

Note - The guidance in this subclause is expressed in the EU-Rent English Vocabulary; a working subset of this is provided in the preceding subclause. If the statements are difficult to understand at face value – e.g., seem ambiguous, or don't quite fit everyday understanding of the words used – it is important to check the definitions before challenging the guidance statements.

Many of the guidance statements are supported by descriptions, which reflect EU-Rent users' informal statements of the guidance.

The examples in this subclause are generally presented in the form “It is obligatory that ...,” “It is necessary that ...,” etc. This emphasizes the application of the modal claim (obligation, necessity, etc.) to the underlying fact type, but sometimes provides a cumbersome representation. SBVR Structured English (see Annexes H and C) also supports more direct representation. For example, the operative business rule:

It is obligatory that each driver of a rental is qualified.

can be represented as

Each driver of a rental must be qualified.

For a treatment of these examples in RuleSpeak[®], a widely-used business rule notation, see Annex F.

E.2.2.2.1 Introduction

<EU-Rent English Vocabulary Rules>

Vocabulary: EU-Rent English Vocabulary

<EU-Rent English Vocabulary Levels of Enforcement>

Level of enforcement is a categorization scheme for business rules defined (or adopted) by the organization that owns the rules. EU-Rent's categories are listed below.

Enforcement Level: strict

Definition: strictly enforced: if the rule is violated, the sanction or other consequences always ensue.

Enforcement Level: deferred

Definition: deferred enforcement: strictly enforced, but enforcement may be delayed — e.g., waiting for resource with required skills.

Enforcement Level: pre-authorized

Definition: pre-authorized override: enforced, but exceptions allowed, with prior approval for actors with before-the-fact override authorization.

Enforcement Level: post-justified

Definition: post-justified override: if not approved after the fact, the sanction or other consequences will ensue.

Enforcement Level: override

Definition: override with explanation: comment must be provided when the violation occurs.

Enforcement Level: guideline

Definition: guideline: suggested, but not enforced.

E.2.2.2.2 Rule Set -- Rental Rules

It is necessary that each rental *has* exactly one requested car group.

Guidance Type: structural business rule

Description: The renter may request a change of car group up to pick-up time, but a car group must always be specified

Supporting fact type: rental has requested car group

It is necessary that each rental *includes* exactly one rental period.

Guidance Type: structural business rule

Description: The renter may request a change to the start and/or end of the rental period, or cause a de-facto change by late return of the car, but a rental period must always be specified

Supporting fact type: rental has rental period

It is necessary that each rental *has* exactly one return branch.

Guidance Type: structural business rule

Description: The renter may request a change to the return branch, or cause a de-facto change by return of the car to an unauthorized branch, but a return branch must always be specified

Supporting fact type: rental has return branch

It is necessary that the scheduled pick-up date/time of each advance rental is after the booking date/time of the rental booking that establishes the advance rental.

Guidance Type: structural business rule

Description: When a rental reservation is made (establishing an advance rental) the rental scheduled pick-up date/time must be later than the actual date/time of reservation

Supporting fact types: rental booking has booking date/time
rental booking establishes advance rental
rental has scheduled pick-up date/time
date/time₁ is after date/time₂

Related facts: the noun concept 'cash rental' is a category of the noun concept 'rental'
the noun concept 'advance rental' is a category of the noun concept 'rental'

E.2.2.2.3 Rule Set -- Charging / Billing / Payment Rules

It is permitted that a rental *is open* only if an estimated rental charge is provisionally charged to a credit card of the renter that is responsible for the rental.

Guidance Type: operative business rule

Description: While a renter has possession of a car, there is a provisional charge to EU-Rent against his credit card. This will be replaced by an actual charge at the end of the rental

Enforcement Level: Strict

Supporting fact types: rental has rental charge
estimated rental charge is provisionally charged to credit card
renter has credit card
rental has driver

Related facts: [rental is open](#)
[renter is responsible for rental](#)
The [noun concept 'estimated rental charge'](#) is a [category of the noun concept 'rental charge.'](#)
The [noun concept 'renter'](#) is a [role that ranges over the noun concept 'driver.'](#)
The [noun concept 'driver'](#) is a [facet of the noun concept 'person.'](#)

It is necessary that the [rental charge of each rental is calculated in the business currency of the rental.](#)

Guidance Type: [structural business rule](#)
Note: This is a constraint imposed by credit card issuers.
Supporting fact types: [rental has rental charge](#)
[rental charge is calculated in business currency of rental](#)
[rental has business currency](#)

If the [renter of a rental requests a price conversion](#) then it is obligatory that the [rental charge of the rental is converted to the currency of the price conversion.](#)

Guidance Type: [operative business rule](#)
Description: EU-Rent will provide the customer with a bill in another currency, but the actual billing is done in the business currency, and converted.
Enforcement Level: [strict](#)
Supporting fact types: [rental has renter](#)
[rental has rental charge](#)
Related fact: [a price conversion is the rental charge of a rental denominated in a currency requested by the renter](#)

It is necessary that each [cash rental honors the lowest rental price of the cash rental.](#)

Guidance Type: [structural business rule](#)
Description: Between the booking date/time of a cash rental and its actual return date/time, pricing changes (e.g., tariff changes, discounts, promotions) may occur.
The lowest rental price is the most favorable price for the renter that results from any such changes.
Honoring the lowest rental price applies only while the car group and duration of the rental remain unchanged.

The structural business rule above can be elaborated as three detailed structural business rules.

It is necessary that a cash rental price for a cash rental that is calculated because of EU-Rent price changes and that *is less than the* lowest rental price honored by the rental replaces the lowest rental price honored by the rental.

It is necessary that a cash rental price for a cash rental that is calculated because of changes to the requested car group or rental duration of a rental replaces the lowest rental price honored by the rental.

It is necessary that the lowest rental price honored by a rental is not replaced *after the* actual return date/time of the rental.

There is no need for a structural business rule that the lowest rental price is not replaced before the booking date, because the rental does not exist before that date.

Supporting fact types: cash rental *honors* lowest rental price
cash rental *has* base rental price
rental *has* actual return date/time
rental *has* requested car group
rental *has* rental duration
state of affairs *occurs after* date/time

Related facts: *the noun concept* 'cash rental' *is a category of the noun concept* 'rental'
the noun concept 'lowest rental price' *is a role that ranges over the noun concept* 'cash rental price'
the noun concept 'cash rental price' *is a category of the noun concept* 'base rental price'

E.2.2.2.4 Rule Set -- Driver Rules

It is permitted that a rental *is open* only if each driver of the rental *is not a* barred driver.

Synonymous Statement: *It is prohibited that a rental is open if a driver of the rental is a* barred driver.

Guidance Type: operative business rule

Description: While a rented car is in possession of the renter, no driver for the rental can be a barred driver.

Enforcement Level: pre-authorized

Supporting fact types: rental *has* primary driver
rental *has* additional driver

Related facts: *'being open' is a characteristic of the noun concept* 'rental'
'being barred' is a characteristic of the noun concept 'driver'
the noun concept 'primary driver' *is a role that ranges over the noun concept* 'driver'
the noun concept 'additional driver' *is a role that ranges over the noun concept* 'driver'

It is obligatory that each driver of a rental *is qualified*.

Guidance Type: operative business rule

Description: To be accepted as a driver on a rental, a person must comply with EU-Rent's definition of "driver is qualified."

Enforcement Level: Strict

Supporting fact types: rental *has* primary driver
rental *has* additional driver

Related facts: driver is qualified
the noun concept 'primary driver' is a role that ranges over the noun concept 'driver'
the noun concept 'additional driver' is a role that ranges over the noun concept 'driver'

E.2.2.2.5 Rule Set -- Pick-up / Return Rules

This subclause illustrates a trade-off of a larger body of shared concepts, and corresponding vocabulary, against simpler formulation of business rules.

The business rules here could have been stated more elaborately; e.g., one of the examples below is:

It is obligatory that the country of the return branch of each international inward rental is the country of registration of the rented car of the rental.

It could have been stated as

"If the country of the pick-up branch of a rental is not the country of registration of the rented car of the rental then it is obligatory that the country of the return branch of the rental is the country of registration of the rented car."

Defining categories of rental, as used below, simplifies the expression of rules at the expense of additional concepts and larger vocabulary to be managed.

This kind of trade-off is a business choice of the semantic community.

It is obligatory that at the actual return date/time of each in-country rental and each international inward rental the local area of the return branch of the rental owns the rented car of the rental.

Guidance Type: operative business rule
Description: When a car is moved between branches in different local areas in the same country, or is returned to its country of registration after being dropped off abroad, ownership moves between local areas with it. This is so whether it is a one-way rental or a transfer made by EU-Rent.
Note: Ideally, this would be a structural rule, defining ownership at the end of rentals, but EU-Rent cannot always control car movements as it would like to.
Enforcement Level: pre-authorized
Supporting fact types: rental has actual return date/time
rental has return branch
branch is included in local area
local area owns rental car
state of affairs occurs at date/time
Related facts: the noun concept 'rented car' is a role that ranges over the noun concept 'rental car'
the noun concept 'return branch' is a role that ranges over the noun concept 'branch'
the noun concept 'in-country rental' is a category of the noun concept 'rental'
the noun concept 'international inward rental' is a category of the noun concept 'international rental'
the noun concept 'international rental' is a category of the noun concept 'rental'

It is obligatory that the country of the return branch of each international inward rental is the country of registration of the rented car of the rental.

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| Guidance Type: | <u>operative business rule</u> |
| Description: | When a one-way rental has dropped a car off in a different country, that car may then be used for only one kind of rental – a one-way rental back to its country of registration. |
| Note: | If a one-way rental back to country of registration does not occur within a short time, the branch manager will have a EU-Rent employee transfer the car. |
| Enforcement Level: | <u>pre-authorized</u> |
| Supporting fact types: | <u>branch has country</u> <u>rental has return branch</u> <u>rental car has country of registration</u> |
| Related facts: | <u>the noun concept 'rented car' is a role of the concept 'rental car'</u> <u>the noun concept 'international inward rental' is a category of the noun concept 'rental'</u> <u>the noun concept 'return branch' is a role that ranges over the noun concept 'branch'</u> <u>the noun concept 'country of registration' is a role that ranges over the noun concept 'country'</u> |

It is necessary that if a rental is open and the rental is not an international inward rental then the rented car of the rental is owned by the local area of the pick-up branch of the rental.

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|---|--|
| Guidance Type: | <u>structural business rule</u> |
| Note: | This ensures that the local area that owned the car at the start of a rental retains responsibility for it until it is dropped off at an EU-Rent branch. It also ensures that a car's ownership is retained within its country of registration. |
| Supporting fact types for the three business rules above: | <u>rental has pick-up branch</u> <u>local area includes branch</u> <u>rental car is owned by local area</u> |
| Related facts: | <u>the noun concept 'rented car' is a role that ranges over the noun concept 'rental car'</u> <u>'international inward rental' is a category of 'international rental'</u> <u>'international rental' is a category of 'rental'</u> <u>'being open' is a characteristic of 'rental'</u> <u>'pick-up branch' is a role of 'branch'</u> <u>'return branch' is a role of 'branch'</u> |

If the actual return date/time of a rental is after the end date/time of the grace period of the rental then it is obligatory that the rental incurs a late return charge.

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|------------------------|--|
| Guidance Type: | <u>operative business rule</u> |
| Note: | The grace period of a rental ends one hour after the rental's scheduled return date/time or at close of business of the return branch, whichever is earlier. |
| Enforcement Level: | <u>Strict</u> |
| Supporting fact types: | <u>rental has actual return date/time</u> <u>rental has grace period</u> <u>period has end date/time</u> |

[date/time₁](#) *is after* [date/time₂](#)

[rental](#) *incurs* [late return charge](#)

Related facts: [the noun concept 'actual return date/time' is a role that ranges over the noun concept 'date/time'](#)
[the noun concept 'grace period' is a role that ranges over the noun concept 'period'](#)
[the noun concept 'end date/time' is a role that ranges over the noun concept 'date/time'](#)

If the [drop-off location](#) of a [rental](#) is not the [EU-Rent site](#) that is base for the [return branch](#) of the [rental](#) then it is obligatory that the [rental](#) *incurs* a [location penalty charge](#).

Guidance Type: [operative business rule](#)

Description: If a rented car is returned to a location that is not the specified return branch of the rental, that branch will accept the car but a location penalty charge will be applied to the rental.

Enforcement Level: [Strict](#)

Supporting fact types: [rental has drop-off location](#)
[rental has return branch](#)
[branch is located at EU-Rent site](#)
[rental incurs location penalty charge](#)
[EU-Rent site is base for rental organization unit](#)

Related facts: [The noun concept 'return branch' is a role that ranges over the noun concept 'branch.'](#)
[The noun concept 'branch' is a category of the noun concept 'rental organization unit.'](#)
[The noun concept 'EU-Rent site' is a role that ranges over the noun concept 'location.'](#)
[The noun concept 'drop-off location' is a role that ranges over the noun concept 'location.'](#)

If a [rental](#) is [assigned](#) then it is obligatory that the [rented car](#) of the [rental](#) is stored at the [pick-up branch](#) of the [rental](#).

Synonymous Statement: [It is prohibited that the rented car of an assigned rental is not stored at the pick-up branch of the rental.](#)

Guidance Type: [operative business rule](#)

Description: A rental car must physically be at the pick-up branch when it is assigned to a rental.

Note: This is an example of a rule created to ensure that real-world influences do not cause problems in EU-Rent's business. In this case, EU-Rent knows that sometimes cars are not brought to branches when they are supposed to be, so it insists that cars assigned to rentals are physically present. It does not permit cars that are "due to be returned to this branch tomorrow" to be assigned.

After assignment to a rental, the car must stay at the branch until pick-up time.

This doesn't mean that the car can't be moved. It means that if a car is to be moved, it must be unassigned from any rental and another car assigned in its place.

Enforcement Level: [Override](#)

Supporting fact types: [rental car is stored at branch](#)

Related facts: [the noun concept 'rented car' is a role that ranges over the noun concept 'rental car'](#)
['being assigned' is a characteristic of the noun concept 'advance rental'](#)
[the noun concept 'advance rental' is a category of the noun concept 'rental'](#)

the noun concept 'pick-up branch' is a role that ranges over the noun concept 'branch'

At the actual start date/time of each rental it is obligatory that the fuel level of the rented car of the rental is full.

Guidance Type: operative business rule

Description: A rented car must have a full tank of fuel at the rental pick-up time.

Note: This is an example of a rule created to ensure that real-world influences do not cause problems in EU-Rent's business. In this case, two requirements are met. First, a car must have some fuel in it for the customer to drive it away.

Second, starting fully-fuelled means that EU-Rent can easily estimate how much fuel is to be charged for at the end of the rental.

Enforcement Level: post-justified

Supporting fact types: rental has start/date time

rental has rental car

rental car has fuel level

state of affairs occurs at date/time

Related facts: the noun concept 'rented car' is a role of the concept 'rental car'

fuel level is full or 7/8 or 3/4 or 5/8 or 1/2 or 3/8 or 1/4 or 1/8 or empty

E.2.2.2.6 Rule Set -- Points Rental Rules

It is necessary that the booking date/time of a points rental is at least 5 days before the scheduled start date/time of the rental.

Guidance Type: structural business rule

Description:

Supporting fact types: rental has booking date/time

rental has scheduled start date/time

date/time₁ is before date/time₂

Related facts: the noun concept 'points rental' is a category of the noun concept 'rental'

the noun concept 'scheduled start date time' is a role that ranges over the noun concept 'date/time'

the noun concept 'booking date/time' is a role that ranges over the noun concept 'date/time'

It is necessary that the renter of each points rental is a club member.

Guidance Type: structural business rule

Note: Only club members have points balances against which points rentals can be charged. Bookings for points rentals are not accepted from non-members.

Supporting fact type: rental has renter

Related facts: the noun concept 'points rental' is a category of the noun concept 'rental'

the noun concept 'club member' is a role that ranges over the noun concept 'renter'

E.2.2.2.7 Rule Set -- Rental Period Rules

It is obligatory that the start date of each reserved rental is in the future.

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| Synonymous Statement: | It is prohibited that the <u>start date</u> of a <u>reserved rental</u> is in the past. |
| Guidance Type: | <u>operative business rule</u> |
| Description: | A rental should not be booked or rescheduled with a start date/time earlier than the actual date/time of the booking or rescheduling. |
| Note: | On any given day, rentals that are due to be picked up that day should not be “reserved,” but “assigned” - i.e., they should have cars assigned to them. |
| Enforcement Level: | <u>pre-authorized</u> |
| Supporting fact types: | <u>rental has start date</u> <u>date/time is in the future</u> |
| Related facts: | the <u>noun concept</u> ‘ <u>reserved rental</u> ’ is a category of the <u>noun concept</u> ‘ <u>rental</u> ’ the <u>noun concept</u> ‘ <u>start date</u> ’ is a role that ranges over the <u>noun concept</u> ‘ <u>date/time</u> ’ |

It is obligatory that the rental duration of each rental is at most 90 rental days.

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| Guidance Type: | <u>operative business rule</u> |
| Description: | EU-Rent doesn’t allow rentals to be reserved for longer than 90 days or be extended beyond 90 days. |
| Note: | There are other legitimate ways to define what a duration is. Standards organizations, including ISO, are working on standards for measurement, including measurement of time. When there is a clear consensus on such standards, SBVR will adopt them as defaults. In the interim, individual enterprises will define for themselves consistent ways to represent measurements within their own vocabularies. EU-Rent has elected to style duration as a name denoting an instance of duration. But, being aware that other organizations might have taken a different approach to defining these kinds of measurements, EU-Rent will be watchful that, in an interchange that involves measurements, there may be things needing adjustment. |
| Enforcement Level: | <u>pre-authorized</u> |
| Supporting fact type | <u>rental has rental duration</u> |

If rental₁ is not rental₂ and the renter of rental₁ is the renter of rental₂ then it is obligatory that the rental period of rental₁ does not overlap the rental period of rental₂.

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|------------------------|--|
| Guidance Type: | <u>operative business rule</u> |
| Description: | A renter can have at most one open rental – i.e., can have only one rental car at a time. |
| Enforcement Level: | <u>pre-authorized</u> |
| Supporting fact types: | <u>rental has renter</u> <u>rental has rental period</u> <u>period₁ overlaps period₂</u> |

E.2.2.2.8 Rule Set -- Servicing Rules

It is obligatory that each rental car in need of service has a scheduled service.

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|-----------------------|---|
| Guidance Type: | <u>operative business rule</u> |
| Description: | A rental car that has done more than 5000 miles since its last service is in need of service and has to be scheduled for service. |
| Note: | For countries that measure distance in kilometers, the figure is 8000 |
| Enforcement Level: | <u>Deferred</u> |
| Supporting fact type: | <u>rental car has scheduled service</u> |
| Related fact: | <i>'being in need of service' is a characteristic of 'rental'</i> |

It is obligatory that the service reading of a rental car is at most 5500 miles.

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|------------------------|--|
| Guidance Type: | <u>operative business rule</u> |
| Description: | A car must not be run for more than 5500 miles without being serviced. |
| Note: | For countries that measure distance in kilometers, the figure is 8800 |
| Enforcement Level: | <u>pre-authorized</u> |
| Supporting fact types: | <u>rental car has service reading</u> |

If the rented car of an open rental is in need of service or is in need of repair then it is obligatory that the rental incurs a car exchange during rental.

| | |
|------------------------|--|
| Guidance Type: | <u>operative business rule</u> |
| Description: | During a rental, if the rental car's service reading exceeds 5000 miles (8000 km), the renter must take the car to a branch |
| Enforcement Level: | <u>pre-authorized</u> |
| Supporting fact types: | <u>rental has rented car</u> <u>rental incurs car exchange during rental</u> |
| Related facts: | <i>the noun concept 'rented car' is a role that ranges over the noun concept 'rental car'</i> <i>'being open' is a characteristic of the concept 'rental'</i> |

E.2.2.2.9 Rule Set -- Transfer Rules

At the transfer drop-off date/time of a car transfer it is obligatory that the transferred car of the car transfer is owned by the local area that includes the transfer drop-off branch of the car transfer.

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|------------------------|--|
| Guidance Type: | <u>operative business rule</u> |
| Description: | When a car is moved between branches in different local areas in the same country, ownership moves to the local area of the receiving branch. |
| Enforcement Level: | <u>Strict</u> |
| Supporting fact types: | <u>car transfer has transfer drop-off date/time</u> <u>car transfer has transfer drop-off branch</u> <u>car transfer has transferred car</u> <u>local area includes branch</u> <u>rental car is owned by local area</u> <u>state of affairs occurs at date/time</u> |

Related facts: [the noun concept 'transfer drop-off date/time' is a role that ranges over the noun concept 'date/time'](#)
[the noun concept 'transfer drop-off branch' is a role that ranges over the noun concept 'branch'](#)
[the noun concept 'transferred car' is a role that ranges over the noun concept 'rental car'](#)

[It is obligatory that the country of the transfer drop-off branch of an international return is the country of registration of the transferred car of the international return.](#)

Synonymous Statement: [It is prohibited that the country of the transfer drop-off branch of an international return is not the country of registration of the transferred car of the international return.](#)

Guidance Type: [operative business rule](#)

Description: When, as a result of a one-way rental, a car has been dropped off in a different country, it can be moved only back to its country of registration

Enforcement Level: [pre-authorized](#)

Supporting fact types: [car transfer has transfer drop-off branch](#)

[car transfer has transferred car](#)

[branch has country](#)

[rental car has country of registration](#)

[thing₁ is thing₂](#)

Related facts: [the noun concept 'transferred car' is a role that ranges over the noun concept 'rental car'](#)

[the noun concept 'international return' is a category of the noun concept 'car transfer'](#)

[the noun concept 'transfer drop-off branch' is a role that ranges over the noun concept 'branch'](#)

[At the drop-off date/time of an international return it is obligatory that the transferred car of the international return is owned by the local area that includes the transfer drop-off branch of the international return.](#)

Guidance Type: [operative business rule](#)

Description: When a car is moved between branches in different local areas in the same country, ownership moves to the local area of the receiving branch.

Enforcement Level: [pre-authorized](#)

Supporting fact types: [car transfer has transfer drop-off branch](#)

[car transfer has transferred car](#)

[local area includes branch](#)

[state of affairs occurs at date/time](#)

Related facts: [the noun concept 'transferred car' is a role that ranges over the noun concept 'rental car'](#)

[the noun concept 'international return' is a category of the noun concept 'car transfer'](#)

[the noun concept 'transfer drop-off branch' is a role that ranges over the noun concept 'branch'](#)