# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynafleet</td>
<td>1</td>
</tr>
<tr>
<td>Dynafleet</td>
<td>1</td>
</tr>
<tr>
<td>Technical description</td>
<td>2</td>
</tr>
<tr>
<td>Controls</td>
<td>4</td>
</tr>
<tr>
<td>Display</td>
<td>6</td>
</tr>
<tr>
<td>Menus and symbols</td>
<td>7</td>
</tr>
<tr>
<td>Using the menus</td>
<td>8</td>
</tr>
<tr>
<td>Starting the system</td>
<td>9</td>
</tr>
<tr>
<td>Shutting off the system — stand by</td>
<td>9</td>
</tr>
<tr>
<td>Transferring data</td>
<td>9</td>
</tr>
<tr>
<td>General</td>
<td>10</td>
</tr>
<tr>
<td>Mail</td>
<td>10</td>
</tr>
<tr>
<td>Mail menu</td>
<td>11</td>
</tr>
<tr>
<td>General driving and resting times</td>
<td>12</td>
</tr>
<tr>
<td>Orders</td>
<td>15</td>
</tr>
<tr>
<td>Logs</td>
<td>16</td>
</tr>
<tr>
<td>Driver coaching</td>
<td>17</td>
</tr>
<tr>
<td>Emergency &amp; Assistance</td>
<td>18</td>
</tr>
<tr>
<td>Tachograph download menu</td>
<td>18</td>
</tr>
<tr>
<td>Settings</td>
<td>20</td>
</tr>
<tr>
<td>System errors and warnings</td>
<td>21</td>
</tr>
</tbody>
</table>
Dynafleet

Dynafleet is a system for transport planning combined with vehicle planning, message handling and automatic reporting of vehicle status and driver times.

The driver communicates continually with the office. The traffic officer in the office can direct the vehicle to various places for various missions. The driver can send messages to other drivers, to the office or privately. Contact between the driver and the office means that much of the order administration can be administered in a simple way and more effective manning of transport is achieved. Communication with the central office takes place via the GSM mobile phone network.

The system collects information from the tachograph and the engine control unit. Dynafleet provides the driver with information about the vehicle and driving activities. This makes it possible to have a better transport administration and follow-up of the running costs of the vehicle, the work contribution of the driver and how economically the driver drives.

The section “Design and function” describes the most basic functions that all drivers must be familiar with. In the “System management” section there is a system overview and a description of how the system is started. The remaining sections describe the system functions in more detail.
Dynafleet comprises two units, Dynafleet Gateway and Dynafleet Driver Tool. Dynafleet Gateway has an assistance button located on the instrument panel. Dynafleet Driver Tool has a keyboard and also has a separate colour display as an option. The Dynafleet unit is connected to various electronic control units and the tachograph via the vehicle’s electronic network. Communication with the central office takes place via the GSM mobile phone network.

The Dynafleet Driver Tool is located in the instrument panel beneath the radio. The screen is located above the
Dashboard. Dynafleet Gateway is located in the electrical distribution box.

Driver data is logged as four different types of activity: driving time, rest time, working time and waiting time. While the vehicle is in motion, the activity is automatically logged as driving time. When stationary, the logged activity is determined by the settings on the tachograph for driver 1. Information is taken directly from the tachograph.

All data is transferred to the office for further processing and follow-up. Transfer of vehicle data to the office is performed via the GSM network. If there is poor coverage, the information is stored temporarily in the Dynafleet system. Basic data reports are also transferred when required by the central office. The GPS receiver provides the system with correct system time and position.

**Reduced functionality**
The system is developed for Volvo’s FH and FM vehicles, but can be installed in any vehicle. This will, however, limit some of the functionality due to other vehicles having different types of tachograph, different electronic systems, etc., than the vehicles for which the system has been developed.
1. “Esc” has two functions depending on the situation:
   - In forms where you can choose between different values, pressing “Esc” means that you cancels the setting.
   - In other cases, pressing “Esc” moves you up a level in the menu tree.

2. “Select” has three functions depending on the situation:
With a question, pressing “Select” indicates a Yes answer to the question.
In forms where you can choose between different values, pressing “Select” means that you confirm and accept the current setting.
In a menu, pressing “Select” moves you to the active option, i.e. the highlighted submenu with white text on a black background.

3 IR receiver, receives signals from the keypad.
4 “Arrow keys, right, left, up and down”, moves the cursor in the selected direction.
5 IR transmitter, transmits signals to the Dynafleet unit.

**Keyboard**
Use the keyboard to type messages. Do no expose the keyboard to sunlight, damp, moisture or dirt.
The IR transmitter on the keyboard must be directed towards the IR receiver on the Dynafleet unit when you type.
To switch between QWERTY and Cyrillic on the keyboard, press ALT and SHIFT at the same time, or CTRL and SHIFT at the same time.

**Note!**
The keypad can only be used while the truck is stationary. Store the keypad in the glove compartment in the radio shelf while travelling. The keypad is then protected against the sun and will not move when braking suddenly or in a collision.

**Four-way directional cross**
The standard functions in Dynafleet can be performed using the joystick which is located on the dashboard, near the steering wheel.

**Care of the plastic casing and IR transmitter/receiver**
Clean with ordinary cleaning agents for vehicle interiors. Try first on a small area that is not visible so that the surface is not damaged.
Check that the lenses on the IR transmitter and the IR receiver are clean, if the system does not react to keyboard messages. The lenses should be cleaned with a soft, clean and slightly damp cloth.
Emergency alarm button
There is an emergency alarm button in the instrument panel or on the radio shelf. The button must be held pressed in for at least three seconds for an alarm message to be sent. Depending on the settings for the office the request is sent to the office and VAS (Volvo Action Service) or Security Services. If the tool Dynafleet Driver is installed in the vehicle, pop-up messages inform the driver of status updates for the ongoing request.

Extra equipment:
After using the emergency button or writing an assistance request you will always be called by an operator on a telephone number specified in the Dynafleet online portal. The intention of the call is to get confirmation of the action you initiated. If you do not receive such call within reasonable time, your initial request might have failed because of influences beyond our control. We then recommend trying to reach our services via more conventional methods.

Display

Note!
The emergency assistance button only functions when the system is switched on or during standby. We advice adjusting the standby time to a suitable level to secure availability of the feature. (Standby time is configurable in the Dynafleet online portal. Check with the administrator to make these changes).
The screen is mounted above the dashboard. The screen pops up or drops down automatically when the system is started or stopped.

Use a clean, soft and slightly damp cloth to clean the screen glass. Other plastic components can be cleaned with ordinary cleaning agents for car interiors.

**Menus and symbols**

The menus vary in appearance. The relevant symbols and functions are described below.

**Standard menu**

1. Symbol that indicates which part of the system you are viewing, i.e. Mail, Log, or Settings Menu.

2. Unread messages, shows that there are one or more messages in the message list.

3. The lower icon shows the GSM signal strength and the upper shows GPRS signal strength.

4. The currently active alternative is shown as white text on a black background.

5. Scroll-strip that shows if there is more information available. Depress "down" to show the information.

**Note!**

Make sure the screen is not exposed to fluids.
Using the menus

The example below describes how the menus in Dynafleet are used. The example shows how to send an SMS.

1. Set the cursor on "Mail" using the arrow keys.
2. Press "Select" to activate the mail menu.
3. Set the cursor on "Write new" using the arrow keys.
4. Press "Select" to continue.
5. Set the cursor on "SMS (standard characters)" using the arrow keys.
6. Press "Select" to write a new SMS.
7. Type in telephone number and message. Move the cursor between the different fields using the arrow keys.
8. Move the cursor to "Send" using the arrow keys.
9. Press "Select" to send the message.
**Starting the system**

1. Turn the starter key. The system will start automatically when the key is in the radio position. The colour screen rises.
2. The system will automatically identify the driver by reading the driver card in the digital tachograph.
3. After the greeting you can begin to work with the system.

**Shutting off the system — stand by**

When the key is turned to 0, the system goes to the standby mode. The screen shuts off and drops down if it is not already down. The system continues to log data when it is in the standby mode. After 2 hours (or some other time decided by the office) in standby mode, the system goes to a rest mode and stops logging data. The system can thereafter be woken up by an SMS, e.g. with temperature logging or location logging (the system is woken up by GSM communication).

The system is shut down completely only when the main switch is turned off. In this state, Dynafleet cannot receive GSM communications.

**Caution!**

Wait for 3 minutes after you have stopped driving before you switch off the main electrical supply, otherwise data can be lost. Read more about how you switch off the main electrical supply in the “Driver instructions” section.

**Transferring data**

The data collected and saved in the system is transferred to the fleet office where it is compiled and documented. Information is transferred to the office via the GSM network.
General

The main menu consists of the following menu choices:

**Mail**
Receive, send and manage messages.

**Drive/rest time**
Shows driving and rest times.

**Orders**
Receive and manage incoming orders.

**Log**
Shows the vehicle's log.

**Emergency & Assist.**
Shows status of ongoing Emergency assistance call. Send, view status of an Assistance call.

**Tacho. Remote dl.**
Initiates driver card data or tachograph mass memory remote download and displays data transfer statuses.

**Settings**
Managing settings in Dynafleet.

**Shut down**
Puts Dynafleet in standby mode

---

**Mail**

In the mail menu, the driver can receive, send and manage messages.

When the Dynafleet-unit has received one or more messages, the symbol for new message is shown in the upper right of the display and the speaker sounds if it is switched on.

It is always possible to send simple text messages between the vehicle and the office. The office can decide to activate SMS, E-mail or formatted messages (predefined form to fill out).
Mail menu
The mail menu consists of the following menu selections:

**Write new**
Write a new mail. Choose between message to office, SMS or E-mail.

**Inbox**
Read and manage received messages. Navigate to the position information if the GPS coordinator is connected to the mail menu (see the Navigation section).

**Outbox**
Read and manage sent messages.

**Draft**
Manage drafts.

**Sent**
Manage sent messages.

**Address book**
Manage contacts in the address book.

Two types of SMS characters that can be used
There are two types of text messages that can be used.

- Standard characters - Uses standard GSM characters which are not supported in all languages but are compatible with all mobile phones.

- Extended characters - Uses unicode which supports all languages. The message is shorter and the user should make sure that the receiver's mobile phone is compatible to receive this type of SMS message.

Navigate to destination using navigation
The Dynafleet unit needs to be connected to a compatible navigation device. Contact your local dealer for more information.

If a message from the office contains position information, this can be sent to the navigation device.
from the unit. This is done from the message menu (press enter when viewing the message): a "Navigate to..." command can be selected to push the destination to the navigation device.

**General driving and resting times**

The “Drive/rest time” menu is used to facilitate the observance of driving time regulations. The function is adapted to work in accordance with EU driving time regulations together with the tachograph. The settings can be changed and allow different driving times from the office.

**Main menu – Drive/rest time**

The Drive/rest time menu consists of the following menu items:

- **Show driver activities**, shows the times for all ongoing and accumulated times for driver activities.
- **Enter detailed driver activities**, used by the driver to set a detailed activity while he is not driving.

The lower part of the display shows ongoing activities:
- TCO: current activity on the tachograph, accumulated activity time and ongoing activity time.
- DTJ: current activity, accumulated activity time and ongoing activity time.

**Main menu – View driver activities**

If any regulation is about to be broken, a warning is shown in the display. The office unit can be used to set how long before a regulation is broken a warning should be given.

<table>
<thead>
<tr>
<th>Show driver activities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Break time</td>
<td>01:00</td>
</tr>
<tr>
<td>Continuous driving</td>
<td>04:15</td>
</tr>
<tr>
<td>Continuous resting</td>
<td>00:30</td>
</tr>
<tr>
<td>Daily driving</td>
<td>08:45</td>
</tr>
<tr>
<td>1 week driving time</td>
<td>20:0</td>
</tr>
<tr>
<td>2 week driving time</td>
<td>75:0</td>
</tr>
<tr>
<td>Daily resting</td>
<td>01:30</td>
</tr>
</tbody>
</table>
Break time
Time with activity Resting or Waiting since the current break period was started. A new break period starts when activity Driving or Working is detected.

Continuous driving
Sum of Driving time since last qualified break time. It shall not exceed 4h30. It is reset to zero after 45 minutes or 15+30 minutes of break time.

Continuous resting
Duration of qualified break time. It adds times when exceeding the minimum breaks times (15, 30 or 45 minutes).

Daily driving
Sum of Driving time since the current driving session was started. A new daily driving session starts the first time activity Driving is detected after the daily rest condition is fulfilled.

1 week driving time
Displays the total driving time for the current week. Starts after a weekly rest. The maximum is 6 continuous driving sessions within a week.

2 weeks driving time
Displays the total driving time for two weeks (last and current week). The time is not to exceed 90 hours.

Daily resting
Cumulated resting time between two driving sessions. Shall be at least 9h (short daily rest) or 11h.

Detailed driver activity
The detailed driver activity must first be enabled by the office before it can be used. It allows the driver to specify activity in addition to the tachograph resting/waiting/working activities. The select activity is reported back to the office. It can be selected in the "Set driver activity
detail" menu or in the pop up window when turning key off. The activity ends when selecting another one or on driving.

Calculation of driving times at not affected by the selection of a detailed driver activity with the exception of “Ferry”. The “Ferry” activity should be selected before going on ferry or train to comply with EU regulations.

Main menu – Show driver activities
If one is starting to break a regulation, a warning is shown in the display. From the office unit, one can set how soon before a regulation is broken that a warning should be given.

<table>
<thead>
<tr>
<th>Show driver activities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rest time</td>
<td>01:00</td>
</tr>
<tr>
<td>Driving shift</td>
<td>04:15</td>
</tr>
<tr>
<td>Break</td>
<td>00:30</td>
</tr>
<tr>
<td>24 hour driving time</td>
<td>08:45</td>
</tr>
<tr>
<td>1 week driving time</td>
<td>20:0</td>
</tr>
<tr>
<td>2 weeks driving time</td>
<td>75:0</td>
</tr>
<tr>
<td>Daily rest</td>
<td>01:30</td>
</tr>
</tbody>
</table>

Rest time
Time for the rest or waiting activity since the current rest period was started. A new rest period starts when the Driving or Working activity is detected.

Driving shift
The total driving time since the last qualified rest time. It must not exceed 4 hours and 30 minutes. It is reset to zero after 45 minutes rest time or 15 + 30 minutes rest time.

Break
Duration of qualified resting time. The times are added together if they are longer than the shortest rest times (15, 30 or 45 minutes).
24 hour driving time
The total driving time since the current driving period was started. A new daily driving period starts the first time the driving activity is detected after the prescribed daily rest time has been fulfilled.

1 week driving time
Shows the total driving time for the current week. Starts after a week's rest. Max. 6 continuous driving sessions within a week.

2 weeks driving time
Shows the total driving time for two weeks (the latest and the current week). The time must not be longer than 90 hours.

Daily rest
Accumulated resting time between two driving sessions. Must be at least 9 hours (short daily rest) or 11 hours.

Orders
An order consists of the assignment, location, allocation status, planned arrival time and planned departure time. An order can be accepted or rejected by the driver. The driver can also report about an order's progress through the order status. When an order is received, an icon is shown at the top of the screen.

The appearance of the orders is decided individually by each office.

Navigation (accessory)
The Dynafleet unit must be connected to a compatible navigation unit. Contact your local dealer for more information.

If an order from the office contains position information, this can be sent to the navigation system from the unit. This is done from the menu where the order is accepted. This selection is only available if the order has been
accepted. The selection is made by pressing “Select” when the destination address is highlighted.

Logs
Go to the journal menus by pressing the function key with the journal symbol or via the main menu. From the main menu in the journal you can reach all accessible journals in the system.

<table>
<thead>
<tr>
<th>Log</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trip log 1</td>
</tr>
<tr>
<td>Trip log 2</td>
</tr>
<tr>
<td>Vehicle long-term log</td>
</tr>
<tr>
<td>Temperature</td>
</tr>
<tr>
<td>1 Reset: 2008-06-03, 09:49</td>
</tr>
<tr>
<td>Vehicle log active</td>
</tr>
<tr>
<td>2 Reset: 2008-06-03, 15:02</td>
</tr>
<tr>
<td>Vehicle log paused</td>
</tr>
</tbody>
</table>

Vehicle log 1 and 2
Shows accumulated vehicle data in absolute values and % of the distance since the last reset while active (not paused).

<table>
<thead>
<tr>
<th>Trip log 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance</td>
</tr>
<tr>
<td>Fuel</td>
</tr>
<tr>
<td>Average fuel consumption</td>
</tr>
<tr>
<td>Idling</td>
</tr>
<tr>
<td>PTO</td>
</tr>
<tr>
<td>AdBlue</td>
</tr>
<tr>
<td>Economy zone</td>
</tr>
<tr>
<td>Overspeed zone</td>
</tr>
<tr>
<td>Rolling with engine disengaged</td>
</tr>
<tr>
<td>Cruise control</td>
</tr>
<tr>
<td>Speed limit exceeded</td>
</tr>
<tr>
<td>Top gear</td>
</tr>
</tbody>
</table>
**Vehicle long-term log**
The vehicle long-term log shows the accumulated values for distance, fuel consumption and average fuel consumption.

<table>
<thead>
<tr>
<th>Vehicle long-term log</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance</td>
<td>11523.2 km</td>
</tr>
<tr>
<td>Consumption</td>
<td>36814.8 l</td>
</tr>
<tr>
<td>Average fuel consumption</td>
<td>37.3 l/100 km</td>
</tr>
</tbody>
</table>

**Temperature**
Requires extra equipment connected to Dynafleet unit. Contact your local dealer for more information.
This shows the temperature in the trailer. Up to four different temperatures can be shown, depending on how many sensors there are.
If a sensor has an alarm function, this is shown in red figures or with an exclamation mark (!), depending on which display the truck is fitted with.

<table>
<thead>
<tr>
<th>Temperature</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature 1</td>
<td>-18 °C</td>
</tr>
<tr>
<td>Temperature 2</td>
<td>-7 °C</td>
</tr>
<tr>
<td>Temperature 3</td>
<td>+4 °C</td>
</tr>
<tr>
<td>Temperature 4</td>
<td>+12 °C !</td>
</tr>
<tr>
<td>Trailer doors</td>
<td>Closed</td>
</tr>
<tr>
<td>Defroster status</td>
<td>On</td>
</tr>
</tbody>
</table>

**Reset: 2008-06-02, 09:49**
Shows the latest resetting date/time and allows the driver to reset the corresponding vehicle log.

**Vehicle log active or vehicle log paused**
Used by the driver to change between paused and active vehicle log.

**Driver coaching**
Driver coaching must first be activated by the office. It helps the driver to improve the fuel consumption by suggesting different actions in the pop-up window such as e.g.
• “You have been idling too long. Please turn off ignition.”
• “Shift up to improve fuel economy”
• “You are driving too fast. Please slow down.”

Emergency & Assistance

Assistance request
Send a request for assistance. Enter necessary information in the free-text field.

Assistance status
This shows the status for sent assistance request: time it has been initiated, time received by office, time is has been attended to and the requesting driver name.

Emergency status
This shows the status for sent emergency assist request: time it has been initiated, time received by office, time is has been attended to and the requesting driver name. Read more about the emergency assistance button, “Emergency assistance button” on page .

Statuses are erased 7 days after a request is initiated. The message is then “No ongoing request”.

On any status change, a pop up window will inform the driver of the new status.

Tachograph download menu

Tacho. Remote dl.
Go to the tachograph remote download menus via the main menu.

This function requires to have a digital tachograph supporting the remote download feature installed in the vehicle and the service to be enabled. Contact your local dealer for more information. This menu is not displayed if the function is not available.

An icon on the status bar informs the user of an ongoing remote download process running in the background. If
the process fails, a specific icon is displayed and details are available in Driver or Tachograph data status menus.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>This icon informs the user of an ongoing remote download process in the background.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>This icon shows that the download process failed. Details are available in Driver or Tachograph data status menus.</td>
</tr>
</tbody>
</table>

**Initiate driver card dl.**
Initiates a driver card data download from the tachograph to the office. A maximum of one transfer per day is allowed. Once initiated the process runs in the background and status is reported through popups and Driver data status menu.

This function requires the driver to be logged in on the Driver Tool using his driver card inserted in the tachograph (driver slot).

Greyed menu item means this function is disabled by office.

EU regulations require at least one transfer every 28 days or more frequent depending on country specific regulations.

**Driver data status**
This menu informs the driver about driver data transfers:
- Current ongoing transfer: which driver has initiated the transfer and current status.
- Date of last successful transfer.
- Days since last data available at the office.
- Last warning message and date it was received.

**Initiate tacho. mem. dl.**
Initiates a tachograph mass memory download from the tachograph to the office. A maximum of one transfer per
day is allowed. Once initiated the process runs in the background and status is reported through popups and Tachograph data status menu.

Greyed menu item means this function is disabled by office.

EU regulations require at least one transfer every 90 days.

**Tachograph data status**

This menu informs the driver about tachograph mass memory transfers:

- Current ongoing transfer: which driver has initiated the transfer and current status.
- Date of last successful transfer.
- Days since last data available at the office.
- Last warning message and date it was received.

**Settings**

The settings menu gives access to all adjustable system parameters. To alter a setting, press “Select” on the setting that is to be altered and scroll between the alternatives shown using the arrow keys. Press “Select” to accept the highlighted setting. The following alternatives can be selected in the settings menu:

**Screen saver**, adjusts the delay before the screen saver is activated or turns the function off.

**Language**, selects desired language

**Units**, selects between European, British or American units.

**Volume**, adjusts the speaker volume.

**Brightness**, adjusts the screen brightness.

**Backlight**, adjusts the screen backlight.

**Keyboard**, selects the keyboard layout.

**System information**, shows the hardware version, software version, serial number, information about tachograph, information about connected USB units and information about connected navigation devices.
System errors and warnings
If a fault occurs, a fault message is shown on the screen. Usually you acknowledge that you have read a fault, warning or message by pressing "Esc". The message will then disappear although the problem will still be present and should be rectified as soon as possible.

Driver Time Warning pop ups
A "Driver Time Warning" pop up appears showing the rule about to be broken (rule name and remaining time) or already broken (rule followed by "broken" and exceeding time). Supported warnings are:
- Continuous driving time
- Daily driving time
- 1 week driving time
- 2 week driving time
- Daily resting

Driver Time Information pop ups
- You must make up rest time during the week.
- Normal daily rest is 11 hours. This period was a reduced daily rest period.

Driver Time Management pop ups
- Was last rest a weekly rest?
- Normal weekly rest is 45 hours. OK to consider this rest period as a weekly rest?

Tachograph download warning pop ups
A "Driver data warning" pop up appears when no driver data have been successfully transferred to office since a long time (threshold is setup by office):
- Driver data has not been transferred since more than XX days. Proceed now?
A "Tachograph data warning" pop up appears when no tachograph data have been successfully transferred to office since a long time (threshold is setup by office):

- Tachograph data has not been transferred since more than xx days. Proceed now?

Tachograph download information pop ups

- Remote download process is being initiated. Please wait…
- Data transfer is only allowed once a day. Proceed now?
- Transfer ongoing, refer to status menu for further updates.

Tachograph download error pop ups

- No link with office. Please retry later!
- Failed: login with driver card is required to perform data transfer.
- Failed: data has already been transferred today.
C
Controls, Dynafleet ............................... 4

D
Drive/rest time, Dynafleet ....................... 12
Drive/rest time ........................................ 12
Driver coaching, Dynafleet ....................... 17
Dynafleet, main menu ............................ 10
Dynafleet .................................................. 1

E
Emergency alarm & Assistance,
Dynafleet ................................................. 18
Emergency alarm & Assistance .................... 18
Emergency alarm button ............................ 6

L
Logs, Dynafleet, Dynafleet, logs ............... 16

M
Mail menu, Dynafleet ............................... 11
Main menu, Dynafleet ............................... 10

O
Orders, Dynafleet ....................................... 15

S
Settings menu, Dynafleet ......................... 20
Shutting off the system, Dynafleet .............. 9