction equipment.
- › Wheel change, bogie width.
- › Improvements in pneumatic and electrical systems.
- › Access door.
- Etc.

Construction and adaptation of additional rolling stock  
Repair after accidents.

Regional diesel locomotive - RENFE  
Reset, general service and restyling.





**Joan Lluís Martí**  
General management / Production Manager

“ I like to say that our success is down to the professionalism and effort made by our staff – they are the most important asset for TRADINSA.

## Vocation for service and experience



## Maintenance

The lifespan of a piece of equipment depends on whether proper and efficient maintenance is carried out on it.

At TRADINSA we are fully aware of the procedures required to ensure maximum reliability of your equipment - by providing advice on the most suitable improvements so that your equipment will achieve better performance and come into line with current regulations.

We have premises at our disposal with access to the RENFE railway line which, together with our experience in long-cycle maintenance means that we are fully qualified to carry out everything from basic inspections to large-scale service of whole trains.

All the above is done without overlooking concepts of obsolescence that has enabled us to detect the end of the working life a piece of equipment and suggest the best solution accordingly.

### MAINTENANCE

#### Bogies

- › Maintenance and complete recovery of bogies.
- › Replacement of wheels and brake discs.
- › Maintenance of reducers.
- › Pneumatic system - valves.
- › Electrical system.
- › Suspension and shock absorbing – primary and secondary.
- › Braking system – cylinders and blocks.
- › Final trials.

#### Couplings

- › Maintenance of automatic couplings.
- › Maintenance of semi-permanent couplings.
- › Trials and tests.

#### Electrical – pneumatic installations and equipment

- › Motors.
- › Resistance.
- › Batteries.
- › LV cabinets.
- › Arc extinguishing devices and circuit breakers.
- › Air conditioning.
- › Doors and mechanisms.

#### Miscellaneous

- › Anti-graffiti systems.
- › Sheet metal and paint.
- › Elements of comfort and interior design.



*Serviced bogie.*





**Sergi Buñuel Blanco**  
Production Manager / Head of Department

**“** Our experience in maintenance enables us to design and manufacture the most suitable equipment for each process, in the knowledge that it will be both useful and effective for our customers.



## Machinery

A job cannot be developed or have a guarantee of being well done without the best tool.

Our proven track record is the most important asset at TRADINSA and we use it to manufacture maintenance machinery and test equipment to ensure that our customers obtain maximum performance in their work.

And if your equipment has been rendered obsolete, we carry out adaptation and modernisation work that will enable you to recover them at levels of the utmost reliability.

We include specialist training in the use of our equipment in all supplies, in addition to a study of their use for any model of train.

The equipment incorporates easy-to-use software specially developed for each piece of equipment, with Internet connection, so as to deal with any problem online.

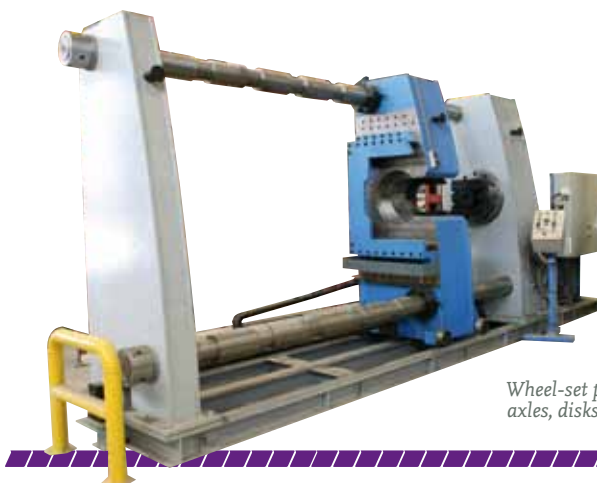
By way of a complement to our services, we offer the chance to carry out studies and development of long-cycle maintenance processes or studies of maintenance processes regarding any type of train or equipment.

### MACHINERY AND EQUIPMENT

- › Press for setting wheels, discs and reducers
- › Test bench – bogie press
- › Test bench for reducers
- › Test bench for couplings
- › Test bench for springs
- › Test bench for shock absorbers
- › Test bench for pantographs
- › Test bench for brake cylinders
- › Test bench for pneumatic equipment and panels
- › Tools of all type to suit your needs

### MISCELLANEOUS

- › Study of plant application and development of long-cycle maintenance plants.
- › Study of maintenance processes regarding any type of train or equipment.



Wheel-set press; offsetting of axles, disks and reducers.



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