

**INTERNATIONAL GRANDS PRIX FOR AUTOMOTIVE INNOVATION**

**Engineering – OEM Category :**

**Gold Trophy (equal)**

**DELPHI**

**DIRECT ACTING DIESEL COMMON RAIL SYSTEM**



In the Delphi Direct Acting Diesel Common Rail system, the injector needle is set in motion directly by a piezo ceramic actuator, rather than being moved via an electro-hydraulic circuit. It takes less than 100 microseconds to open and close the needle valve of the injector and spray the high pressure diesel fuel into the engine, allowing seven (or more) injections per engine cycle. In addition, the injector's operating principle is completely leak free. That means all fuel is injected, and no

high pressure fuel is wasted into a return flow, saving up to 1 kilowatt of lost energy used by today's servo systems and removing the requirement for expensive fuel coolers. Other benefits include stability over its life time, robustness of injected quantities for varying injection patterns, low shot to shot variation of injected quantities and high spray momentum.

**Highlights:**

The direct acting piezo technology enables the injector to spray fuel into the combustion chamber faster and with much improved spray momentum and accuracy and provides extremely fast opening and closing of the needle valve, independent of injection pressure.

The faster needle actuation reduces the quantity of fuel injected at low needle lifts, minimizing the highly variable spray structure at the beginning and end of injection events. Particulate matters and NOx can be reduced by up to 30 percent. This benefit allows for cost optimization of the aftertreatment by reducing the size of the particulate filter or, conversely, eliminating NOx aftertreatment. In addition, noise is reduced by up to 5dBA thanks to the use of the multiple injection strategy. At idle, the direct acting injector concept makes no perceptible noise above the engine itself.

Launch date: It entered in production in September 2008 and is already fitting vehicles such as the Mercedes-Benz C 250 CDI, E 250 CDI, E 220 CDI and E 250 CDI Coupé.

## Engineering – OEM Category :

### Gold Trophy (equal)

#### VALEO

##### BEAMATIC PREMIUM™, ADAPTIVE DRIVING BEAM



On the top of the adaptive front lighting system (AFS), the module provides a high beam equivalent even with surrounding cars. Based on a camera system, the module adapts the beam pattern according to leading or crossing cars by avoiding glare.

This is the first worldwide application allowing to drive all the time in “High beam” without glaring others. The system improves the current product by mainly adding light on the side of the leading or upcoming cars.

The function is supported by adding an additional actuator on the top of the usual dynamic bending light and leveling controllers. This actuator activates a special shield allowing to hide the leading and crossing cars.

#### Highlights:

Increased safety and improved comfort for the driver through better visibility leading to shorter reaction time. The system controls the lighting in any possible direction avoiding the glare.

Optimized performance through the selection of the best possible lighting configuration even in presence of other cars.

Better optical performance with intermediate steps between Low Beam and High Beam. Improved “High Beam usage” rate with fully automatic transition between the different functions.

Planned launch date: 2010

## Spare parts and aftermarket Category

### Gold Trophy

#### NGK SPARK PLUGS

##### LPG LASERLINE SPARK PLUGS



An Iridium chip is welded onto the top of the slim center electrode (0.6mm diameter). A platinum chip is also worked into the ground electrode. In gas-powered engines, the use of these precious metals decreases the risk of hot gas corrosion – which is much higher than with normal gasoline operations.

Iridium allows the design of the center electrode to be very slim - with a diameter of only 0.6mm. This enables the flame front to spread evenly inside the combustion chamber, thus improving engine efficiency. Additionally, the slim electrode requires less ignition voltage. This is exceptionally important because gas is harder to ignite than gasoline.

The ignition voltage required can rise by 7,000 volts. If it were not for the Iridium center electrode, the risk of coil failure would rise dramatically.

The electrode gap of all LPG LaserLine spark plugs has already been adapted to gas operations. In addition, the metal shell of the plugs features a special chrome alloy coating which shields it from the aggressive and corrosion promoting conditions.

The assortment comprises seven specific spark plugs. Despite of this limited number of types, it includes a perfect spark plug match for about 90 percent of all convertible passenger cars in Europe.

**Highlights:**

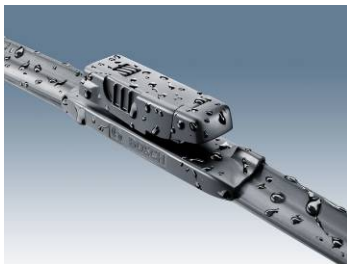
Assortment exclusively dedicated to answer LPG and CNG needs  
Ultra short assortment, easy stocking (7 part numbers)  
Covers more than 90 percent of the European and French car parc

Planned launch date: October 2009

## Silver Trophy

### BOSCH

#### MULTI-CLIP / FLAT WIPER BLADE UNIVERSAL ADAPTER



To make its range of flat wiper blades more compact, Bosch has invented the first multifunction adapter pre-fitted on the blade. The Multi-Clip covers four different Sidelock and Toplock interfaces offered by car manufacturers. Thanks to the Multi-Clip the range may be reduced to 11 single wiper blade references, replacing 45 blade kits.

The Multi-Clip universal adapter for flat wiper blades brings together four fixation systems into one. It is pre-fitted on the Bosch Aerotwin series wiper blades. No box of adapters is delivered in addition to the blade. Mounting is easily carried out in a single step.

**Highlights:**

For the professional: a more compact, more simple range, stock management made easier and reductions in stock storage and display surface areas

For the motorist: mounting remains easy as there is only one direct step with no adapter needed to be found and fitted.

Launch date: September 2009

# Garage Equipment Category

## Gold Trophy

### TEXA S.p.A.

#### OBD LOG



The OBD Log from TEXA is a small, discreet diagnostic device that has been specially designed to detect intermittent malfunctions, those that arise unexpectedly on the road in a random way and have often disappeared when a car is brought in for repair.

The OBD Log plugs directly into a vehicle's OBD socket. It is equipped with an internal memory where it can record faults the moment they occur. By doing so it can analyze all the information through the EOBD protocol.

The OBD Log allows you to let it record any vehicle data for days or even a whole week at a time. It features a cyclical memory that writes the latest

relevant data over the oldest if no fault is detected.

At the end of the "observation" period, you can download recorded data for viewing on your PC through specific operating software. Its small size and the fact that it is totally automatic makes it easy to install on any type of vehicle (Euro2 or later for gasoline engines and Euro4 or later for diesels).

Following each trip, a light will appear: green indicates that no errors were detected, while a red light indicates that a fault was recorded and that details are available for viewing.

#### Highlights:

OBD Log may remain "onboard" several days, connected to the vehicle's OBD socket to record data related to the vehicle's electronic behavior and analyze the intermittent or random faults that show up on the PC once the client has returned to the shop.

A good recording avoids the many drawn out explanations on the part of the customer, unsatisfactory answers on the part of the repairman as well as losses of time not always billable.

Planned launch date: July 2009

## Silver Trophy

### ACTIA AUTOMOTIVE

#### MULTI-DIAG® POCKET



As the latest addition to ACTIA's range of multimake diagnostics tools, Multi-Diag® Pocket supports all major automotive makes and allows users to perform all crucial electronic maintenance and repair operations on vehicles.

Multi-Diag® Pocket is a hand-held diagnostics station featuring a 7" touchscreen, a vehicle communications interface and an accessories kit (OBD cable, power supply, carry bag, external DVD player). Extremely easy to handle (only 850g), Multi-Diag®

Pocket travels with you: its Bluetooth vehicle interface brings you the freedom of wireless technology and its battery pack provides up to 2 hours of stand-alone operation for roadside repair work.

The groundbreaking innovation provided by Multi-Diag® Pocket is the 1-click feature. Just one click and Multi-Diag® automatically identifies the vehicle's make and model. It then queries the memory of each ECU automatically to check the vehicle's electronic health status and generates a detailed report with a description of any errors that may have occurred, ECU by ECU.

The new databases built into Multi-Diag® provide reliable vehicle identification as soon as the unit is connected to the vehicle's OBD plug. Multi-Diag® Pocket can automatically interpret vehicle type and run the ECU diagnostics routines without operator action. Producing a simple ECU error code report that can sometimes require 120 operations with a traditional diagnostics tool can be carried out in a single click using Multi-Diag® Pocket. The 1-click feature targets all EOBD-compatible vehicles implementing VIN (first compatible vehicles date to 1996).

### **Highlights:**

The 1-click feature provides significant time gains and opens up new prospects in the diagnostics area, for adding value to garage services or generating new profit centers.

Multi-Diag® Pocket is a business tool that repair specialists can use to save time and boost turnover.

Launch date: Official launch at EQUIP AUTO 2009.

## **Services Category**

### **Gold Trophy**

#### **CHIMIREC**

#### **REGENERATION OF COOLING LIQUIDS**



Because of its concern for the environment, CHIMIREC PPM has developed a solution for regenerating cooling fluids and bringing a new life to this waste. After being collected and sorted, the cooling liquids undergo a physical treatment by fine ultrafiltration in order to purify and clarify the used diluted glycol. Cooling liquids are classified as being hazardous industrial waste because they contain ethylene glycol and various additives. They can pollute our environment in the event of a spill.

Thanks to this solution, regenerated liquids (classified according to their transparency) can be reused either in the auto industry, in the application of additives within the building trade or in the treatment of water.

### **Highlights:**

Environmentally-friendly.

Launch date: 2008

## JURY'S SPECIAL AWARD

### Vehicle's equipment category

#### **BERU AG BORGWARNER**

##### **BERU HIGH VOLTAGE PTC HEATER**

Modern fully electric vehicles don't produce any waste heat to heat the compartment and defrost the windshield. Only the battery radiates some heat, but not enough. Present heaters have to be developed to increase the heating power.

The new High Voltage PTC (HV-PTC) by BERU is fitted in the air conditioning instead of the water heat exchanger and the conventional PTC Heater and connected to the high-voltage power supply system.

It generates a heating power of approximately 3,000 Watts and weighs approximately 1.8kg. Inside the water heat exchanger, a heating capacity of approximately 3,000 to 5,000 Watts with a weight of about two kilograms is possible.

In comparison: a conventional BERU PTC heater for combustion engines reaches approximately 0.8kg and achieves a heating capacity of 500 to 2,000 Watts.

The new BERU PTC heater supports the future trend in the automotive industry, which is the hybridization and electrification of vehicles. Only hybrid or electric vehicles will be able to achieve future CO2 emission targets. But full electric vehicles produce - contrary to cars with gasoline or diesel engines - insufficient or no waste heat at all.

#### **Highlights:**

Heating is a very important issue for the success of electric vehicles since drivers demand the same comfort they are used to. Beru's HV-PTC is one of the first high-voltage heaters on the market. It is easy to integrate into the engine because it is small sized. It can provide a variable heating power and high security is guaranteed despite high voltage.

Launch date: Beginning of 2009

### Garage category

#### **LuK**

##### **DMF INSPECTION TOOL**

LuK has developed a specific tool to allow workshop inspection of a clutch DMF without disassembly: lateral play and angular tolerance in particular. The values measured are compared with the specifications for the new flywheel. The tool indicates whether the DMF is able to withstand extended clutch life.

## **Fillon Technologies**

### **JET CLEAN**

The product is a washer of ecological pistol who allows, without any fog nor spatters, to clean of bottom in attic a pistol paint. Compatible at the same time for solvent products and hydrodiluable products thanks to two adapted sprays, it cleans within 20 seconds all the circuits by producing no waste.

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