

1. XE ENGINE

1.1 GENERAL

XE engine

Valve clearance

Valve clearance (cold/hot)

Inlet	0.50 mm
Exhaust	0.50 mm

DEB

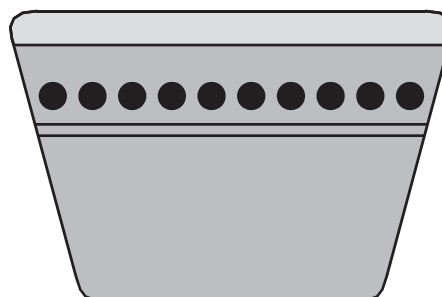
DEB setting	1.40 mm
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V-belt tension

V-belt tension, "AVX" raw edge ⁽¹⁾(N) Application example: air-conditioning compressor drive	
New V-belt ⁽²⁾	
Setting tension	600
Test tension	≥ 400
Run-in V-belt ⁽³⁾	
Minimum tension	250
Adjusting tension	350

V-belt tension, "XPB" raw edge ⁽¹⁾(N) Application example: steering pump drive on FAX vehicle	
New V-belt ⁽²⁾	
Setting tension	1250
Test tension	≥ 950
Run-in V-belt ⁽³⁾	
Minimum tension	750
Adjusting tension	950

- (1) Raw-edge V-belts can be recognised by the absence of textile fabric in the rubber, with the exception of the top of the belt edge, on the edges and the insides of the belt (polished belt edges). Version: either a toothed or a non-toothed belt.
- (2) After fitting the new V-belt, set the pre-tension to the "setting tension" and after a trial run check whether the pre-tension complies with the "test tension". If the test tension reading is lower than the value specified in the table, set the V-belt to the minimum "test tension".
- (3) If the V-belt tension is lower than the "minimum tension", set the belt to the "adjusting tension".



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2. GEARBOX

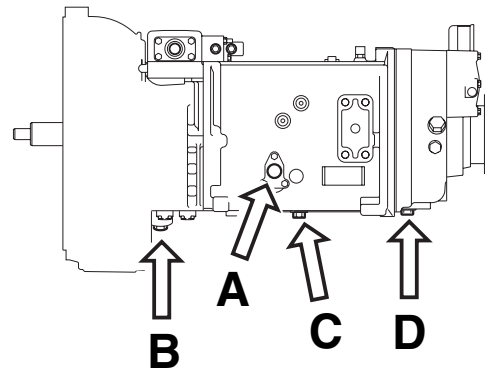
2.1 TIGHTENING TORQUES

The tightening torques specified in this paragraph are different from the standard tightening torques cited in the overview of the standard tightening torques. The other threaded connections not specified must therefore be tightened to the torque cited in the overview of standard tightening torques.

When attachment bolts and nuts are replaced, it is important - unless stated otherwise - that these bolts and nuts are of exactly the same length and property class as those removed.

ZF 8S -151/181 and 16S-151/181/221 gearboxes

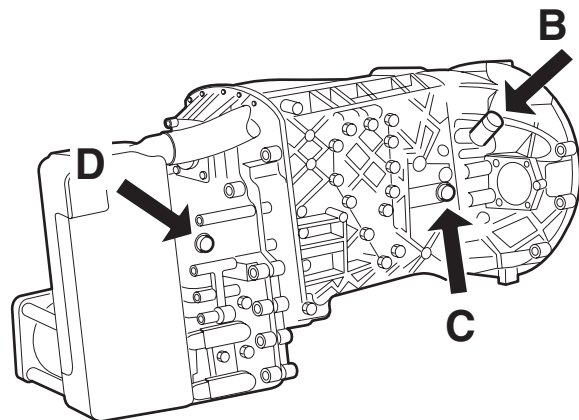
Level check/filler plug (A)	60 Nm
M24 drain plug (B)	60 Nm
M38 drain plug (B)	120 Nm
Drain plug (C/D)	60 Nm



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ZF 8S-151/181 and 16S-151/181/221 with integrated retarder

Drain plug (D)	60 Nm
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3. REAR AXLE

3.1 TIGHTENING TORQUES

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Filler and drain plugs/hub plugs (Torx wrench) 85 Nm

M24 U-bolt nut, property class 8

If flanged nut 740 Nm ± 55 Nm ⁽¹⁾
 If yellow zinc plated hexagonal nut 615 Nm ± 50 Nm ⁽¹⁾

(1) Evenly tighten the two U-bolt nuts alternately.

M24 U-bolt nut, property class 10

If flanged nut 880 Nm ± 60 Nm ⁽¹⁾
 If yellow zinc plated hexagonal nut 615 Nm ± 50 Nm ⁽¹⁾

(1) Evenly tighten the two U-bolt nuts alternately.

M22 U-bolt nut, property class 10 (leading rear axle)

If flanged nut 700 Nm ± 50 Nm ⁽¹⁾
 If yellow zinc plated hexagonal nut 530 Nm ± 40 Nm ⁽¹⁾

(1) Evenly tighten the two U-bolt nuts alternately.

TECHNICAL DATA

Rear axle

CF85 series

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3.2 FILLING CAPACITIES

Differential

1339 axle
1347 axle
1354 axle
1355(T) axle (1st axle)
1355(T) axle (2nd axle)
1132(T) axle (1st axle)
1132(T) axle (2nd axle)

Filling quantity with minimum caster

approx. 18.0 litres
approx. 21.5 litres
approx. 16.5 litres
approx. 13.0 litres
approx. 11.5 litres
approx. 17.0 litres
approx. 15.0 litres

Filling quantity with maximum caster

approx. 20.0 litres
approx. 23.5 litres
approx. 16.5 litres
approx. 18.0 litres
approx. 13.0 litres
approx. 25.5 litres
approx. 17.5 litres

Wheel hub

1354 axle
1355(T) axle
1132(T) axle

Filling capacity per hub

approx. 2 litres
approx. 2 litres
approx. 0.8 litres

6. FRONT AXLE

6.1 TIGHTENING TORQUES



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When attachment bolts and nuts are replaced, it is important that - unless stated otherwise - these bolts and nuts are of exactly the same length and property class as those removed.

U-bolt nut M20, property class 10

If flanged nut	450 Nm ± 40 Nm ⁽¹⁾
If yellow zinc plated hexagonal nut	400 Nm ± 40 Nm ⁽¹⁾

(1) Evenly tighten the two U-bolt nuts alternately.

M22 U-bolt nut, property class 10 (leading rear axle)

If flanged nut	700 Nm ± 50 Nm ⁽¹⁾
If yellow zinc plated hexagonal nut	530 Nm ± 40 Nm ⁽¹⁾

(1) Evenly tighten the two U-bolt nuts alternately.

1. SPECIFICATIONS

1.1 GENERAL

IN ORDER TO SATISFY THE WARRANTY CONDITIONS AND GUARANTEE THE LIFESPAN, SAFETY AND RELIABILITY OF DAF PRODUCTS, IT IS OF THE UTMOST IMPORTANCE THAT THE CORRECT FLUIDS, OIL AND LUBRICANTS, COOLANT AND FUEL ARE USED AND THAT THE REQUIRED REPLACEMENT INTERVALS ARE OBSERVED.

Lubricant, engine coolant and fuel additives - of whatever type - must not be used except in those circumstances specified by DAF.

Always follow the safety instructions below and the instructions that are supplied with the product.

Ask your lubricant and fuel supplier(s) whether the products supplied comply with DAF specifications.

DAF is not liable for damage or problems in the following instances:

- 1. use of oil of a lower grade than specified.**
- 2. use of oil of a different viscosity than specified.**
- 3. if the change interval is exceeded.**
- 4. if fuel, lubricants or coolants have been used which do not meet the requirements specified by DAF.**

Intermediate inspection

This is the intermediate inspection symbol.

Intermediate inspections are based on several visual inspections.

When an extended changing interval is applicable to the engine oil (X-service), an intermediate inspection should be carried out.

Intermediate inspection



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X-service

This is the symbol for an X-service.

An X-service is a mileage-dependent maintenance check which consists of changing the engine oil plus a number of visual inspections.

Note:

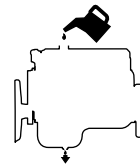
If the prescribed oil specification and additional conditions (see specification manual "Fluids and lubricants") are met, an extended changing interval (X-service) may be applied.

An X service should be carried out at least once every year.

X service



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Y-service

This is the symbol for a Y-service.

A Y-service is an annual maintenance check consisting of several maintenance activities plus changing of the gearbox and rear axle oil.

Note:

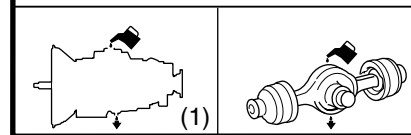
If the prescribed oil specification (see specification manual "Fluids and lubricants") has been met, an extended changing interval may be applied.

Y service

1x per YEAR



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1. SAFETY INSTRUCTIONS

1.1 SAFETY INSTRUCTIONS

Comply with all the warnings and safety precautions given in this maintenance manual.

First read the instructions and warnings on the labels and stickers that are affixed to various components on the vehicle and follow them. They are provided for your safety and health, so do not ignore them.

Wear clean, fitted clothes and apply protective cream to unprotected parts of your body, if necessary.

Do not run the engine in an enclosed or unventilated area. In other words, make sure that the exhaust gases are effectively extracted.

Remain at a safe distance from rotating and/or moving components.

Never remove the filler cap from the cooling system when the engine is at operating temperature.

Be careful when changing the oil. Hot oil may cause serious injuries.

Various oils and lubricants used on the vehicle may constitute a health hazard.

Avoid unnecessary contact with drained oil.

Frequent contact damages the skin.

This also applies to engine coolant, windscreen washer fluid, refrigerant in air conditioning systems, battery acid and diesel fuel.

So avoid inhalation and direct contact.

When carrying out operations under the cab, make sure the cab is fully tilted.

2.4 ENVIRONMENT

By carrying out the maintenance activities in a professional manner, on time and at regular intervals, you will help to reduce the impact on the environment.

This means, for example, noticing and remedying possible leakages in time and keeping the engine in an optimum condition (adjusting valves, replacing air filter element etc.), thus reducing the emission of harmful exhaust gasses.

It should be noted that oils and fluids contain harmful substances that have a negative impact on the environment.

That is why you should take care that drained oils and fluids and also discarded oil and fuel filters, are collected in separate receptacles or containers.

In short: **maintenance activities must be carried out in an environmentally aware manner.**

2.5 PARTS

All DAF parts and components have been carefully attuned to each other, a decisive factor in ensuring the original DAF quality.

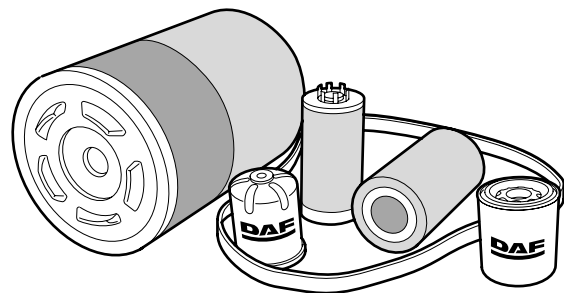
It is only logical, therefore, that the original DAF quality can be maintained best if original DAF parts and components are used when replacing parts or components.

As far as maintenance activities are concerned, this includes components such as windscreen-wiper blades, air-dryer elements, gaskets, V-belts and filters.

For example, if "non-original DAF filters" are used, the engine will be insufficiently protected against fine microscopic airborne dust particles, almost imperceptible metal swarf in the oil and dirt in the fuel, resulting in:

- premature replacing of cylinders, pistons, bearings, valves, injector pump and other moving parts
- reduced engine performance
- increased fuel consumption

Therefore, always use original DAF parts and components.



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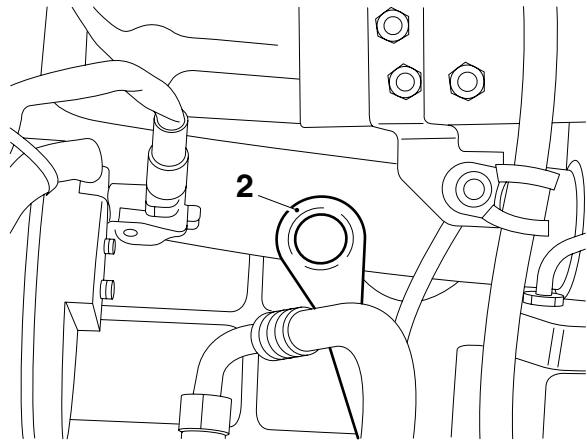
EXPLANATORY NOTES ON THE MAINTENANCE ACTIVITIES

Inspection and adjustment

CF85 series

3.6 INSPECTION, ENGINE OIL LEVEL

1. Ensure that the vehicle is standing on a flat and level surface.
2. Wait at least 5 minutes before checking the engine oil level of a hot engine.
3. Pull the dipstick (2) out of the holder.
4. Wipe the dipstick clean with a lint-free cloth.
5. Put the dipstick back into the holder.
6. Pull the dipstick out again and check the oil level.

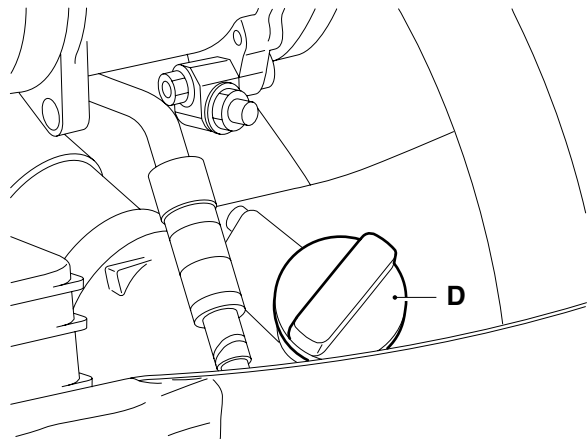


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7. If necessary, top up oil via the filler opening with the red cap (D) to the maximum oil level. Always use the specified oil. Do not top up above maximum level.

Note:

For the difference between minimum and maximum engine oil level, see "Technical data".



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3.12 CHECKING FOR FUEL LEAKS

1. Visually inspect all hose connections and fuel system components for leaks.

3.13 CHECKING THE COMPONENTS AND HOSE CONNECTIONS FOR LEAKS

1. Check all hose connections and cooling system components for leaks.
2. Check the hose connections and inlet system components.

3.14 CHECKING THE EXHAUST SYSTEM

1. Visually inspect the exhaust system for leaks.
2. Check the exhaust suspension points.
3. Check that no heat transfer (due to accumulated dirt, for example) can take place to the exhaust system area, such as pipes, components etc.

3.15 CHECKING THE RADIATOR AND INTERCOOLER FOR FOULING

1. Visually inspect the radiator and intercooler for fouling. If necessary, clean the radiator and intercooler, see "Cleaning".

EXPLANATORY NOTES ON THE MAINTENANCE ACTIVITIES

CF85 series

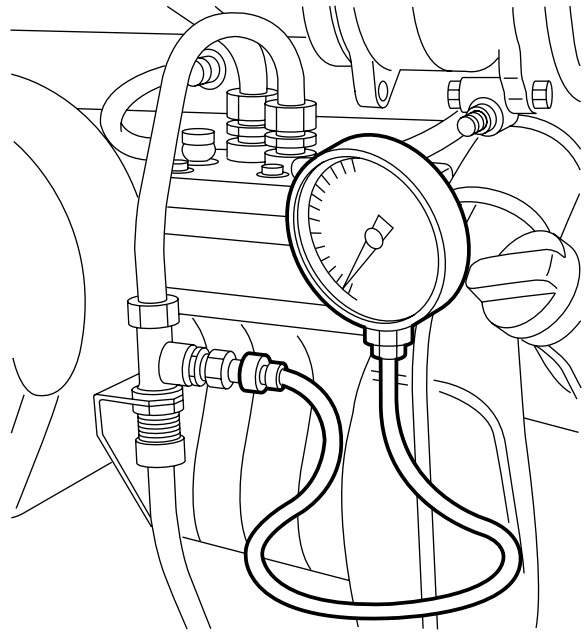
Inspection and adjustment

- The pressure gauge should indicate a pressure below 2 bar **with the pressure regulator switched off**. If the measured pressure exceeds the value indicated, the compressor line should be cleaned or replaced.

Note:

If the pressure measured is too high, there is excessive carbon deposit in the compressor line. This may be due to the poor condition of the compressor (oil consumption).

- Run the engine at idling speed.
- Bleed the brake system until the cut-in pressure of the pressure regulator has been reached and switch off the engine. The needle of the pressure gauge may not drop too quickly now. If necessary, check the system for air leakage. Pay particular attention to the compressor line and compressor.
- Fit the safety valve.
- Connect the compressor control line to connection point 23 of the air dryer.



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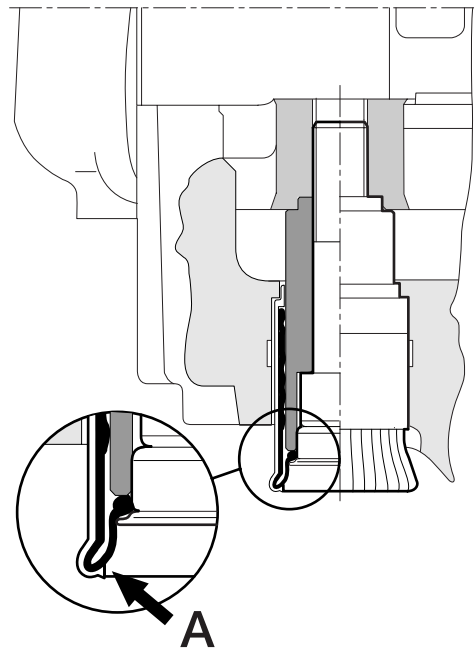
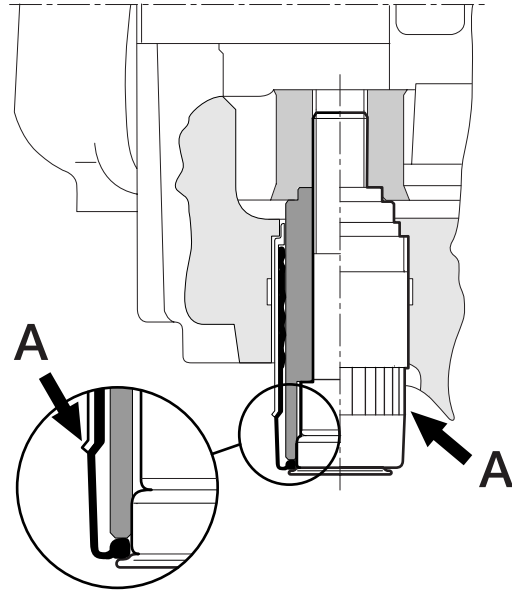
EXPLANATORY NOTES ON THE MAINTENANCE ACTIVITIES

CF85 series

Inspection and adjustment

Version: Knorr SN 7000

1. Check the transition between the ribbed part of the rubber cover and the smooth part (A). If the smooth part is rolled inwards, the brake shoe and brake disc thicknesses must be checked.



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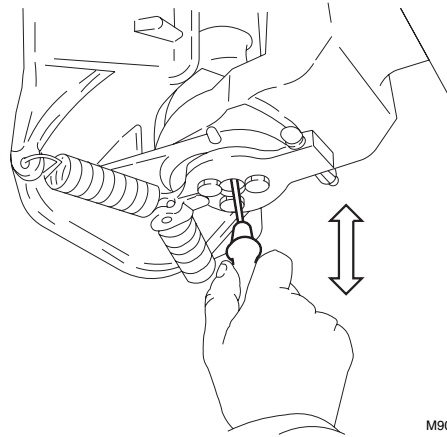
EXPLANATORY NOTES ON THE MAINTENANCE ACTIVITIES

Inspection and adjustment

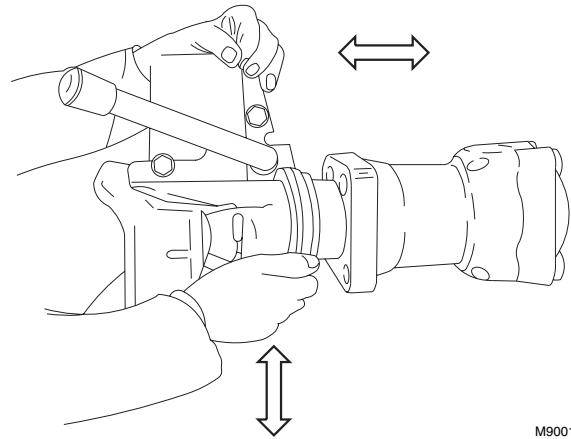
CF85 series

3.36 CHECKING THE TRAILER COUPLING

1. Check the vertical play of the arched pin.
2. Check the radial play of the arched pin.



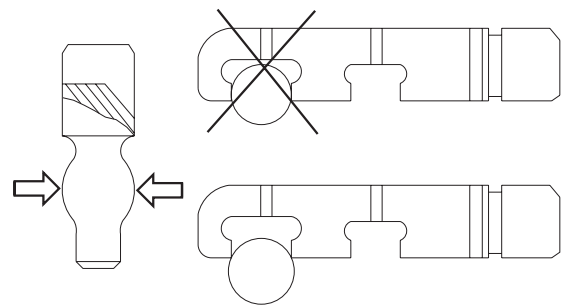
3. Check the vertical and horizontal play of the coupling jaw.



4. Check the diameter of the arched pin.
5. Check the attachment of the trailer coupling and the rear cross member.

Note:

For maximum play values, consult the manufacturer's instructions or the specified legal requirements.



6. CLEANING

6.1 CLEANING THE BATTERY POLES



Avoid sparks and open flames in the vicinity of batteries.

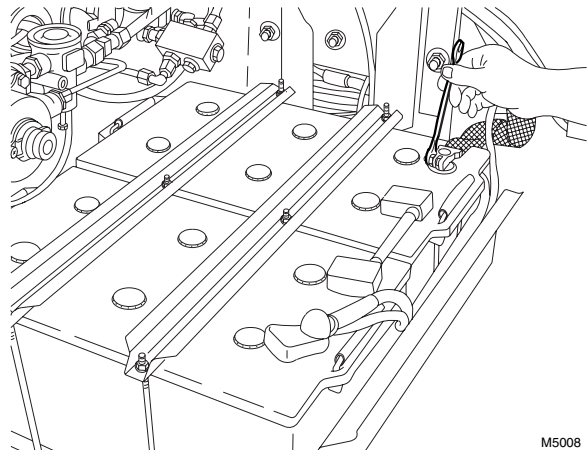
Battery acid is an aggressive fluid. In the event of contact with the skin: rinse the skin with plenty of water for a sustained period. If redness or pain persists, consult a doctor. Remove any clothing affected and rinse with water.

In the event of contact with the eyes: rinse with plenty of water for at least 15 minutes and consult a doctor.

If swallowed: do NOT induce vomiting. Rinse the mouth, drink two glasses of water and consult a doctor.

In the event of inhalation: get fresh air, rest and consult a doctor.

1. Disconnect the earth lead from the battery terminal.
2. Disconnect the positive lead from the battery terminal.
3. Clean the battery terminals, battery cables and the top of the battery (oxide and dirt discharge the battery).
4. If the top of the battery has acid on it, it should be rinsed with water.
5. Grease the battery terminals with Vaseline.
6. Check the earth lead connection to the chassis and grease the connection with Vaseline.
7. Fit the positive lead to the battery terminal.
8. Fit the earth lead to the battery terminal.
9. Check the routing and attachment of the battery cables.



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