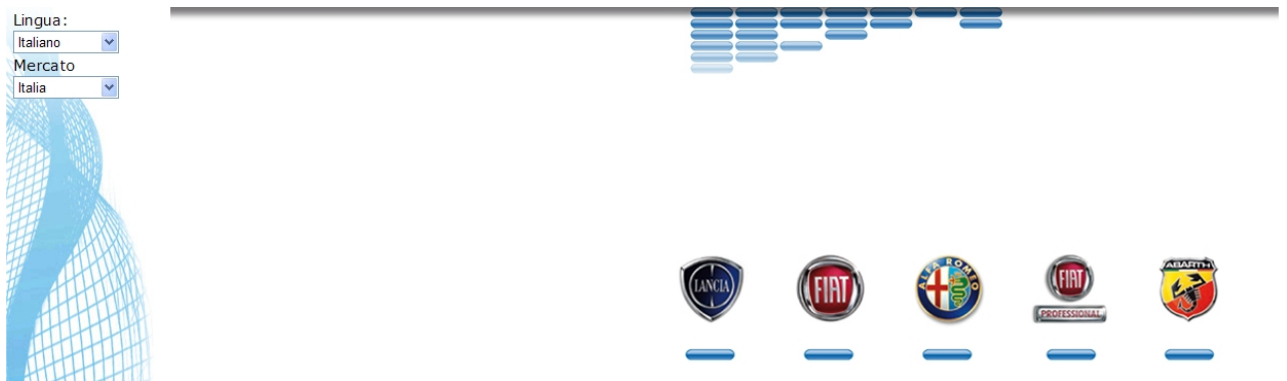


Guide to the Labor Time Schedule

Foreword

This edition of the Web Labor Time Schedule is the normal evolution of the Labor Time Schedule DVD already used throughout the network. For this reason, it maintains the graphic design of the DVD edition with additional features such as ease of use and exhaustive data content, which are typical of an online support service.



Specifically, this tool makes it possible to identify the time frames, the parts, the problems, the positions and the links among the complex operations specific to the selected model, as well as the repair packages.

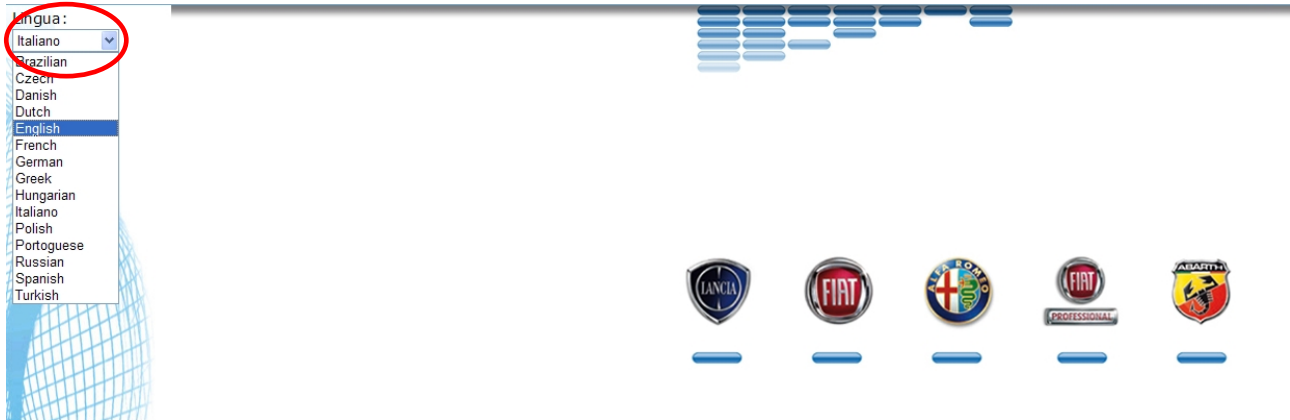
This Labor Time Schedule contains all the languages and models of the five brands of FGA.

Summary

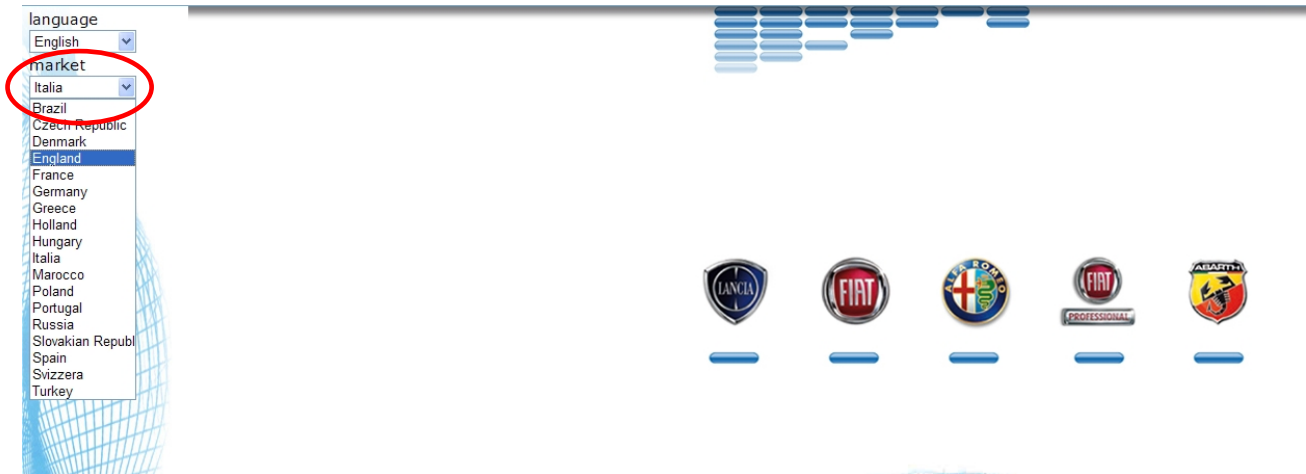
- [Configuration of the International setting](#)
- [Setting setup](#)
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 - [Operation assembly selection](#)
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 - [Time values](#)
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 - [Labour and material](#)
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 - [Validation](#)
 - [Deletion of packages, operations and spare parts](#)
 - [Summary of the repair operation](#)
- [Instructions on the body work groups](#)
- [Accident repairs \(Group 76\)](#)

Configuration of the international settings

From the Homepage of Labor Time Schedule, the user should select the option from the **Language** drop-down menu in order to set the preferred language to display the interface and all the descriptive information present in the data.



Furthermore, the user can select the option from the **Market** drop-down menu to set the reference market. This entails the adoption of the related list for the quotation of the spare parts contained in the packages of the Labor Time Schedule .



Setting Setup



[Preferences](#) | [change password](#) | [my e-mail](#) | [Exit](#) | [Dati Societari](#)

Tempario					
		Home Warranty for painting Preferences change password my e-mail Exit Dati Societari			
150.034.0 500 POP 1.3JTD MJ		Code		Description	
		>>			

Preferences

From the main screen of the Labor Time Schedule, the user may also configure the functional settings of program according to his or her requirements.

Select the **Preferences** command to edit the user profile and the invoicing area.

User profile

Tempario	
Home Preferences change password my e-mail Exit Dati Societari	
TURN BACK	
UserID	U037377
Language:	English
Market	England
Corporate name	
Address1	
Address2	
Brands we deal	☒ Fiat ☒ Lancia ☒ Alfa Romeo ☒ Fiat Professional ☒ Abarth
Confirmation to enter the operation:	☒ Show ☐ Don't show
View with drawing	☒ Show ☐ Don't show
Default driver's side:	☒ Left ☐ Right
Update	
User profile Invoicing	

In this window, the user can enter information concerning the workshop that will be shown in the Labor Time Schedule Interface (in the **Summary** page) and as header on all printouts.

In addition, users can enter their user-id, set the market and the language, the brands dealt and configure certain features related to the application behaviour.

In this window, the user can select the default display mode of the timing page.

The display without drawings makes it possible to display a larger number of operations, while also allowing the displaying of the drawing, if necessary.

In addition, in this window the user can specify if the Labor Time Schedule should display a confirmation message when the entry of an operation is added to the Processing list or to specify the default driver's side.

Invoicing

Tempario			
Home Preferences change password my e-mail Exit Dati Societari			
TURN BACK			
General labour rate:	25,00	0,00	0,00
Labour rate for painting:	35,00	0,00	0,00
Rate range to use	☒ 1	☐ 2	☐ 3
Extra charge percentage for consumable material:	0,00		
Extra charge upper limit for consumable material (hours):	0		
Conversion to Euro	1,00		
Tax percentage:	20,00		
Estimations' progressive code prefix			
Estimations' progressive code:	1		
Estimations' standard duration (dd):	10		
Update			

User profile Invoicing

In this window, the user can set all the parameters required for the economic valorization of the repair procedure.

In the first two lines, the user should enter the values of *the labour rate for general operations*

general labour rate	30,00	0,00	0,00
---------------------	-------	------	------

and the labour rates for *painting*.

paint labour rate	35,00	0,00	0,00
-------------------	-------	------	------

For each rate there are three available fields corresponding to the three different lists.

The user can select the rate to apply using the selection button under the fields (*Rate range to use*).

labour rate tariff to be utilised	☒ 1	☐ 2	☐ 3
-----------------------------------	------------------------------------	-------------------------	-------------------------

In the next two lines the user can set the parameters to calculate the **extra charge for consumable material**.

percentage surplus for consumables	0,00
------------------------------------	-----------------------------------

In the first field the user can set the percentage which has to be applied to the total amount of labour for the whole procedure to determine the extra charge (expressed as extra time) necessary to compensate the use of consumable materials.

In the second field the user can set the total number of hours of the procedure beyond which the consumable material won't be charged.

max.limit for consumables surplus (hours)	0
---	--------------------------------

The extra time, given by these two values, will be associated to the general labour rate to generate the extra charge.

Example

Extra charge percentage: 10%

Extra charge limit: 5 hours

Total time of the procedure: 11.20 hours

General labour rate: € 22.00

The percentage is applied to the 5 hours since the total time exceeds this value:

$$10\% * 5 \text{ hours} = 0.50 \text{ hours}$$

Valorizing this time and adding it to the labour rate, the following is obtained:

$$0.50 \text{ hours} * € 22.00 = € 11.00$$

This is the value that the Labor Time Schedule calculates as extra charge for consumable materials.

In brief:

$$\text{Extra charge} = \text{Labour rate} * \text{Extra charge percentage} * \text{shortest (Limit, Procedure time)}$$

The field **Conversion to EURO** makes it possible to set the conversion from the currency in use to Euro.

Conversion to Euro	1,00
--------------------	-----------------------------------

For Italy, all the prices are already in Euro, so 0 should be set for this value, which disables the currency conversion function.

In the next field the user should enter the value for **Tax percentage** (VAT).

tax percentage	20,00
----------------	------------------------------------

This value is used to calculate the economic valorization of the procedure.

The field **Progressive quote prefix** makes it possible to specify an acronym to place before the progressive code of the quotes which appears on all printouts.

progressive estimate code prefix	00
----------------------------------	---------------------------------

This makes it possible to distinguish between two quotes with the same progressive code that may have been printed from two different workstations.

The current progressive code appears in the field below. This value cannot be modified, but the user can reset it.

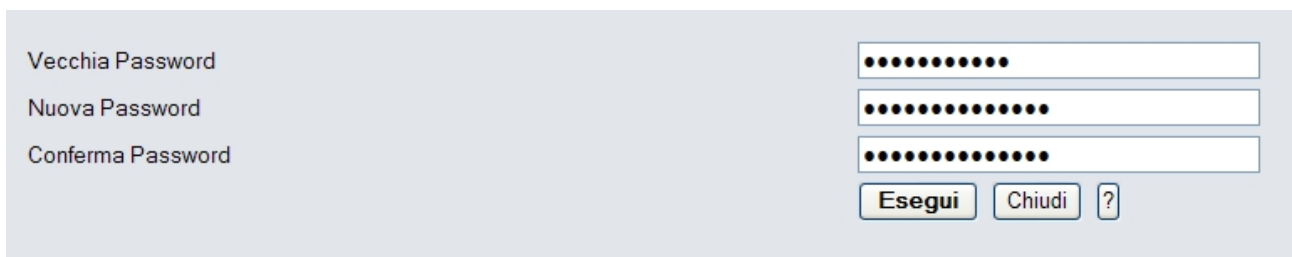
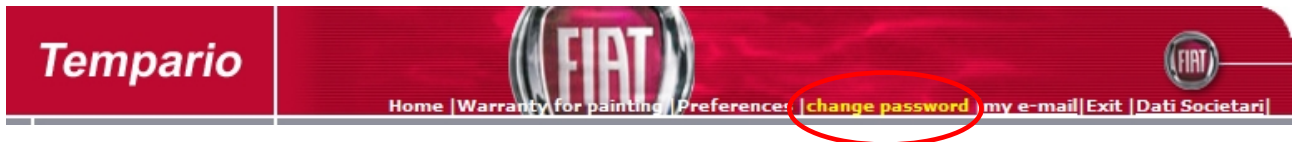
progressive estimate code	1
---------------------------	--------------------------------

The last field makes it possible to set the **standard duration**, which will be printed on the quotes.

standard estimate duration (days)	10
-----------------------------------	---------------------------------

Change password

From the main screen of the Labor Time Schedule , the user can click on the *change password* command to modify or update his or her login password.

A screenshot of the password change form. The form has a light gray background. On the left, there are three labels: 'Vecchia Password', 'Nuova Password', and 'Conferma Password'. On the right, there are three corresponding password input fields, each filled with black dots. Below the input fields, there are three buttons: 'Esegui', 'Chiudi', and a button with a question mark icon. A red arrow points downwards from the 'change password' link in the header above to the top of the form.

My e-mail

In addition, the user can enter his or her e-mail address to reset the login password in the *my e-mail*.

A screenshot of a web form titled "Configura l'indirizzo Email per il Reset Password". On the left side of the form are three car logos: Alfa Romeo, Fiat, and Lancia. The form contains two input fields: "Username" with the value "U037377" and "Indirizzo Email" which is empty. Below the input fields are two buttons: "GO" and "CANCEL". The form is set against a light blue background with a subtle pattern.

Warranty for painting

The **Warranty for painting** command makes it possible to select the correct assembly for the painting operations, so that they are compatible with the painting type and the detected fault.

The screenshot displays the Tempario software interface. At the top, the 'Tempario' logo is on the left, and the Fiat logo is on the right. Below the Fiat logo, the text 'Home (Warranty for painting) Preferences | change password | my e-mail | Exit | Dati Societari' is visible. The 'Warranty for painting' link is circled in red. Below this, the vehicle information '150.034.0' and '500 POP 1.3JTD MJ' is shown. To the right of this information are fields for 'Code' and 'Description', followed by a '>>' button. A red arrow points from this '>>' button to a pop-up window titled 'Flat Rate Schedule - Warranty for painting - Windo...'. This window contains three radio buttons for 'One-coat painting', 'Two-coat painting' (which is selected), and 'Three-coat painting'. Below these buttons is a table with two columns: 'Code' and 'Description'.

Code	Description
2A	ORANGE PEEL.
2B	RUNS IN THE LOWER LAYER
2C	BLISTERING
2D	RUNS IN THE SURFACE LAYER
2E	FLAKING
2F	STAINS
2G	DISCOLOURATION OR FADING
2H	POROSITY
2J	POOR TOUCH-UP
2K	VISIBLE RUST
2L	INSUFFICIENT PAINT
2M	OPACITY
2N	CRAZING

The selection field of the painting type makes it possible to make the selection among the types allowed for the selected vehicle.

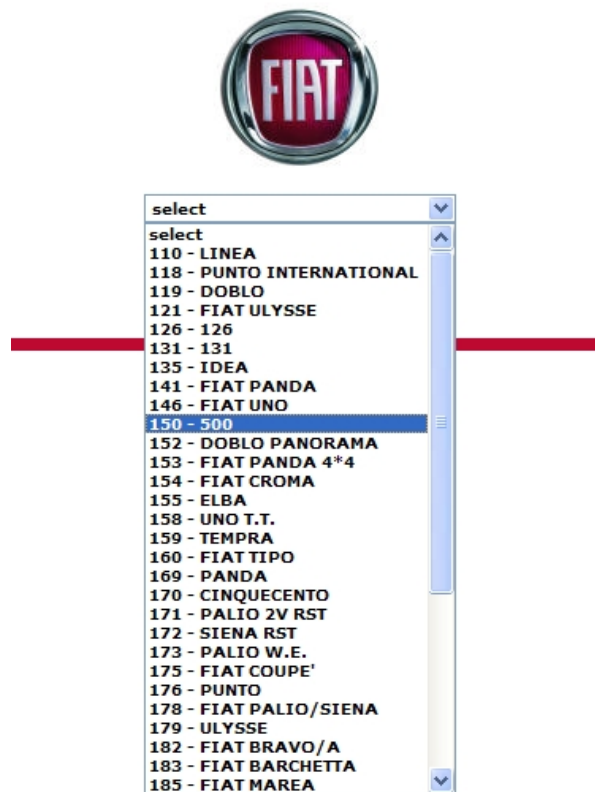
Once the detected fault in the vehicle painting has been selected, the Labor Time Schedule will display the assembly page containing all the painting operations compatible with the information available for the vehicle.

Model selection

In the middle of the initial screen, the user will see the five brands of FGA from which he or she can select the vehicle model on which (s)he wishes to work;



Click on one of the brand buttons to display drop-down window containing the complete list of all the available models in the Labor Time Schedule according to the selected brand.



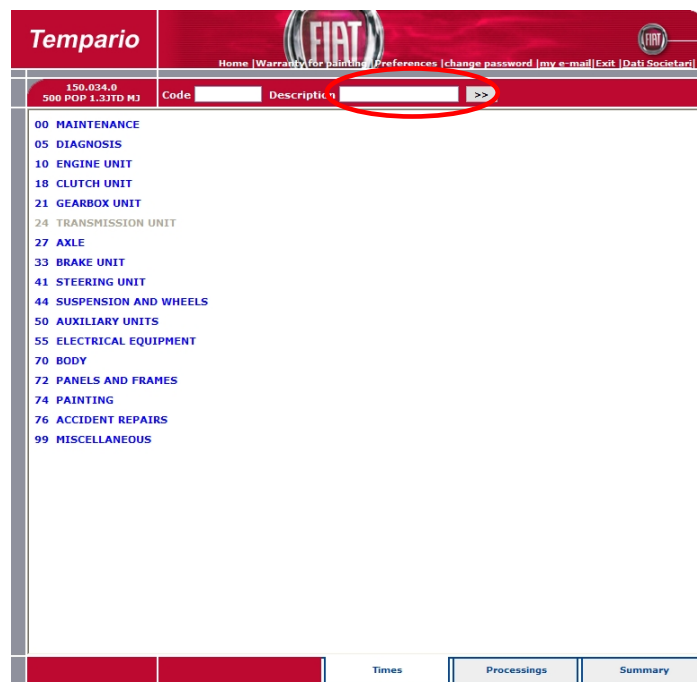
Once the model has been selected, the user will see the version selection window where the model code is completed with the version code and the series code to make up the complete MVS code of the vehicle.

Version selection

The Version section makes it possible to select the exact type of the vehicle on which the user wishes to work, once the model has been selected.



Once the specific vehicle version has been defined, the user moves on to another window for the group selection. All the information it contains shall refer exclusively to the selected version (as indicated by the MVS code and the vehicle description always included in the navigation header);



New search

If the user wishes to end the current search and move on to another vehicle, (s)he can quit the selection using the **Home** button, which is always included in the navigation header.



As an alternative to the guided search, the user can instead enter the model code of the vehicle concerned in the purpose-provided MVS field, on the top-left.

The sequence of screenshots illustrates the navigation process:

- Top-left screenshot:** Shows the 'Tempario' header with the 'MVS' field circled in red. Below the header, there are language and market dropdown menus, and a row of car brand logos.
- Top-right screenshot:** A list of vehicle models is displayed, including '150.021.0 NAKED SGE', '150.022.0 500 NAKED 1.2 BV', and others. A red arrow points from the 'MVS' field in the first screenshot to this list.
- Bottom screenshot:** Shows the '150.034.0 500 POP 1.3JTD MJ' vehicle selected. The page displays a list of components for maintenance and diagnosis, such as '00 MAINTENANCE', '05 DIAGNOSIS', '10 ENGINE UNIT', and '18 CLUTCH UNIT'. A red arrow points from the vehicle list in the second screenshot to this page.

or, if known, the complete M/V/S code of the vehicle.

MVS: 1500340 >>

This will grant the user direct access to the specified MVS.

Tempario

FIAT

Home | Warranty for painting | Preferences | change password | my e-mail | Exit | Dati Societari

150.034.0
500 POP 1.3JTD MJ

Code Description >>

00 MAINTENANCE

05 DIAGNOSIS

10 ENGINE UNIT

18 CLUTCH UNIT

21 GEARBOX UNIT

24 TRANSMISSION UNIT

27 AXLE

33 BRAKE UNIT

41 STEERING UNIT

44 SUSPENSION AND WHEELS

50 AUXILIARY UNITS

55 ELECTRICAL EQUIPMENT

70 BODY

72 PANELS AND FRAMES

74 PAINTING

76 ACCIDENT REPAIRS

99 MISCELLANEOUS

Operation selection

Once the user has identified the vehicle on which (s)he wishes to work and has entered group selection area, (s)he starts to navigate among the repair procedures of the Labor Time Schedule .

There are three ways to access the procedures in Labor Time Schedule :

- ☐ ***Operation group selection***
- ☐ ***Search by operation code***
- ☐ ***Search by operation description***

Search by operation code

Through the **Code** field on the top-left, the user can perform a search by operation code.



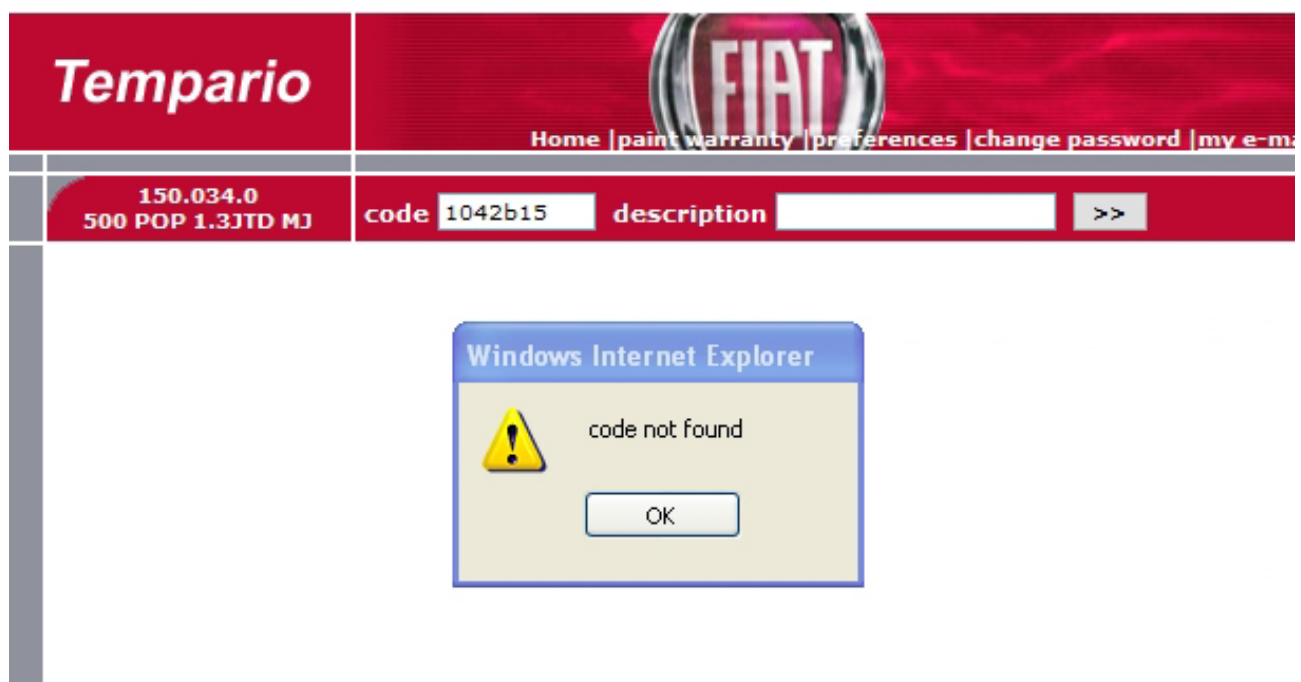
150.034.0
500 POP 1.3JTD MJ

Code Description >>

In this field, the user can enter a code consisting of 2, 4, 5 or 7 characters, corresponding to a **group**, **group+subgroup**, **group+subgroup+assembly** code or a **complete operation code**.

In case the code exists, and depending on the code entered, the Subgroup, the Assemblies or the Times (Operations) window appears on the screen.

If the search fails, the system displays a warning message.



Tempario

Home | paint warranty | preferences | change password | my e-m

150.034.0
500 POP 1.3JTD MJ

code 1042b15 description >>

Windows Internet Explorer

code not found

OK

If the user enters the complete and existing operation code he or she will access directly the time of the required operation to which the corresponding graphic table may be associated.

Tempario

[Home](#) | [Warranty \(for painting\)](#) | [Preferences](#) | [change password](#) | [my e-mail](#) | [Exit](#) | [Dati Societari](#)

150.034.0
500 POP 1.3JTD MJ

Code 0010k30

Description

>>

00 MAINTENANCE
05 DIAGNOSIS
10 ENGINE UNIT
18 CLUTCH UNIT
21 GEARBOX UNIT
24 TRANSMISSION UNIT
27 AXLE
33 BRAKE UNIT
41 STEERING UNIT
44 SUSPENSION AND WHEELS
50 AUXILIARY UNITS
55 ELECTRICAL EQUIPMENT
70 BODY
72 PANELS AND FRAMES
74 PAINTING
76 ACCIDENT REPAIRS
99 MISCELLANEOUS



150.034.0
500 POP 1.3JTD MJ

GROUPS > 00 MAINTENANCE > 0010 NEW VEHICLES AND MAINTENANCE > 0010K PROGRAMMED
MAINTENANCE, EMISSION CONTROL VERSIONS UP TO 90,000KM

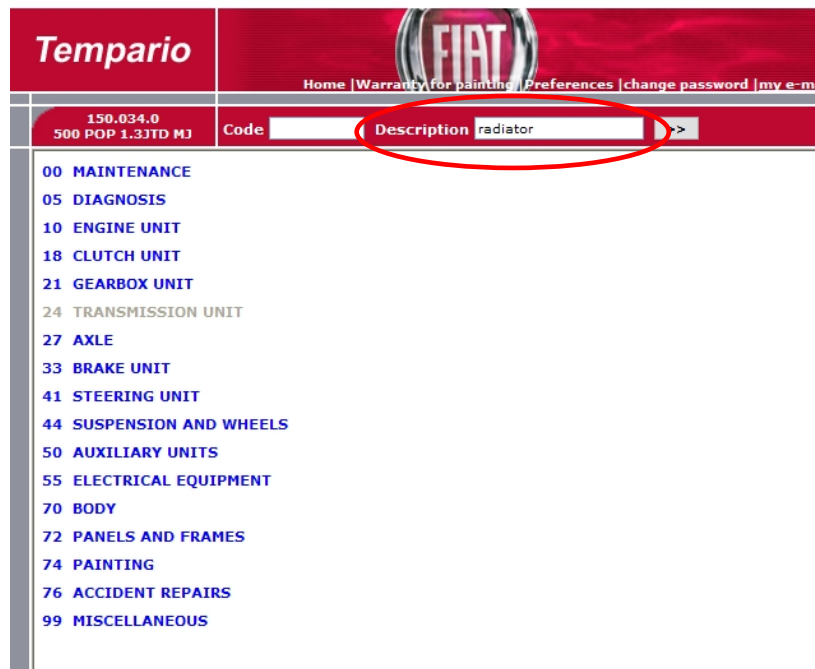
A line drawing illustration of a car on a lift. A technician is working on the engine. To the right is a service cart with a tank and hoses. Above the car is a box with the letter 'K' and a row of logos including Lancia, Fiat, Alfa Romeo, and others, followed by the word 'SERVICE'.

Don't show

Operation code	Description	Times	C.	R.	P.	
0010K30	30,000km service coupon, emission control versions	1,30		1	P	➡
0010K60	60,000km service coupon - emission control versions	3,05		1	P	➡
0010K90	90,000km service coupon - emission control versions	1,30		1	P	➡

Search by operation description

In the **Description** field, the user can enter a word or a sentence to search for in the descriptions of the operations.



The screenshot shows the Tempario software interface. At the top, there is a red header with the 'Tempario' logo and a 'FIAT' logo. Below the header, there is a navigation bar with links: 'Home', 'Warranty for painting', 'Preferences', 'change password', and 'my e-m'. Below the navigation bar, there is a search bar with a 'Code' field and a 'Description' field. The 'Description' field is highlighted with a red circle and contains the text 'radiator'. Below the search bar, there is a list of vehicle categories:

- 00 MAINTENANCE
- 05 DIAGNOSIS
- 10 ENGINE UNIT
- 18 CLUTCH UNIT
- 21 GEARBOX UNIT
- 24 TRANSMISSION UNIT
- 27 AXLE
- 33 BRAKE UNIT
- 41 STEERING UNIT
- 44 SUSPENSION AND WHEELS
- 50 AUXILIARY UNITS
- 55 ELECTRICAL EQUIPMENT
- 70 BODY
- 72 PANELS AND FRAMES
- 74 PAINTING
- 76 ACCIDENT REPAIRS
- 99 MISCELLANEOUS



Code	Description
1088B20	engine cooling radiator - r + r
1088B36	engine cooling radiator upper support pin (one) r & r
1088D10	coolant outlet sleeve from radiator r & r
1088D14	upper sleeve for coolant inlet to radiator - r + r
1088E10	radiator cooling fan - r + r
1088E14	electric radiator cooling fan circuit - check operation of components, line continuity &and repair contacts - includes relay replacement if necessary
1088E20	resistor for radiator cooling fan - r + r
5020A50	heater radiator - r+r
5020A54	heater radiator - r+r with heater box removed
5040C50	air conditioner heater radiator - r+r
5040C54	air conditioner heater radiator - r+r with air conditioner box removed
7620J85	radiator kit

12 Results found

Close

If the search is successful, a window appears on the screen with all the operations, the description of which contains the word or sentence entered. Otherwise, the system displays an error message.

Operation group selection

It's possible to select the operation group in the list described on the left-hand side of the window. If a group doesn't contain operations for the selected MVS, it will appear as disabled.

Tempario					
		Home Warranty for painting Preferences change password my e-mail Exit Dati Societari			
150.034.0 500 POP 1.3JTD MJ		Code		Description	radiator >>
00 MAINTENANCE 05 DIAGNOSIS 10 ENGINE UNIT 18 CLUTCH UNIT 21 GEARBOX UNIT 24 TRANSMISSION UNIT 27 AXLE 33 BRAKE UNIT 41 STEERING UNIT 44 SUSPENSION AND WHEELS 50 AUXILIARY UNITS 55 ELECTRICAL EQUIPMENT 70 BODY 72 PANELS AND FRAMES 74 PAINTING 76 ACCIDENT REPAIRS 99 MISCELLANEOUS					

Operation subgroup selection

Click on the selected subgroup and the display will move on to the **Subgroups** selection window.

The subgroup window shows all the existing subgroups for the selected group and makes it possible to select the subgroup and to display its assemblies.

Tempario	 
Home Warranty for painting Preferences change password my e-mail Exit Dati Societari	
150.034.0 500 POP 1.3JTD MJ	GROUPS > 10 ENGINE UNIT
1004 ENGINE AND POWER UNIT 1008 POWER UNIT MOUNTS 1012 ENGINE CRANK CASE 1016 CYLINDER HEAD/S 1020 CRANK CASE SUMP AND COVERS 1024 CRANK SHAFT AND FLYWHEEL 1028 PISTONS AND CONNECTING RODS 1032 TIMING SYSTEM 1036 TIMING SYSTEM 1040 FUEL TANK AND PIPE 1044 FUEL CIRCUIT PUMP/S AND DEVICES 1048 ENGINE AIR SUPPLY CIRCUIT 1060 DIESEL INJECTION SYSTEM 1064 TURBO CHARGING SYSTEM 1068 ACCELERATOR CONTROLS 1072 INLET AND EXHAUST MANIFOLDS 1076 EXHAUST PIPES AND SILENCERS 1080 EMISSION CONTROL SYSTEM 1084 ENGINE LUBRICATION 1088 ENGINE COOLING 1092 ENGINE COMPONENT MISCELLANEOUS DRIVES	

Operation assembly selection

Select a row in the table on the screen to display the **Assemblies** selection window.

The first screenshot shows the Tempario web application interface. The top navigation bar includes the Tempario logo, the FIAT logo, and links for Home, Warranty for painting, Preferences, and change password. The main content area displays a list of engine components under the heading 'GROUPS > 10 ENGINE UNIT'. The components are listed as follows:

- 1004 ENGINE AND POWER UNIT
- 1008 POWER UNIT MOUNTS
- 1012 ENGINE CRANK CASE
- 1016 CYLINDER HEAD/S
- 1020 CRANK CASE SUMP AND COVERS
- 1024 CRANK SHAFT AND FLYWHEEL
- 1028 PISTONS AND CONNECTING RODS
- 1032 TIMING SYSTEM
- 1036 TIMING SYSTEM
- 1040 FUEL TANK AND PIPE
- 1044 FUEL CIRCUIT PUMP/S AND DEVICES
- 1048 ENGINE AIR SUPPLY CIRCUIT
- 1060 DIESEL INJECTION SYSTEM
- 1064 TURBO CHARGING SYSTEM
- 1068 ACCELERATOR CONTROLS
- 1072 INLET AND EXHAUST MANIFOLDS
- 1076 EXHAUST PIPES AND SILENCERS
- 1080 EMISSION CONTROL SYSTEM
- 1084 ENGINE LUBRICATION
- 1088 ENGINE COOLING
- 1092 ENGINE COMPONENT MISCELLANEOUS DRIVES

A red arrow points down from the '1032 TIMING SYSTEM' entry to the second screenshot. The second screenshot shows the Tempario web application interface with the '1032 TIMING SYSTEM' subgroup selected. The main content area displays a list of assemblies under the heading 'GROUPS > 10 ENGINE UNIT > 1032 TIMING SYSTEM'. The assemblies are listed as follows:

- 1032A CHAIN TIMING SYSTEM
- 1032C TIMING SYSTEM TENSIONERS

The assemblies window shows all the existing assemblies for the selected subgroup and makes it possible to select the assembly and to display its operations.

Operation selection

Select a row in the Assemblies table to display the Operations *Operations* selection window.

Tempario

FIAT

Home | paint warranty | preferences | camb

150.034.0
500 POP 1.3JTD MJ

GROUPS > 10 ENGINE UNIT > 1032 TIMING SYSTEM

1032A CHAIN TIMING SYSTEM

1032C TIMING SYSTEM TENSIONERS



150.034.0
500 POP 1.3JTD MJ

GROUPS > 10 ENGINE UNIT > 1032 TIMING SYSTEM > 1032A CHAIN TIMING SYSTEM

A

do not display

operation code	description	times	c	r	p.	
1032A12	timing system drive chain r r	4,40	C	1	P	➡
1032A16	camshaft gear - r + r with shaft assembly removed	0,40		1		➡

Using the **Hide** button, the user can display the operation list on the full screen, or using the **Display with drawing** command, (s)he can display simultaneously the operations and the graphics associated to the Assembly to which the operation belongs.

150.034.0 500 POP 1.3JTD MJ		GROUPS > 10 ENGINE UNIT > 1032 TIMING SYSTEM > 1032A CHAIN TIMING SYSTEM				
Operation code	Description	Times	C.	R.	P.	show
1032A12	timing system drive chain r & r	4,40	C	1	P	➡
1032A16	camshaft gear - r + r with shaft assembly removed	0,40		1		➡



The display of the graphic table can be enabled or disabled using the *Display with drawings* and *Hide*

Operations table

The operations table lists all the operations related to the assembly and to the selected MVS.

It contains the operation code (comprising the group, subgroup, assembly and operation codes), the operation description and the operation time expressed in hours and its fractions (hundredths).

operation code	description	times	c	r	p.	
1088B10	engine cooling tank - r + r	0,25		1		➡
1088B20	engine cooling radiator - r + r	0,95	C	1	P	➡
1088B36	engine cooling radiator upper support pin (one) r r	1,00	C	1		➡

Time values

It is specified and emphasised that the time frames indicated in the Labor Time Schedule refer to the following guidelines:

- ☐ operating on vehicles characterized by normal use;
- ☐ operating with qualified personnel who have attended specific training courses;
- ☐ using the equipment described in the repair manual;
- ☐ operating according to the repair procedure described in the repair manual.

The time described in the Labor Time Schedule includes:

- ☐ preparation of the vehicle and of the working area;
- ☐ instructions of the supervisor and technical documentation consultations;
- ☐ checks and tests related to the performed work;
- ☐ exceptional cases.

Abnormal difficulties of loosening or particularly expensive diagnosis may exceptionally occur due to the very the nature of the problem. In this case we indicate the specific operation with the normal value of the Labor Time Schedule and one of the **0530A** assembly operation to indicate the exceptionally necessary extra time.

Time frames asterisk

Instead of the time value the user may find an asterisk ^{*};

this means that the operation is compatible with the vehicle, but the time must be specified by the repairer.

operation code	description	times	C	r	p.	
5505C10	rpm sensor connector r r	*		1		➡

Again in the **operations table** there are columns indicated by abbreviations **C**, **R** and **P**, which show additional information on the operation in question.

Specifically:

C Indicates that the operation is complex, in other words it consists of other operations.

Using the **C** button the user can display a tree structure that represents the composition of the operation

1088B20 - engine cooling radiator - r + r

1088B20

1 - 1048A10

1 - 1048B20

1 - 7210A18

1088B20

0,95 h

engine cooling radiator - r + r

The number next to each operation indicates in which quantity the operation is contained in the root operation.

Even when a complex operation is entered in the *Operations list* not all the displayed operations in the structure are actually entered, the available quantity of each of these is decreased by the quantity indicated by the number.

Therefore the availability (*max. repetitiveness*) of one or more operations may finish (and for this reason it cannot be added the Processing), after adding a complex operation that already contains it.

Select an operation from the structure to display in the boxes at the bottom the code, the time and the operation description.

1088B20 - engine cooling radiator - r + r

1088B20

1 - 1048A10

1 - 1048B20

1 - 7210A18

1088B20

0,95 h

engine cooling radiator - r + r

Use the **+** and **-** buttons to expand or minimise the tree structure.

1088B20 - engine cooling radiator - r + r	
+ 1088B20	
1088B20	engine cooling radiator - r + r
0,95 h	

1088B20 - engine cooling radiator - r + r	
- 1088B20 1 - 1048A10 1 - 1048B20 1 - 7210A18	
1088B20	engine cooling radiator - r + r
0,95 h	

R indicates the repetitiveness of the operation, in other words the max. number of times the operation can be carried out in the same repair (regardless of the position).

When an operation has exhausted its repetitiveness and cannot be used, the line of the time frames table becomes **red**.

operation code	description	times	c	r	p.	
1088B10	engine cooling tank - r + r	0,25		1		➡
1088B20	engine cooling radiator - r + r	0,95	C	1	P	➡
1088B36	engine cooling radiator upper support pin (one) r r	1,00	C	1		➡

The **yellow** colour indicates that the operation has already been used in the Processing list, but less, than its repetitiveness.

operation code	description	times	c	r	p.	
5540B04	dipped/main beam electrical wiring - check component operation, line continuity and repair contacts - includes relay replacement if necessary	0,20		1		➡
5540B06	electrical wiring of side light in headlamp (one), l/h or r/h - check component operation, line continuity and repair contacts	0,50		1		➡
5540B10	lower front light cluster r r	0,90	C	2		➡
5540B24	high beam bulb (one) of one headlamp/light cluster lh or rh r r	0,25		2	P	➡
5540B25	low beam bulb (one) of one headlamp/light cluster lh or rh r r	0,20		2	P	➡
5540B26	bulb (one) for side lights of one headlamp/light cluster, l/h or r/h - r+r	0,20		2	P	➡
5540B31	lh light cluster front turn signal bulb r r	0,20		1		➡
5540B33	rh light cluster front turn signal bulb r r	0,20		1		➡
5540B38	headlamp/light cluster light beam - position	0,20		1		➡
5540B70	left front light cluster with turn signal r r	0,65	C	1	P	➡
5540B71	right front light cluster with turn signal r r	0,65	C	1	P	➡

P Indicates that one or more repair packages are associated with the operation.

5540B24	high beam bulb (one) of one headlamp/light cluster lh or rh r r	0,25	2	P	➡
---------	--	------	---	---	---

Press the button ➡ to display a selection window of the input, making it possible to select wether to enter the simple operation or one of its associated packages in the Processing list.

packages operations:			
code	description	position	km
5540B241	DIPPED BEAM BULB	010	0
5540B241	DIPPED BEAM BULB	090	0

cancel

ok

The symbol  means that the selected operation is dealt with in another section of the Labor Time Schedule .

Press the reference button to display directly the page of the time frames of the reference assembly.

operation code	description	times	c	r	p.	
5550D04	brake light electrical wiring - check component operation, line continuity and repair contacts	0,20		1		
5550D10	brake light switch - r+r	#		1		
5550D16	third stop light - r+r	0,25		1	P	
5550D17	third brake light - r r	0,30		1	P	
5550D18	handbrake on warning light switch - r+r	0,40		1		
5550D20	reversing light/s electrical wiring check component operation, line continuity and repair contacts	0,20		1		
5550D22	reversing light switch - r+r	0,40		1		



operation code	description	times	c	r	p.	
1060G04	electronic diesel injection - check	0,10		1		
1060G10	air flow meter - r r	0,25		1	P	
1060G11	air temperature and pressure sensor - r.r.	0,35		1		
1060G14	engine coolant temperature sensor - r r	0,60		1		
1060G16	pressure relief sensor - r r	0,30		1		
1060G18	fuel temperature sensor - r r	0,35		1		
1060G20	rpm and timing sensor - r r	0,40		1		
1060G22	cam angle sensor - r r	0,35		1		
1060G28	fuel pressure sensor - r r	0,35		1		
1060G30	water presence sensor on fuel filter r r	0,30		1		
1060G31	one fuel pressure regulator on common rail to injectors r r	0,65		1		
1060G38	brake pedal switch - r r	0,30		1	P	
1060G42	switch on clutch pedal r r (jtd engines)	0,30		1		
1060G50	throttle body r r	1,00	C	1		
1060G70	vacuum reservoir r r	0,30		1		
1060G80	ds electric injection control unit - r r	0,35		1	P	
1060G88	diesel injection system relays - r r	0,10		1		
1060G90	diesel injection wiring harness - r r	1,80	C	1		

Entering an operation or a package

After the identification of the model and the operation code, the user can continue with the selection and add the desired operation to the **Processing list** using the command 

packages		operations:	
code	description	position	km
5540B241	DIPPED BEAM BULB	010	0
5540B241	DIPPED BEAM BULB	090	0

The first option refers to the single operation and the selection, if the limits of the repetitiveness are not exceeded, will always be possible.

The second option refers to the repair packages.

The selection will be allowed only if there is at least one package and if it is available.

If the package is unavailable, the code field will be red.

5540B24	high beam bulb (one) of one headlamp/light cluster lh or rh r r	0,25		2	P	
---------	--	------	--	---	---	---

A package can be unavailable if a package with the same code has already been added, or if there is already a package that causes its unavailability (mutual exclusion).

Selection among the alternative spare parts

If the selected package contains two or more alternative spare parts, the system will ask the user to make a selection.

Only the selected spare part will be added to the processing list.

Once the selection has been made, press the **Ok** button to add the selected spare part to the processing list.

Packages

Operations:

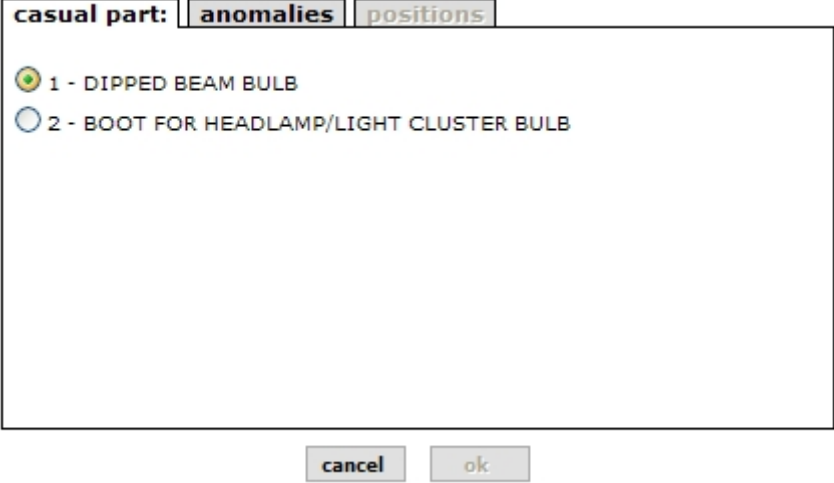
ALTERNATIVE SPARE PARTS				
Drawing	Description	Groups	Optional	
51804334	PEDAL	1		☐
51804358	PEDAL	1		☒

Cancel

Ok

Case piece selection

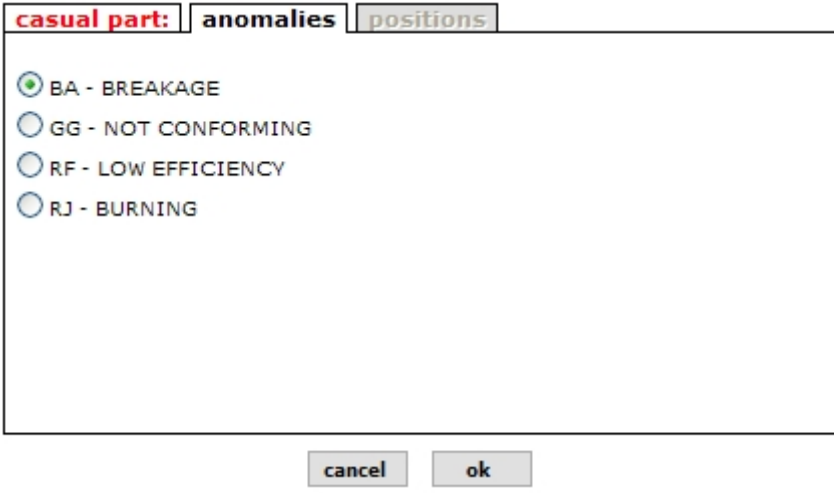
Press the **Case piece**  button to select among the parts of the selected operation the case piece, the fault and the positions to associate with the problem.



The dialog box has three tabs: 'casual part:', 'anomalies', and 'positions'. The 'anomalies' tab is selected. It contains two radio button options:

- ☒ 1 - DIPPED BEAM BULB
- ☐ 2 - BOOT FOR HEADLAMP/LIGHT CLUSTER BULB

At the bottom are 'cancel' and 'ok' buttons.



The dialog box has three tabs: 'casual part:', 'anomalies', and 'positions'. The 'positions' tab is selected. It contains four radio button options:

- ☒ BA - BREAKAGE
- ☐ GG - NOT CONFORMING
- ☐ RF - LOW EFFICIENCY
- ☐ RJ - BURNING

At the bottom are 'cancel' and 'ok' buttons.

If the problem contains a package, it will automatically show the case piece and the position, which is why it is necessary to identify the fault and if necessary modify the case piece.

Processing list

After the selection of the package or the operation and the definition of the reference spare parts, the user can access the **Processing list** in the **Processing** window.

The processing window shows all the problems which have been defined, along with the related package.

Tempario		 									
		Home Print Warranty for painting Preferences change password my e-mail Exit Dati Societari									
150.034.0 500 POP 1.3JTD MJ											

Problem: :							Labour			
	1/1	Validation	☐ ☐	☒ ☐	€ 16,25					
Main operation :		3330B22					Material			
Case Piece :		1 - BRAKE PEDAL					€ 40,05			
Fault :							Total			
Positions :							€ 56,30			

Operations:										
Operation code	Description	H	h (f)	rate	cost	Error	P.C.			
3330B22	brake pedal - r+r manual gearbox versions	0,65	0,65	25,00	16,25					

Spare Parts					
Drawing	Description	no.	no. (f)	cost (u)	cost
51804334	PEDAL	1	1	40,05	40,05

		Times	Processings	Summary
--	--	-------	-------------	---------

Problems

On the top left part of the processing list, the problem selection section is indicated by a letter of the alphabet.

fault: :					labour
	1/1	validate	☐ ☒	☒ ☐	€ 19,50
principal operation :	3330B22				parts
causal part :	1 - BRAKE PEDAL				€ 40,05
anomaly :					total
positions :					€ 59,55

At the start of navigation the system automatically creates the problem **A** ready to be filled.

Using the navigation buttons, the user can move among the problems that contain at least one operation or one spare part:

fault: :					labour
	2/2	validate	☐ ☒	☒ ☐	€ 39,00
principal operation :	3330B38				parts
causal part :	1 - PEDAL MOUNT				€ 106,34
anomaly :					total
positions :					€ 145,34

If user moves beyond the last completed problem the system creates a new, empty field.

It is not possible to have more than one empty field at the end of the problem list.

Press the **X** key to delete the selected problem.

Use the button to move the operations and the spare parts among the problems.

fault: :					labour
◀◀B▶▶	2/2	validate		✓ ✗	€ 39,00
principal operation :		3330B38			parts
causal part :		1 - PEDAL MOUNT			€ 106,34
anomaly :					total
positions :					€ 145,34

operations:									
operation code	description	h	h (f)	rate	cost	error	P.C.		
3330B38	pedal unit mount - r r	1,30	1,30	30,00	39,00		9	✗	69

parts					
part no.	description	no	no (f)	cost (u)	cost
51786838	SUPPORT	1	1	106,34	106,34

The problem list makes it possible to select the destination: the list contains all the existing problems at the moment, except the source problem (the one which is displayed on the screen) and a new, empty problem field indicated by a letter also appears at the end of the list.

The operations will be added to the selected problem.

To add the packages, the system works according to special rules.

Every single package must be located in a problem dedicated to it. So if the selected problem is empty, the package will be added, otherwise a new problem will be created at the end of the list.

If the problem containing a package is added or an operation is deleted, it will be considered as a problem reported by the user and no longer as a package.

On the upper left area of the window, there are certain fields that indicate the case piece, the fault and the positions associated with the individual problem with the description related to it.

fault: :				
◀◀C▶▶	3/4	validate	☐ ☐	☒ ✕
principal operation :	5540B24			
causal part :	1 - DIPPED BEAM BULB			
anomaly :				
positions :	010 - LEFT			

Labour and material

The labour and material table appears in the field to the right of the problem.

labour
€ 7,50
parts
€ 8,69
total
€ 16,19

The Operations Table

The operations and spare parts tables appear at the bottom of the screen.

The **operations table** has the following fields:

operations:									
operation code	description	h	h (f)	rate	cost	error	P.C.		
5540B24	high beam bulb (one) of one headlamp/light cluster lh or rh r r	0,25	0,25	30,00	7,50				 

Operation code – the code of the operation;

Description – the description of the operation;

H - the basic time (from the Labor Time Schedule) necessary to perform the operation;

h (f) – the time acknowledged and used for invoicing. It could show a value lower than the nominal value if a discount was applied deriving from an overlapping with other activities already acknowledged in another operation;

Rate – the rate applied to the operation depending on whether it is a general operation or painting;

Cost – the total cost calculated for the operation;

Error – shows the validation error codes of the operation. The field in every line is coloured green or red after the validation to indicate the validity or invalidity of the operation.

P.C – the whole list of all the possible case pieces and the corresponding faults

X – the button to delete the operation

 – moves the Operation to another problem

The Spare Parts Table

The *spare parts table* has the following fields:

parts					
part no.	description	no	no (f)	cost (u)	cost
14151095	BULB	1	1	8,69	8,69

Drawing – code of the spare part;

Description – description of the spare part;

no. – the basic quantity of the material used in a package;

n.(f) – the quantity acknowledged and used for invoicing. It could show a value lower than the nominal value if by using this option the max. quantity were to exceed the maximum value envisaged for the vehicle;

Cost (u) – the unit cost of the material;

Cost – the total calculated for the material;

The total amounts of the problem are summarised on the upper right part of the window.

labour
€ 7,50
parts
€ 8,69
total
€ 16,19

Validation

Press the button  to validate the problems according to various validation rules.

The **green** and the **red** colours indicate whether the list of validation, as a whole, is valid or not.

fault: :					labour
◀◀A▶▶	1/1	validate			€ 7,50
principal operation :	5540B24				parts
causal part :	1 - DIPPED BEAM BULB				€ 8,69
anomaly :	BA - BREAKAGE				total
positions :	010 - LEFT				€ 16,19

operations:									
operation code	description	h	h (f)	rate	cost	error	P.C.		
5540B24	high beam bulb (one) of one headlamp/light cluster lh or rh r r	0,25	0,25	30,00	7,50				

parts					
part no.	description	no	no (f)	cost (u)	cost
14151095	BULB	1	1	8,69	8,69

The operations that cause an invalidity are reported in a **red** box where the user can see the validation code not exceeded because of an operation.

fault: :					labour
◀◀A▶▶	1/1	validate			€ 7,50
principal operation :	5540B24				parts
causal part :	1 - DIPPED BEAM BULB				€ 8,69
anomaly :					total
positions :	010 - LEFT				€ 16,19

operations:									
operation code	description	h	h (f)	rate	cost	error	P.C.		
5540B24	high beam bulb (one) of one headlamp/light cluster lh or rh r r	0,25	0,25	30,00	7,50				

parts					
part no.	description	no	no (f)	cost (u)	cost
14151095	BULB	1	1	8,69	8,69

Deletion of packages, operations and spare parts

Thanks to the button  the user can delete the selected operation or the whole problem.

fault: :					labour
◀◀A▶▶	1/1	validate	●●	✓✕	€ 7,50
principal operation :	5540B24				parts
causal part :	1 - DIPPED BEAM BULB				€ 8,69
anomaly :					total
positions :	010 - LEFT				€ 16,19

operations:									
operation code	description				h	h (f)	rate	cost	error
5540B24	high beam bulb (one) of one headlamp/light cluster lh or rh r r				0,25	0,25	30,00	7,50	T01

parts					
part no.	description		no	no (f)	cost
14151095	BULB		1	1	8,69

It is important to know that by deleting an operation or a spare part from a problem containing a package, this problem will lose this indication and will be considered only a simple group of operations and spare parts.

If the user deletes a whole problem, the corresponding letter of the alphabet will not be reused, unless it is the last one at the end of the problem list.

Summary of the repair operation

The **Summary** window shows the total economic valorization of the problems created with the Labor Time Schedule.

repair operation summary :	
general labour rate :	€ 30,00
paint labour rate :	€ 35,00
tax percentage :	20,00%
company name :	
address 1 :	
address 2 :	

fault:	description	position	hours	labour	parts	total
A	1 - DIPPED BEAM BULB	010 - LEFT	0,25	7,50	8,69	16,19
	consumables				0,00	0,00
	total intervention		0,25	7,50	8,69	16,19
	total tax					3,24
	total invoice					19,43
	equal to euros					19,43

At the top of the **Summary of the repair operation** table, the user can see the economic parameters and the rates configured by the repairer in the **Preferences** window.

repair operation summary :		
general labour rate :	€ 30,00	
paint labour rate :	€ 35,00	
tax percentage :	20,00%	
company name :		
address 1 :		
address 2 :		

While at the bottom the user will find the repairer's details as configured again in the **Preferences** area.

company name :	
address 1 :	
address 2 :	

The problem table shows the data concerning the problems with their description, position, labour time, cost of labour, cost of material and total amount.

fault:	description	position	hours	labour	parts	total
A	1 - DIPPED BEAM BULB	010 - LEFT	0,25	7,50	8,69	16,19
	consumables				0,00	0,00
	total intervention		0,25	7,50	8,69	16,19
	total tax					3,24
	total invoice					19,43
	equal to euros					19,43

The economic data concerning each problem is the same contained in the [Processing](#) page.

labour
€ 7,50
parts
€ 8,69
total
€ 16,19

The table ends with the total amounts of the whole repair procedure.

fault:	description	position	hours	labour	parts	total
A	1 - DIPPED BEAM BULB	010 - LEFT	0,25	7,50	8,69	16,19
	consumables				0,00	0,00
	total intervention		0,25	7,50	8,69	16,19
	total tax					3,24
	total invoice					19,43
	equal to euros					19,43

Instructions on the bodywork groups

Painting procedures (Group 74)

The painting procedures are extensively treated in the specific manual. However, we need to specify that the painting time is obtained (for the specific repair procedures and for specific types of painting) by adding the **fixed** painting time to the **part painting** time.

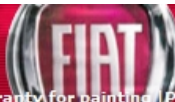
The fixed painting time should only be used once within the same repair (SR) regardless of the number of the parts repaired.

If there are different types of procedures within the same repair (therefore with different fixed painting times), only the fixed time with the highest value should be used (since it also contains the others).

The polishing operations (subgroup 7470) refer to machine polishing and do not envisage the addition of fixed times.

The Labor Time Schedule contains the following repair methods for the painting operations depending on the type of paint and on the repair level:

- **Undercoat painting or painting for new parts** (subgroups 7430 - 7435 - 7437 respectively for single, double or triple coat).
- **Painting of repaired parts with stripping of the sheet up to 40% of its surface** (subgroups 7440 - 7445 - 7447 respectively for single, double or triple coat).
- **Painting of repaired parts with stripping of the sheet up to 20% of its surface** (subgroups 7450 - 7455 - 7457 respectively for single, double or triple coat).
- **Cosmetic enamel only painting** (subgroups 7460 - 7465 - 7467 respectively for single, double or triple coat).

Tempario			
		Home Warranty for painting Preferences change password	
150.034.0 500 POP 1.3JTD MJ		GROUPS > 74 PAINTING	
7420 FIXED TIME FOR PAINTING			
7425 PROTECTIVE APPLICATIONS FOR SHEET METAL			
7430 ONE COAT COMPLETE CYCLE PAINTING			
7435 TWO COAT COMPLETE CYCLE PAINTING			
7437 THREE COAT COMPLETE CYCLE PAINTING			
7445 TWO COAT PAINT AFTER REPAIR AT 40%			
7447 THREE COAT PAINT AFTER REPAIR AT 40 %			
7455 TWO COAT PAINT AFTER REPAIR AT 20 %			
7457 THREE COAT PAINT AFTER REPAIR AT 20%			
7465 TWO COAT COSMETIC PAINTING			
7467 THREE-COAT COSMETIC PAINTING			
7470 POLISHING			

Accident repairs (Group 76)

Group 76 includes the operations and specific times concerning accident repairs.

The timing of group 76 was entered in the Labor Time Schedule in order to make it possible to prepare more accurate repair quotes for a greater Consumer Protection.

The time frames were observed during real repairs (carried out at our Technical Training Centre) in terms of insurance classification which is why they were certified by **FGA CUSTOMER SERVICES** and **TECHNICAL SERVICE**.

In the light of the above, the time frames of group 76 are not comparable with the time frames shown in groups 72 and 74 as the latter were observed only for the purpose of the repair/replacement of the single panel which is why these operations are not covered by a warranty contract.

Tempario	
	
Home Warranty for painting Preferences change	
150.034.0 500 POP 1.3JTD MJ	GROUPS > 76 ACCIDENT REPAIRS
7602 BODY DIAGNOSIS	
7604 FIXED TIMES	
7620 FRONT PART OF VEHICLE	
7640 CENTRAL PART OF VEHICLE	
7660 STRIP REAR PART OF VEHICLE	