FleetGarage specification

Tallinn 2024

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The latest version of this document can be found at:
https://fleetgarage.eu/content/documents/FleetGarage-Specification.pdf .

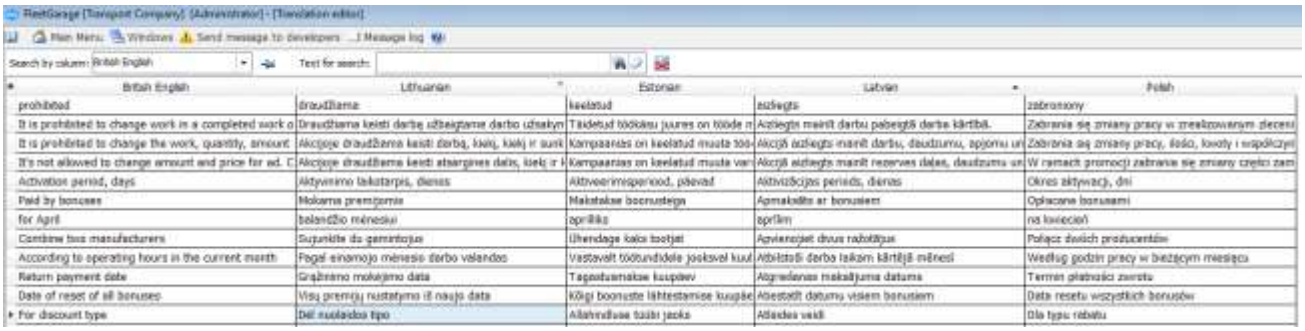
Purpose of the system

FleetGarage system is designed to automate repairs and maintenance of a fleet of vehicles. The software allows you to optimize internal work processes, reduce repair and maintenance costs, rationally allocate resources and increase the availability of transport (increase the technical readiness ratio).

Flexible and easy setup of the system allows you to adapt it to specific needs and changing processes within the enterprise, which will ensure sustainable development and maintain the competitiveness of the company.

Localization

FleetGarage system is multilingual. Within one enterprise, it is possible for different employees to work in different languages.



British English	Lithuanian	Estonian	Latvian	Polish
prohibited	draudžiama	keelatud	aizliegts	zabroniony
It is prohibited to change work in a completed work o	Draudžiama keisti darbų užbaigtame darbo užsakyn	Täidetud töökäsu juures on tööde n	Aizliegts mainīt darbu pabeigtā darba kārtībā.	Zabrania się zmiany pracy w zrealizowanym zlecen
It is prohibited to change the work, quantity, amount	Akcijoje draudžiama keisti darbą, kiekį, kiekį ir sumą	Kampaanias on keelatud muuta töö-	Akcijā aizliegts mainīt darbu, daudzumu, apjomu un	Zabrania się zmiany pracy, ilości, kwoty i współczyn
It's not allowed to change amount and price for ad. C	Akcijoje draudžiama keisti atsarginės dalis, kiekį ir k	Kampaanias on keelatud muuta var	Akcijā aizliegts mainīt rezerves daļas, daudzumu un	W ramach promocji zabrania się zmiany części zam
Activation period, days	Aktyvinimo laikotarpis, dienos	Aktiveerimisperiood, päevad	Aktivizācijas periods, dienas	Okres aktywacji, dni
Paid by bonuses	Mokama premijomis	Makstakse boonustega	Apmaksāts ar bonusiem	Opłacane bonusami
for April	balandžio mėnesiu	aprillile	aprīlim	na kwiecień
Combine two manufacturers	Sujunkite du gamintojus	Ühendage kaks tootjat	Apvienojiet divus ražotājus	Połącz dwóch producentów
According to operating hours in the current month	Pagal einamojo mėnesio darbo valandas	Vastavalt töötundidele jooksval kuul	Atbilstoši darba laikam kārtējā mēnesī	Według godzin pracy w bieżącym miesiącu
Return payment date	Grąžinimo mokėjimo data	Tagastusmakse kuupäev	Atgriešanas maksājuma datums	Termin płatności zwrotu
Date of reset of all bonuses	Visų premijų nustatymo iš naujo data	Kõigi boonuste lähtestamise kuupäe	Atiestatīt datumu visiem bonusiem	Data resetu wszystkich bonusów
For discount type	Dėl nuolaidos tipo	Allahindluse tüübi jaoks	Atlaides veidi	Dla typu rabatu

User rights

Group of users

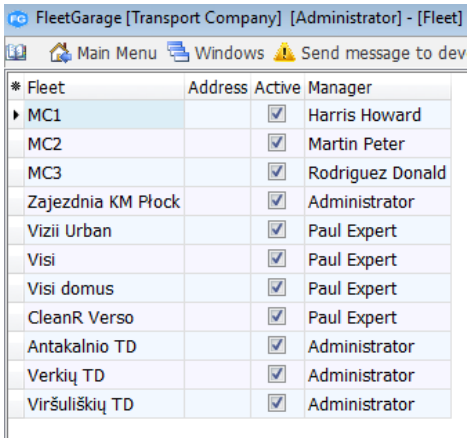
FleetGarage system allows you to flexibly create different workplaces (sets of rights). Each user will see only those buttons and interfaces and fields that are required.

Name	Department	Group	Login	Access denied
Alain Prost	BUS_2	Fleet Prof	DEMO_PROF	☐
Arnold Joseph	Management	Fleet EXPERT	LOGIN_3069	☐
Fenrych Tomasz	Management	Fleet EXPERT	TFenrych	☐
Fitzgerald William	Wash	MobApp: Cleaner	LOGIN_2950	☐
Georg Expert	Management	Fleet EXPERT	GEORG_EXPERT	☐

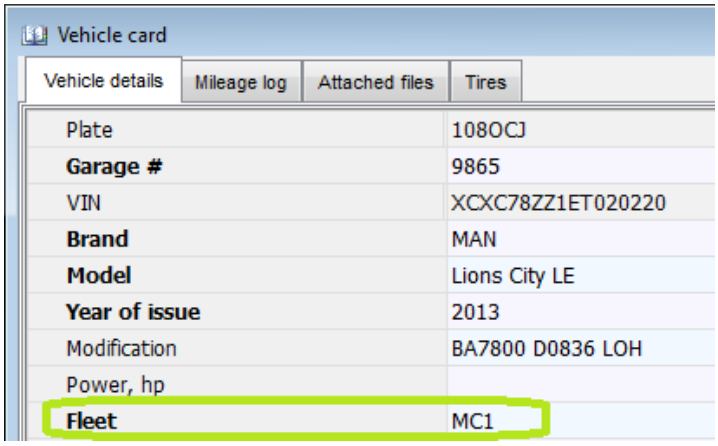
User group	Description
Time stamp	Time stamp
Fleet EXPERT	Supervisor
Workshop	Workshop
Auditor	Auditor
Fleet	Fleet
Warehouse keeper	WH keeper
Fleet dispatcher	Fleet dispatcher
TV: LOAD_PERFORMER	TV: LOAD_PERFORMER
Tightening the wheels	Tightening the wheels
Tires manager	Tires manager
Contractor	Contractor
Car manufacturer	Car manufacturer
Agregat	Agregat
MobApp: Cleaner	MobApp: Cleaner
LJ	LJ
Cleaning	Cleaning
Fleet Prof	Fleet Prof

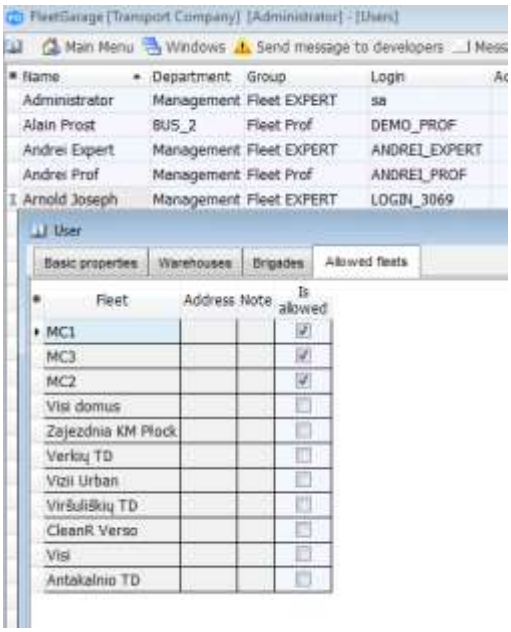
Fleets

FleetGarage system has a linking of a vehicle to a fleet, as well as settings for users to carry out operations with the transport of only their fleet (or several selected ones).



Fleet	Address	Active	Manager
MC1		☑	Harris Howard
MC2		☑	Martin Peter
MC3		☑	Rodriguez Donald
Zajezdnia KM Płock		☑	Administrator
Vizii Urban		☑	Paul Expert
Visi		☑	Paul Expert
Visi domus		☑	Paul Expert
CleanR Verso		☑	Paul Expert
Antakalnio TD		☑	Administrator
Verkių TD		☑	Administrator
Viršuliškių TD		☑	Administrator





General system capabilities

The system is modular. Each module is switched on and off at the customer's request.

Here is an example of some modules:

Driver submission of request

It is important to use the mobile application «FG:Fleet Driver» to create driver requests.

1. This saves time for the technician to process and understand the problem. A driver can attach photos and videos, which will help to find faults quickly and, when issuing a vehicle, check that the problem is no longer present. It will be much quicker and easier for the foreman to create a work order based on the request. And pass it on to a mechanic to work with text, photos and videos.
2. The driver can create a request after thinking about it and will not forget to indicate everything.
3. It will be possible to measure the time from the submission of a request to its processing by a foreman, and this will help to reduce the time at this stage.
4. The driver can make a request whenever it is convenient for him, whether the foreman's working day has started or not, whether the foreman is at lunch or talking to someone on the phone.
5. Personal responsibility appears. It will be easier to find out whether the driver has reported this problem or not.
6. The ability to measure and reduce the number of vehicles in the repair queue.
7. When a request is generated, the fleet dispatcher sees which vehicles are available and which are faulty. The planned repair date can then be agreed between the foreman and the dispatcher.
8. It is easier to identify recurring problems if the workshop did not fix the problem the first time.

As a result, the time from request to vehicle issue is reduced, as are technician labour costs.

Purpose

Create a service request for subsequent processing by the workshop foreman.

Principle of operation

Drivers or other employees who have rights (authorized users) create requests. Requests are entered into the general request log, which the workshop foreman works with: he uses the system to coordinate the repair date with the fleet dispatcher. When a vehicle arrives for repair, a work order is created based on the request.

Functionality

The system allows you to create a request in one of the following ways:

1. Through a mobile application for iOS and Android (with the ability to take a photo/video and attach it to the request (up to 15MB);
2. From a dedicated interface in the control room or repair area.
3. The dispatcher, foreman or other employee receives a call from the driver by phone and creates a request in the request log.

Driver mobile application

Designed for Android and iOS.

A vehicle repair request can be created by an authorised user. Authorisation is carried out using the personnel number and mobile phone number stored in the system.

Vehicles are identified by garage or registration number.

The software requires you to enter at least 10 characters of text and at least one attribute (traffic accident, recurring problem, maintenance, information system).

The mobile application allows the driver to view his current and completed orders.

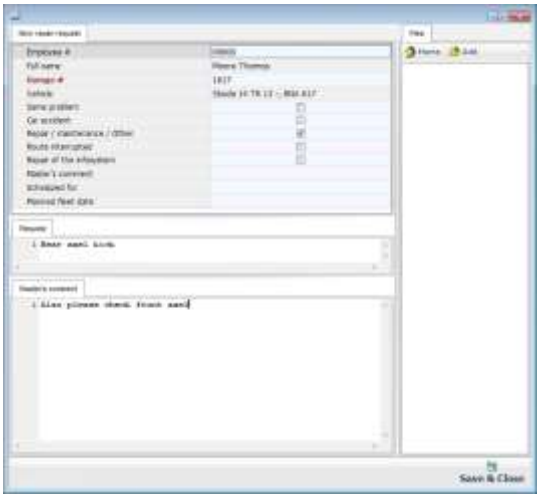
Driver interface

A computer interface allows authorised staff (drivers) to create requests. The interface is similar to request creation from a mobile application, with the exception of photo and video attachments.

Interface for the workshop foreman to enter requests

A workshop foreman or an employee with rights to the request log can create a new request by entering the data in the log. Data when creating/editing a request:

- the initiator of the request (usually the driver);
- vehicle
- attributes: maintenance/repair, repeated problem, information system, accident;
- planned repair date;
- a suitable repair date for a fleet manager;
- request text;
- files;
- additional comments from the foreman.



Vehicles

Purpose

The "Vehicles" module is designed to maintain records of all vehicles. Including:

- Adding / writing off vehicles ;
- Transport performance management;
- View transport by different stages (displayed in different colours) including
    - Available for use;
    - A request has been created but not processed;
    - At work in the workshop;
    - Work completed;
    - The vehicle has left the workshop after being repaired.

Principle of operation

The transport module is used when entering requests and creating work orders. Allows employees who have rights to view and edit transport data.

Functionality

The vehicle log allows you to keep records of both passenger and service vehicles.

Based on accompanying reference books. For example: Brands, Models, Modifications, Fleets, Fuel Type, etc.

The catalogue displays the status of the vehicle in different colours depending on the repair (planned, in progress, interrupted, completed, waiting for parts).

It is possible to maintain records of transport department/sub-department, tires, route number, warranty period, policy, mileage, date, type, last maintenance, etc.

The vehicle card contains a mileage log.

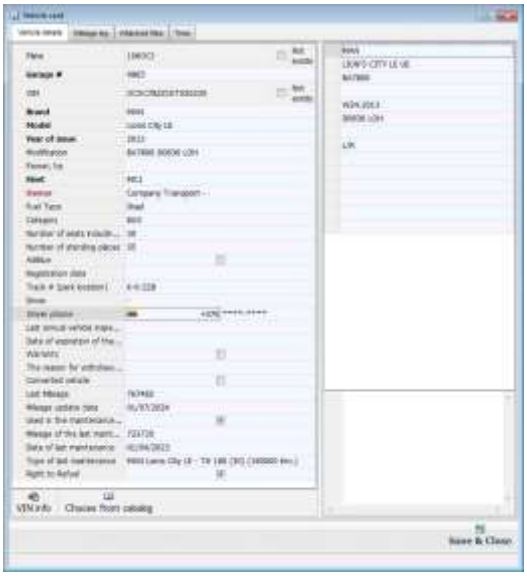
The basic set of car characteristics is tied to the car modification and includes the following categories:

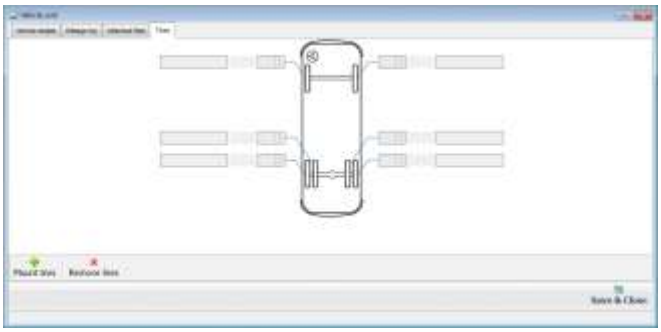
- wheel formula;
- number of seats/standing;
- accessibility for the disabled;
- engine number and type;
- gearbox number and type;
- air conditioning (whole interior, driver only, absent);
- transport length;
- fuel type and tank capacity;
- insurance policies;
- accounting account;
- vehicle owner;
- maintenance intervals;
- cleaning intervals.

Interface examples

Transport log

Transport properties editing form





Routine maintenance

Purpose

The module is designed to automate routine maintenance.

Principle of operation

For various transport models, service intervals and a schedule are indicated, indicating the type of maintenance by mileage or period. For example: small, medium, small large, annual.

For each type of maintenance, a set consisting of jobs and spare parts is selected.

The expert sees which vehicles need maintenance in the near future and creates maintenance requests. When such a request is processed, the required list of jobs and spare parts from the appropriate set is inserted into the work order.

Functionality

The routine maintenance module allows you to set up rules for both passenger and service vehicles.

It is possible to automatically notify repair department specialists about the upcoming maintenance of each vehicle.

The maintenance interval is configured in the vehicle modification directory and, as a result, ensures the configuration of a list of jobs, spare parts and rules for the same type of transport.

FleetGarage allows you to customize different types of maintenance. For example: routine maintenance small, medium, large or RM30, RM60, RM90, RM120, etc.

Sets containing jobs and checks can be linked to a model or modification to quickly create a repair request or work order with a list of technical operations.

The system automatically suggests the next maintenance based on the previous service.

FleetGarage allows you to customize the color marking in the list of vehicles depending on the maintenance:

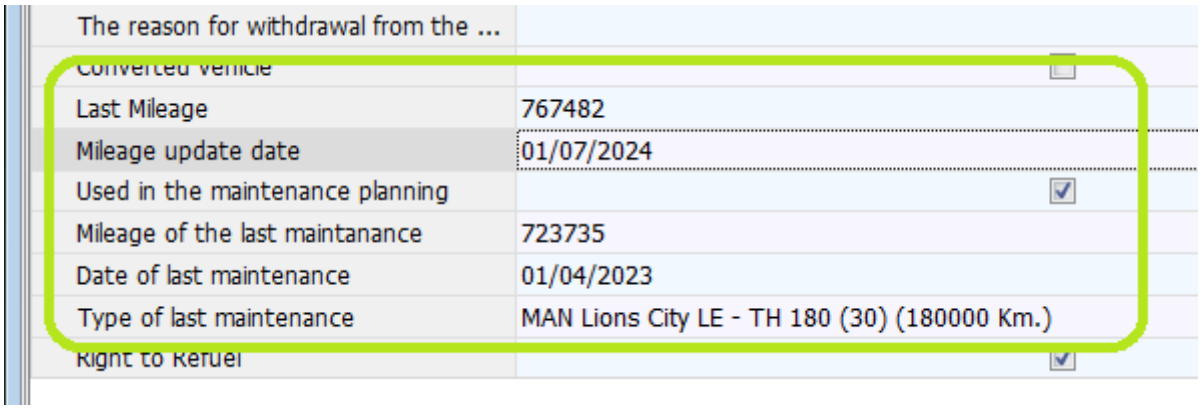
- scheduled maintenance;
- delay in maintenance;
- maintenance is scheduled, but there is another request for this vehicle that can be processed while the vehicle is in the workshop.

It is possible to cancel or change the maintenance date.

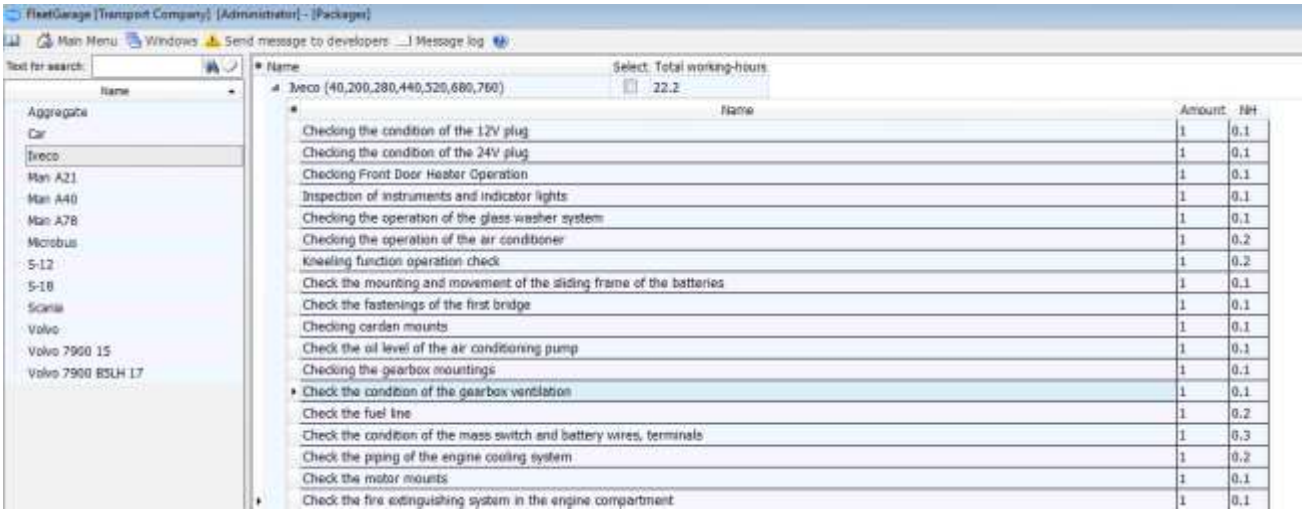
The “Autoinformer” allows you to set up alerts for transport department/sub-department staff indicating when vehicles need to be in the workshop for maintenance.

Interface examples

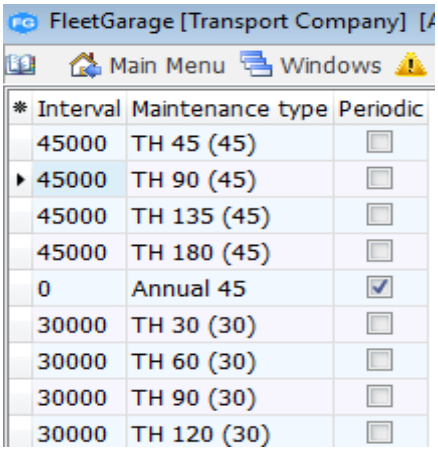
Vehicle card data



Maintenance sets

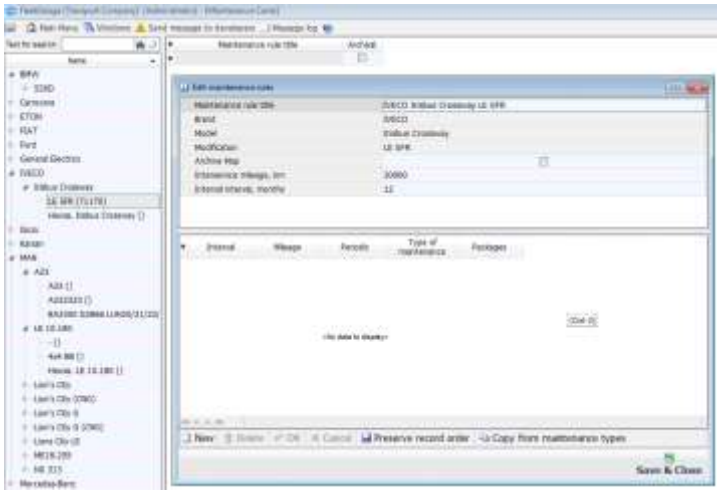


Types of routine maintenance



*	Interval	Maintenance type	Periodic
	45000	TH 45 (45)	☐
▸	45000	TH 90 (45)	☐
	45000	TH 135 (45)	☐
	45000	TH 180 (45)	☐
	0	Annual 45	☑
	30000	TH 30 (30)	☐
	30000	TH 60 (30)	☐
	30000	TH 90 (30)	☐
	30000	TH 120 (30)	☐

Scheduled maintenance schemes



Module repair

Purpose

Processing requests and creating work orders. Monitoring the progress of repair orders, making changes as repairs progress.

Principle of operation

Based on the request, the workshop foreman creates a work order. Adds jobs, spare parts, assigns performers. The module allows you to record the fact of shipment of spare parts according to the work order and notes on the completion of individual or all work. When accepting a vehicle for repair, it is possible to print out a repair order for a car mechanic. When the repair is completed, the completion and delivery of the transport is marked.

Functionality

When processing a work order request, the ability to merge several requests into one, view and add to the request, view and edit files, indicate a workshop vehicle slot, assign auto mechanics, the planned completion date (after agreement with fleet dispatchers), indicate the type of work order,

required labour costs, planned start time of work, add jobs, sets. View the recommendations and note their relevance or the need to complete this work order.

When creating a work order, the foreman enters the mileage (or it is entered automatically if integrated with the monitoring system), can specify the location of the repair, can select the location of the repair and can enter the planned date for completion of the repair (after consultation with the transport departments).

It is possible to add sub-contracted work and to indicate that the entire work order has been carried out by a sub-contractor. During the repair process, the list of work and parts will be addred/changed as necessary.

The work order has a generalised cost and allows you to take into account the cost of repairing vehicles and units.

You can configure the types of work orders. For example:

- Routine maintenance;
- Technical repair;
- Body repair;
- Washing/cleaning;
- Aggregate unit repair;
- Service transport repair;
- Warranty repair;
- Subcontracted repairs.

It is possible to view the repair history in the work order.

Work orders are divided into separate tabs:

- Basic work orders;
- Work orders for aggregate units;
- Other work;
- Cleaning/Washing.

Contents: request, jobs, spare parts, subcontract works, recommendations, notes.

Vehicle repair history is available from the work order.

The ability to select and indicate with a flag separately for each job the fact of completion. If a car mechanic or other performer of the work indicated comments on the work, then the foreman has the opportunity to look at this comment in the work order. Possibility of printing a workshop repair task, work order and other required documents.

The distribution of the standard hours among the performers is carried out taking into account the work participation coefficient (by default, equal). System control of the mileage sequence.

The technician (car mechanic) at the workstation can mark the completion of individual tasks or the entire repair order, or mark a lunch break.

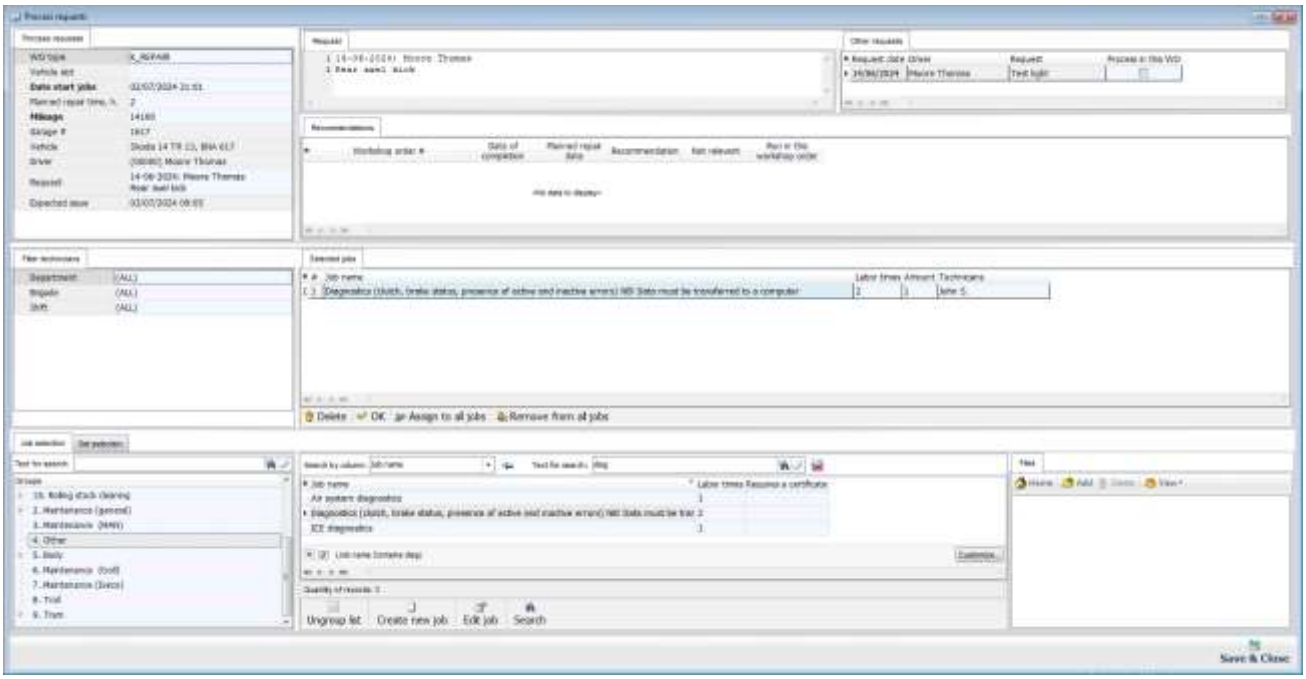
If the technician has provided comments on the job, the foreman can view these comments in the work order. The technician can edit or delete comments on the work order and the mechanic's recommendations. In this case, all comments are saved in the system.

The workstation of the work performer has the following capabilities:

- authentication by employee personnel number;
- accounting for standard repair time and actual time spent;
- automatic distribution of actually spent time among individual jobs, with the ability to mark the start/pause/continuation/end of individual jobs;
- each performer sees only his work orders in which he is assigned.
- a technician can mark individual jobs or the entire work order: started/finished/suspended;
- the ability to mark a “lunch break” with an automatic pause and resume;
- function “invite a foreman” or “spare parts required” with a list of missing spare parts;
- a technician can provide comments on a specific job or recommendations for the entire work order;
- a foreman can edit or delete recommendations;
- all comments on the performers’ jobs are saved in the system;
- a technician has the opportunity to view photos/videos in the repair request, as well as attach his photos/videos or other files;
- a technician can record a workshop vehicle slot in which he performs the work;
- The system provides an automatic correction if a technician forgets to mark the end of the work (when closing a work order or when the working hours of the repair area end);
- you can set a limit on how many repair orders a technician can run at any one time;
- you can set up a notification to the foreman about the work/task completed by the performers;
- if the foreman has established the fact that repair work has been completed and closed the work order, then the technician no longer has the opportunity to put marks on the jobs or work order.

Interface examples

Processing a request and creating a workshop repair order



Printed form of repair order

Repair order # 162718 of 02.07.2024 **K_REPAIR**

Work 02.07.2024 21:04
Delivery 0

Vehicle	Skoda 14 TR 13, ???. ? BNA 617, 1996 ?.?., VIN: 12192	Autokalsi o TD	Distance 14100

GAR # 1617 **LP #** BNA 617 **VIN** 12192

REQUEST

14-06-2024: Moore Thomas
Rear axel kick

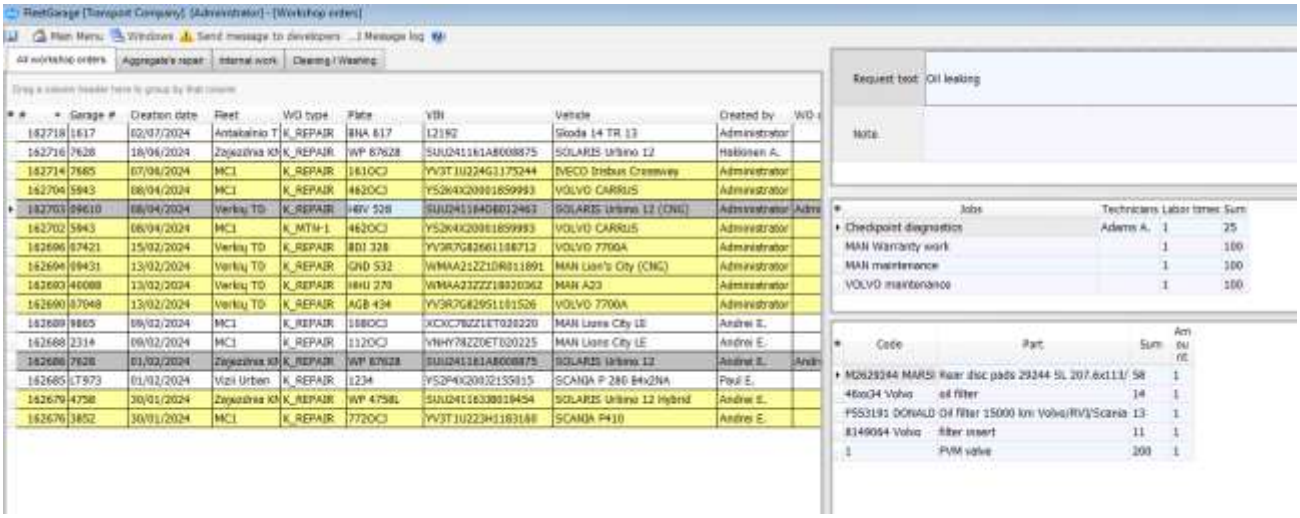
JOBS

Name	Qty	Norms	Technicians
Diagnostics (clutch, brake status, presence of active and inactive errors) NB! Data must be transferred to a computer	1	2,00	John S.

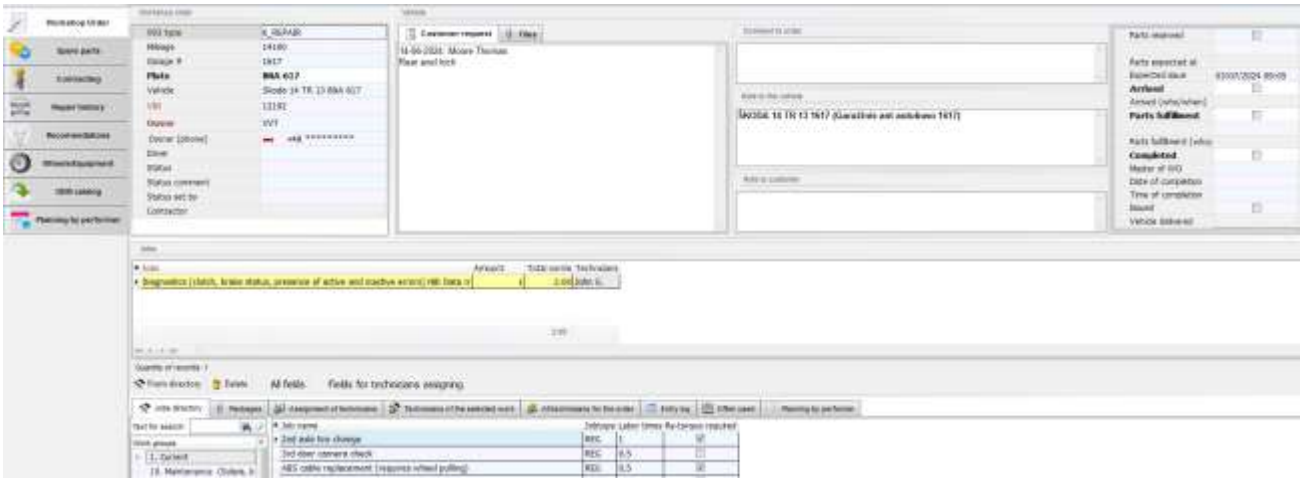
NOTES

Master _____ Technician _____

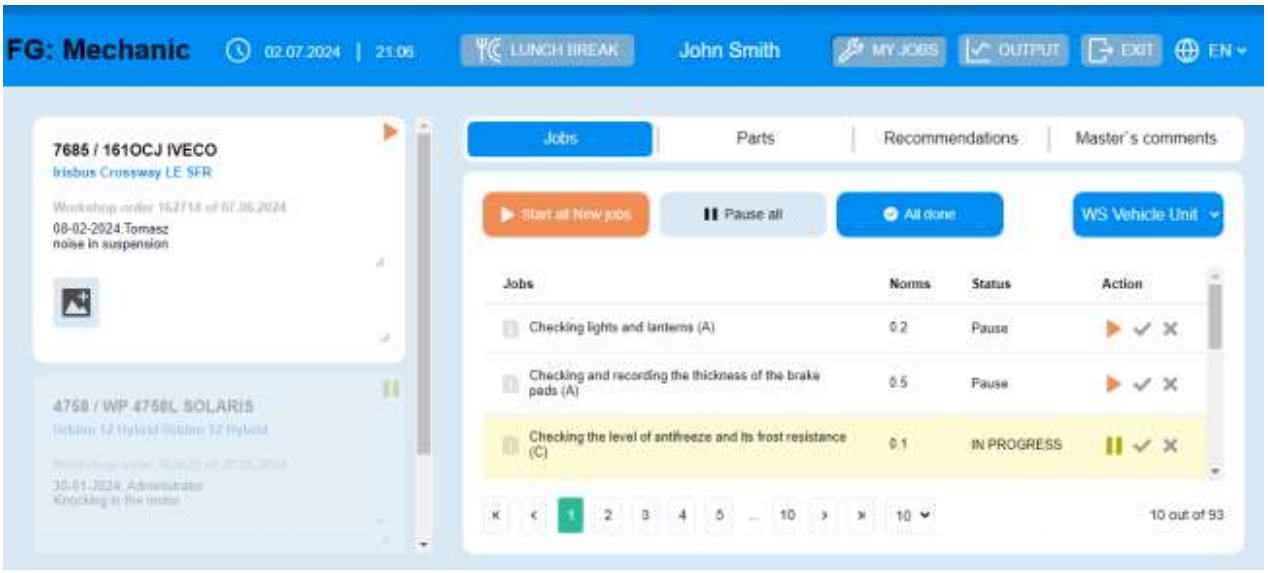
Work order log



Editing a work order



Technician (car mechanic) workplace



Time tracking

Purpose

Automation of employee time tracking.

Principle of operation

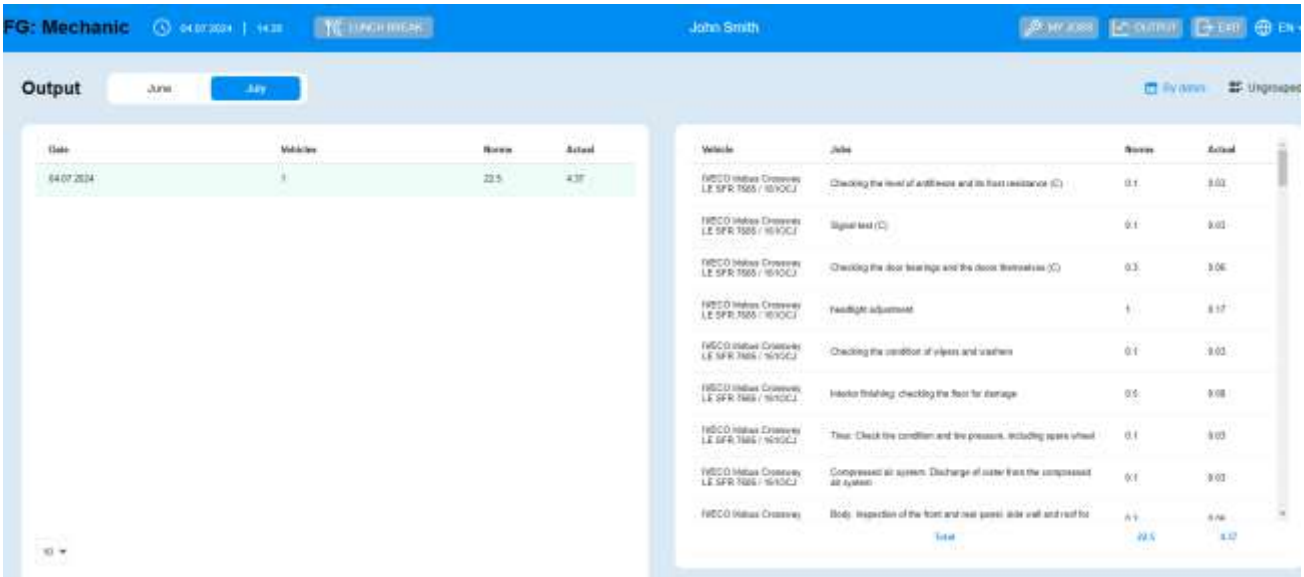
Technicians are authorized by personnel number, mark the beginning/end of work, pauses, breaks.

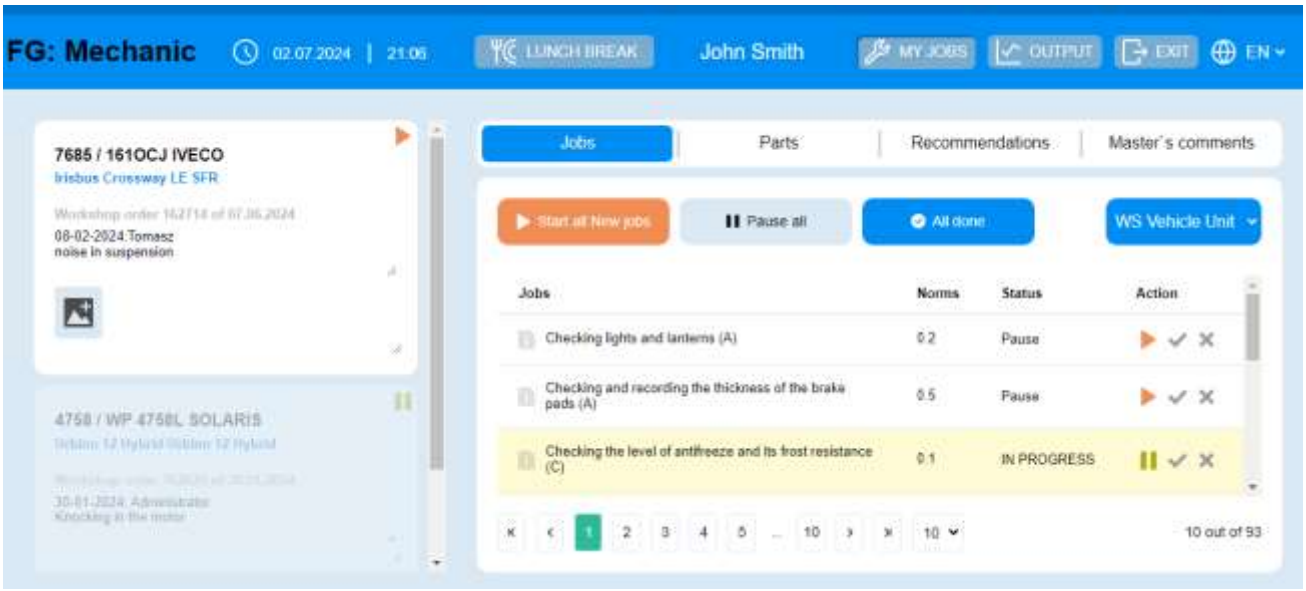
Functionality

- Ability to work from a computer or smartphone;
- recording the time of auto mechanics allows employees to record the beginning and end of work on a work order;
- generating reports on employee working time and productivity.

Interface examples

Work performer's workplace





Vehicle repair history module

Purpose

Collect data and store information on all vehicle repairs. This information can be used to assess vehicle condition, identify faults and plan repairs.

Principle of operation

Ability to view service repair history from different modules and interfaces as required.

Functionality

The repair history is determined according to the vehicle (make and model, garage side number and registration number).

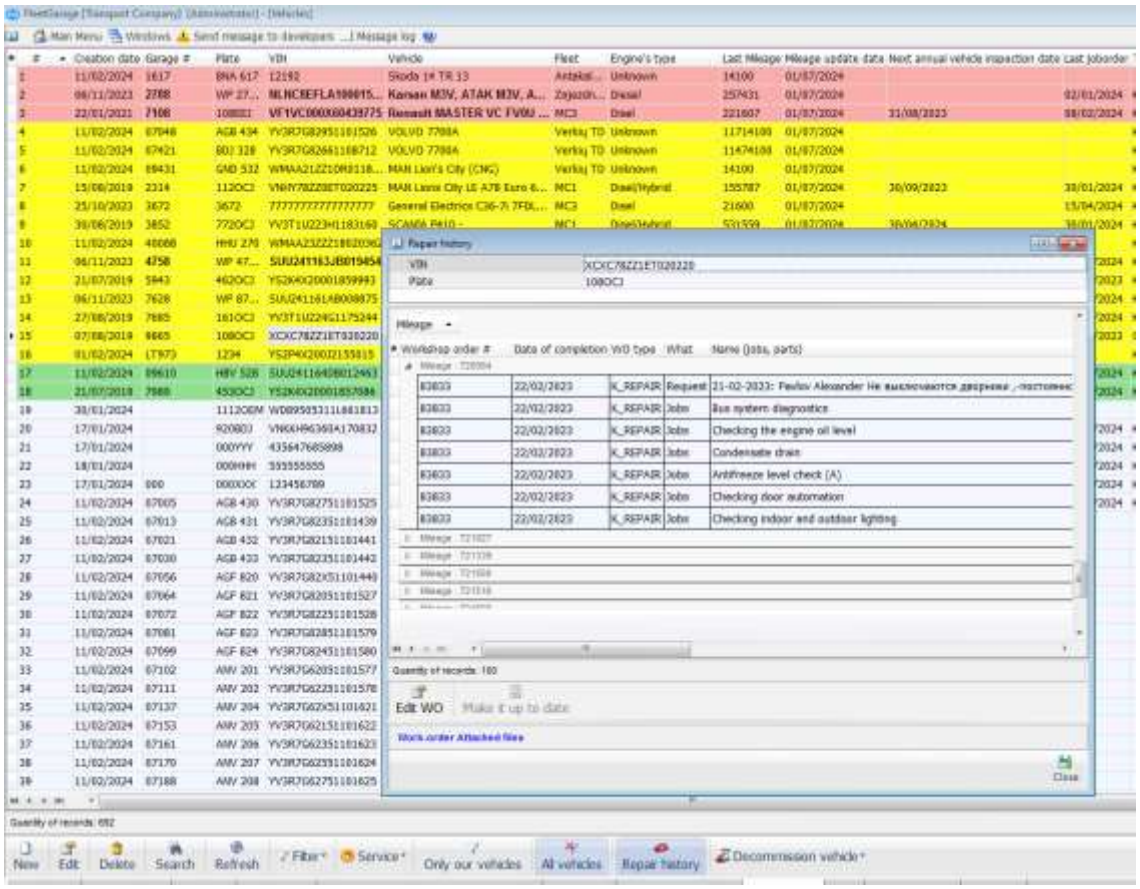
History includes:

- total mileage of the vehicle on the day of repair
- date of repair;
- type of repair;
- technicians performing the work;
- workshop foreman;
- request;
- recommendations;
- standard and actual time spent on repairs;
- spare parts and materials used for repairs.

Interface examples

Data in the work order

Transport log



Aggregate unit repair accounting module

Purpose

Automate the accounting and repair history of numbered and unnumbered aggregate units.

Principle of operation

The work is carried out in a separate tab "Aggregate's repair" in the work order log. The subject of the work is not the transport, but one or more units. If the unit contains a serial number, the repair history is available for it.

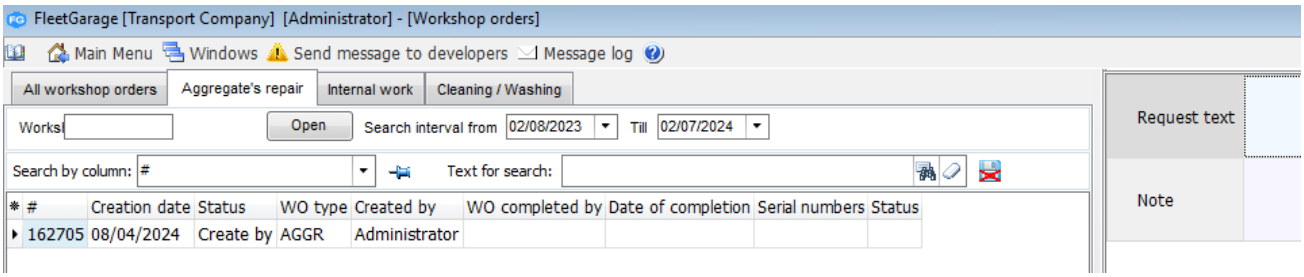
Functionality

The repair request (reasons for repair) is entered in the created work order. A manufacturer, model and type of aggregate unit must be specified. Either the serial number or the number of units of the same type is specified. You can specify the estimated repair time.

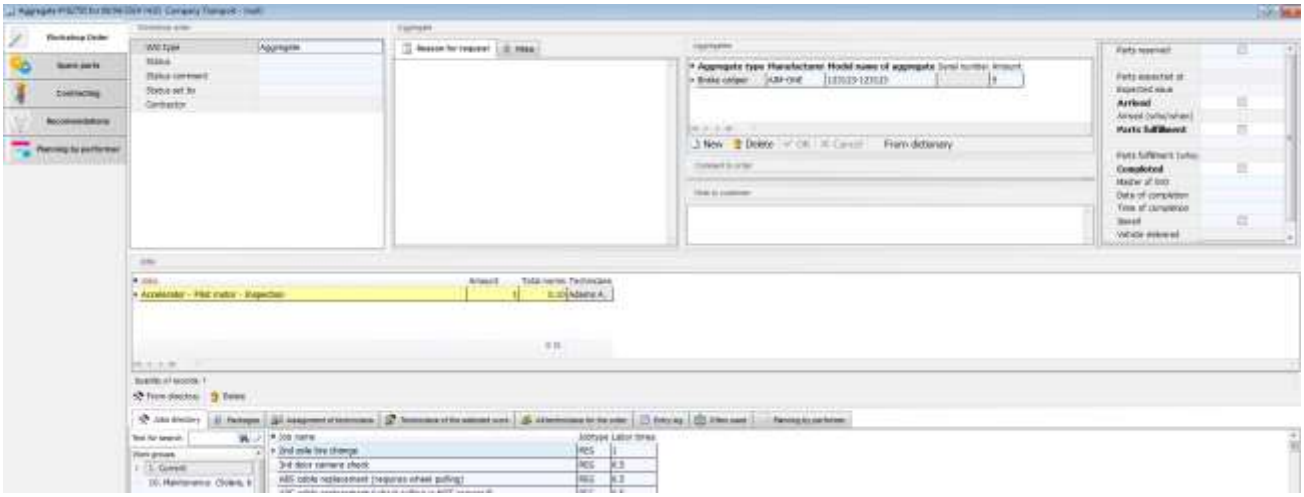
FleetGarage allows you to record repairs performed, including spare parts used, standards and actual hours worked.

Interface examples

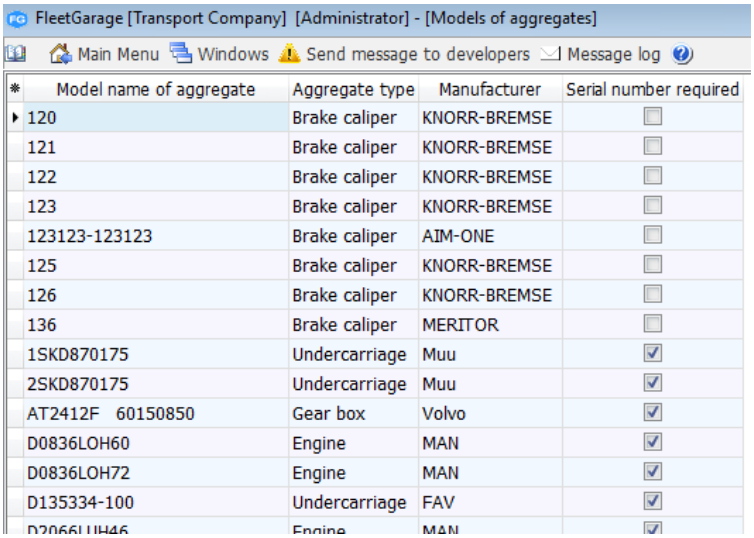
Unit repair log



Work order for aggregate repair

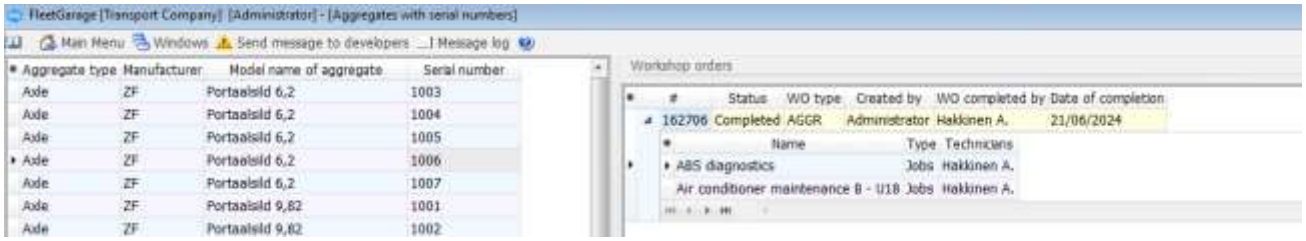


Aggregate models



Model name of aggregate	Aggregate type	Manufacturer	Serial number required
120	Brake caliper	KNORR-BREMSE	☐
121	Brake caliper	KNORR-BREMSE	☐
122	Brake caliper	KNORR-BREMSE	☐
123	Brake caliper	KNORR-BREMSE	☐
123123-123123	Brake caliper	AIM-ONE	☐
125	Brake caliper	KNORR-BREMSE	☐
126	Brake caliper	KNORR-BREMSE	☐
136	Brake caliper	MERITOR	☐
1SKD870175	Undercarriage	Muu	☑
2SKD870175	Undercarriage	Muu	☑
AT2412F 60150850	Gear box	Volvo	☑
D0836LOH60	Engine	MAN	☑
D0836LOH72	Engine	MAN	☑
D135334-100	Undercarriage	FAV	☑
D2066LUH46	Engine	MAN	☑

Aggregate units directory and repair history



Kanban module (task board)

Purpose

Designed to visualise the repair process to understand the progress and status of the work. Provides transparency. On the TV panel, you can see which job is where and which technician is doing what.

Principle of operation

During the repair process, work orders acquire certain statuses (automatically and/or manually). All work orders are displayed in the foreman interface or on the TV panel in the repair area.

Web application that can be configured on a smart-TV at autorun:

- Current and planned technician workload;
- repair status of work orders;
- output of performers (technician) per month.

Functionality

Individual Kanban statuses change automatically according to a technician's mark: in progress/in pause/waiting for spare parts/requesting a foreman.

The visualisation shows who is free, who is busy and who is on break. It also shows what work is planned for the future.

Most of the statuses are fixed and assigned automatically:

- Scheduled;
- Accepted;
- In progress;
- pause;
- completed by a technician;
- finalized by a foreman;
- left a workshop.

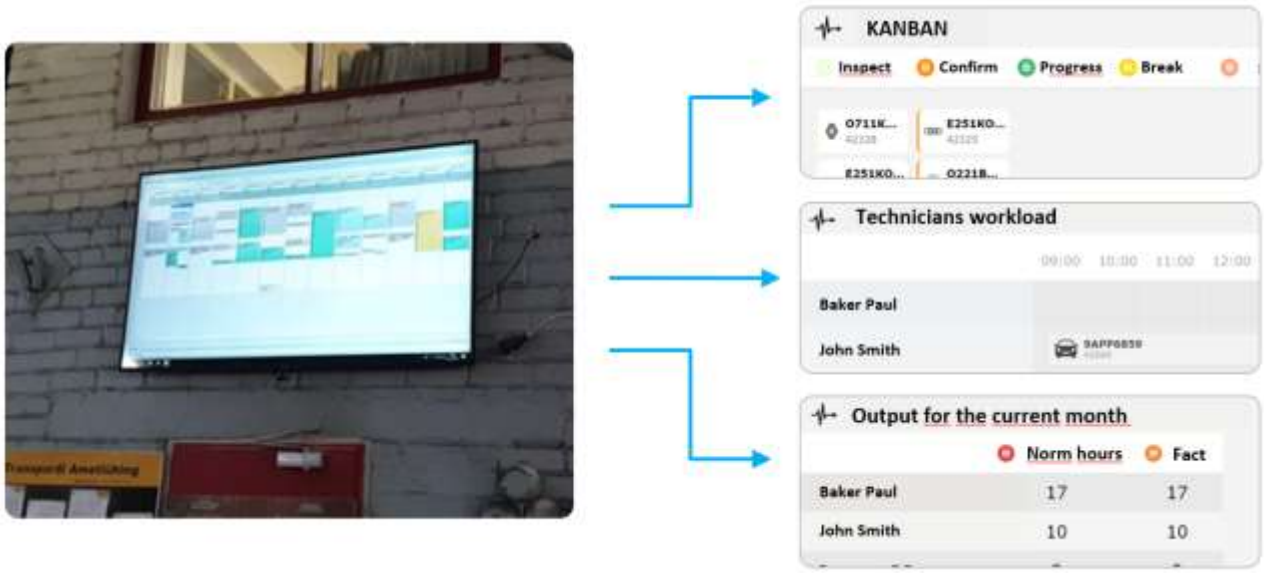
You can also set any additional statuses that are assigned to the work order.

The peculiarity of Kanban is that one work order can have several statuses. For example, one technician does electrical work and the status is “In progress”, while another does the suspension and needs “Attention of a foreman”.

According to the work plan, when the workshop foreman assigns a performer to work order, you can see changes on the TV panel. If the auto mechanic is currently performing work or is on pause, this is also visually presented on the screen.

Interface examples

Kanban



Tire and wheel accounting module

Purpose

Designed to automate tire accounting and save history. It allows the repair shop to record all repairs and replacements.

Principle of operation

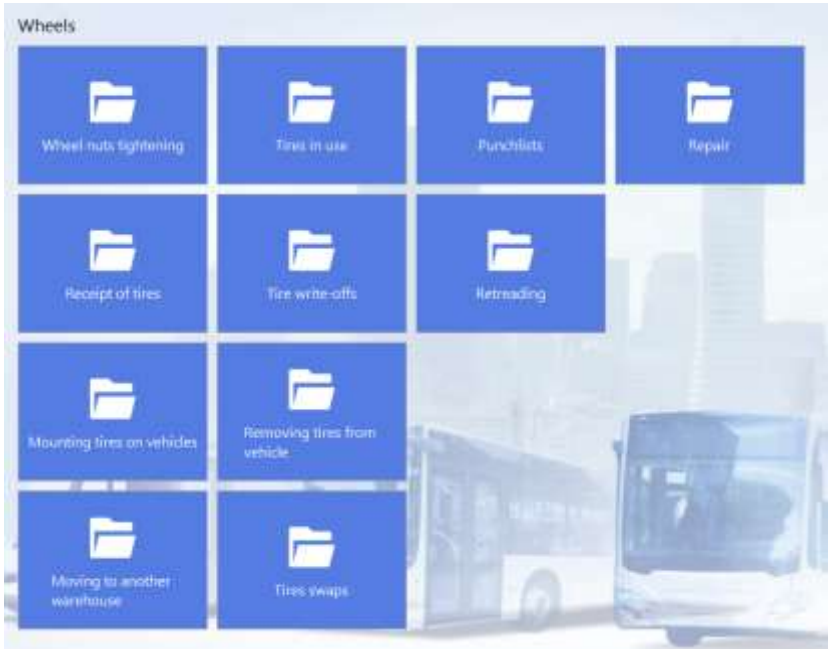
Each tire has a serial number and specifications. FleetGarage allows you to record the entire operating cycle of tires, view the history of each tire and conduct an analysis to select the optimal tire model based on mileage.

Functionality

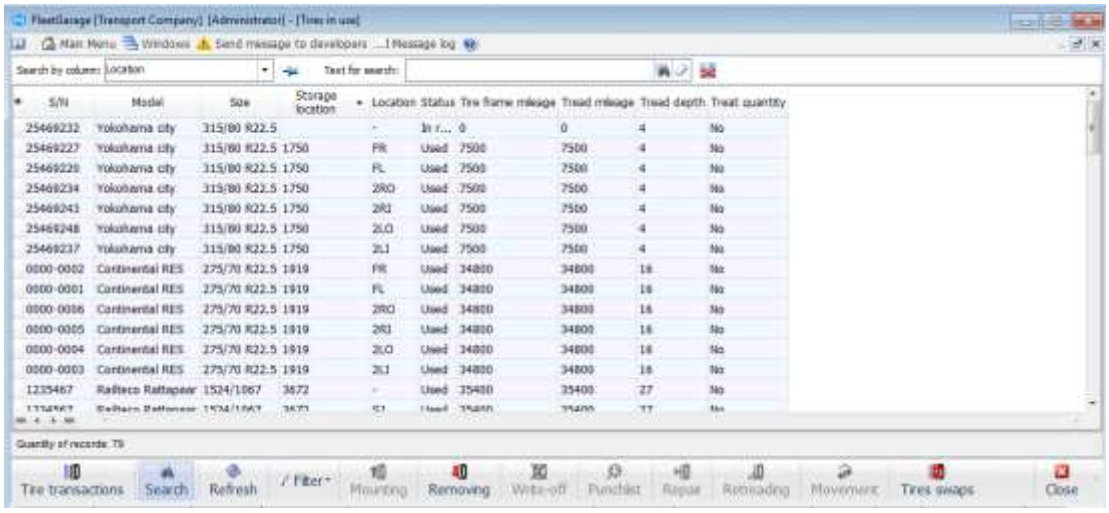
- Tyre number registration: (purchase, mounting/demounting, repairs, protection, repositioning, relocation, defect detection, write-off).
- Complete history, taking into account the date and mileage of the tread and cord.
- Configuration of wheel formulas with graphic display.
- Control of tread depth with setting of values in the work order.
- Mechanism to control the traction of the wheel after the repair according to the mileage (min/max/expired).
- Wear uniformity control.
- Mobile application for an Android tablet for the field team to record the fact of broaching.

Interface examples

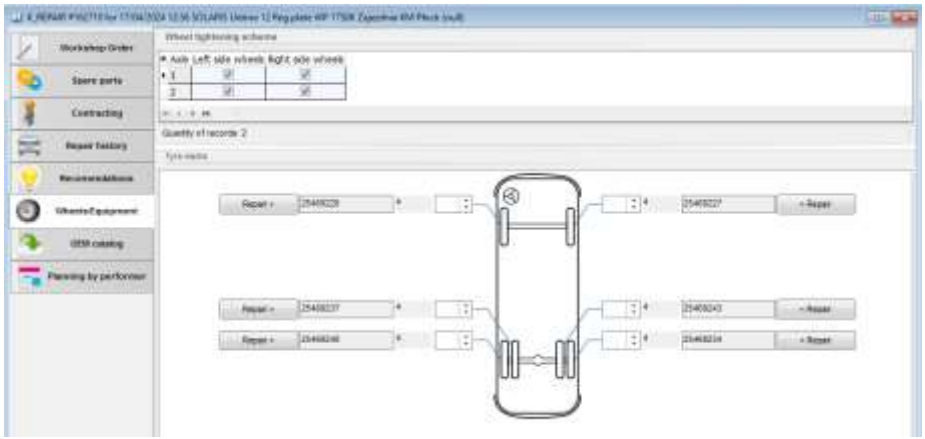
All functions



Tires in use



Tread depth measurement



Other works accounting module

Purpose

Other works was created in order not to lose the productivity of the technicians when they are involved in work not related to the repair of vehicles and automotive units: repairing a tools, painting walls, cleaning the workshop, etc.

Principle of operation

In the work order log on the tab “Internal work”, work orders for other work are entered.

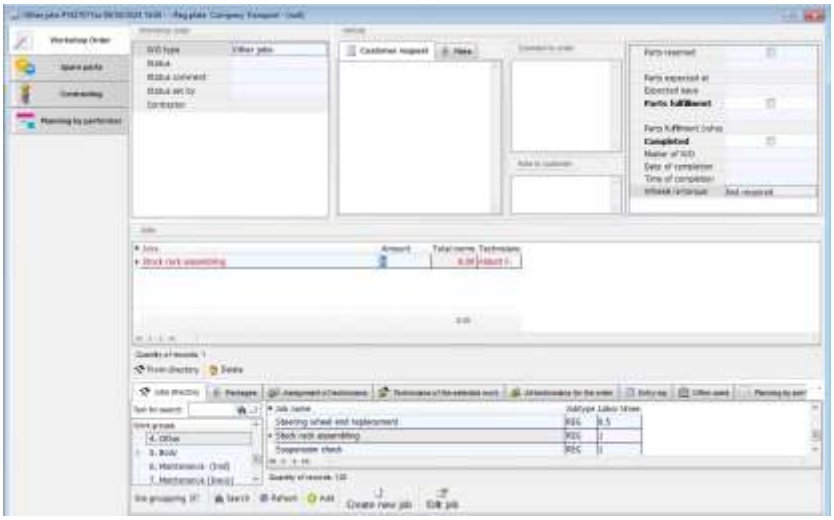
Functionality

- Request for repair
- Neither transport nor units are specified
- Works, spare parts, sets
- Assignment of performers (technicians)

- Accounting for planned (normative) and actual labor costs due to the marks of performers for this category of work orders
- Recording execution

Interface examples

Editing a work order for other work



“Autoinformer”

Purpose

Reduce repair time through notifications/reminders to employees.

Principle of operation

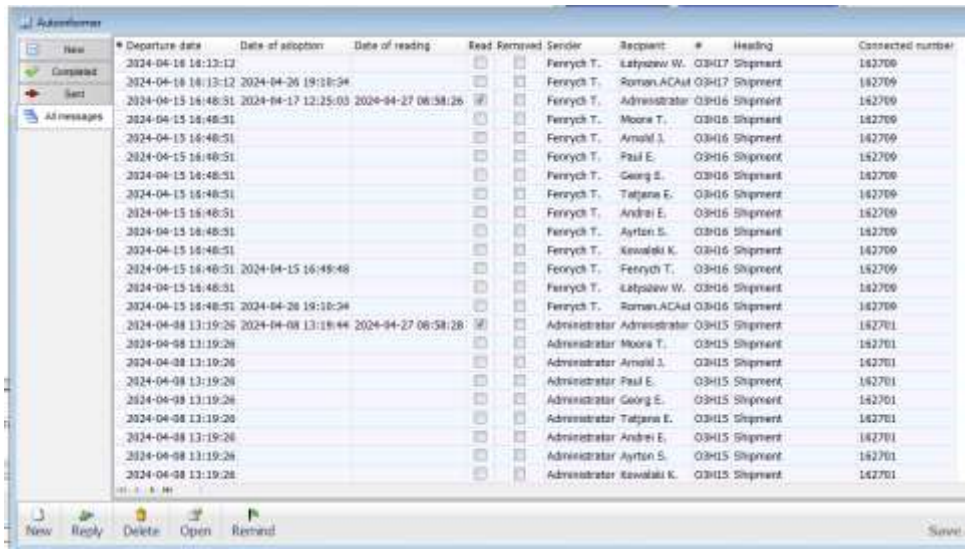
When certain events occur, the system sends notifications to employees via email or other channels.

Functionality

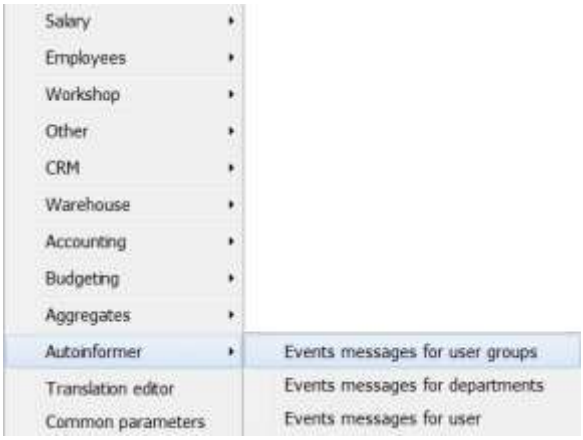
- There is a setting for at least 5 basic events - standard notifications
- Ability to add and customize your events
- The text of messages is formed using tags
- Ability to configure for a group or specified users
- Various alert channels, including:
    - Built into the system
    - Email
- Possibility of sound notification

Interface examples

“Autoinformer” event log



Ability to customize events



Certificates of Competence

Purpose

Allow only those with a certificate to perform certain jobs.

Principle of operation

- Certificates of competence are entered in the log.
- Certificates are assigned to performers (technicians), indicating the validity period.

The job specifies which certificate is required to perform the job.

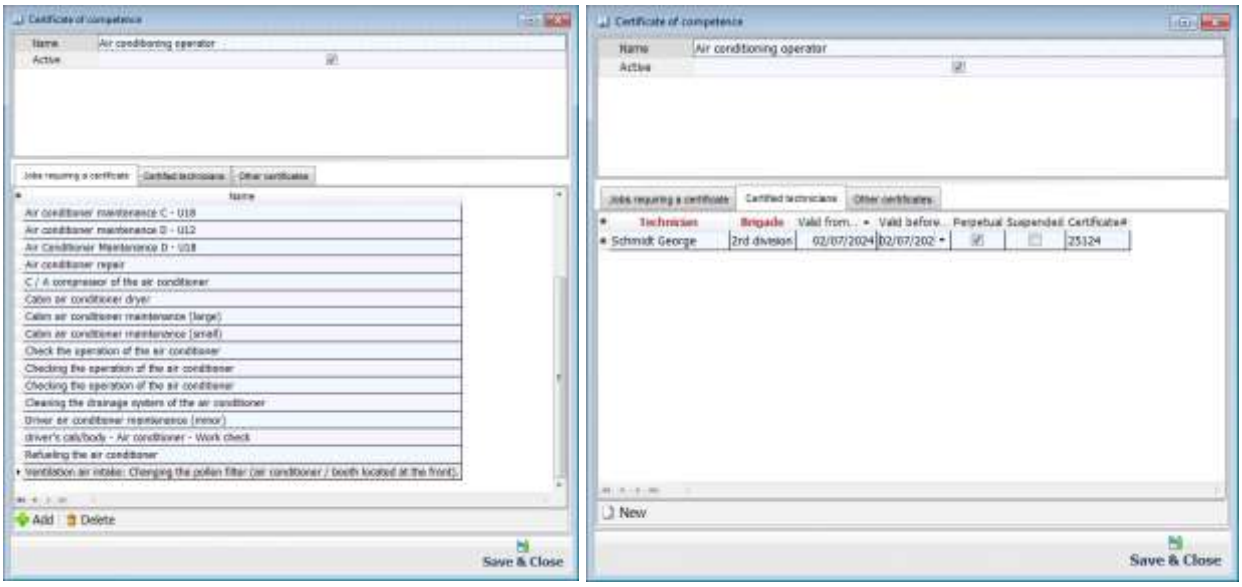
Functionality

Workers can be classified according to their level (with appropriate certificates). The software allows you to mark certain jobs that are only available to properly certified personnel. The system automatically controls access to special tasks that require qualifications (certificates), i.e. it is impossible to appoint a worker who does not have the appropriate certificate to perform such work.

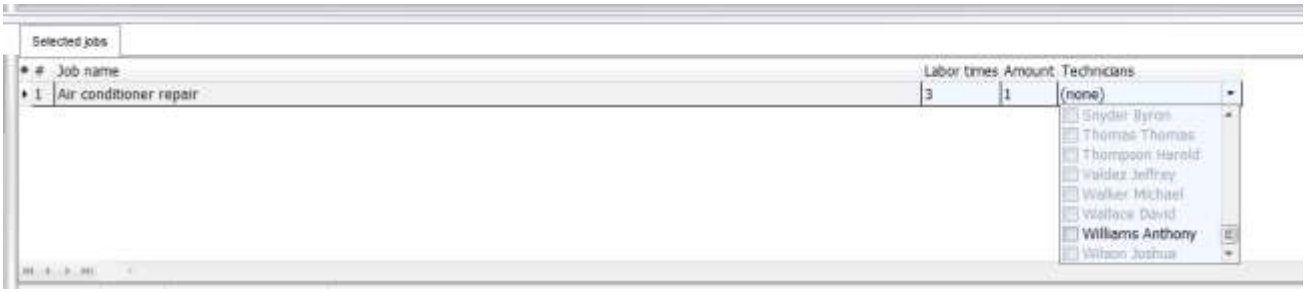
When processing the request to the workshop order and when editing work orders and assigning operators, the system checks whether a certificate is required for this work and whether the assigned worker has one. If they do not have it, they cannot be assigned to the job. Jobs in the list are marked with a flag.

Interface examples

Setting up certificates



Control of certificates in work orders



Reports

Purpose

Reports are necessary for analysis and management decisions to improve the efficiency of operations and repairs.

Principle of operation

The module allows you to select a report, period and additional parameters. Reports are displayed in a built-in interface and can be saved as PDF files.

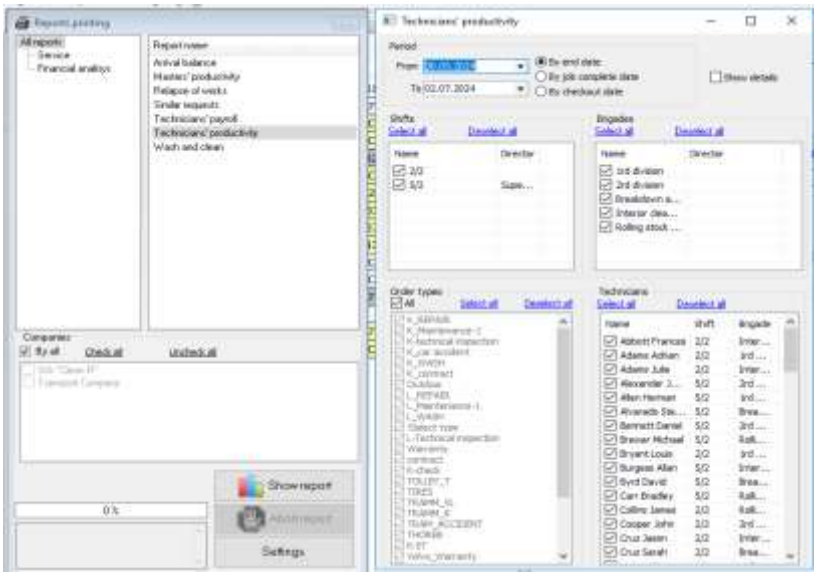
Functionality

The system includes the following reports:

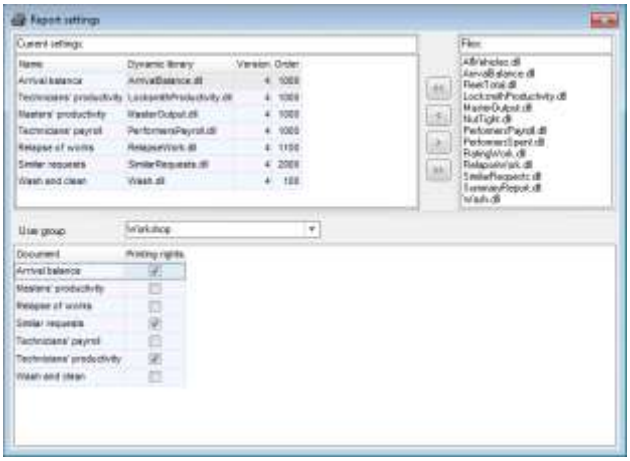
- All transport (All Vehicles)
- Balance of races (Arrival Balance)
- Report for the fleet (Fleet Total)
- Development of Performers (Locksmith Productivity)
- Broach wheels (Wheel re-tightening)
- Rating (Rating of jobs)
- Rating (Rating of spare parts)
- Relapse jobs
- Key Indicators (KPI)

Interface examples

Report selection form



Setting up reports



Sample of report

Service

Output of technicians 30.05.2024 to 02.07.2024

Order types: All. Work shifts: All. Technicians: All.

#WO	Job	GAR #	Vehicle	Spent time	Labour times	Efficiency, %
Total				**17:53**	**39:17**	**219**
Work shift: 2/2				**0:01**	**2:11**	
Brigade: 2rd division				**0:01**	**1:41**	
Hakkinen Andrei				**0:01**	**1:41**	
Aggregate				0:01	1:08	
16270	ABS diagnostics		- -	**0:00**	0:30	
16270	Air conditioner maintenance B - U18		- -	**0:01**	0:38	
K-technical inspection				0:00	0:33	
16271	Electrical work (diagnostics, short circuit, open circuit	1919	MAN ME18.255	**0:00**	0:30	
16271	Gearbox oil level	1919	MAN ME18.255	**0:00**	0:03	
Brigade: Interior cleaning				**0:00**	**0:30**	
Abbott Frances				**0:00**	**0:30**	
Work shift: 5/2				**17:52**	**37:06**	**207**
Brigade: 2rd division				**17:52**	**37:06**	**207**
Alexander John				**0:00**	**28:06**	
Bennett Daniel				**0:00**	**2:00**	
Rice Elmer				**17:52**	**7:00**	**39**

Warehouse module

Purpose

The Warehouse module is designed to manage warehouse operations.

Principle of operation

FleetGarage system contains the following directories and logs:

- Spare parts and materials directory and all related directories (groups, types, units, and 5 more directories);
- Logical and physical warehouses;
- Financially responsible persons;
- Orders to supplier;
- Moves;
- Supplies;
- Inventory;
- Etc.

Implemented FIFO cost depreciation.

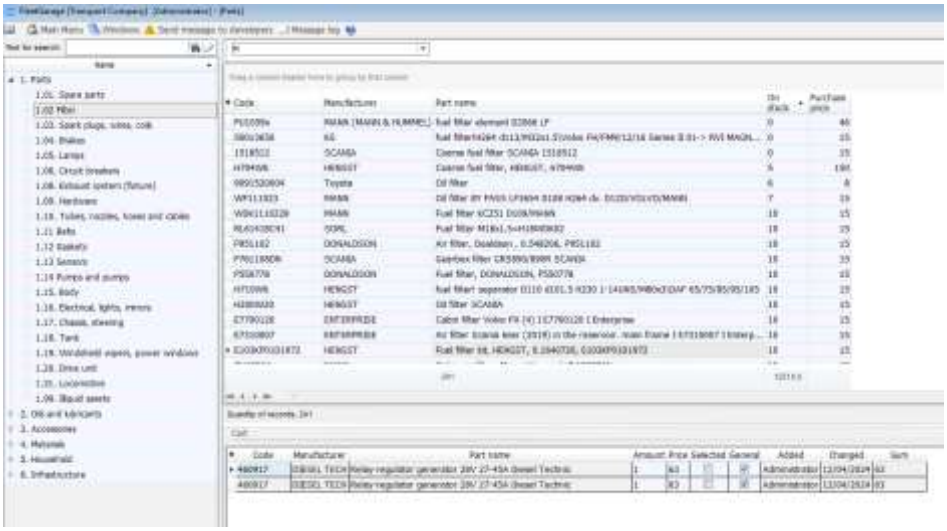
Goods receipt documents are used to replenish the warehouse. For write-offs - work orders and write-off documents.

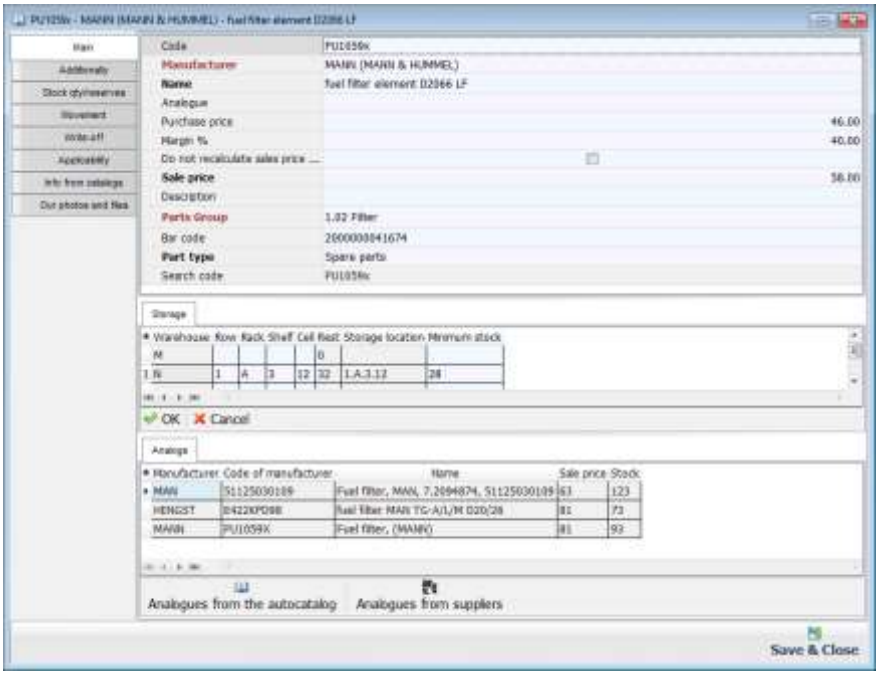
Functionality

- Control of the quantity, location and condition of warehouse stocks;
- Forecasting demand for inventory;
- Inventory movement tracking;
- Management of receipt, write-off, return and transfer of goods;
- Product order management;
- The history of each item associated with the repair order;
- Storage;
- Inventory;
- Barcoding;
- Etc.

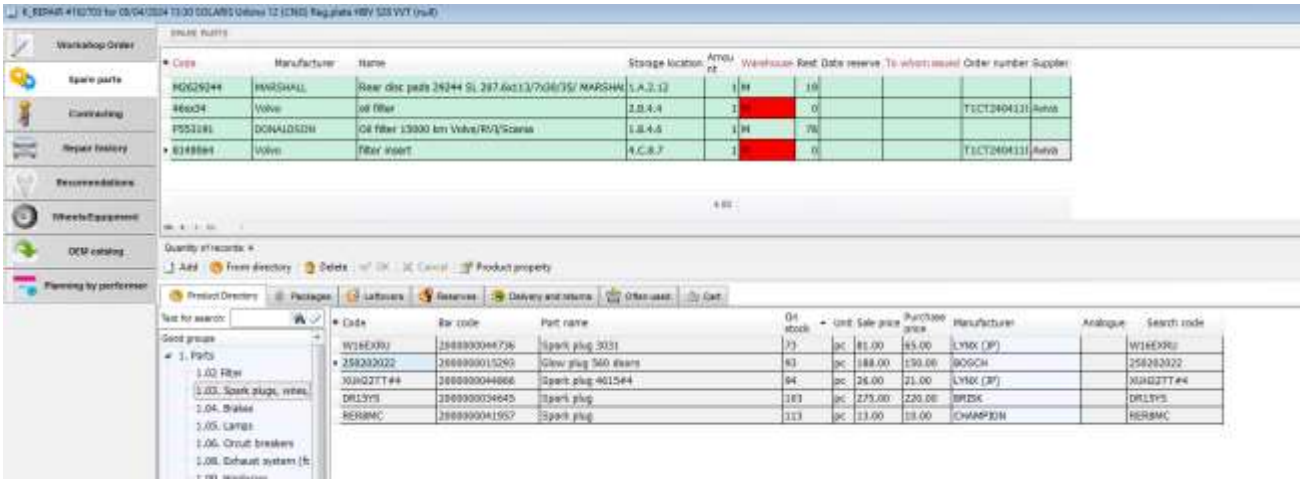
Interface examples

Spare parts and materials

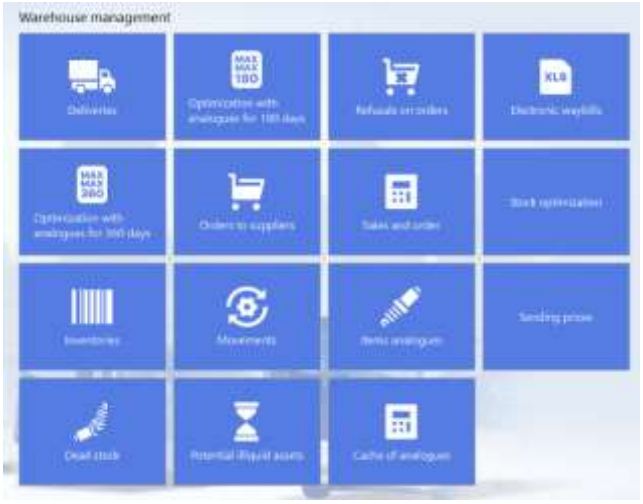




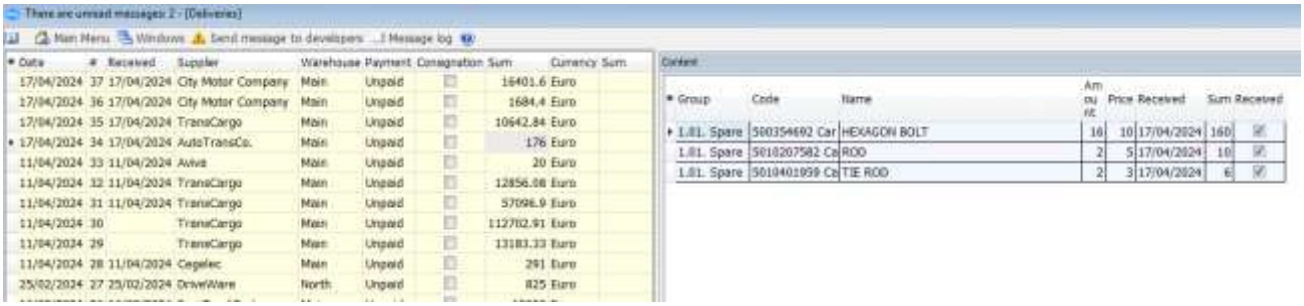
Spare parts in workshop document

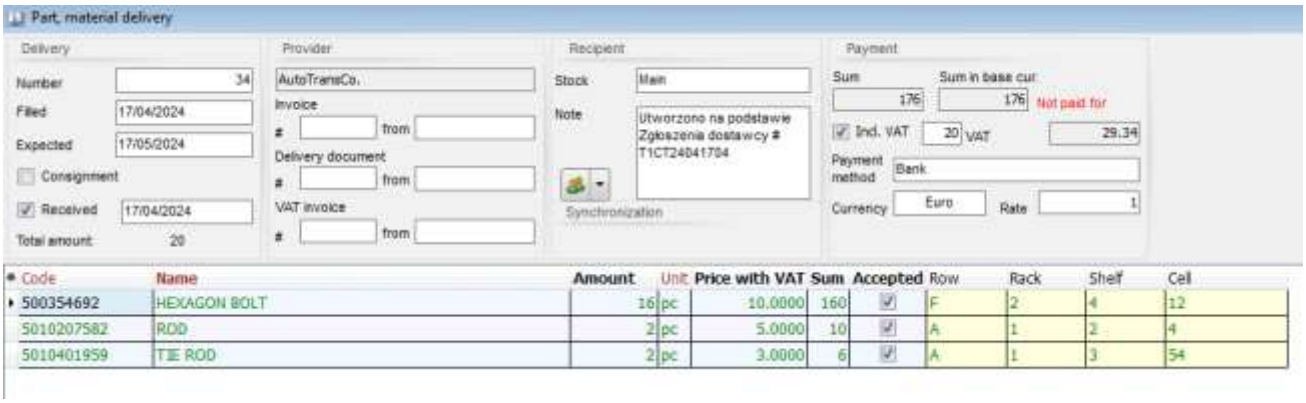


General warehouse management section



Deliveries





Inventory Optimization Module

Purpose

The module uses a range of algorithms and analytical tools to help determine the optimal level of stock, ensure that there is no excess stock in the warehouse that leads to additional costs, and identify excess stock for write-offs and write-downs.

Principle of operation

The system analyses the dispatch of spare parts by work order over six months or a year. Calculates average monthly and average daily sales. Calculates the optimum quantity based on stock policy. It then analyses how much is in stock, how much is in reserve, how much is ordered, how much is on the way and offers to place an order for each part.

The following parameters are also taken into account:

- Target storage level in days;
- Safety stock in days;
- Delivery period;
- Frequency of orders;
- Manual optimal quantity;
- Inventory control class;
- Special control class.

The illiquid stock control module identifies dead stock for configured categories. For example, from 1 year to 2 years, from 2 years to 3 years, etc. For each of the illiquid classes, the system allows you to set rules for write-offs and write-downs.

Functionality

FleetGarage allows you to configure the parameters described above.

Warehouse optimization:

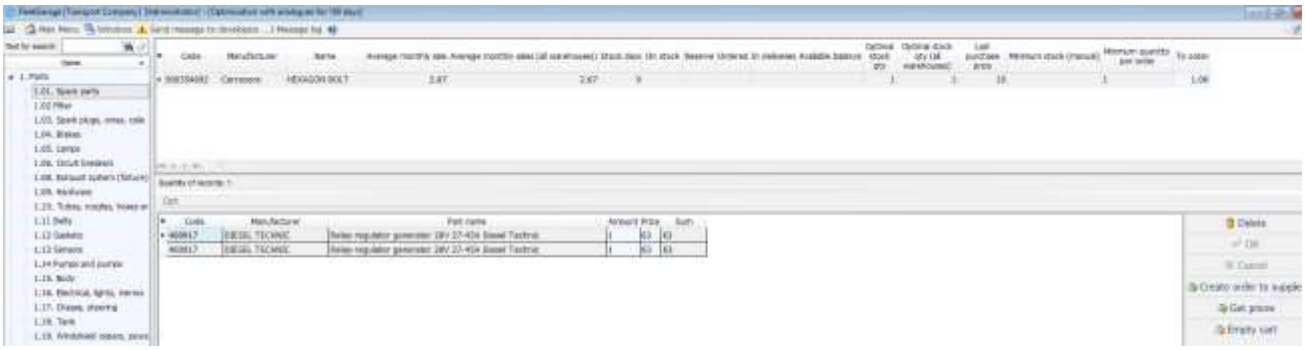
- Calculate the optimal quantity.
- Calculate the quantity to order.
- Place an order for the supply of spare parts.

Non-liquid assets:

- Make calculations and identify illiquid assets.
- Assign classes.
- Write-down / write-off.

Interface examples

Warehouse optimization module



Module for working with illiquid assets

Washing and cleaning accounting module

Purpose

The module is designed to receive and manage orders for cleaning and/or washing vehicles, control the execution of orders, automate cleaning accounting and store history

Principle of operation

- The head of the washing and cleaning department sets parameters, authorised work and rights.
- RFID tags are installed on vehicles.
- Washers and cleaners use a special mobile application
- At the start of the cleaning, the cleaners scan the RFID tag or enter the license plate number / garage number.
- Select jobs they are authorised to perform.
- If damage to the interior is detected during the process, an appropriate comment is made
- Mark completion of work
- Washing and cleaning are listed on a separate tab in the work order history.
- The vehicle repair history does not include washes.
- The manager can generate a report with information on the volume and composition of the work done by each washer/cleaner.
- The manager receives a notification via Autoinformer" of any interior problems found during the cleaning process.

Functionality

- The mobile application is suitable for smartphones, tablets and other mobile devices (Android operating system).
- The mobile application supports RFID (Radio Frequency Identification) wireless identification technology, which uses radio waves to transmit information. RFID tags are used to identify vehicles.
- The vehicle directory allows each vehicle to be assigned a type of cleaning and the frequency with which it should be carried out (by mileage or period).
- The mobile application allows you to specify the type of cleaning (manual or automatic car body wash, interior cleaning, wet or dry seat cleaning, engine washing, etc.).
- The history of washing and cleaning is stored in a separate tab in the work order log.
- It is possible to display a report on the output of individual or all cleaners/washers.

Interface examples

Roadside assistance module

Purpose

A web application that can be used on a tablet or smartphone, which allows you to record work on the road. Such as: towing the car to a repair shop or on-site repair.

Principle of operation

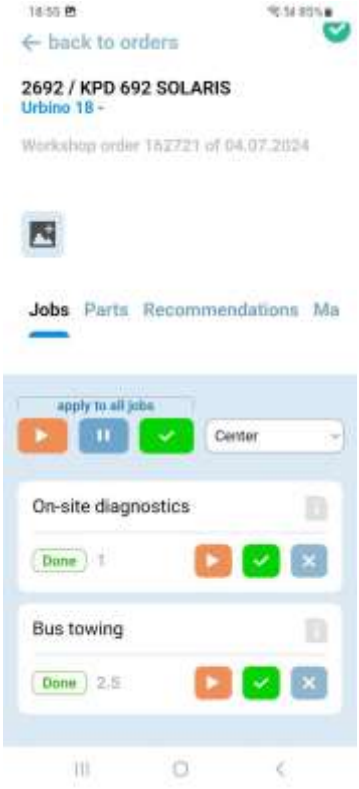
A member of the field team logs in on a smartphone or tablet using his or her personal number, indicates the vehicle on which the work was performed, indicates acceptable work, notes the actual assistance time spent, and marks the start/end of the work.

A special type of work order is created, containing details of the worker who carried out the fieldwork and the scope of the work.

Functionality

- Set up a list of acceptable off-site work for users.
- Extended registration via SMS and authorisation by personnel number.
- Measurement of actual labour costs.

Interface examples



Checking the tightness of wheel screws

Purpose

The module is designed to control the tightening of wheel nuts after repairs involving the removal and replacement of wheels. Allows you to reduce the number of detours due to a wheel falling off while driving.

Principle of operation

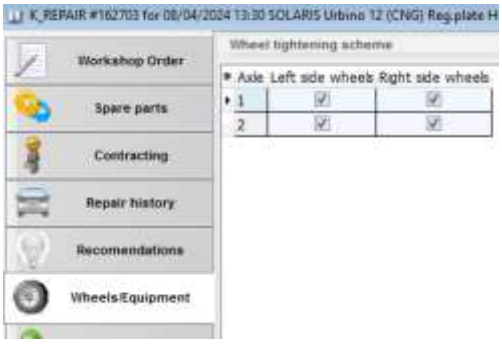
- Some operations are indicated in the database with a note that the wheel nuts must be checked for tightness when carrying out the operation.
- If such job is included in the workshop order, before completing the job it is necessary to indicate which wheels need to be pulled, with the option of randomly tightening either on the side or along the axle.
- When the calculated mileage is reached, a task is automatically generated for the field team to check the wheel tightness.
- The mobile application for Android OS and tablet adaptation displays a list of vehicles to be checked.
- When an employee checks the tightness, they mark "Wheels are tight".
- Wheel tightness check data is stored in a separate log.
- If the tightening is not done on time, the transport is marked with a special colour. It is possible to configure a notification about the absence of a tightening check.
- It is possible to generate a report with the output of the craftsmen, indicating the number of tightened wheels and the number of vehicles.

Functionality

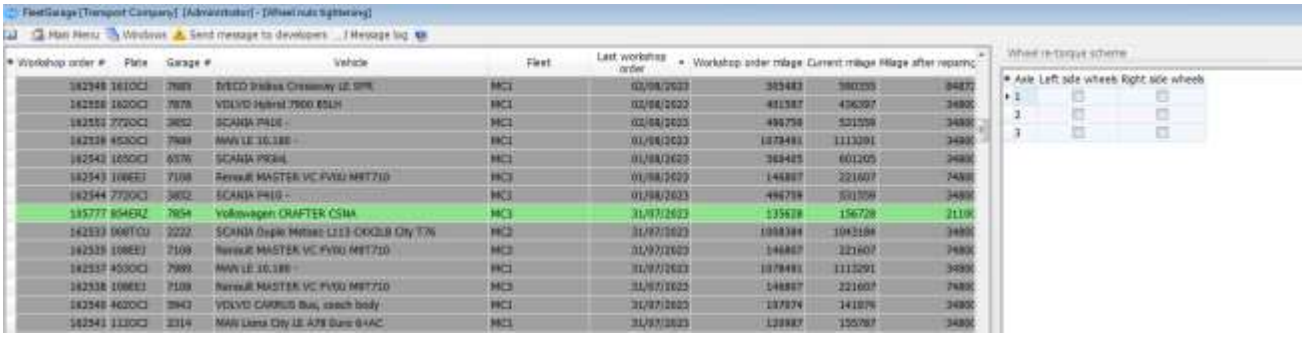
- Special types of repair orders related to wheel removal and check the tightening interval are specified in the vehicle directory.
- A list of vehicles requiring a tightening check is automatically generated.
- Tasks for tightening the wheels are automatically created, in which you must specify the formula of the vehicle's wheels and the location of the wheels that need to be tightened.
- The employee must record the fact of tightening the wheels in the app.

Interface examples

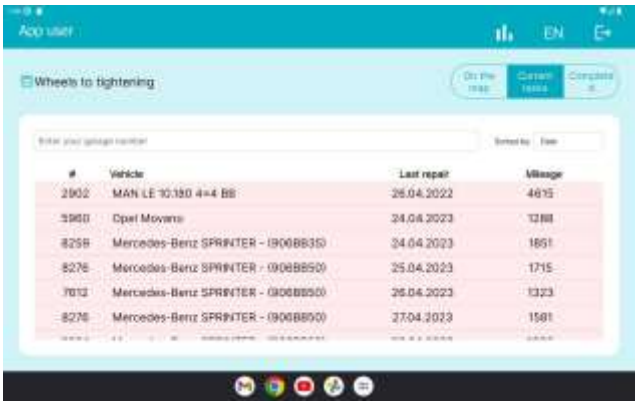
Markings in the work order which wheels to check

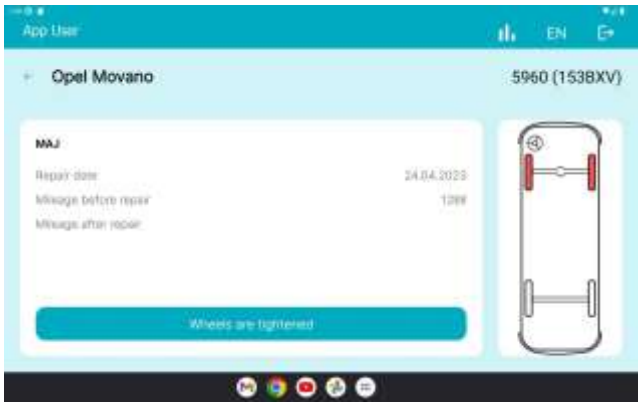


Wheel tightening log



Mobile application





KPIs

Purpose

The module allows you to set targets based on data generated by the software and track actual results. The system is configured with 6 main indicators. Data is generated for the previous month and earlier.

Principle of operation

The system is preset with the following indicators:

- Technical readiness coefficient;
- Number of requests with repeated problems;
- Number of line departures;
- Total number of vehicles serviced;
- Number of vehicle repairs per mechanic;
- Transport costs per 100 km;
- Number of cleanings/washings carried out

Functionality

- Set the target value of the indicator in the system.
- Report with key indicators.

Interface examples

Financial analysis

Fleet KPI June 2023

KPI	Target	Actual
Readiness factor (transport availability). Total.	90	89
Fleet: Buses	95	97
Fleet: Trolleybuses	85	80
Fleet: Trams	90	91
Number of requests "Same problem"	2	1
Fleet: Buses	2	-
Fleet: Trolleybuses	2	3
Fleet: Trams	2	1
Number of requests "Unexpected route interruption"	1	2
Fleet: Buses	1	-
Fleet: Trolleybuses	1	5
Fleet: Trams	1	-
Total number of vehicles serviced	243	207
Fleet: Buses	250	300
Fleet: Trolleybuses	200	220
Fleet: Trams	300	100
Total serviced vehicles per technician (car mechanics)	4	4,1
Fleet: Buses	4	4,4
Fleet: Trolleybuses	4	3,2
Fleet: Trams	4	4,8
Service costs per 100 km	33	35
Fleet: Buses	30	25
Fleet: Trolleybuses	40	50
Fleet: Trams	30	29
Number of cleanings/washes	1 385	1 515
Fleet: Buses	1 000	1 200
Fleet: Trolleybuses	1 500	1 335
Fleet: Trams	2 000	2 010

Road accident log

Purpose

The log is intended to record the circumstances of an accident and monitor the status of cases for settlement with insurance companies.

Principle of operation

The data on the case is updated through interaction with insurance companies and those involved in the incident.

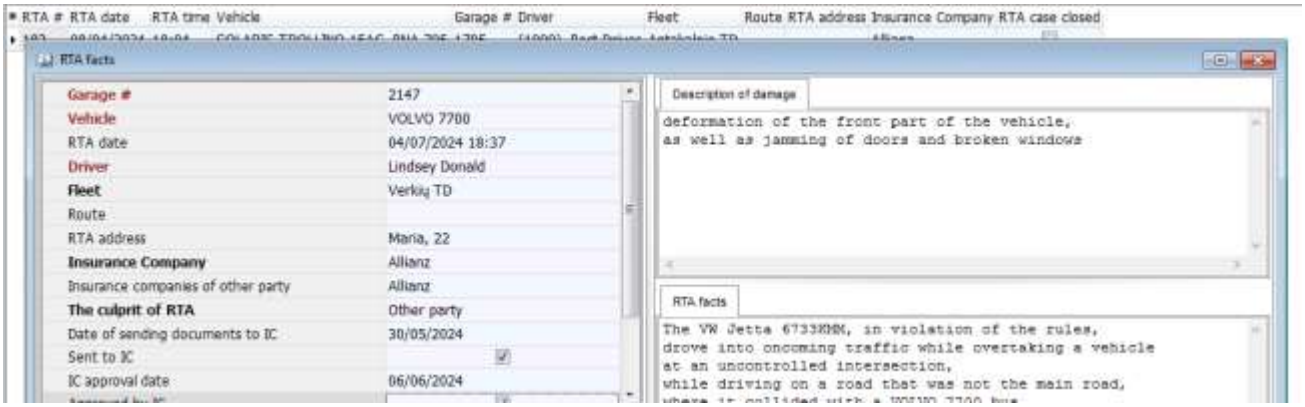
Functionality

The log allows you to keep track of the following parameters:

- Date of the traffic accident;
- Guilt of the customer's driver (guilty/innocent/mutual/under investigation);
- First name, last name, driver's personnel number;
- Information on your transport;
- Type of vehicle (trolleybus, bus), transport unit;
- Vehicle route;

- Data on the second participant in the accident (make, model, registration number, garage number of the vehicle;
- Description of the traffic accident;
- The ability to take and attach a photo/video or attach another document;
- The log records information about the consideration of the insured event;
- Insurance company where the customer's Vehicle is insured;
- Insurance company of the second party to the accident;
- Injury case number;
- Affected persons;
- Damage;
- Compensated damage;
- Losses;
- Status of the case (under investigation/fully resolved);
- Ability to create a repair request based on an accident.

Interface examples



Integration module with mileage loading

Purpose

The module allows you to automatically download daily mileage for vehicles. Input interface: email, file or API. FleetGarage system integrated with PikasMOB.

Principle of operation

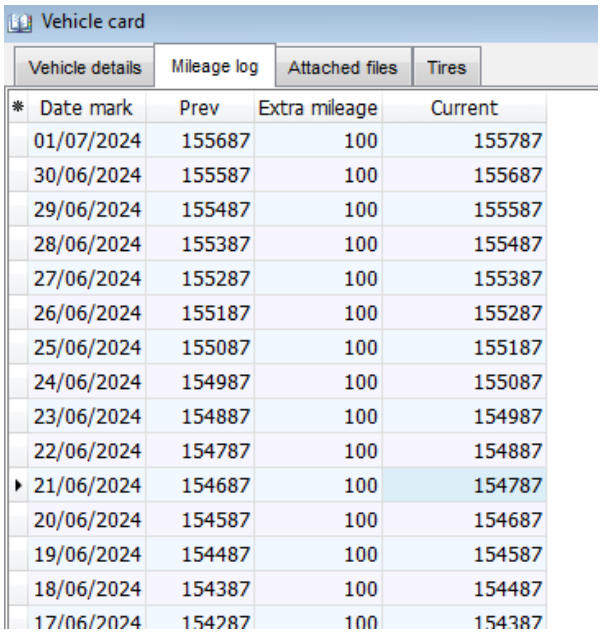
The module for loading daily mileage according to a schedule accesses the monitoring system via API and reads the mileage data. In the case of email integration, the FleetGarage robot reads the specified mailbox and downloads the file. A comparison is made based on the vehicle's registration number. The current mileage of the vehicle is increased by the additional mileage per day. The date of the mileage update is recorded. The result is recorded in the mileage log.

Functionality

- Ability to retrieve daily mileage in different ways: via API, from email, from file.
- Checks for restrictions.
- Possibility of mass loading in case of missed data acquisition.
- Possibility of initial update of absolute mileage value.

Interface examples

Vehicle directory. Tab "Mileage log".



* Date mark	Prev	Extra mileage	Current
01/07/2024	155687	100	155787
30/06/2024	155587	100	155687
29/06/2024	155487	100	155587
28/06/2024	155387	100	155487
27/06/2024	155287	100	155387
26/06/2024	155187	100	155287
25/06/2024	155087	100	155187
24/06/2024	154987	100	155087
23/06/2024	154887	100	154987
22/06/2024	154787	100	154887
21/06/2024	154687	100	154787
20/06/2024	154587	100	154687
19/06/2024	154487	100	154587
18/06/2024	154387	100	154487
17/06/2024	154287	100	154387

Open API

To develop any integration with other systems, you can use a documented and extensible API.

Opportunities for integration with third-party software

FleetGarage system can be integrated with other software. For example:

- Accounting systems;
- Personnel accounting and management systems;
- Filling of technical fluids;
- Refueling;
- GPS / GSM monitoring;
- Business analysis tools (Power BI, Qlik Sense, ReportsNow etc).

Reports examples

List of vehicles

This report will show you all or filtered transport list.

Garage #	License plate number	VIN	Year	Brand	Model
41131	[redacted]	SUU241163JB [redacted]	2018	SOLARIS	Urbino 12
45128	[redacted]	SUU241163JB [redacted]	2018	SOLARIS	Urbino 12
45136	[redacted]	SUU241163JB [redacted]	2018	SOLARIS	Urbino 12
41165	[redacted]	SUU241163JB [redacted]	2018	SOLARIS	Urbino 12
45144	[redacted]	SUU241163JB [redacted]	2018	SOLARIS	Urbino 12

Vehicle repair balance

This report shows you which vehicles are repaired more than one day. And help you to control long-term repairing.

Finances

Balance of arrived and issued vehicles from 01.02.2023 to 26.04.2023

Fleets: all. Departments: all

Management **Plovimas/valymas,**

Date	At the begin	Arrived	Issued	At the end	Vehicles remain for next day
20.02.2023	0	3	3	0	
23.02.2023	0	1	0	1	1530
24.02.2023	1	0	0	1	1530
25.02.2023	1	0	0	1	1530
26.02.2023	1	0	0	1	1530
27.02.2023	1	0	0	1	1530
28.02.2023	1	0	0	1	1530

The productivity of foremen

This report shows you productivity and efficiency of foremen (master of workshop, mechanic).

Service

Output of jobs masters 26.04.2022 to 26.04.2023

Departments: All. Order types: All. Job groups: All. Mechanics: All.

Date	#WO	GAR #	Vehicle	Kokku
Total				17
Department: Management				8
Administrator				**8**
Kėbulo remontas				1
14.03.2023				1
	2	1618	Skoda 14 TR 13	1
Plovimas/valymas				2
20.02.2023				2
	8	1111	Skoda 14 TR 11	1
	9	1112	Skoda 14 TR 11	1
Remontas				1
22.02.2023				1
	14	31208	SOLARIS Urbino 12	1
TECHNINĖ PRIEŽIŪRA				4
20.02.2023				1
	10	1113	Skoda 14 TR 11	1
22.02.2023				1
	7	1530	Skoda 14 TR 02	1
03.03.2023				1
	1	1530	Skoda 14 TR 02	1
14.03.2023				1
	3	07439	VOLVO 7700A	1

Wheel tightening

This report shows productivity and efficiency of field workers, who responsible for wheel nuts checks and re-torque. Also show if exists expired tightening's.

Service

Wheels tightening from 01.01.2023 to 26.04.2023

VKO: All

Date	GAR#	VKO	Vehicle	Tightening task	Wheels qty	Milage after repair	Expi-red
Administrator					4		0
23.02.2023	1530	Antakalnio TD	Skoda 14 TR 02	1L, 1R, 2L, 2R	4	149	
Total					**4**		**0**

The rating of the works

This report shows how efficient workshops technicians (car mechanics) perform popular works.

Finances
Rating of jobs from 30.11.2022 to 26.04.2023

Companies: By company Vilniaus viešasis transportas, Sort by: By quantity, Order types: TO-1, TO-2, Joksev, Groups of jobs:All

Job name	Qty	Average Labour Times	Average spent time	Average price	Total Labour times	Total sum
2. Transporto remontas (bendrasis)	**41,00**	**0:18**	**0:00**	**7,68**	**12:35**	**315,00**
2.01. A Alyva ir skystis	**2,00**	**0:33**	**0:00**	**13,75**	**1:06**	**27,50**
Alyvos lygio tikrinimas priekinės ašies guoliuose (A)	1	1:00	0:00	25,00	1:00	25,00
Aušinimo skysčio lygio patikrinimas (A)	1	0:06	0:00	2,50	0:06	2,50
2.02. A Po transporto priemone	**3,00**	**0:36**	**0:00**	**15,00**	**1:48**	**45,00**
Paleidimo valdymas (A)	1	1:00	0:00	25,00	1:00	25,00
Stabdžių trinkelių storio tikrinimas ir registravimas (A)	1	0:30	0:00	12,50	0:30	12,50
Patikrinkite po bandomojo važiavimo (A)	1	0:18	0:00	7,50	0:18	7,50
2.03. C Alyva ir skystis	**13,00**	**0:12**	**0:00**	**5,19**	**2:42**	**67,50**
Ašies alyvos lygio patikrinimas (C)	4	0:18	0:00	7,50	1:12	30,00
Aušinimo skysčio lygio ir atsparumo šalčiui tikrinimas (C)	4	0:06	0:00	2,50	0:24	10,00
Automatinės pavarų dėžės alyvos lygio patikra (C)	2	0:12	0:00	5,00	0:24	10,00
Drėgmės separatoriaus (C) tikrinimas	1	0:18	0:00	7,50	0:18	7,50
Alyvos lygio tikrinimas pavarų dėžėje (C)	1	0:18	0:00	7,50	0:18	7,50
Vairo stiprintuvo alyvos lygio patikrinimas (C)	1	0:06	0:00	2,50	0:06	2,50
2.05. C Išorinis valdymas	**4,00**	**0:13**	**0:00**	**5,63**	**0:54**	**22,50**

The spare parts rating

Report shows popular spare parts.

Finances

Rating of spare parts from 30.03.2023 to 26.04.2023

Code	Producer	Title	Amount
120322535	Solaris	Filter	35
85107862a	Volvo	air filter	22

Repeated works

This report was compiled to identify an unusual situation where the same work is being carried out on the same vehicle over a short period of time.

Service
Duplicated jobs from 26.04.2022 to 26.04.2023

GAR #	Vehicle	Job name	Qty	Spent time	Total Labour times	Repair orders
1530	Skoda 14 TR 02	Automatinės pavarų dėžės alyvos lygio patikra (C)	2	0:00	0:24	19, 21
1530	Skoda 14 TR 02	Ašies alyvos lygio patikrinimas (C)	2	0:00	0:36	19, 21

Similar repair requests

This report helps to identify if some repairing was not made from 1st time.

Service
Request for similar jobs from 27.12.2022 to 26.04.2023

GAR #	Vehicle	Prev. order	Date prev. order	Mechanic	Request #	Request date	Request created by
07773	VOLVO 7700A				142640	15.02.2023	A.
07773	VOLVO 7700A				142660	21.02.2023	s A.
1111	Skoda 14 TR 11				142643	20.02.2023	s A.
1111	Skoda 14 TR 11				142644	20.02.2023	s A.
1111	Skoda 14 TR 11				142645	20.02.2023	s A.
1111	Skoda 14 TR 11				142646	20.02.2023	s A.
1111	Skoda 14 TR 11				142636	09.02.2023	A.
1113	Skoda 14 TR 11	10	20.02.2023	ator	142665	22.02.2023	T.
1115	Skoda 14 TR 11				142654	20.02.2023	s A.
1530	Skoda 14 TR 02	7	19.02.2023	ator	142670	23.02.2023	A.
1530	Skoda 14 TR 02	7	19.02.2023	ator	142675	03.03.2023	s A.
1530	Skoda 14 TR 02	19	03.03.2023	A.	142676	03.03.2023	s A.
1530	Skoda 14 TR 02	19	03.03.2023	A.	142677	03.03.2023	s A.
1677	SOLARIS TROLLINO				142682	13.03.2023	A.
40215	MAN Lion's City G				142651	20.02.2023	A.