

# CITROEN JUMPER 4x4 DANGEL

## From conversion Nr. 5300070



INSTRUCTIONS FOR USE AND MAINTENANCE (Complement to the car manufacturer's manual)

#### Dear Customer,

Thank you for selecting a vehicle with the 4-wheel drive system designed and manufactured by Automobiles DANGEL.

To ensure that you fully benefit from your DANGEL vehicle this manual includes all features of the 4-wheel drive system.

Please read this manual thoroughly before using the vehicle for the first time. This manual contains important information, details and advice.

It will assist you in using your DANGEL 4-wheel drive system.

Further information about the maintenance of your vehicle 4-wheel drive system to be read at the end of this booklet.

Automobiles DANGEL wish you pleasant reading and safe driving.



## **WARNING**



Your 4-wheel drive system appreciably improves the capability of your vehicle; thus it can access to roads where, under some circumstances, a 2-wheel drive version would not be able to travel.

For your safety and the longevity of your vehicle, when road conditions become treacherous, please adapt your driving style accordingly (see pages of this manual about limits and operating recommendations).

This manual is an addition to the manufacturer's manual of your vehicle and only deals with features of the 4-wheel drive system by Automobiles DANGEL.

For any other information please refer to the manufacturer's manual.

We draw your attention on the fact that your vehicle is equipped with some of the equipment described in this document according to the version and the characteristics available in your country.

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### **OPERATING ADVICES**



## Warning



The 4-wheel system designed and manufactured by Automobiles DANGEL gives you additional traction, however basically your vehicle is not intended to clear obstacles.

Therefore the enhanced traction makes it suitable for all-road but not all-terrain use.

Non-compliance with the recommendations given in this manual may damage your vehicle and make the warranty null and void.

## **Driving**

#### How does the 4-wheel mode work?

Your vehicle is fitted with an automatic hydraulic coupler. It transfers a part of the engine torque to the rear axle in case the front axle loses traction. This transfer is **fully automatic** and does **not require any action from you.** 

Note: During tight parking manoeuvres (in 1st gear and reverse) and near steering locks, the 4-wheel drive system slightly brakes the vehicle. This **phenomenon is completely normal** and results from the different rotation speeds between the front and rear axles.

#### Your vehicle is fitted with:

- An automatic hydraulic coupler: the viscous-coupling



- As an option, a lockable rear axle



## Safety equipment

The electronic control of the ESC is specific to the vehicle and includes the following systems that are identical to those of the base vehicle. Please refer to the manufacturer's manual for any further information:

- Wheels antiblocking system (ABS)
- Electronic Brakeforce Distribution (REF).



The warning light together with a sound signal and a message indicates a poor running of the system.



The lighting of this indicator, coupled with the **STOP** indicator, together with a sound signal and a message indicates a poor running of the **REF** that can lead to a loss of control when braking



In both cases, **the system gets inactive**, please rapidly contact a network dealer or a qualified workshop.

Note: when wheels get changed (tyres and rims), please take care that they are homologated for your vehicle. When the ABS is running it can show through light

- The emergency brake assist (AFU).
- The Acceleration Slip Regulation (ASR).
- The dynamic stability control (CDS).

The **CDS** system is automatically activated at the engine starting. In case of loss of adherence the system switches on and is indicated by the light blinking on the dash board.

In special conditions (mud, snow, soft soil), it might be necessary to neutralize the system by pushing the button in order to get the wheels slip and to have adherence again.

Note: Reactivation of the system can be made manually or automatically from 50 km/h on.

The system offers additional safety on top of the 4x4 in normal use but it must not encourage the driver to take risks or drive at too high speeds over the limit of physics' laws.

#### Driving all-road

The all-road performance of this vehicle category (vehicle gross weight "G.V.W" up to 3.5 tons) is influenced by:

- The transported load, its distribution and load securing
- The available adherence
- The type of ground
- Wear and type of the tyres

#### Driving with a trailer

Under all-road conditions, when you pull a trailer you must take into account that:

- The trailer is not necessarily suited for all-road usage.
- Selection of parking place is important for re-starting easily.
- The weight of the trailer and its load could influence the behaviour and the line of your vehicle. Try to anticipate and adapt your driving.

According to the instructions manual it is imperative to check the coupling torque of the hitch assembly after 1.000 km  $\rightarrow$  see tow bar instructions.

#### Fording

#### Fording must be an exception.

- Check that the water depth doesn't go above the wheel radius, also take into account that waves could be generated.
- Disactivate the Stop & start system.
- Drive as slowly as possible without stalling. Do not exceed 10 km/h.
- Do not stop and do not run the engine off.

When coming out the water and as soon as the safety conditions allow it, use the brake gently a few times in order to dry up the brake discs and pads.

#### How to cross an obstacle?

To cross an obstacle (low ditches, steps,...) we advise you to:

- Slow down before the obstacle;
- Cross the obstacle on the bias one wheel after the other;
- Slow down after crossing the obstacle.

We highly recommend you not to come over the obstacle head on.

#### Driving in a slope

When driving in a slope we advise you to:

- Always take the line in front of the slope, avoid taking the slope diagonally,
- Drive downwards slowly, steering straight ahead, using the engine brake;
- Take into account the adherence, the load and its distribution as these parameters can make the value of the maximal crossable rope vary.
- Always keep control of your vehicle.
- We highly recommend not to approach the slope diagonally or take a U-turn in a slope, as the danger would be losing the adherence and/or side sliding and tumbling.



## **WARNING**



Driving off road is different than driving on road.

It implies to be trained to face all the possible difficulties safely.

An adapted driving enables to preserve the mechanical integrity and durability of your vehicle.

Drive carefully and slowly because of your vehicle has bigger dimensions than a light passenger car and some obstacles may be difficult to be identified.

## **Useful values in cross-contry:**

Front angle	22 - 2	25 °
Rear angle	22 - 2	25 °
Ventral angle	15 -	16 °
Ground clearance	195	mm
Wheel radius		
215/70 R15	330 /	mm
225/70 R15	336	mm
225/75 R16	360 mm	
	Weight	Value in %
Maximum slope *	2T (empty)	93 %
	3,5T (in load)	45 %

<sup>\*</sup> Theoretical values in 1st gear to the maxi engine torque (values can vary depending on equipments and wheelbases).

## **Tyres**



#### Tyre pressure?

The tyres are the only contact between your vehicle and the ground, so it is important to check their pressure regularly.

#### Tyres at the right pressure guarantee:

- Your safety
- Good road holding
- Moderate fuel consumption
- Less tyre wear

Reminder: Tyre pressure should be checked when tyres are cold.

#### Remark:

- The M+S tyres (option) with different characteristics from those of the base vehicle are adapted to off-road situations and road grip changes. It is recommended to consider this feature in normal conditions of use of the vehicle on the road.
- The tire pressure value is indicated in the instructions manual of the base vehicle or on the sticker on the driver door panel.

## Warning, on 4WD vehicles:

The tyres must always be of the same brand, the same type, and have the same degree of wear at the front and rear.

Be careful to swap the front and rear wheels regularly according to their degree of wear, without crossing them.

Tyre wear directly influences the grip of the vehicle when driving in **precarious conditions** (snow, mud,...).

For such uses, do not hesitate to **replace the tyres early** before reaching the thread wear indicator.

Do not hesitate to choose specialist tyres suited to your use of the vehicle.

## Washing your vehicle



After your vehicle has been used under severe conditions (mud, snow...), we advise you to wash it:

Taking off the wheels of the vehicle optimises washing.

Pressurised wash is more effective.

Washing under the body frame make it more effective.

Check that the engine skip plates are not clogged, and remove if required in order to prevent blocking of moving elements.

If you are using a high pressure hose please maintain proper distance in order to:

- Protect the painted surfaces.
- Protect the fragile mechanical items (joints, hoses ...).

## In case of an incident

Contact a repair workshop certified by the manufacturer while informing them that your vehicle is fitted with a DANGEL 4-wheel drive system (hand this manual to them if required). For easier identification, you may want to give them the vehicle's conversion number.







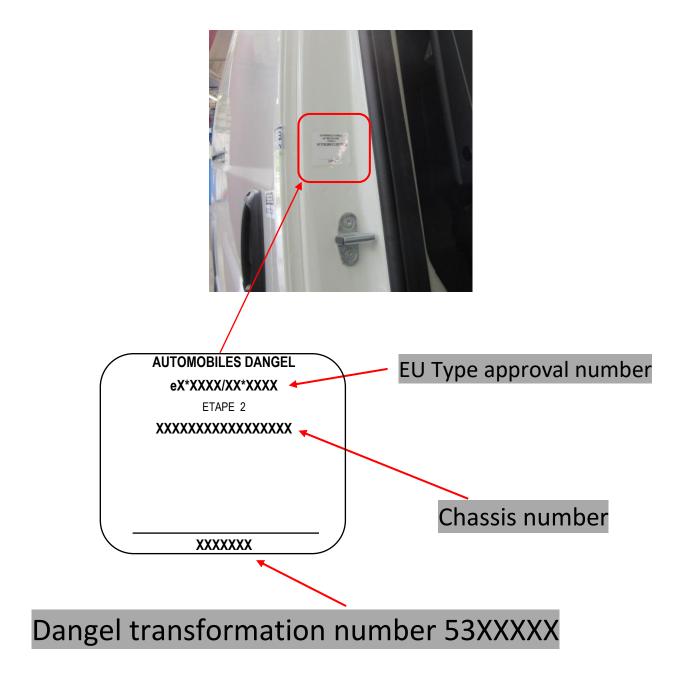
#### **WARNING**

Like most of the 4-wheel drive vehicles, **never haul by lifting the front or the back** (it can destroy the transmission).

The Vehicle must be hauled with 4 wheels on the ground (or loaded on a deck).

## **IDENTIFICATION OF THE VEHICLE**

The vehicle was fitted by Automobiles DANGEL. For its identification, there is a label placed on the central pillar of the right front door. It also includes the transformation number at the bottom of this one. (See photo below).



This identification is necessary for the after sales service and the warranty.

## Weights and payloads

For more information, refer to your registration certificate.



## **WARNING**



The **payload** values take into account the weight of the DANGEL equipment (approximately 150 Kg).

Your 4WD vehicle has improved drivability, but in any case it does not enable the vehicle to be in overload.

In the case of a tractor vehicle it is forbidden to overtake 80 km/h speed for a commercial vehicle and 100 km/h for a personal vehicle. Please take into consideration the authorized loads that can be towed as well as the speed limits in accordance with the local regulation of every country.

To know the permitted vertical load on the tow bar, refer to the installation instructions of the tow bar (inside the vehicle).

The values of G.C.W.R\* and towing charges indicated are for a maximum altitude of 1000 meters, maximum trailer weight must be reduced by 10% in increments of 1000 meters further.

High outside temperatures can cause lower performance of the vehicle. To protect the engine when the outside temperature is above 37  $^{\circ}$  C, limit the towed weight.

Note that the loading space and the internal dimensions of the vehicle remain unchanged by the equipment 4X4 (see the instructions manual of the base vehicle for more information).

\* G.C.W.R.: Gross Combination Weight Rating

## **Goods transport:**

**Engines** 

DW12 €6.2

2.2 BlueHDI

Power 140 CV

103 Kw

Torque 340 N.m

DW12 €6.2

2.2 BlueHDI

Power 165 CV

121 Kw

Torque 370 N.m

**Bodies** 



Chassis/ Flatbebs cab and double cab



Vans and Combi: L1/L2/L3/L4

#### Characteristics when the vehicle is empty:

Please refer to the car manufacturer's instructions manual.

It is important to mention that the limits of use are to be adapted according to the equipment and to the loading of the vehicle.

## We also equip:

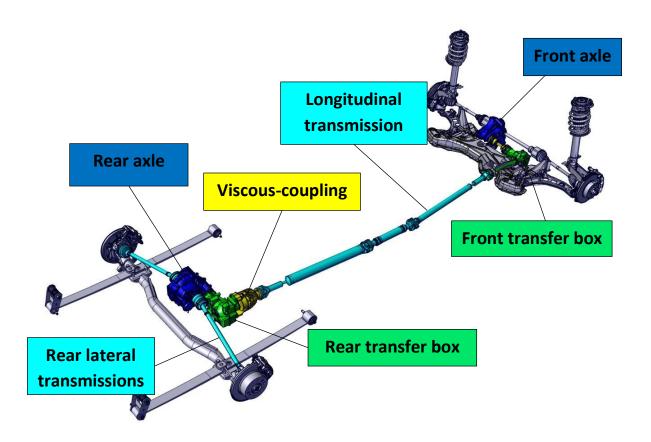
The 4x4 equipment is proposed on the bases vehicles for conversion / convertible (chassis cab, chassis double cab, platform cab and chassis). The weights, sizes and payloads are then functions of the final conversion. The minimum and maximum values must be met **according to Dangel EC Certificate of Conformity (COC)**.

#### Note that in all cases the 4x4 equipment does not change:

- The volumes as well as the interior dimensions of the loading compartment.
- The bodywork versions.
- The bodywork versions.
- The towing weight with braked or unbraked trailer.
- Maximum load at the coupling/ point.

(Please refer to the car manufacturer's instructions manual for additional information).

## **Architecture of the system**

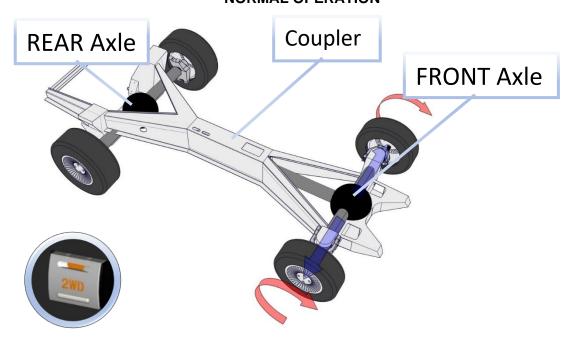


#### **Characteristics of the 4WD Endurance conversion:**

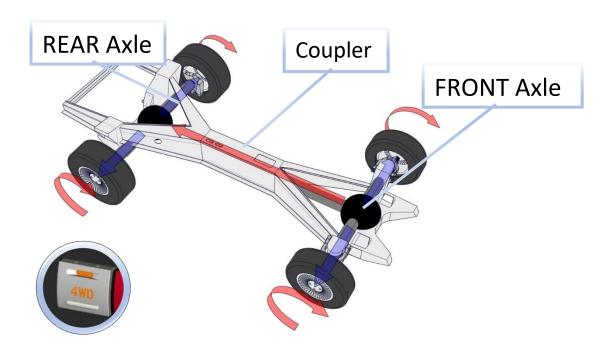
- 4x4 transmission with automatic torque transfer by hydraulic coupler
- Total ground clearance of 195 mm when empty in working order (according to the version).
- Speed ratios unchanged
- Original tyres
- Weight of the equipment: approximately 150 kg (according to version).

## **Operating principle**

#### **NORMAL OPERATION**



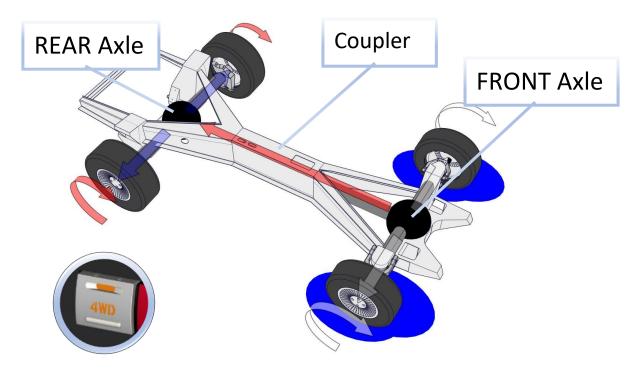
#### LOSS OF GRIP OF FRONT WHEELS



The operation of the 4 wheel drive system designed and constructed by Automobiles DANGEL is based on **automatic and optimum distribution** of the **engine torque** with the **coupler** at the **heart of the system**.

Depending on the grip of the front wheels, the coupler automatically distributes engine torque to the rear axle wheels, thus giving the vehicle **increased drivability**.

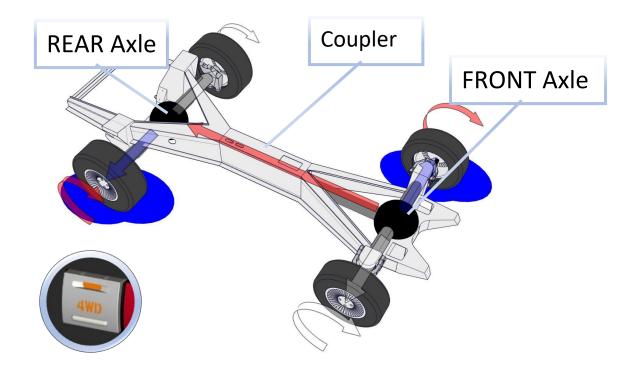
#### LOSS OF ADHERENCE ON THE FRONT AXLE IN 4WD MODUS



Functioning of Rear LOCK (option rear differential WITH locking)

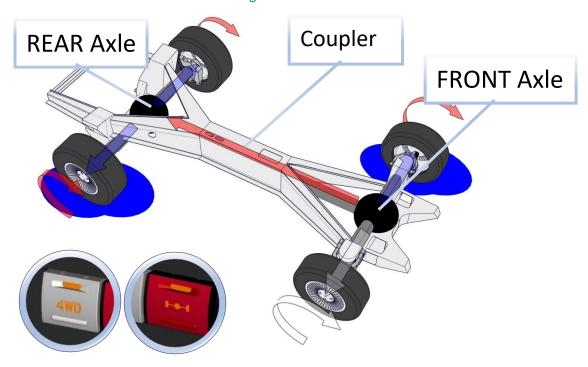
No adherence on one REAR wheel and one FRONT wheel

If rear diff. WITHOUT locking = FORWARD MOVEMENT IS IMPOSSIBLE



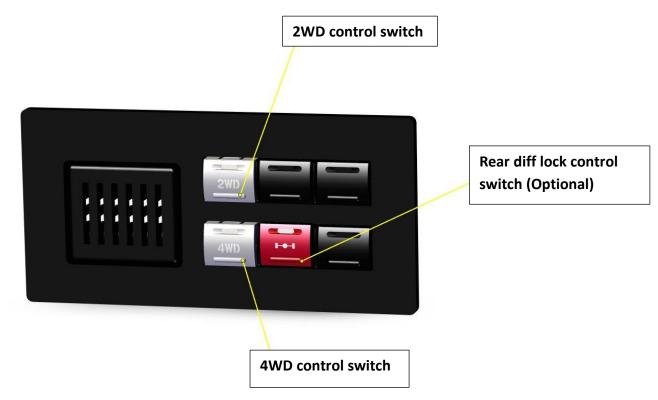
#### No adherence on one REAR wheel and one FRONT wheel

If rear diff. WITH locking = FORWARD MOVEMENT IS POSSIBLE

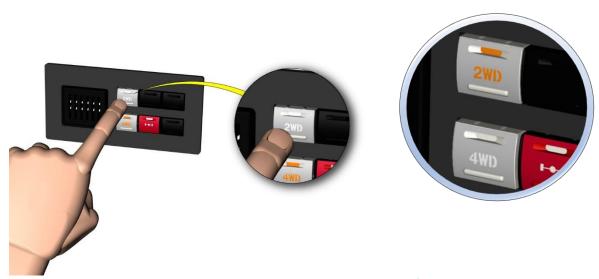


## Use of the 4-wheel drive

## **DANGEL** control



## **Desactivation of the "4WD" mode:**

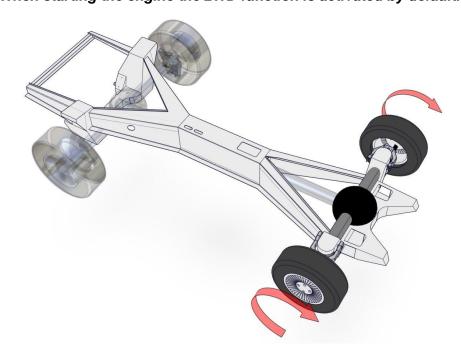


## **Mode 2WD ON**

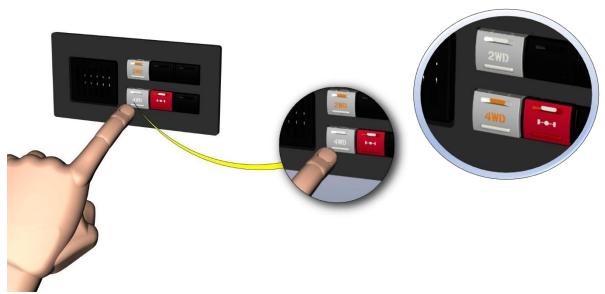
 Press the 2WD switch, the orange indicator light above it comes on when 2WD is activated.

#### Notes:

- Select 2WD as soon as you can.
- No locking function possible in 2WD.
- There may be a time gap between the electrical state and the effective mechanical state of the 4WD clutch.
- When starting the engine the 2WD function is activated by default.



## Activation of the "4WD" mode:

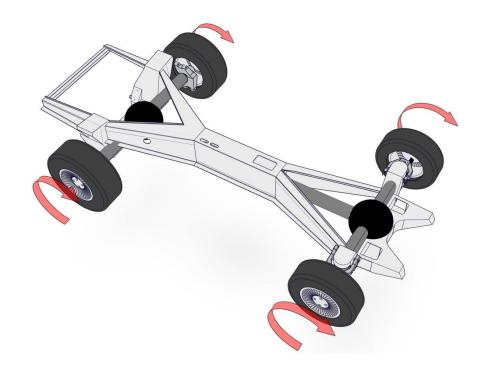


**Mode 4WD ON** 

Press the 4WD switch, the orange indicator light above it comes on when 4WD is activated.

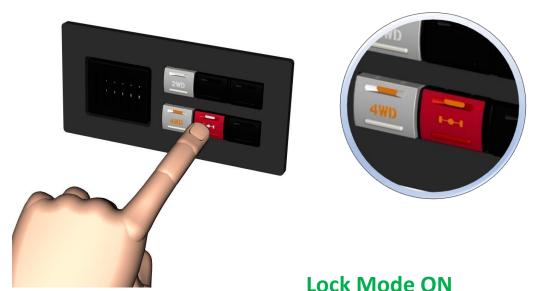
#### Note:

- If the control switch is on 4WD position when turning the engine off, the electropneumatic disactivates the 4x4 system. On next restart, Dangel system will be in 2WD.
- Never switch from 2WD to 4WD position when the front wheels slip



## **R LOCK function**

## **Locking the rear differential**



- When stationary or at low speed, press the brown switch on the left of the dashboard to lock the rear differential.
- The indicator light above it comes on to confirm that locking has been requested.

A buzzer comes on when the differential is actually locked (intermittent audible signal).

#### Notes:

- The 4WD modus must be ON to have the R-LOCK function.
- A light gets on when the rear lock is activated.
- A buzzer can be heard when the differential is actually locked (intermittent sound).
- For safety purposes the system does not allow the locking above a speed of 25 km/h.
- Press the control switch again to unlock the rear differential. Sound and light signal

## **Unlocking the rear differential**



press the control switch again to unlock the rear differential. Audible and light signals

#### Remarks:

- Unlocking occurs automatically when the speed exceeds 25 km/h, or after the ignition is switched off.
- When stationary, it is possible that unlocking will not be instantaneous. If this is the case, simply drive a few metres for the differential to lock.



#### **WARNING**



For your safety and to guarantee durable use of your vehicle, do not abuse the crossing capabilities, this is not an all terrain vehicle.

## Use of the rear differential locking

The rear axle with differential locking increases the all-road capability of your vehicle.

Highly bumpy or slippery slopes and uneven climbs areas can be managed when the rear differential is locked.

We advise you to lock the rear differential before entering the difficult areas.

On a slope with varying adherence, drive slowly in order to avoid jerks in the transmission. Under these conditions, and depending on the type of ground, it may happen that the whole rear drive power is transferred to a single rear wheel, the one that has maintained traction.

Do not make U-turns on a slope and always stay pointed up or down the line of the steepest

In **unlocked position (Auto 4WD)**, the rear DANGEL axle distributes the torque between the right and the left wheel. Moreover the differential enables the rear right wheel and the rear left wheel to turn at different speeds. In curves it enables a **safe road handling** and **preserves the drivetrain and the tyres.** 

In **locked position (R-Lock)**, the rear DANGEL axle drives both rear wheels at exactly the same speed. This helps the vehicle move on the most difficult roads: uneven hills, steep and bumpy climbs, ...

#### IMPORTANT!

The rear differential locking must be used as an exception.

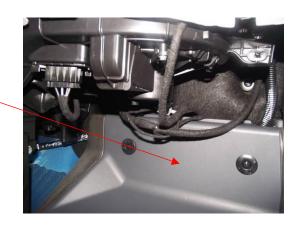
- Rear differential locking must be activated only on grounds with poor adherence.
- Never use the locking on grounds with good grip, especially when turning!
- Do not engage the locking when the wheels are slipping (hazard of abusive use not covered by the warranty).
- Engage slowly at the 1st restart.
- Unlock the differential after crossing the difficult area.

## **Location of the fuze**

The fuse for the electrical locking circuit is located in the passenger side interior trim.

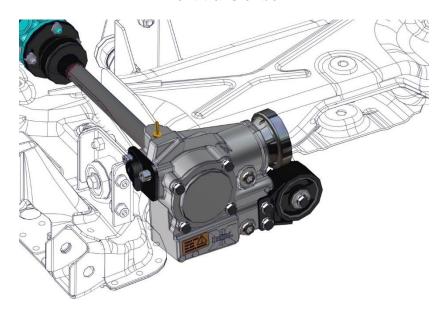
Fuse: 10 amp; Dangel reference 99.6.12914.80.

Location of the electrical locking circuit fuse



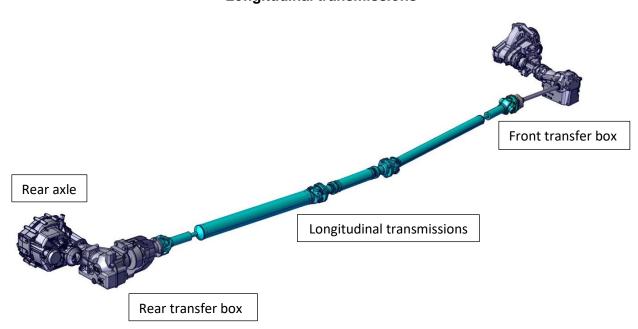
## **Frequently asked questions**





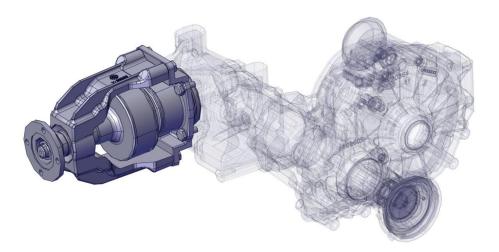
Mechanical assembly transmitting the engine torque to the longitudinal transmission by means of a bevel gear.

#### **Longitudinal transmissions**



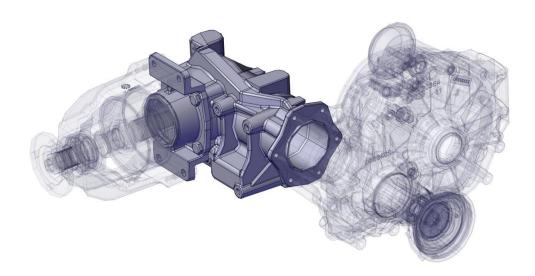
Mechanical assembly transmitting the engine torque to the rear wheels by means of a coupler.

#### **Hydraulic coupler**



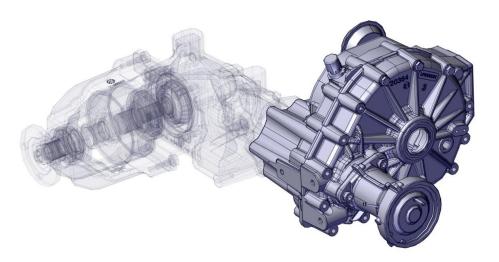
Permanently active, it detects the loss of grip of the front wheels and then transmits the engine torque to the rear wheels. The coupler will adjust the percentage of torque as required.

#### Rear transfer box



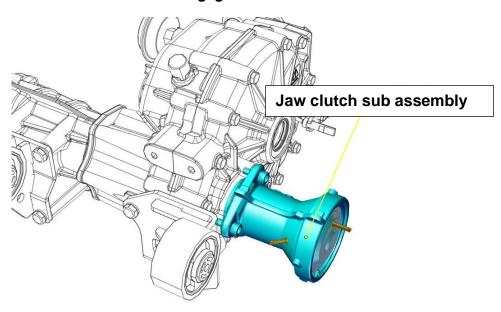
Mechanical assembly transmitting the engine torque to the rear axle by means of a bevel gear.

#### Rear axle with differential



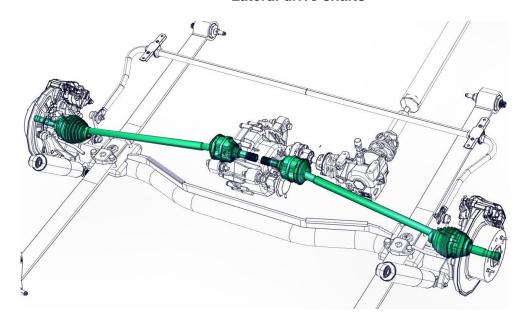
- The differential, a mechanical assembly mounted in the rear axle, enables the two wheels of a single axle to rotate at different speeds (absolute necessity in bends to avoid tyre scrub). It also multiplies the torque.
- As an option, the rear differential can be lockable. Locking the rear differential increases your vehicle's cross-country capabilities, but must be used with care.

#### Rear drive engagement 2WD/4WD



Mechanical assembly allowing switching from 2WD to 4WD using the switches on the dashboard.

#### Lateral drive shafts



They transfer the engine torque from the differential to the wheels.

# Visual compulsory checking to be done at each 4x4 maintenance or once a year

#### In the cabin:

When the engine is on, check that the switches 2WD/4WD works properly. Check the absence of warning light on the dashboard.

#### Tyres:

Check that the 4 tyres are the same brand, same type and have the same wearing between the front and rear axle.

#### Under the body:

Check that there is no accumulation of ground, grass, etc... especially in the protection plates.

#### Under the vehicle, on the front part:

Check the integrity of each drive shaft boot.

Check that there are no leaks from the oiled parts, from the pipes and brake hoses, etc...

Check the fastening of the front transfer box.

#### Under the vehicle, on the central part:

Check the fastening of the longitudinal drive line supports.

Check that there are no leaks from the tanks.

Check the integrity of the vibration absorber.

#### Under the vehicle, on the rear part:

Check the fastening of the rear differential.

Check that there are no leaks from the oiled parts, from the pipes and brake hoses, etc...

Check the integrity of each drive shaft boot.

## **WARNING**

When the vehicle is on a lift with 4 wheels hanging, the tests with « engine on » must be done only in position 4WD mode.

In the same conditions **NEVER** switch from position 2WD to 4WD.

## **AUTOMOBILES DANGEL WARRANTY**

## **Car manufacturer warranty**

The car manufacturer warranty remains valid for the vehicles converted at Automobiles Dangel's production site, homologated in stage 2, according to the usual terms and conditions.

## **The 4x4 conversion warranty**

#### **Warranty duration**

Automobiles Dangel provide a 2-year-warranty and unlimited mileage on the 4x4 equipment. The Dangel warranty begins with the first registration of the vehicle. It is transmitted free of charge to possible subsequent owners.

When ordering the 4x4 conversion you may extend the warranty period by subscribing a warranty extension for a determined duration and mileage according to the applying sales conditions. The conditions of the Dangel warranty then replace the manufacturer's warranty.

The warranty extension ends up when the first of both terms is reached (mileage or time).

Then the conditions of the warranty extension replace the basis warranty.

#### The warranty content

The Dangel warranty and warranty extension cover any fault that could be attributed to a manufacturing or assembly defect and that would occur on normal use of the vehicle during the warranty time.

#### **Limits and exclusions to Dangel warranty**

The 4x4 equipment must be maintained according to Dangel instructions and recommendations. Those are mentioned in the manual for use and maintenance supplied together with our conversion (available as well on our web site <a href="www.dangel.com">www.dangel.com</a> -> After Sales -> User). They are complementary to the car manufacturer's instructions and recommendations.

Please note that the repairing agreement granted by Dangel warranty is conditioned by the correct application of the maintenance plan of the 4x4 transmission parts and basis vehicle.

The document "warranty policy" gives detail of the complementary supporting documents to be shown when asking for the warranty for repairing (available as well on our web site <a href="https://www.dangel.com">www.dangel.com</a> -> After Sales).

Please note that the repairing agreement granted by Dangel warranty is conditioned by the correct application of the maintenance plan of the 4x4 transmission parts and basis vehicle.

The document "warranty policy" gives detail of the complementary supporting documents to be shown when asking for the warranty for repairing (available as well on our web site www.dangel.com -> After Sales).

#### **Exceptions to DANGEL warranty**

The following circumstances are grounds for **a total exclusion** from the warranty:

- Lack of the requested documents related to the maintenance and/or information required by Automobiles Dangel about the vehicle;
- Alterations of the 4x4 components not authorized or not planned by Automobiles Dangel;
- Recommendations about "Tyres" not followed;
- Original parts replaced by other parts not approved by the manufacturer and/or Automobiles DANGEL;
- Breakdown caused by a connection/mounting originally not made by Dangel;
- Breakdown caused by shocks, falls, sabotages;
- Use not conform to the specifications mentioned in this User's manual;
- Accidents, natural disasters or other causes beyond the reach of Automobiles
   Dangel due to cases of force majeure such as lightning, water, fire, acts of war, uprisings, disorders.

#### The warranty does not cover:

The regular maintenance and checking of the 4x4 conversion components, the repair and replacement of the components due to wearing.

Transformations and adaptations made by other car converters than Automobiles Dangel which may alter the technical characteristics of the vehicle as delivered (conform to this manual) and the use made of the vehicle as defined.

## MAINTENANCE AND CHECKING RECOMMENDATIONS

## Who should you contact?

Please contact a dealer or repairer workshop authorised by the manufacturer giving the information that the vehicle is equipped with a DANGEL 4-wheel drive system (hand this manual over if necessary), and refer to the detailed recommendations on the following pages.

In case of extreme uses (heavy loads, all-road driving, highway etc.) the mechanical elementof your vehicle are more stressed and need more frequent maintenance.



The maintenance and repair are to be done in the after-sales network of your car manufacturer.

OPERAT	IONS	PARTS	RECOMMENDED LUBRICANTS
17 Can		Front transfer box	80 W 90 API GL5 (YACCO BVX LS 200)
	Oil	Rear transfer box	, , , , , , , , , , , , , , , , , , , ,
change	Rear axle	Compatibles oils: 80W90 according the norm API GL5 ZF TE-ML05C	
	Greasing	Longitudinal drive line	<ul><li>Shell Retinax LX2</li><li>FUCHS Renolith</li><li>Duraplex GWB</li><li>Rhenus NorlpexLKP2</li></ul>
	Checking	Overall 4x4 driveline	

#### Note:

To reach the top performance of your vehicle, it is important to use the recommended quality and quantity of oil.

<sup>\*</sup> For further information about lubricants, please consult our web site <u>www.dangel.com</u> -> After Sales.

## **Compulsory maintenance operations**



#### Front transfer box

**Capacity:** 0.70 L + 0.05 / -0.00 L

Oil: 80 W 90 API GL5 (YACCO BVX LS 200), or

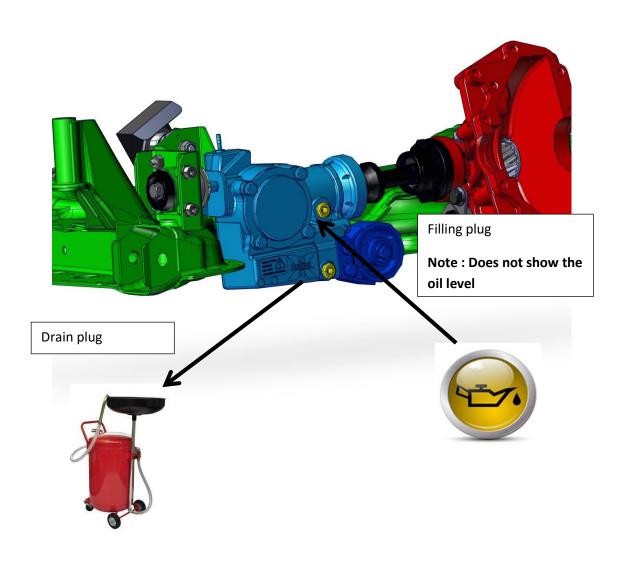
equivalent 80W90 according to the norm API

GL5 ZF TE-ML05C.

Oil change: Every 24.000 km or 2 years in case of normal

use, every 18.000 km or 1 year in case of

intensive/ severe use.





#### Rear transfer box

**Capacity:** 0.90 L + 0.05 / -0.00 L

Oil: 80 W 90 API GL5 (YACCO BVX LS 200), or

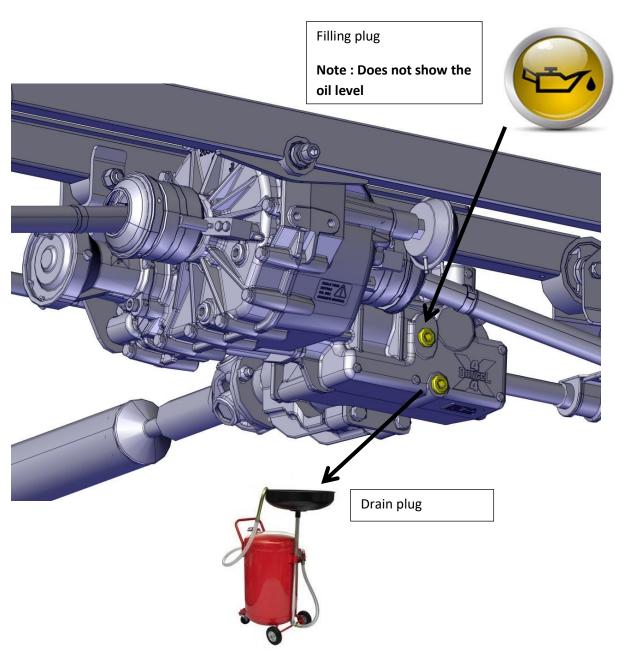
equivalent 80W90 according to the norm API

GL5 ZF TE-ML05C.

Oil change: Every 24.000 km or 2 years in case of normal

use, every 18.000 km or 1 year in case of

intensive/ severe use.





#### Rear axle

**Capacity:** 1.2 L + 0.05 / -0.00 L

Oil: 80 W 90 API GL5 (YACCO BVX LS 200), or

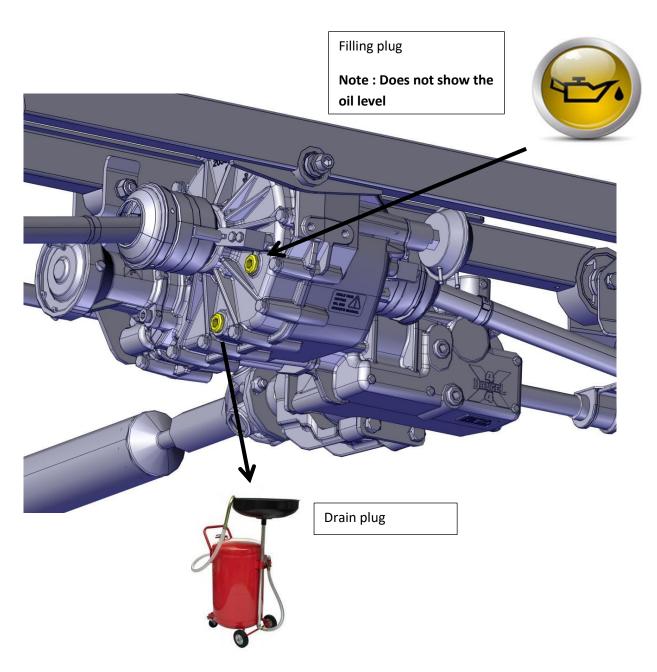
equivalent 80W90 according to the norm API

GL5 ZF TE-ML05C.

Oil change: Every 24.000 km or 2 years in case of normal

use, every 18.000 km or 1 year in case of

intensive/ severe use.





#### Gearbox

Consult the manufacturer's recommendations.



#### **Longitudinal transmission**





Lubricate the crosspieces\* during the 4-wheel-drive maintenance or once a year.

Note: crosspieces presence depends on transmission models.



## Hydraulic coupler

Hydraulic coupler: Organ without any maintenance

MAINTENANCE 24 000 KM  DATE: / /  Next service on: or	AUTHOR. REPAIRER STAMP
km	
MAINTENANCE 48 000 KM	AUTHOR. REPAIRER STAMP
DATE://	
Next service on: or km	
MAINTENANCE 72 000 KM	AUTHOR. REPAIRER STAMP
DATE://	
Next service on: or km	

MAINTENANCE 96 000 KM	AUTHOR. REPAIRER STAMP
DATE://	
Next service on: or km	
MAINTENANCE 120 000 KM	AUTHOR. REPAIRER STAMP
DATE://	
Next service on: or km	
MAINTENANCE 144 000 KM	AUTHOR. REPAIRER STAMP
DATE://	
Next service on: or km	

MAINTENANCE 168 000 KM	AUTHOR. REPAIRER STAMP
DATE://	
Next service on: or km	
MAINTENANCE 192 000 KM	AUTHOR. REPAIRER STAMP
DATE:/	
Next service on: or km	
MAINTENANCE 216 000 KM	AUTHOR. REPAIRER STAMP
DATE://	
Next service on: or km	

MAINTENANCE 240 000 KM  DATE: / /	AUTHOR. REPAIRER STAMP
Next service on: or km	
MAINTENANCE 192 000 KM	AUTHOR. REPAIRER STAMP
DATE://	
Next service on: or km	
MAINTENANCE 216 000 KM	AUTHOR. REPAIRER STAMP
DATE://	
Next service on: or km	

## LIST OF THE DOCUMENTS AND INFORMATION TO BE GIVEN In case of an intervention repair under warranty

Information about the vehicle	<ul> <li>✓ Chasis number</li> <li>✓ Mileage</li> <li>✓ Registration number</li> <li>✓ Date of the 1st registration</li> <li>✓ Picture(s) of the vehicle (external view)</li> <li>✓ Description of the use made with the vehicle</li> <li>✓ Description of the about the customer name, phone, e-mail</li> </ul>
Information	<ul> <li>✓ Description of the misfunctioning</li> <li>✓ Picture of the concerned parts</li> <li>✓ Pictures of the 4 tyres showing:         <ul> <li>The brand</li> <li>The model</li> <li>The dimensions</li> <li>The tread surface</li> <li>The wearing</li> </ul> </li> </ul>
to be given when contacting Dangel	degree  ✓ According to the mileage, please show the invoices of the maintenance 2 WD and 4WD in conformity with the car manufacturer and Automobiles DANGEL recommendations.  NOTE: The invoices must mention  - The workship name - The date of the invoice - The number of the invoice - The vehicle chasis number - The mileage at the intervention time - The detailed operations made - The lubricants used - The oils used (quantity, quality)



## **AUTOMOBILES DANGEL S.A.S**



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