

# WINGET



## PARTS & OPERATORS HANDBOOK

# WINGET ADT10

WINGET LIMITED  
PO BOX 41  
EDGEFOLD INDUSTRIAL ESTATE  
PLODDER LANE  
BOLTON, LANCs  
BL4 0LS

Tel: ++ 44 (0) 1204 854650

Fax: ++ 44 (0) 1204 854663

[parts@winget.co.uk](mailto:parts@winget.co.uk)

[service@winget.co.uk](mailto:service@winget.co.uk)

[www.winget.co.uk](http://www.winget.co.uk)

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# **ADT10 Dump Truck**



The contents of this Handbook, although correct at the time of publication, may be subject to alteration by the Manufactures without notice.

Winget Limited operate a policy of continuous product development. Therefore, some illustrations or text within this publication may differ from your machine.

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**PARTS**

## THE HANDBOOK

**WARNING** *The Operator must read all the Handbook and fully understand its contents before attempting to operate the machine.*



THE HANDBOOK MUST NOT BE REMOVED FROM THE MACHINE.

The Handbook should be kept clean and in good condition. Additional copies of the Handbook can be obtained from your Distributor.

The contents of this Operators Handbook are designed as a guide to the machine's controls, operation, working capacities and maintenance. It is not a training manual.

Only trained operators should use this machine. Consult your Distributor for details of authorised training courses.

In this Handbook are notes accompanied by a warning triangle.

**WARNING** *These notes are used to indicate that the procedure being described in the Handbook must be followed to avoid serious injury or death to yourself or others; or damage to the machine.*



*The warnings are also used to protect the machine from unsafe servicing practices.*

Pay particular attention to the warnings given in the Handbook.

If you have any doubts about any aspect of the machine's capability or servicing procedures, you must consult the manufacturer.

## MACHINE IDENTIFICATION

Please record the model and serial numbers of your machine in the spaces provided and quote them when ordering parts.

Model – Year \_\_\_\_\_.

Dumper serial no. \_\_\_\_\_.

Key, cab door \_\_\_\_\_.

Key, start \_\_\_\_\_.

Engine \_\_\_\_\_.

Transmission \_\_\_\_\_.

Front axle \_\_\_\_\_.

Rear axle \_\_\_\_\_.

Ram steering \_\_\_\_\_.

Ram, tipping, L.H. \_\_\_\_\_.

Ram, tipping, R.H. \_\_\_\_\_.

Tyre make & size \_\_\_\_\_.

**WARRANTY TERMS & CONDITIONS**

The Manufacturer assures you that if any part of the machine becomes defective due to faulty manufacture or materials within 12 months from the date of purchase, the part will be repaired or replaced under warranty free of charge by any authorised Winget Distributor. Warranty repairs must be carried out by Winget Distributors.

This Warranty is given to the first owner and may be transferred to subsequent owners for the balance of the Warranty period.

The Manufacturer's liability only extends to the costs of repair or replacement of the faulty parts and necessary labour charges involved in the repairs. The Company accepts no liability for any consequential loss, damage or injury, resulting directly or indirectly from any defect in the goods.

Items not covered by Warranty and considered to be the customer's responsibility include normal maintenance services; replacement of service items and consumables; replacement required due to abuse, accident, misuse or improper operation; replacement of wearable items e.g. pins, bushes, brake plates, clutch plates etc.

The Warranty will not apply where the equipment is modified, converted, or used for purposes other than those for which it was designed, unless clearance for the modifications etc. have been granted by the Manufacturer, in writing.

The Pre-Delivery Inspection and Warranty Registration Document must be completed correctly and returned to the Manufacturer within 7 days of sale date. Failure to do so may result in the claim being subsequently rejected.

Tyres and tubes are not covered by Warranty, but are covered by the tyre manufacturer's own warranty system which provides against defects in material or workmanship.

The engine and transmission are covered separately by the engine and transmission manufacturers. Engine and transmission warranty repairs must be handled by the relevant engine or transmission manufacturers' distributors.

No claim will be considered if other than genuine Winget Limited parts, which must be obtained from Winget Limited via an authorised Distributor, are used to effect a repair, or if lubricants other than those recommended by Winget Limited are used.

The equipment must be serviced in accordance with the service schedules laid down by Winget Limited. Evidence that these have been complied with may be required before Warranty Claims are reimbursed.

The Manufacturer's policy is one of continuous improvement. Winget Limited reserve the right to change specifications without notice. No responsibility will be accepted for discrepancies which may occur between specification of machines and the descriptions contained in publications.

Safety is the responsibility of all persons working with this articulated dump truck. Think “safety” at all times. ***Read and remember the contents of this handbook.***

The safe working recommendations for specific tasks are found with the instructions for the relevant operation in this Handbook.

## MACHINE MODIFICATION

**WARNING** Any modifications to the machine will affect its working parameters and safety factors. Refer to the Manufacturers before fitting any non-standard equipment or parts.



The Manufacturers accept no responsibility for any modifications made after the machine has left the factory, unless previously agreed by the Manufacturers in writing; the Manufacturers will accept no liability for damage to property, personnel or the machine if failure is brought about due to such modifications, or fitment of spurious parts.

## TRAINING

**WARNING** Only trained operators should use this machine.



Operators should hold an appropriate full motor vehicle driving licence and undergo both a safety awareness course and a driver training course for articulated dump trucks run by the C.I.T.B. or equivalent body leading to the award of a C.T.A. or equivalent

It is strongly recommended that operators read the B.S.I. publication British Standard number BS 6264, “Procedure for Operator Training For Earth Moving Machinery” available from the British Standard Institution. Another useful publication is the C.I.T.B. publication CC515 “Dumpers and Rear Dump Trucks Plant Operation Instruction Manual”.

## RUNNING-IN

**WARNING** While a gradual ‘running-in’ of a new engine is not necessary, it is extremely important that the instructions given in Section 1 “Operation” on “Running-in a new engine” should be followed very closely during the first fifty hours of operation.



## DRIVING

**WARNING** ***NEVER*** use the machine for purposes other than those for which it was designed. This machine was designed to carry loads such as soil, clay, sand, wet concrete, stone or other similar materials. It was not designed to carry loads which may move around in the skip uncontrollably, nor to carry any loads or materials which overhang the skip in any way. If in any doubt as to the suitability of this machine for a particular task, contact your nearest Distributor or the Manufacturer for advice.



*ALWAYS* be aware of local and national regulations governing the use of the machine.

*NEVER* commence work with the machine until the “Daily (or every ten hours)” service checks have been made. (See Service Section for details)

*ALWAYS* check wheel nut tightness daily.

*NEVER* carry passengers.

Ensure that the seat is securely fixed to the machine. Where seat belt restraints are fitted as part of Rops/Fops protection they must be worn. Check that the seat belt is in good condition, free from cuts and frayed edges.

*ALWAYS* remain in the driving seat whenever the engine is running. Never attempt to operate any controls unless seated.

*ALWAYS* apply the parking brake before leaving the driver’s seat.

*NEVER* dismount with the engine running, and never leave the machine unattended with the key in the starter switch.

When Battery Isolators are fitted they must be activated only when the engine is turned off except in cases of emergency.

Activating a Battery Isolator when the engine is running can result in damage to the electrical components and circuits.

*NEVER* fill the fuel or hydraulic tanks with the engine running.

*ALWAYS* drive only on surfaces that are known to be stable.

*ALWAYS* keep the cab floor and walkways clean.

*NEVER* drive the machine close to the edge of any excavation. Always use effective wheel stops to prevent the machine running close to the edge. Make sure that the stops are in proportion to the size of the wheels and are set sufficiently far enough back from the edge of any excavation to prevent the weight of the load causing a collapse.

*NEVER* adjust the tyre pressures in an attempt to improve traction on soft ground or obtain a softer ride on hard ground. Incorrectly adjusted tyres can affect the steering and handling characteristics.

*NEVER* attempt to free a machine which is ‘bogged down’ by pushing with the bucket of a backhoe loader, tracked excavator or other similar machine.

*NEVER* attempt to lift the machine unless the articulation lock is engaged and the safe working load of the equipment to be used is correct for the weight of the machine.

*ALWAYS* use the reversing camera when reversing.

*NEVER* drive the machine with the skip raised.

When working within the articulation point crush zone always fit the articulation lock.

*NEVER* work under an unpropped skip. Always use the skip support provided.

*NEVER* make unnecessary “crash stops” when travelling at speed, especially in forward direction.

## **SKIPS AND LOADING**

### **WARNING**



*NEVER* exceed the rated payload. The weights of all loads above skip water level must be checked.

*ALWAYS* ensure that the load is evenly distributed in the skip.

*ALWAYS* take extra care when tipping non free running loads.

*NEVER* leave the machine with the skip raised unless the skip support is in place.

## **TOWING**

### **WARNING**



*NEVER* attempt to tow an articulated dump truck before first reading ‘Towing the dump truck’ (see Contents page).

*NEVER* attempt to start the engine of an articulated dump truck by towing or pushing.

Dumpers are not designed as towing vehicles, however, trailers may be towed providing that:

**1** The combined weight of the trailer and its load does not exceed the specified maximum drawbar pull and drawbar load of the machine.

**2** Trailers may be towed in first gear on level dry ground, provided a purpose made towing attachment pin is used.

*NEVER* tow loads up, down or across gradients.

## **GRADIENTS**

### **WARNING**



*NEVER* operate on any gradients which exceed 25% (1 in 4), or across gradients which exceed 16% (1 in 6).

*ALWAYS* remember that slippery or loose surface conditions can adversely affect safe machine operation, including braking, particularly on gradients.

*ALWAYS* choose routes that avoid steep, slippery or loose gradients.

*NEVER* coast down gradients. Always negotiate gradients in first gear.

*ALWAYS* drive forwards up gradients when loaded.

*NEVER* park on a gradient. If this is unavoidable, *ALWAYS* chock the wheels.

*NEVER* attempt to turn on a gradient

*NEVER* tow up, down or across a gradient.

*NEVER* discharge the skip across a gradient.

## **HYDRAULICS**

**WARNING**



*ALWAYS* “Dump” pressure from the system before carrying out any maintenance or adjustments. (see Service - Hydraulic system).

*ALWAYS* purge hydraulic rams before commencing work. With the engine running operate the hydraulic control to fully extend and retract the rams.

*NEVER* leave the machine unattended with pressure in the system.

*ALWAYS* practise the greatest cleanliness in maintaining hydraulic components.

## **SERVICING**

**WARNING**



*ALWAYS* report any defect at once, before an accident or consequential damage can occur.

*ALWAYS* conform to service schedules except where:

- 1 Warning lights or warning indicators call for immediate attention.
- 2 Adverse conditions necessitate more frequent servicing.

*ALWAYS* wear correctly fitting protective clothing. Loose or baggy clothing can be extremely dangerous when working on running engines or machinery.

*ALWAYS*, where possible, work on or close to engines or machinery only when they are stopped. If this is not practical, remember to keep tools, test equipment and all parts of your body well away from the moving parts.

*ALWAYS* “Dump” pressure from the hydraulic system before carrying out any kind of maintenance or adjustment. (see Service - Hydraulic system).

*ALWAYS* avoid contact with exhaust pipes, exhaust manifolds and silencers when the engine is running; these can be very hot.

*ALWAYS* work out of doors, or in a well-ventilated area.

*NEVER* run an engine in an enclosed space. Exhaust fumes in enclosed areas can kill.

*ALWAYS* disconnect battery cables and remove battery before using an external charger, carrying out welding repairs or to prevent unauthorised usage when unattended or during a repair.

*NEVER* allow unqualified personnel to attempt to repair, remove or replace any part of the machine, or anyone to remove large or heavy components without adequate lifting tackle.

*NEVER* attempt to modify or repair the Rops cab by welding, drilling or any other means. Attempts to do so will invalidate Rops/Fops Certification.

*ALWAYS* obtain advice before mixing oils; some are incompatible. If in doubt drain and refill.

*NEVER* allow oils and fuels to come into regular contact with skin. This can lead to serious skin diseases including, medical evidence suggests, skin cancer. *ALWAYS* wear protective gloves when handling oils and fuels whether topping up, draining or refilling. *ALWAYS* wash hands if oils or fuels come into contact with the skin.

Many liquids used in this machine are harmful if taken internally or splashed into the eyes. In the event of accidentally swallowing oils, fuels, anti-freeze, battery acid etc, **DO NOT** encourage vomiting, seek qualified medical assistance immediately.

*ALWAYS* dispose of waste oils and fuels into waste oil storage tanks. If storage tanks are not available consult your distributor or local authority for addresses of local designated disposal points. It is illegal to dispose of waste oil into drains or water courses or to bury it.

Equipment which includes friction materials will sometimes contain asbestos. When removing friction material dust from components, such as when servicing brakes or clutches, do not blow out with an airline; it could be harmful to inhale the dust. Remove the dust with a vacuum cleaner or wipe clean with a damp rag. Waste should be placed in a sealed container, marked, and disposed of in accordance with local or national regulations.

The accumulated dust found in clutch housings may contain lead/antimony. No food should be eaten at a work place contaminated by this dust. Hands must be washed before eating. Do not blow out dust with an airline.

*NEVER* work under an unpropped skip, always fit the special Skip Support that has been supplied with the dump truck.

*ALWAYS* fit the articulation lock when servicing or working on the machine.

## DECALS

Attached to the dump truck are several pictorial warning decals

For detailed information on how to safely use the items described by the decals, see the “Safe working, Operation and Servicing” sections of this Handbook.

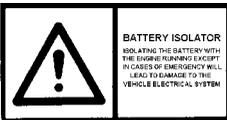
Descriptions of the decals are as follows:



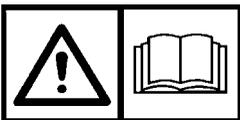
Fuel tank filling point.



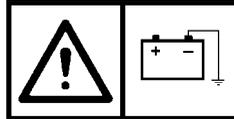
Hydraulic oil filling point.



The Battery Isolator is situated close to this decal.



Read Operator's Handbook, or Operator's Handbook storage place.



The battery negative terminal is connected to earth.



The articulation Lock, when used, prevents the front and rear chassis from articulating.



Keep clear of this “Crush area” between the front and rear articulating chassis of the truck.



ISO Skip Support, when used, is pinned around the tipping ram rod to prevent the ram from closing..



Beware of electrical hazards.

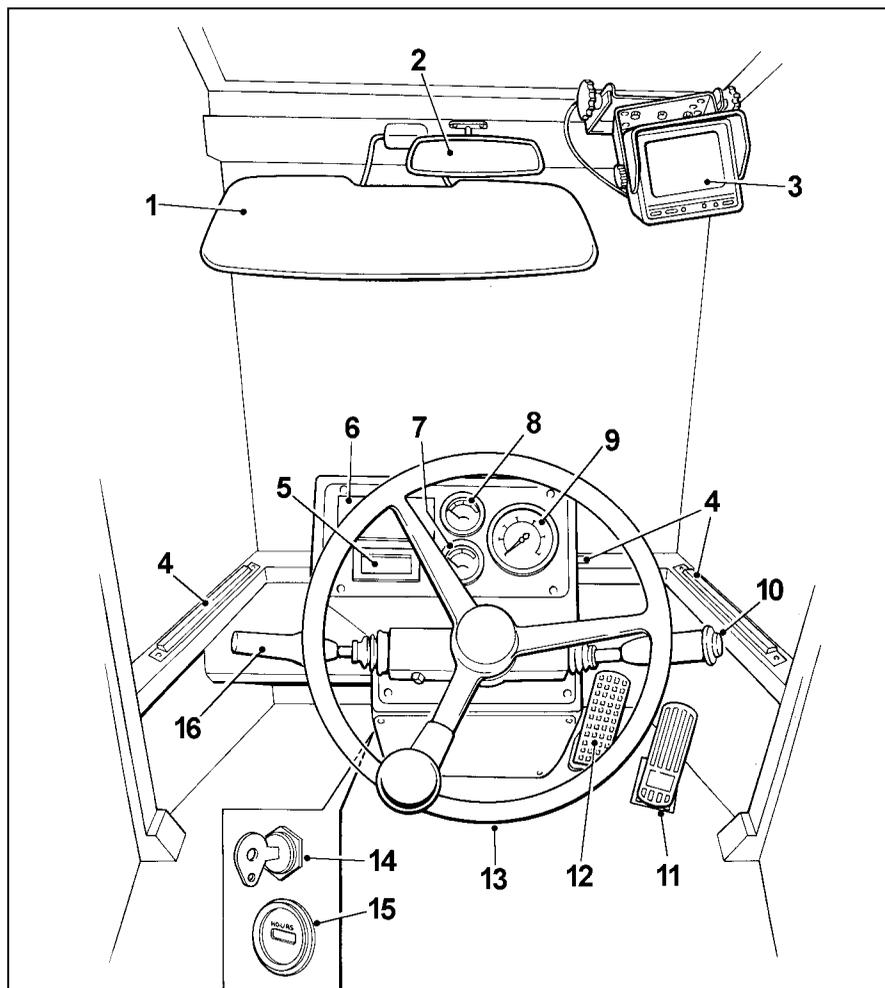


These surfaces may be hot.



Keep hands away from moving parts.

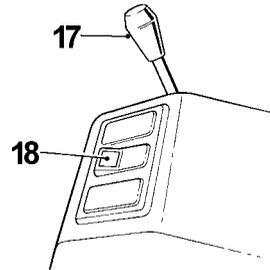
## CONTROLS



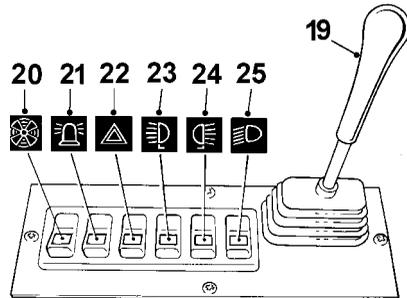
- |                                |                              |
|--------------------------------|------------------------------|
| 1 Sun visa                     | 9 Tachometer                 |
| 2 Rear view mirror             | 10 Multi switch              |
| 3 Rear view monitor            | 11 Accelerator pedal         |
| 4 Screen vents                 | 12 Brake pedal               |
| 5 Transmission indicator       | 13 Steering wheel            |
| 6 Warning lights cluster       | 14 Start switch key          |
| 7 Transmission oil temperature | 15 Hour meter                |
| 8 Engine oil temperature       | 16 Transmission select lever |

**CONTROLS****RIGHT HAND SEAT CONSOLE**

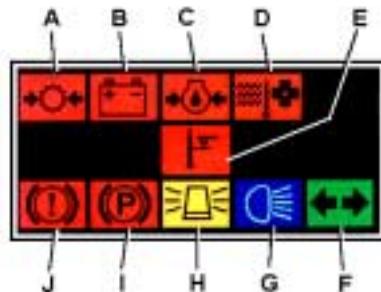
- 17** Parking brake lever
- 18** Auto/manual transmission switch
- Radio/cassette player  
(not illustrated). *For instructions on how to operate the radio/cassette player, see accompanying literature.*

**LEFT HAND SEAT CONSOLE**

- 19** Skip tipping lever
- 20** Two speed heater fan
- 21** Beacon
- 22** Flashing warning lights
- 23** Working lights, rear
- 24** Working lights, front
- 25** Side/head lights

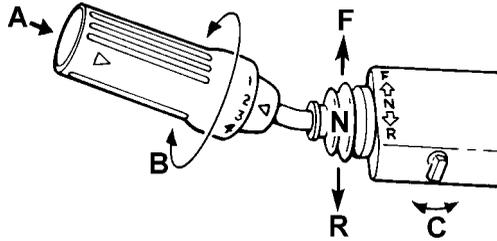
**WARNING LIGHTS CLUSTER**

- A** Transmission fault
- B** Battery charging
- C** Engine oil pressure
- D** Engine coolant temperature
- E** Hydraulic oil temperature
- F** Direction indicators
- G** Main beam
- H** Beacon
- I** Parking brake
- J** Low brake pressure

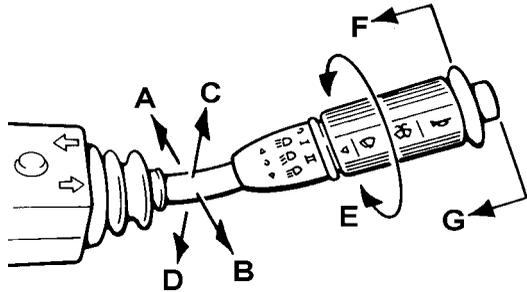


**CONTROLS****FORWARD/REVERSE LEVER**

- A** Kick down button
- B** Gear select
- C** Lever neutral lock
- F** Forward
- N** Neutral
- R** Reverse

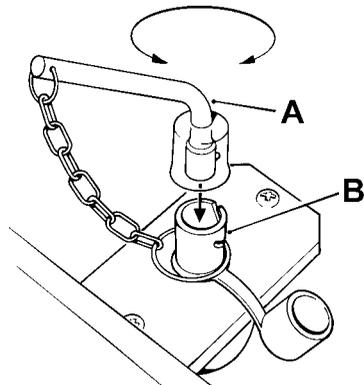
**MULTI SWITCH**

- A** Left turn
- B** Right turn
- C** Headlight flash
- D** Headlight main beam
- E** Two speed wipers
- F** Screen washers
- G** Horn

**BATTERY ISOLATOR SWITCH**

*(Situated beneath the right hand side engine cover)*

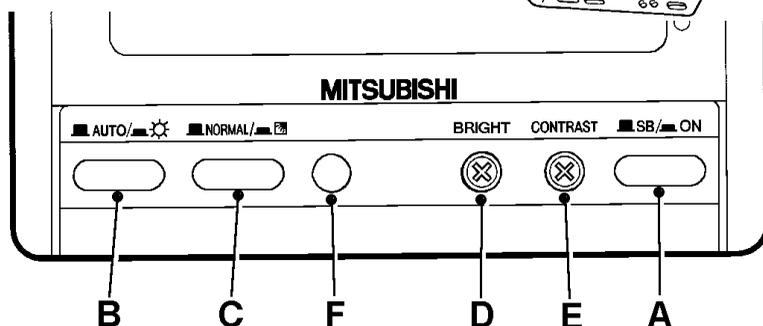
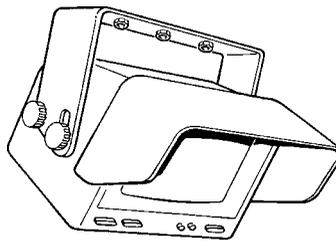
If the dump truck is to be left unattended it is recommended that the key **(A)** is removed from the isolator switch **(B)**.



## CONTROLS

## REAR VIEW MONITOR

**WARNING** Never attempt to operate the monitor switches while driving. This system is only an aid to reversing.



- A ON-SB switch
- B Auto brightness control
- C Exposure switch
- D Brightness control
- E Contrast control
- F Light sensor

It is recommended to use all switches in the OUT (raised) position. Usually there is no need to operate these switches.

## OPERATION OF MONITOR

**A ON-SB (Stand By) switch**

When you press this switch to ON (in), you can view behind the vehicle. Normally, leave this switch in the SB (out) position.

When you shift to reverse, the picture appears automatically.

**B Auto brightness control**

When the switch is in the AUTO (out) position The brightness of the screen automatically adjusts according to the surroundings.

When the switch is depressed (in) the brightness is set at a fixed level.

**C Exposure switch**

This switch is usually left in the NORMAL (out) position. It only operates while being held down (in). If released it returns to the usual screen image (NORMAL).

*Never attempt to operate this while driving regardless of whether going forwards or backwards.* This switch improves the screen image under the following conditions.

- (1) In daylight when glare makes the image hard to see.
- (2) At night when darkness makes the image hard to see.

#### **D Brightness control**

There is usually no need to touch this control. However if the screen appears too bright or too dark, adjust to a satisfactory level. Operation is affected by the **Auto brightness control** so check this also.

#### **E Contrast control**

There is usually no need to touch this control. However if the screen contrast is too weak or too strong adjust to a satisfactory level.

#### **F Light sensor**

There is no need to handle this. This sensor detects the surrounding light from its position in this hole. *Do not block or tamper with this sensor and hole. Inserting tools into this sensor hole may damage the equipment and cause breakdowns.*

#### **\* Distance marks**

Displayed on the right hand side of the screen are a series of distance markers. At night the safe distance is indicated with a green light.

## **DRIVING THE DUMP TRUCK**

### **Safety warnings**

**WARNING**

*ALWAYS wear correctly fitting protective clothing. Loose or baggy clothing can be extremely dangerous when operating or servicing machinery.*

*ALWAYS mount the dump truck using the steps and handles.  
NEVER attempt to mount the truck from any other position.*

*Only skilled personnel are permitted to work with this dump truck.*

*ALWAYS be aware of local and national regulations governing the use of this equipment.*

### **Running-in a new engine**

A gradual running-in of a new engine is not necessary.

Prolonged operation at light loads during the early life of the engine is not recommended.

Maximum load can be applied to a new engine as soon as the engine is put into service and the coolant temperature has reached a minimum of 60°C (140°F).

**WARNING**

*Do not operate the engine at high speeds without a load.*

*Do not overload the engine.*

*Do not allow the engine to run at idle speed for long periods; this may cause bore glazing and increase of consumption.*

### **Pre-start checks**

**WARNING**

*NEVER commence work with the dumper until the checks detailed in "Every 10 operating hours, or daily" have been carried out. (see Service Schedule).*

Check that all controls are clean and not slippery, and that they function correctly.

Check that the areas around pivot points, rams and linkage are free from mud, ice and debris.

Check that all grab handles, steps and platforms are clean and dry.

Check the dump truck for any obvious damage or faults.

Check that all decals can be clearly read.

Check that the rear oil cooler is free from debris.

Check and remove any build up of material from behind the skip tipping rams.

## Driving the dump truck

### WARNING



*NEVER operate controls unless you are seated within the cab. ALWAYS remain in the driving seat whenever the engine is running.*

*Ether type fuels must not be used.*

*If the battery charge or engine oil pressure warning lights fail to cancel, stop the engine.*

*If the engine coolant or transmission oil temperature warning lights illuminate, stop the engine. Detect the fault before continuing. DO NOT PROCEED IF A FAULT IS EVIDENT.*

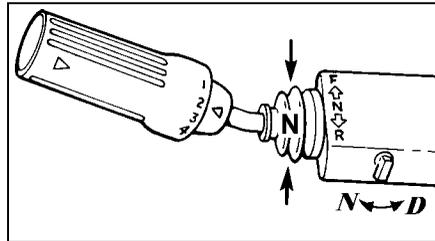
*NEVER attempt to start the dump truck by pushing or towing. This would result in extensive internal damage to the transmission.*

## Starting the engine

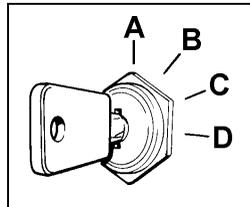
Ensure parking brake is in the raised “ON” position.

Ensure that the forward/neutral/reverse (FNR) lever is in the neutral position. The lever is provided with a mechanical lock to prevent accidental operation. The red flipper points to *N* for NEUTRAL LOCK and *D* for DRIVE.

The FNR lever must be in the neutral position to start the engine. If not the LED display on the dash board will show ‘NN’, (Not in Neutral).



**Starting a warm engine:** Turn the starter key clockwise to “B”. The start-up audible warning will activate for 7 seconds. Ensure that the battery charging and engine oil pressure warning lights have illuminated. Push down the accelerator to a quarter of its travel and hold. Turn the starter key to “D” to engage the starter motor. Allow the key to return to position “B” as soon as the engine starts. Confirm that all warning lights have gone out.

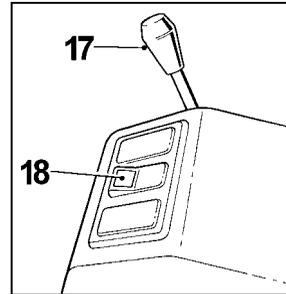


**Starting a cold engine:** As above, but prior to starting the engine, turn the key to “C” and hold for 15 seconds.

When the engine has started and with the FNR lever in neutral (**N**) the LED display on the dash board will show 'N'.

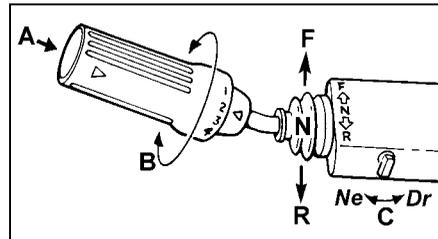
Use the green rocker switch (**18**) located at the RH side of the seat console, to select either **manual** or **automatic** drive mode.

**Manual** mode is with the switch UP and not illuminated.  
**Automatic** mode is with the switch DOWN and illuminated.



## Gear selection (forward travel in manual mode)

Gears are selected by using the rotating stalk (**B**). The stalk is marked with four positions, each position relating to a gear. However, there are two more gears that are selected by depressing the "kick-down" button (**A**) on the end of the stalk. (See table)



**Note:** The LED display on the dash board will only show the gear position when the parking brake is OFF.

To move off; select an appropriate gear. Position 1 will be usual for most applications.

Ensure the stalk locking lever (**C**) is in the drive (**Dr**) position.

Select FORWARD (**F**) with the stalk.

### Gears for manual forward travel

STALK POSITION	GEAR SELECTED	LED DISPLAY
(with kick-down button)		
1	1 <sup>st</sup>	F1
1	2 <sup>nd</sup>	F2
2	3 <sup>rd</sup>	F3
3	4 <sup>th</sup>	F4
4	5 <sup>th</sup>	F5
(with kick down button)		
4	6 <sup>th</sup>	F6

Release the parking brake (**17**) by lowering the lever to OFF position. Use the rotating stalk (**B**) to change between gears.

**IMPORTANT!** Before changing from forward to reverse, or visa versa, ensure that the vehicle has come to a stop.

## Gear selection (forward travel in automatic mode)

Using the rotating stalk, select the range of gears appropriate for the ground conditions. (Each position of the rotation indicates a separate range of gears. See *the following table*) Gear changing is fully automatic, the upper gear limit being dependent upon the rotating stalk position.

Gear ratios for automatic forward travel		
STALK POSITION	GEAR SELECTED	LED DISPLAY
1	1 <sup>st</sup>	F1
2	2 <sup>nd</sup> to 4 <sup>th</sup>	F2, F3 or F4
3	2 <sup>nd</sup> to 5 <sup>th</sup>	F2, F3, F4 or F5
4	2 <sup>nd</sup> to 6 <sup>th</sup>	F2, F3, F4, F5 or F6

Select FORWARD

Release the parking brake by lowering the lever to OFF position. Use the rotating stalk to change the range of gears available when necessary.

## Gear selection (reversing in either manual or automatic mode)

**IMPORTANT!** Before changing from forward to reverse, or visa versa, ensure that the vehicle has come to a stop

When the engine is running and reverse is selected an alarm will sound. It will continue to sound until the lever is returned to the neutral position.

The bleeping of the start-up alarm is faster than that of the reverse alarm, this is to avoid confusing the two.

With the engine running and the start-up alarm sounding, selecting reverse will automatically override the start-up alarm and allow the reverse alarm to sound in its normal manner.

Selecting reverse also illuminates the reversing lamp and activates the rear view camera.

Gears for reverse travel		
STALK POSITION	GEAR SELECTED	LED DISPLAY
(with kick-down button)		
1	1 <sup>st</sup>	R1
1	2 <sup>nd</sup>	R2
2	2 <sup>nd</sup>	R2
3	3 <sup>rd</sup>	R3
4	3 <sup>rd</sup>	R3

**Note:** If it is required to have the camera switched on at all times, this is achieved by depressing the ON button which is located at the lower RH corner of the monitor

The number of reverse gears are less than for forward travel (See table)

## Hill start procedure

With the engine running select the appropriate gear. (Ensure that the engine speed is below 1400 R.P.M. *BEFORE* selection)

Increase the engine speed only if deemed necessary.

Disengage the parking brake, this will automatically select the chosen drive gear.

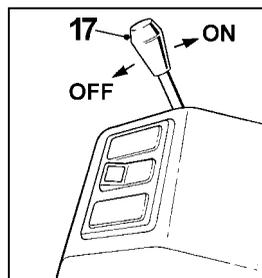
## Parking brake operation

The parking brake (17) applies on the front axle only.

With the engine running and lever (17) raised, the parking brake is ON.

If the vehicle has been stopped for a period of time with the engine switched off, the parking brake will automatically apply irrespective of whether the lever (17) is raised or lowered.

**IMPORTANT:** Always ensure the parking brake is in the raise position before starting the engine.



When the parking brake has been applied, and an attempt is made to select a gear in either forward or reverse then 'PN' will show on the LED display.

**Note:** It is not possible to engage any gear when the parking brake is applied.

## Brake pedal

The brake pedal operates the brakes in the conventional manner.

**WARNING** NEVER make unnecessary 'crash stops' when travelling at speed.



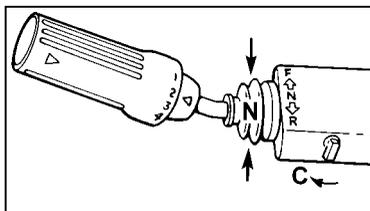
## Stopping the dump truck

Release the accelerator and brake to a halt progressively.

Select neutral (N) with the forward/neutral/reverse lever. Move the lever lock (C) to the left

Apply the parking brake when stationary.

Turn the starter key to the off position, and remove the key.



## Leaving the dump truck

**WARNING** *At the end of the working day, turn the wheels from lock to lock when parking, to clear mud and water from the steering ram rods. This will reduce the risk of wear and damage from dirt and ice.*



Ensure that the machine is parked on firm, level ground. Do not park on a gradient. Check that the parking brake is applied.

Check that the forward/neutral/reverse lever is in neutral.

Ensure that the skip is fully lowered.

With the engine stopped, operate the skip control lever fully in each direction several times to 'dump' hydraulic pressure from the system.

Remove the starter key from the switch.

If unattended for some time, remove the key from the battery isolator

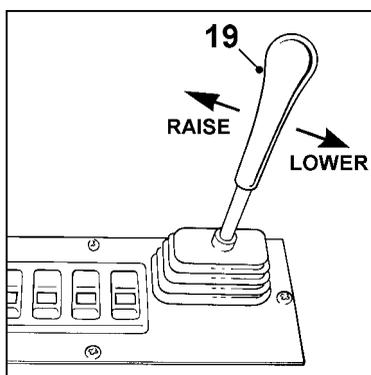
## Skip tipping

The skip is raised and lowered by using lever (19).

The lift rams are dual acting. They have to be "Powered" up and "Powered" down.

However, If the skip is raised and the engine is switched off, DO NOT operate the control lever (19) as the skip will lower to the chassis.

**WARNING** *Never venture under a raised skip unless it is fitted with an "ISO Skip Support*



## Towing the dump truck

The machine should only be towed in the event of it being broken-down. The distance towed should be limited to only that which is necessary to load the machine onto a recovery vehicle.

**WARNING** *Before attempting to tow the dump truck.....*



*Remove the keys from the battery isolator and from the starter  
Chock the wheels.*

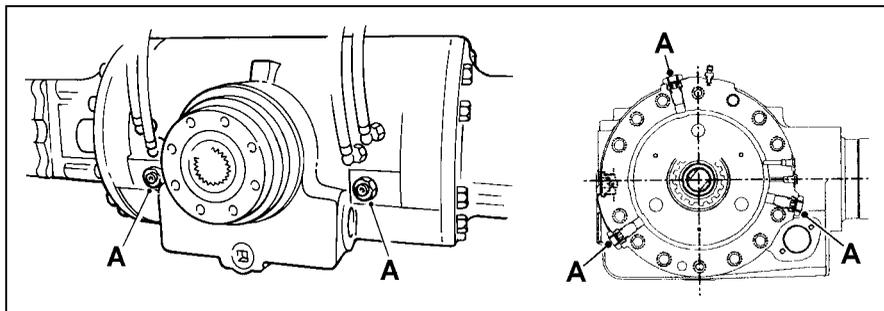
*Disconnect the front and rear propeller shafts from the axles. Tie up the propeller shafts securely to the chassis.*

*Disconnect the front and rear propeller shafts from the axles. Tie up the propeller shafts securely to the chassis.*

*Because of the loss of hydraulic power the parking brakes in the front axle will be locked on by the pressure of internal springs.*

*Before the machine can be moved the springs have to be released.*

*Release the springs by screwing in (clockwise) the grub screws (A) that are equally spaced, three each side, around the axle.*



*Remember that once the chocks are removed from the wheels the dump truck has no means of being braked!*

*Steering is possible without power assistant, but manual steering will be very slow and strenuous.*

## SERVICE SCHEDULE

SERVICE OPERATION	REFERENCE	PAGE
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### WARNING

*Warning lights and indicators*

**REQUIRE IMMEDIATE ACTION**



Air cleaner warning indicator: RED	Air cleaner	3.19
------------------------------------	-------------	------

### Every 10 operating hours, or daily

Engine lubricating oil level	Engine	3.9
Engine coolant level	Cooling system	3.16
Fuel tank level	Fuel system	3.11
Air cleaner dust collector	Air cleaner	3.18
Fuel pre-filter (water trap)	Fuel system	3.12
Hydraulic oil level	Hydraulic system	3.29
Tyre condition and pressure	Wheels & tyres	3.22
Wheel nut tightness	Wheels & tyres	3.22
Axle joints, check for leaks	Axles	3.20
General: Check for oil leaks damage or faults, and report as necessary.		

### First 50 operating hours

*Carry out the procedures for "Every 10 operating hours, or daily", plus the following:*

Engine lubricating oil and filter change	Engine	3.9
Fuel filter change	Fuel system	3.13
Fuel lift pump strainer	Fuel system	3.13
Hydraulic pressures check	Hydraulic system	3.28
Hydraulic filter change	Hydraulic system	3.30
Front and rear axle oil change	Axles	3.20

*Plus the procedures listed in "Every 50 operating hours, or weekly".*

### Every 50 operating hours, or weekly

*Carry out the procedures for "Every 10 operating hours, or daily", plus the following:*

Grease points	Greasing	3.24
Transmission oil level	Transmission	3.5
Air cleaner element	Air cleaner	3.18
Fan belt tension	Engine	3.8

General: Check for loose fixings, nuts and bolts etc.

# SERVICE

3.2

## SERVICE OPERATION

## REFERENCE

## PAGE

### First 100 operating hours

*Carry out the procedures for the service intervals previously described, plus the following:*

Transmission oil and filters change	Transmission	3.5
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### Every 250 operating hours

*Carry out the procedures for the service intervals previously described, plus the following:*

Engine lubricating oil and filter change	Engine	3.9
Front and rear axle oil levels	Axles	3.21
Battery electrolyte level	Batteries	3.23
Air cleaner element	Air cleaner	3.18
Fuel filter change	Fuel system	3.13

### Every 500 operating hours

*Carry out the procedures for the service intervals previously described, plus the following:*

Hydraulic filter change	Hydraulic system	3.31
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### Every 1000 operating hours, or yearly

*Carry out the procedures for the relevant service intervals previously described, plus the following*

Hydraulic oil tank and filter	Hydraulic system	3.31
Hydraulic pressures	Hydraulic system	3.28
Engine valve clearances (tappets)	"See Engine Manual"	-----
Front and rear axle oil change	Axle	3.20
Transmission oil and filters change	Transmission	3.5

### Every 2000 operating hours, or every 2 years

*Carry out the procedures for the relevant service intervals previously described, plus the following*

Change engine coolant	Cooling system	3.17
Check coolant hoses	Cooling system	3.17
Fuel injectors	"See Engine Manual"	-----
Alternator and starter motor	Have the alternator and starter motor checked by your Distributor.	

**EXTRA SERVICES****Dirty working conditions**

Increase the frequency of all services during extremes of dirt, vegetable waste, heat and cold, especially those relating to clean air, cooling efficiency, lubrication and machine cleanliness.

**Laying-up protection**

When a machine is to remain idle, remove the battery to the workshop. Seal all openings: air intake, exhaust breathers. Grease bright parts and protect rubber components from direct sunlight. Fill the fuel tank, check the tyre pressures and exhaust any pressure from the hydraulic system. Also refer to the Engine User's Handbook for additional procedures

Brakes bleeding	3.25
Centre yoke installation	3.32

## SERVICE SAFETY

**WARNING** Read the safety notes in "Safe Working", Section 1 of this book.



Also note the following:

## ISO SKIP SUPPORT

The "ISO Skip Support" **MUST** be used whenever working under a raised skip.

**To install the "ISO Skip Support":**

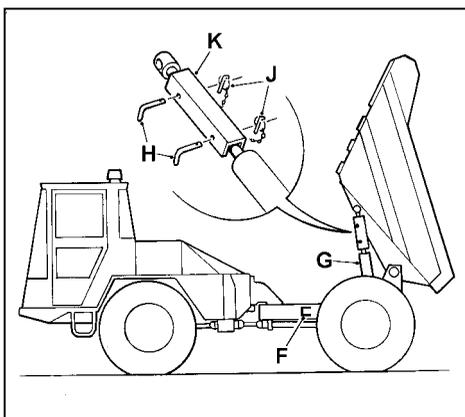
Release the "Support" (**K**) from its storage position on the centre rail of the rear chassis (**F**).

Raise the skip fully using the skip tipping lever.

Place the "Support" (**K**) around the rod of one of the tipping rams (**G**).

Insert the pins (**H**) and secure them with clip/pins (**J**).

Do not operate the skip tipping lever with the "ISO Skip Support" in place.



## ARTICULATION LOCK

The Articulation Lock is provided to lock the front and rear chassis together, making the dump truck a rigid unit.

The Articulation Lock **MUST** be in position before attempting to lift the dump truck, or before commencing any maintenance work.

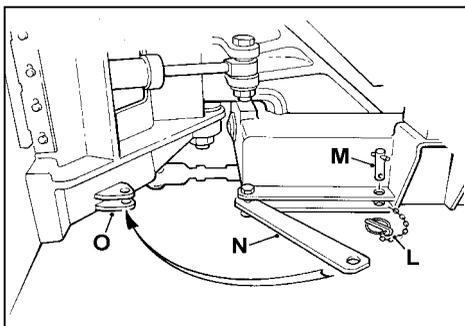
**To install the "Articulation Lock":**

Turn the steering wheel until the front and rear chassis are in a straight line.

Remove clip/pin (**L**) and extract pin (**M**).

Swing the locking bracket (**N**) forwards to the front chassis and into clevis (**O**). (It may be necessary to turn the steering wheel to align the bracket and clevis holes.)

Fit pin (**M**) through the clevis (**O**) and bracket, and secure with clip/pin (**L**).



## Transmission

### Every 50 operating hours, or weekly

#### Oil level: check

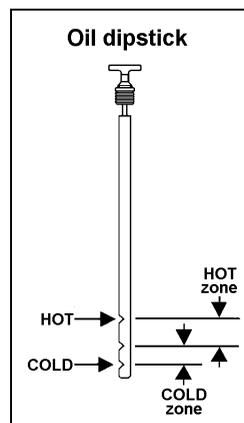
Check the oil level in the transmission. The engine should be at idling speed (about 750 rpm), and the transmission oil at an operating temperature of 80°C.

*Measuring the oil level at a temperature of 80°C is critical.*

With the temperature at about 80°C the upper HOT mark on the dipstick applies. This mark must not be exceeded.

With the engine running and the temperature only at about 40°C the lower mark on the dipstick applies, however, this mark serves only as a guide.

With the engine stopped the oil level in the transmission is essentially on the high mark



### First 100 then every 1000 operating hours

#### Oil: draining

##### WARNING



##### **Disposal of waste oil.**

*Dispose of waste oil into waste oil storage tanks. If storage tanks are not available, consult your Distributor or local authority for addresses of local designated disposal points. It is illegal to dispose of waste oil into drains or water courses, or to bury it.*

Oil changes must be carried out with the vehicle on level ground.

Run the engine until the transmission oil has reached operating temperature. Stop the engine.

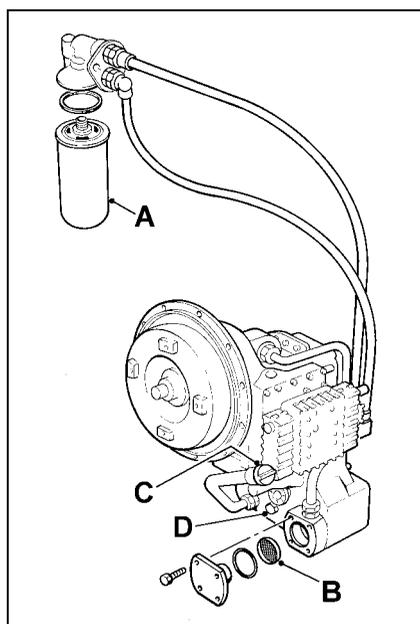
Place a suitable container beneath the drain plug (D).

Remove the dipstick (C). Remove the drain plug (D) and discard its sealing ring.

Drain oil.

Clean the drain plug (it is fitted with a magnetic insert), and the sealing surface of the housing.

Replace the drain plug using a new sealing ring



### Fine filter: change

Clean the area around the fine filter (pressure filter) **(A)** before removing it. Unscrew the filter and discard it. The existing filter **MUST NOT** be reused. Ensure that the new filter is in no way damaged

Before fitting a new filter, cover its gasket with a small amount of oil.

By hand, screw the new filter and gasket onto the housing until contact with the sealing surface is made, then tighten about a further third to half a turn

**Note:** The fine filter is equipped with a warning pressure switch. This warns the driver, by lighting up a signal on the transmission display unit, of a contaminated fine filter. The filter **MUST** then be replaced immediately

### Coarse filter: clean

Clean the area around the coarse filter **(B)** housing. Unscrew the cover and remove the filter. Clean the filter and replace it.

It is not necessary to use a new filter unless the existing one shows signs of damage.

### Oil: refilling

At every oil change the fine filter must be replaced and the coarse filter cleaned (as previously described)

Fill through the dipstick/filler tube with clean oil of the correct grade. As a guide, the capacity of the transmission, hoses and cooler will be about twenty litres.

Start the engine and run it at-idling speed. Ensure the gear selector is in neutral. Top up the oil to the dipstick upper mark of the 'COLD' zone.

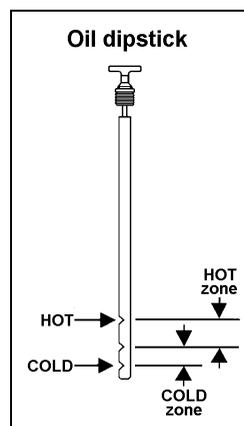
Fully depress the foot brake, select forward gear, and apply maximum engine speed. This will raise the oil temperature to about 80°C

*Measuring the oil level at 80°C is critical*

With the temperature at about 80°C the upper mark 'HOT' on the dipstick applies. This mark must not be exceeded.

With the engine running and the temperature only at about 40°C the lower mark 'COLD' on the dipstick applies. This serves as a guide only for the starting procedure (AEB).

At every oil change the AEB (Automatic determination of filling parameters) must be carried out



### **Calibration using AEB starter**

The AEB (automatic determination of the filling parameters) must be started after each oil change, or the installation of a new transmission unit, or its electronics.

The AEB is actuated by a unit that plugs into the transmission wiring loom. This unit puts the transmission electronics into a learning mode that will help to produce the optimum performance from the transmission

*Proceed as follows:*

Warm up the transmission oil.

To do this, apply the foot operated service brake positively, select forward gear, and apply maximum engine speed.

**IMPORTANT !** *Ensure that no personnel are standing to the front of the machine in the `at risk` area before selecting gear.*

The transmission maximum operating temperature is 100°C, but because the temperature falls rapidly during calibration take the temperature to a gauge reading of 115°C

Also, when the oil temperature approaches 115°C, move the FNR selector to neutral and apply maximum engine speed for approx. 30-60 seconds. This will ensure that all the oil throughout the transmission is being warmed.

Repeat this sequence for at least 6 cycles to ensure that all transmission oil is at maximum operating temperature before calibration commences.

Turn off the engine and plug in the AEB Starter to the diagnostic connection X25 on the wiring loom.

Apply the parking brake and position the FNR lever in neutral.

Start the engine and allow to idle. If the display shows PL press the AEB starter button for 2 seconds.

ST will be shown if all is ok, and automatic fine tuning of the transmission will begin.

If the engine speed is allowed to vary outside the lower or upper limit, the display will indicate accordingly.

The display will show the adjustment of the internal clutch packs indicated by K1,K2, KR etc until OK is displayed, which means that AEB calibration has been successful.

Turn off the ignition and remove the AEB starter.

**Note:** Commence calibration with the transmission oil as warm as possible to prevent the temperature falling outside the lower operating parameter. This procedure may take several attempts before full calibration is achieved.

## Fan drive belt

**Every 50 operating hours, or weekly**

### Check belt tension

**WARNING** *If the fan drive belt shows any signs of wear, damage or stretching, it should be replaced*



To ensure maximum belt life, it is recommended that a belt tensioner gauge is used to check the belt tension. Fit the gauge (**A**) at the centre of the longest free length and check the tension. If a "Burroughs" gauge is used, the correct tension is 355N (80lbf) 36kgf. If the tension is 220N (50lbf) 22kgf or below, adjust it to 355N (80lbf) 36kgf as indicated below:

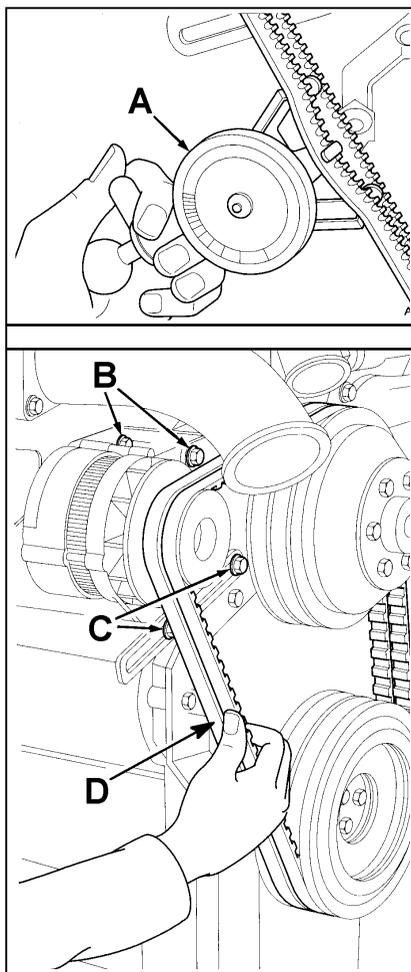
If a gauge is not available, press down the belt with the thumb at the centre of the longest free length and check the deflection (**D**). With moderate thumb pressure – 45N (10lbf) 4,5kgf – the correct deflection of the belt is 10mm (3/8 in).

### Fan drive belt: adjustment

Loosen the pivot fasteners (**B**) of the alternator and the adjustment link fasteners (**C**).

Change the position of the alternator to give the correct tension. Tighten the pivot fasteners of the alternator and the adjustment link fasteners.

Check the belt tension again to ensure that it is still correct. If a new belt is fitted, the belt tension must be checked again after the first 20 hours of operation.



## Engine lubricating oil

### Every 10 operating hours, or daily

#### Check engine oil level

##### WARNING



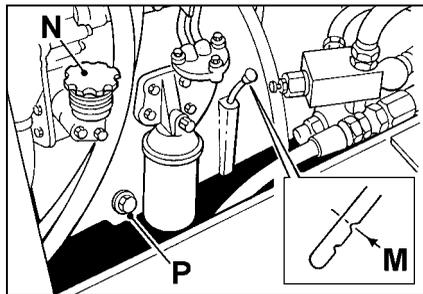
*Lubrication oil cleanliness is vital for the successful operation of the engine. The oil should be stored under the cleanest possible conditions. When changing or topping-up oil, use only clean receptacles*

*Do not allow the oil to come into contact with the rubber hoses on the engine.*

Park the dump truck on level ground to ensure that the reading on the dipstick is accurate

Do not check oil level until the engine has been stopped for 2 minutes

Remove and clean dipstick (**M**), then check that the oil is at the full mark. If level is low, top up through the filler (**N**) to the full mark with clean oil of the correct grade. **DO NOT OVER FILL.**



*(For correct grade of engine oil, see “specifications”)*

##### WARNING



*Do not exceed the correct level of lubricating oil in the sump. If there is too much lubricating oil, the excess must be drained to the correct level. An excess of lubricating oil could enter the breather valve. This could cause the engine speed to increase rapidly without control.*

### Every 250 operating hours

#### Change engine lubricating oil

##### WARNING



*Dispose of waste oil into waste oil storage tanks, If storage tanks are not available, consult your Distributor or local authority for addresses of local designated disposal points. It is illegal to dispose of waste oil into drains or water courses, or to bury it.*

Operate the engine until it is warm.

Stop the engine; remove the sump drain plug (**P**) and its “O” ring. Drain oil from sump.

Ensure that the “O” ring is not damaged. Fit the drain plug and its “O” ring and tighten the plug to 34Nm (25lbf ft) 3,5kgf m.

Fill the sump through the filler (**N**) to the mark (**M**) on the dipstick with new and clean oil of an approved grade. *(For correct grade of engine oil, see “specifications”).*

## Change lubricating oil filter canister

### WARNING



*Discard the used canister and oil in a safe place and in accordance with local regulations*

*The canister contains a valve and special tube to ensure that lubricating oil does not drain from the filter. Therefore, ensure that the correct Perkins engine canister is used.*

*Park the dump truck on level ground to ensure that the reading on the dipstick is accurate*

Put a tray under the filter to retain spilt lubricating oil.

Remove the filter canister (**R**) with a strap wrench or similar tool. Discard the canister.

Ensure that the adaptor (**S**) is secure in the filter head.

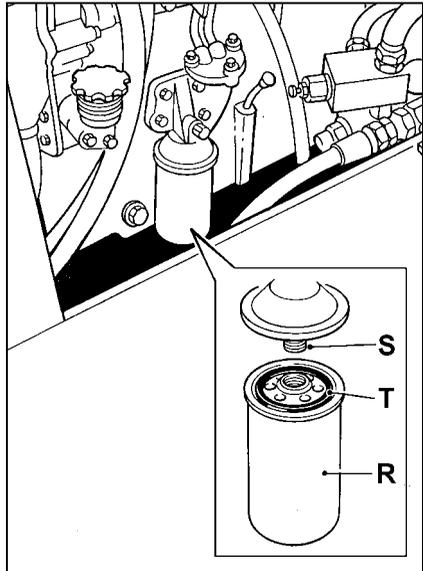
Clean the filter head

Add clean engine lubricating oil to the new canister. Allow the oil enough time to pass through the filter element.

Lubricate the top of the canister seal (**T**) with clean engine lubricating oil.

Fit the new canister and tighten it by hand only. Do not use a strap wrench.

Ensure that there is lubricating oil in the sump.



To prevent the engine from starting, disconnect the electrical stop control of the fuel injection pump. Turn the starter key to operate the starter motor until oil pressure is obtained. Oil pressure is indicated when the warning light is extinguished or by a reading on the gauge. Re-connect the electrical stop control of the fuel injection pump.

Start the engine and check for oil leakage from the filter. When the engine has cooled, check the oil level on the dipstick and put more oil into the sump, if necessary.

**Fuel system****Every 10 operating hours, or daily****Check fuel tank level**

Fill the fuel tank at the end of each day to reduce overnight condensation within the tank.

**To fill the tank:****WARNING**

*Never mix gasoline or any other fuel mixes to diesel fuel because of increased fire or explosion risks.*

*Never remove the filler cap (A) with the engine running.*

*Never smoke when refilling the tank. Always keep control of the filler pump nozzle.*

Stop the engine. Apply the parking brake.

Clean the area around the filler cap (A).

Remove the cap

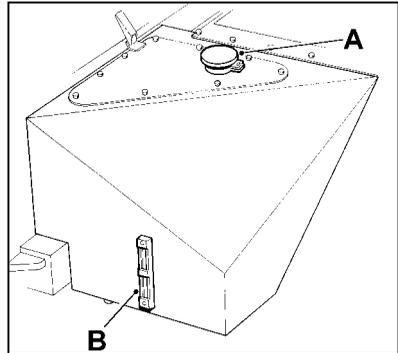
Fill the tank with diesel fuel.

**Note:** The gauge (B) gives an indication as to how low the fuel is, but does not show how full the tank is.

**WARNING**

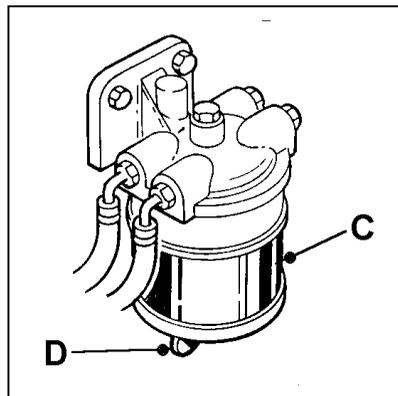
*Do not fill the tank to capacity, but allow room for expansion. Wipe up spilt fuel immediately, otherwise paintwork will be damaged*

Replace the filler cap (A).

**Check fuel pre-filter for water**

If there is sediment in the glass bowl (C), drain as follows:

Loosen the drain (D) at the bottom of the filter and allow the water/fuel to drain into a suitable container. Retighten the drain (D) when uncontaminated fuel begins to flow.



**First 50 operating hours**

When your new engine has run for 50 operating hours, following service procedures should be carried out.

**Clean pre-filter**

(see "Every 250 operating hours")

**Change fuel filter**

(see "Every 250 operating hours")

**Clean fuel lift pump strainer**

(see "Every 250 operating hours")

**Every 250 operating hours****Clean pre-filter**

**WARNING** Clean the area surrounding the pre-filter before removing



Loosen the drain (**F**) and drain all the contents of the filter into a suitable container.

Hold the base of the filter (**G**) while unscrewing the retaining bolt (**H**).

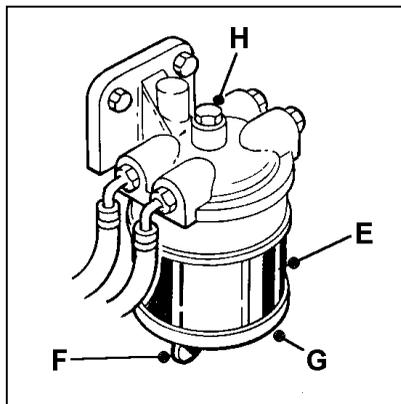
Remove the filter base and the glass bowl (**E**). Take care to collect all of the seals.

Using clean diesel fuel and a lint free cloth, clean the inside of the glass bowl (**E**), the base and the inside of the filter head.

Check the condition of the seals. Renew if necessary.

Reassemble the filter.

Eliminate air from the filter and fuel system.  
(See "Bleeding the fuel system")



## Change fuel filter

**WARNING** Discard used fuel filters and any spilt fuel in a safe place and in accordance with local regulations.

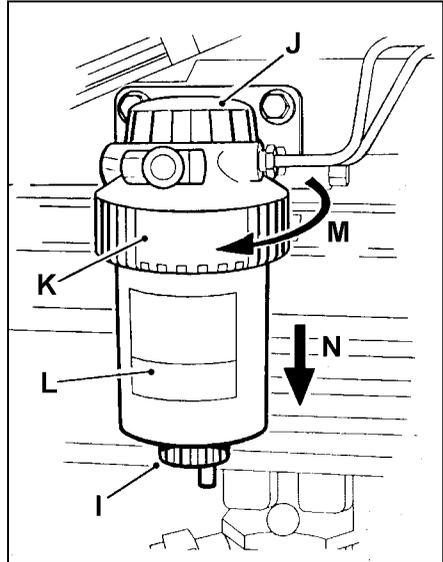


Renew a canister as follows:  
Thoroughly clean the outside surfaces of the fuel filter assembly.

Loosen the drain device **(I)** at the bottom of the canister and allow the water/fuel to drain into a suitable container.

**Note:** If the filter does not have a drain device fitted release the cap **(J)** on top of the filter head. Remove the nylon insert to lower the level of the fuel in the filter canister. This will prevent fuel spill when the clamp ring **(K)** is released.

Support the filter canister **(L)** and rotate the clamp ring to the left **(M)** and remove the clamp ring.



Remove the canister from the filter head by a direct pull downwards **(N)**, and discard the old canister.

Ensure the filter head is clean. Push the new canister fully into the filter head.

Support the canister, fit the clamp ring and rotate it to the right to fasten the canister to the head.

If the nylon insert was removed to lower the fuel level in the filter, ensure that it is fitted correctly and fit the cap.

Eliminate the air from the fuel filter (see *"Bleeding the fuel system"*)

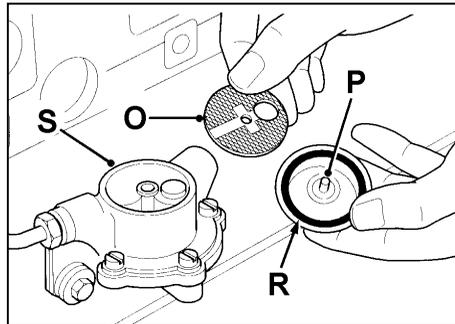
## Fuel lift pump

Clean the gauze strainer as follows:

Release the fastener **(P)** and remove the cover and the joint **(R)** from the top of the fuel lift pump **(S)**. Remove the gauze strainer **(O)**. On some engines it will be necessary to remove the small heat shield which is fitted above the pump.

Wash carefully all of the sediment from the lift pump body.

Clean the gauze strainer, the joint and the cover.



Assemble the lift pump. Use a good joint and ensure that the lift pump body and cover are fitted together correctly because leakage at this point will let air into the fuel system. Fit the heat shield, if one is fitted.

Eliminate the air from the fuel system through the filter vent point. (see “Bleeding the fuel system”)

### Bleeding the fuel system

**WARNING** *If your skin comes into contact with high-pressure fuel, obtain medical assistance immediately.*



If air enters the fuel system, it must be removed before the engine can be started.

Air can enter the system if:

- The fuel tank is drained during normal operation.
- The low-pressure fuel pipes are disconnected.
- A part of the low pressure fuel system leaks during engine operation.

In order to eliminate air from the fuel system, proceed as follows:

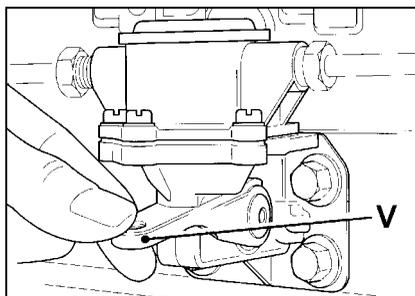
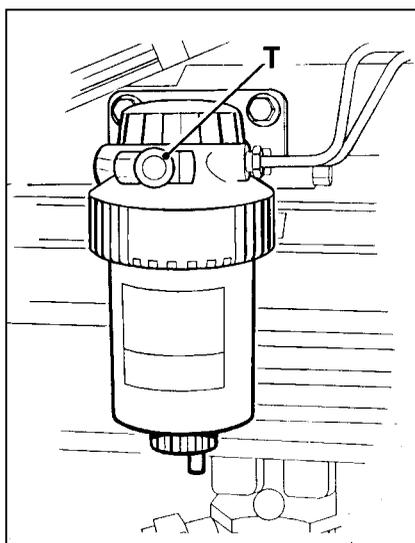
Vent screws are not fitted to the fuel injection pump. Air will usually be removed from the fuel pump automatically.

**WARNING** *If the fuel system is empty or if the canister of the fuel filter has been renewed, it will be necessary to eliminate air from the fuel system especially the fuel injection pump*

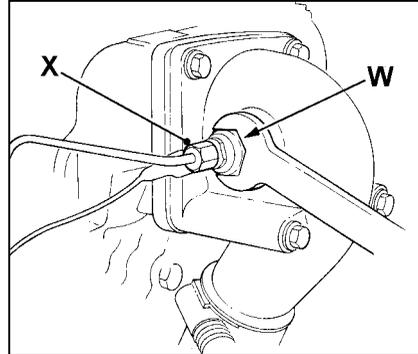


Loosen the vent screw (**T**) on the main filter. Operate the priming lever of the fuel lift pump (**V**) until fuel, free of air, comes from the banjo bolt. Tighten the vent screw

**Note:** If the drive cam of the fuel lift pump is at the point of maximum lift, it will not be possible to operate the priming lever. In this situation, the crankshaft must be rotated one revolution.



**WARNING** Use a spanner to prevent movement of the fuelled starting aid (W) when the union nut (X) is loosened or tightened



Loosen the union nut (X) at the fuelled starting aid and operate the priming lever of the fuel lift pump until fuel, free of air, comes from the connection. Tighten the union nut at the starting aid.

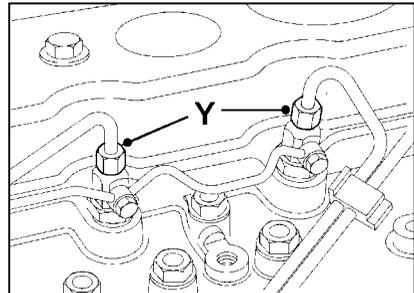
**Note:** For Lucas fuel injection pumps: Loosen the union nut at the outlet connection of the low pressure fuel leak off pipe which is on top of the governor housing of the fuel injection pump. Operate the priming lever of the fuel lift pump until fuel, free of air comes from the connection. Tighten the union nut.

**WARNING** Do not tighten the union nuts of the high-pressure pipes more than the recommended torque tension. If there is a leakage from the union nut, ensure that the pipe is correctly aligned with the atomiser inlet. Do not tighten the atomiser union nut more, as this can cause a restriction at the end of the pipe. This can affect the fuel delivery.



Loosen the high-pressure connections at two of the atomisers (Y).

**WARNING** Damage to the fuel injection pump, battery and starter motor can occur if the starter motor is used excessively to eliminate air from the fuel system.



Use the starter key to operate the starter motor until fuel, free from air, comes from the pipe connections. Tighten the high-pressure pipe connections to 27Nm (20lbf ft) 2.8kgf m. Return the key to the "OFF" position.

The engine is now ready to start.

**WARNING** Operate the engine at low idle speed for a minimum of two minutes immediately after air has been removed from the fuel system. This will ensure that the pump is free of air and prevent any damage to the pumps internal parts by metal to metal contact.



If the engine runs correctly for a short time and then stops or runs roughly, check for air in the fuel system. If there is air in the system, there is probably a leakage in the low-pressure system.

## Cooling system

**WARNING** *Never start the engine without liquid in the cooling system.*



*Antifreeze is toxic and must never be taken internally. If swallowed accidentally, medical advice should be sought immediately.*

*Antifreeze is corrosive to the skin. If it is spilled onto the skin, it should be washed off immediately. It is advisable to wear protective clothing and eye protection when handling antifreeze.*

*Keep antifreeze out of the reach of children.*

*Keep radiator fins and air intakes clean. Buckled fins and obstructed air intakes reduce the efficiency of the cooling system, and may lead to overheating.*

### **Every 10 operating hours, or daily**

#### **Check coolant level**

**WARNING** *If the dump truck is working continuously in hot weather, check the level several times a day. Never check the coolant level with the engine running.*



*The cooling system is pressurised, and care should be taken when removing the radiator cap, especially if the engine is hot.*

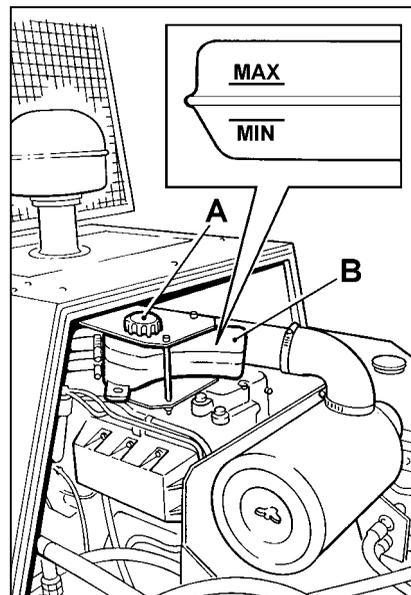
*Never fill up a hot system with cold coolant mixture; damage may be caused to the engine.*

Check and, if necessary, top-up the expansion tank **(B)**.

Top up to the MIN. mark shown on the side of the tank.

If coolant is required, remove the filler cap **(A)** SLOWLY. Providing that there is liquid in the expansion tank, the system can be topped up safely. If not, allow the engine to cool down completely before topping up.

If the cooling system has leaked due to hose failure or similar, it is extremely important that any lost coolant is replaced following repairs by a pre-mixed solution of antifreeze and water. DO NOT use anti-leak additives.



## Every 2000 operating hours, or 2 years

### Change engine coolant

**WARNING** *Never remove the expansion tank cap (A) with the engine running.*



*The cooling system is pressurised, and care should be taken when removing the expansion tank cap, especially if the engine is hot.*

Ensure the machine is parked on firm level ground. Apply the parking brake. Stop the engine.

Before opening any drain plugs, ensure a suitable container is placed on the ground to catch spilt coolant. When opening drain plugs, remember to stand on one side to avoid coolant, which will spill from the drain plug.

Remove the drain plug (C) from the bottom, and the vent plug (D) from the top of the radiator.

Remove the drain plug (E) from the side of the cylinder block to drain the engine. Ensure that the drain plug hole is not restricted.

Remove the filler cap (A) from the expansion tank.

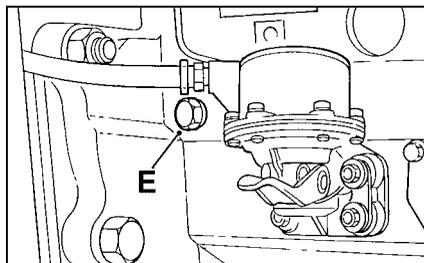
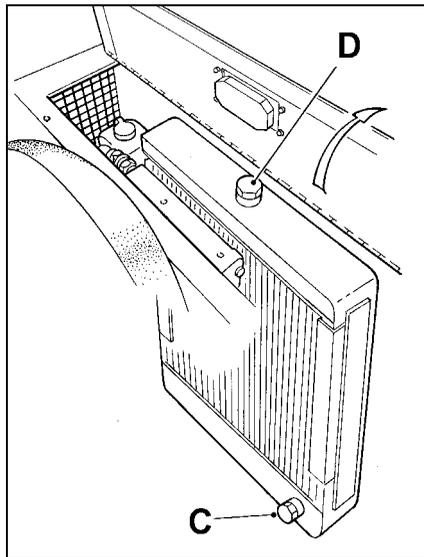
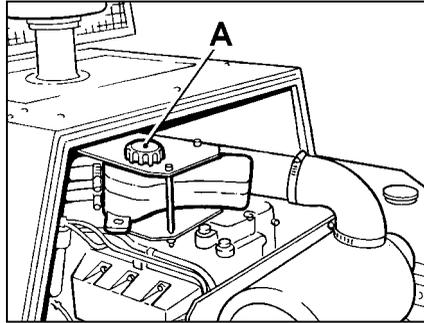
Flush the system with clean water.

Refit the drain and vent plugs.

Refill the system at the expansion tank using the correct mixture of coolant.

It is preferable to use a coolant mixture of 50% antifreeze and 50% water, as this will give greater protection against freezing and engine corrosion.

**WARNING** *Always use antifreeze of the correct type and grade. (For the correct type and grade, see "Specifications")*



### Check hoses

During the renewal of coolant, carefully examine the radiator hoses for cracks, cuts or damage.

## Air cleaner

**WARNING**  The service intervals specified below refer to machines working under normal service conditions. If the machine is working in extremes of dust, dirt, or other air contaminants, the air cleaner elements should be checked more frequently, and renewed as required.

Never remove air cleaner elements whilst the engine is running, and never run an engine without air cleaners fitted.

### Every 50 operating hours, or weekly

#### Check air cleaner

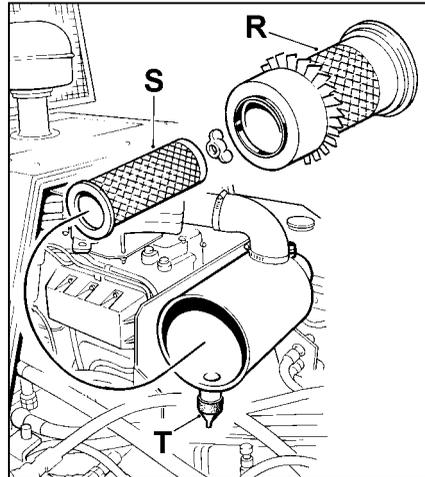
With engine stopped, remove the outer element (**R**).

Check the element for contamination and damage.

Check the inside of the filter housing for heavy build-up of dust.

If the element contamination or dust build-up is excessive, service the air cleaner as described in "Every 250 operating hours", below.

Check that the rubber dust collector (**T**) is not obstructed by debris



### Every 250 operating hours

#### Service air cleaner

With the engine stopped, remove both the outer element (**R**) and inner element (**S**).

Clean the inside of the air cleaner casing using a damp, lint free cloth, paying particular attention to the element seats.

If there is an excessive build-up of dust renew the outer element (**R**).

Check the condition of both outer and inner elements. Discard elements if they are excessively contaminated, distorted or bonded gaskets are loose.

Hold each element up to the light to check for damage or worn areas of paper. Refit new or existing elements as required.

**NEVER ATTEMPT TO CLEAN AND RE-USE AN ELEMENT.**

**Note:** Under normal operating conditions, a new inner element (**S**) **MUST** be fitted at every third change of an outer element (**R**).

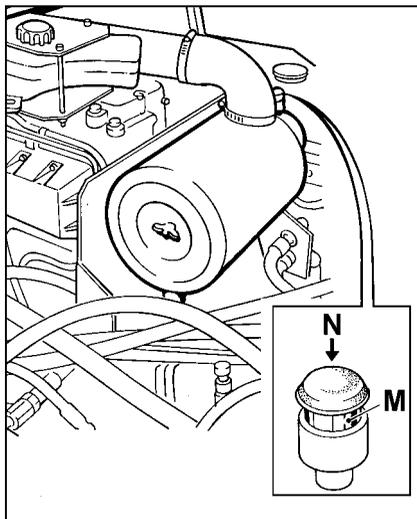
**Air cleaner blockage indicator**

The air cleaner blockage indicator will show RED through the clear panel **(M)** if the air supply to the engine is severely restricted.

**DO NOT RUN THE ENGINE WITH THE INDICATOR SHOWING RED. THIS WILL CAUSE DAMAGE TO THE ENGINE.**

Regular preventive servicing of the air cleaner, as previously described, will prevent this occurring.

**WARNING** *Always obey the "Air cleaner blocked" indicator IMMEDIATELY*



To reset the indicator; press IN the rubber **(N)**.

## Axles

### Every 10 operating hours

#### Check for oil leaks

Check for oil leaks around joints and seals

### First 50 operating hours

#### Change front and rear axle oil

Change the lubrication oils in both the front and rear axles

#### WARNING



*Dispose of waste oil into waste oil storage tanks. If storage tanks are not available, consult your Distributor or local authority for addresses of local designated disposal points. It is illegal to dispose of waste oil into drains or water courses, or to bury it.*

*Clean the area surrounding plugs before removing them.*

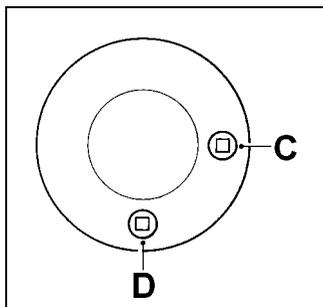
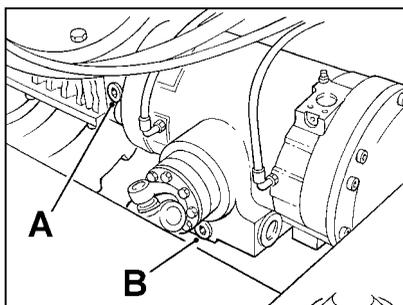
*When removing drain plugs, be sure to stand on one side to avoid oil which will spill from the hole*

Place a suitable container beneath the drain plug.

Remove the drain plug **(B)** and drain the oil from the differential casing. Replace the drain plug.

Refill at the level/filler plug **(A)** with clean oil of the correct grade.

Replace the filler plug.



Service each hub in turn.

Revolve the hub until the drain/level/filler plug is at the bottom **(D)**.

Remove the plug **(D)** and drain the oil.

Revolve the hub until the same hole is at the 3 or 9 o'clock position **(C)**.

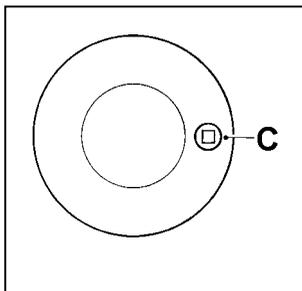
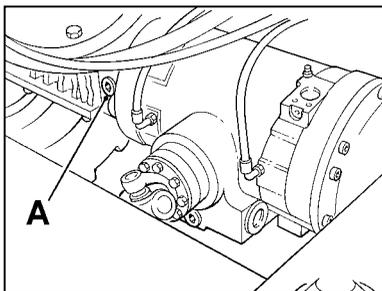
Refill with clean oil of the correct grade until the oil is level with the hole. Replace the plug.

*(For the correct type and grade of oil, see "Specifications".)*

**Every 250 operating hours****Check front and rear axle oil levels**

Park the machine on firm, level ground. Apply the parking brake. Stop the engine. Clean area surrounding plugs before removing them.

The differential case oil levels are correct when they reach the level plug holes **(A)**.



If the oil level is low, top up with clean oil of the correct grade

Check each hub oil level individually

Revolve the hub until the filler/level plug is at the 3 or 9 o'clock position **(C)**.

The hub oil levels are correct when they reach the filler/level plug holes.

If the oil level is low, top up with clean oil of the correct grade.

**Every 1000 operating hours****Change front and rear axle oil**

Use the procedure described in *"First 50 operating hours"* above

## **Wheels and Tyres**

**Every 10 operating hours, or daily**

### **Check wheel nuts**

Tighten these whenever necessary, every ten hours or daily.

After a wheel change, nuts should be checked several times a day until they maintain their correct setting. (*For wheel nut tightening torque, see "Specifications"*)

### **Check tyre pressures**

**WARNING** *When adding air to a tyre, ensure the area is clear of personnel*



*Never over-inflate a tyre beyond its specified pressure*

Check the pressures only when the tyres are cold. (*For correct tyre pressures, see "Specifications".*)

### **Check tyre condition**

Check the tyres for damage and deterioration.

## Batteries

### Safe handling of batteries

#### WARNING



The batteries contain a sulphuric acid electrolyte, which can cause severe burns and produce explosive gases.

Wear protective clothing, gloves and goggles when servicing the batteries. Avoid contact with the skin, eyes or clothing. If spilled onto the skin, flush immediately with cold water.

If splashed into the eyes, flush immediately with cold water for 15 minutes and get prompt medical attention.

Do not take internally. If accidentally swallowed, call a doctor immediately.

Do not use a naked flame or smoke near the batteries. Do not produce sparks with cable clamps when charging the batteries or starting the engine with a slave battery.

Always disconnect battery leads, or disengage the battery isolator **(B)**, before carrying out any maintenance to the electrical system.

### Every 250 operating hours

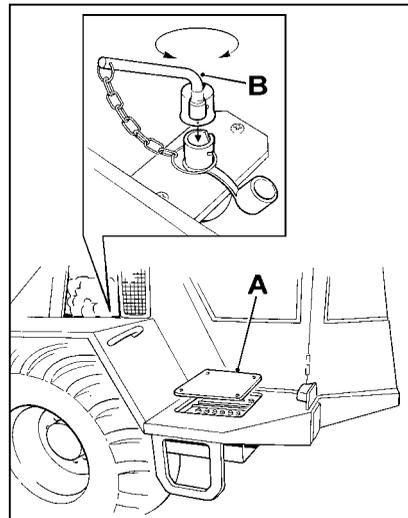
#### Check battery electrolyte levels

The batteries are situated under a plate on the right hand step of the cab **(A)**.

Ensure that the electrical connections are clean and tight, and coat the terminals with petroleum jelly to protect them from corrosion.

Remove battery filler plugs and check that the electrolyte level is between 6 – 9mm (0.25 – 0.37 in) above the tops of the separators.

If necessary, top-up with distilled water. Replace battery filler plugs.



#### Battery removal

*IF A BATTERY IS TO BE REMOVED FROM THE MACHINE, ENSURE THE FOLLOWING PROCEDURE IS USED.*

Switch off the engine and remove the starter key

Ensure all electrical circuits are switched off. Disengage the battery isolator **(B)**.

Remove the battery cover **(A)** and the battery clamp.

Disconnect the earth (-) lead from the battery before removing the positive (+) lead.

Lift the battery from the machine.

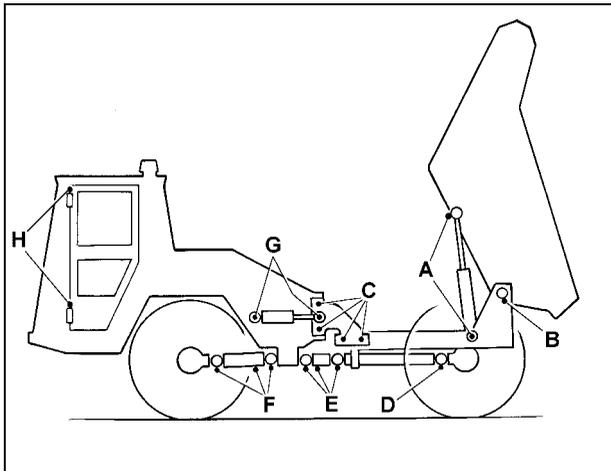
**When installing a battery the positive (+) lead MUST be connected first**

**Greasing****Every 50 operating hours or weekly****WARNING** *Always use lubricants of the grade specified.**Always lubricate and service **BEFORE** work commences, and **WITHIN** the periods specified.*Always clean grease nipples, filler caps, etc. **BEFORE** and **AFTER** lubrication.

Apply the grease gun until clean grease appears

**Location of grease points**

- A** Tipping rams
- B** Skip pivots
- C** Centre pivot
- D** Rear propeller shaft
- E** Centre propeller shaft
- F** Front propeller shaft
- G** Steer rams
- H** Door hinges
- #** Clean and lubricate all linkages not fitted with a grease nipple.



## Brakes

### Braking system

The braking system is designed to require the minimum of maintenance, and no defects should normally occur.

If air is present in the system, it will be indicated by sluggish response and by spongy action of the brake pedal.

Situated on top of the axles are brake bleed screws (**A, B & C**).

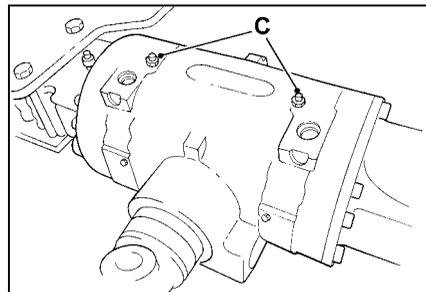
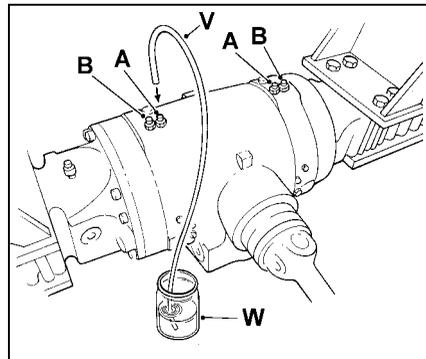
Both front and rear axles contain service brakes (**B & C**). However, the parking brake (**A**) only operates within the front axle.

### Bleeding the brake system

**WARNING** *Clean the areas surrounding bleed screws before servicing.*



*During the bleeding procedure some waste oil will be produced. Dispose of waste oil into waste oil storage tanks. If storage tanks are not available, consult your Distributor or local authority for addresses of local designated disposal points. It is illegal to dispose of waste oil into drains or water courses, or to bury it*



Check that the oil in the hydraulic tank is at the correct level.

Chock the dump truck wheels. Ensure the forward/reverse lever is in neutral.

Start the engine

*To bleed the parking brakes:*

Position the parking brake lever in the OFF position.

Attach a bleeder tube (**V**) to one of the two bleed screws (**A**) and immerse the other end of the tube in a small quantity of hydraulic oil contained in a glass jar (**W**).

Slacken the bleed screw. Hydraulic oil will now run into the jar. When the flow of oil contains no air bubbles, close the bleed screw. Remove the bleeder tube and lock the bleed screw.

Repeat the procedure on the other parking brake bleed screw (**A**).

*To bleed the service brakes:*

**Note:** This procedure requires two people. One person to operate the brake pedal and another person to bleed the brakes.

Position the parking brake lever in the ON position.

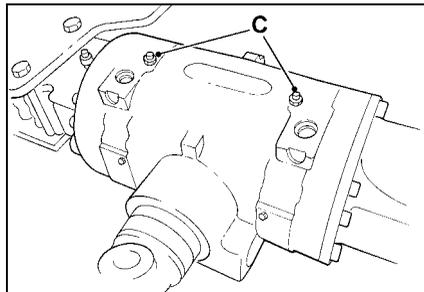
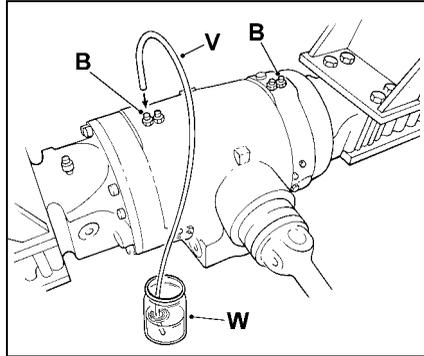
Attach a bleeder tube (**V**) to one of the two bleed screws (**B**) on the front axle. Immerse the other end of the tube in a small quantity of hydraulic oil contained in a glass jar (**W**).

Depress the brake pedal fully and hold it depressed while bleeding.

Slacken the bleed screw. Hydraulic oil will now run into the jar. When the flow of oil contains no air bubbles, close the bleed screw. Remove the bleeder tube and lock the bleed screw.

Repeat the procedure on the other front axle bleed screw (**B**), then the two bleed screws on the rear axle (**C**).

Check the oil level in the hydraulic tank and top up if necessary.



## Hydraulics

### Dumping hydraulic pressure

**WARNING**

*Always dump all hydraulic pressure from the system before servicing any hydraulic component.*

#### To dump pressure:

Ensure that the skip is fully lowered.

Stop the engine and apply the parking brake.

Operate the foot brake pedal fully several times

Move the skip control lever several times in each direction

### Safe working

**WARNING**

*Do not allow oils to come into regular contact with skin. This can lead to serious skin diseases. Medical evidence suggests they may include skin cancer.*

*Always wear protective gloves when handling oils for topping up, draining, or refilling*

*Always practise the greatest cleanliness when servicing hydraulic components.*

*Always clean the areas surround filler points, filters etc., before and after servicing.*

*Dispose of waste oil into waste oil storage tanks. If storage tanks are not available, consult your Distributor or local authority for addresses of local designated disposal points. It is illegal to dispose of waste oil into drains or water courses or to bury it.*

*When working on the hydraulic system, allow the hydraulic oil to cool before disconnecting any components or draining down the system.*

### General hydraulic system checks

- If the hydraulic system fails to operate completely, or does so extremely slowly, carry out the following checks.
- Check that the hydraulic tank is full of oil (*See Every 10 hour or daily servicing procedures for checking hydraulic oil level*)
- Check that the suction filter element has been regularly changed in accordance with the service schedule. If not, change the filter element.
- Check that the suction pipe is not blocked

- Check that no leaks are apparent on suction side of pump, as this could cause the pump to cavitate.
- Periodically check the hoses between the pump and the tank to ensure they are not deformed. Any deformation in the hoses may result in a restricted flow of fluid and damage to the pump.

### **Checking hydraulic pressures**

The complete hydraulic system is divided into four main sections, these are:

- Skip tipping/lowering
- Steering
- Service braking
- Parking braking

Each of these four sections require separate pressure testings, as follows:

#### ***Skip: tipping***

Fit a 200 Bar (3000 psi) gauge into the hydraulic system at the base (full bore) of one of the tipping rams.

With the engine running at full rpm, operate the tipping control lever until the rams are fully extended and the relief valve is 'blowing'.

With the relief valve 'blowing', read the pressure shown on the gauge; it should read 175 bar (2540 psi).

#### ***Skip: lowering***

Fit a 200 bar (3000 psi) gauge into the hydraulic system at the top (annulus) of one of the tipping rams.

With the engine running at full rpm, operate the tipping control lever until the skip is fully lowered and the relief valve is 'blowing'.

With the relief valve 'blowing', read the pressure shown on the gauge; it should read 35 bar (507 psi). If the gauge does not read this, then adjust the pressure regulating valve that is situated on top of the skip tipping valve.

#### ***Steering***

Fit a 200 bar (3000 psi) gauge into the hydraulic system at the base of a steer ram. With the engine running at full rpm, turn the steering wheel to 'full lock' and check that the reading on the gauge is showing 175 bar (2500 psi)

*If the gauge does not read as shown above, contact your distributor, as there may be a fault in the relief valve.*

The relief valves are pre-set by the manufacturer and should NOT be adjusted.

**Service brakes**

Fit a 200 bar (3000 psi) gauge into port A1 of the stac valve. With the engine running at full rpm, the gauge should fluctuate between 70 bar (1015 psi) and 90 bar (1305 psi).

If the figure is falls below 70 bar (1015psi), or the system can not hold the charge, then the low pressure switch will be activated at 60 bar (870 psi) and the brake warning light in the cab is illuminated.

*If the warning light illuminates, consult your distributor.*

**Parking brake**

Fit a 200 bar (3000 psi) gauge into the brake system at the 'T' piece fitting on the front axle.

With the engine running at full rpm, the gauge should read 20 bar (290 psi). This figure **MUST NOT** be exceeded, as this will cause the brake seals within the axle to burst

*If the gauge reads less than 20 bar (290 psi), consult your distributor.*

**Every 10 operating hours or daily****Check hydraulic oil level**

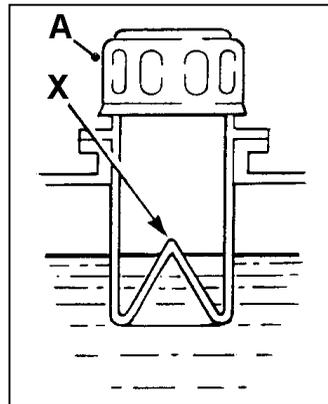
Do not check oil level before closing the tipping rams, and the engine has been stopped for two minutes.

Clean the area surrounding the filler cap **(A)** before removal.

The strainer has a cone **(X)** at its base. The oil level is correct when the top of the cone is just visible.

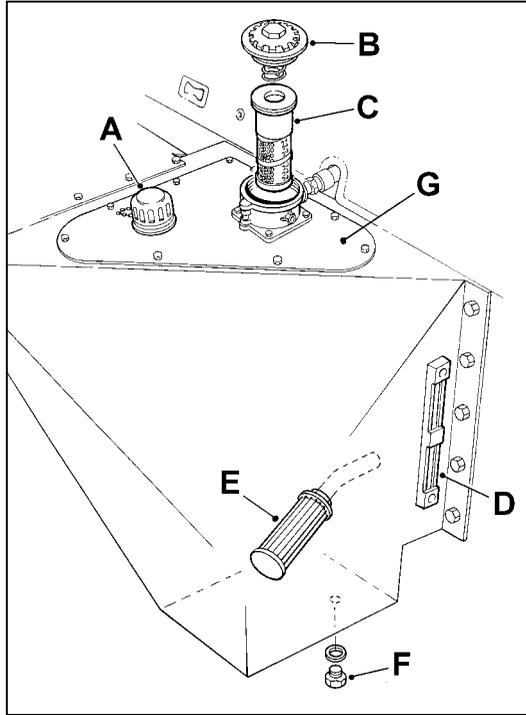
Do not over fill as this will cause leakage from the breather.

**Note:** The oil level sight glass on the side of the tank is to warn of the oil level being low. It does not show that the tank is full.



## Hydraulic tank

- A Filler cap
- B Filter head
- C Filter cartridge
- D Oil level sight glass
- E Strainer
- F Drain plug
- G Cover



### First 50 operating hours

#### Change hydraulic oil filter element

**WARNING** Before changing the filter element, stop the engine and dump hydraulic pressure.



Unscrew the filter head **(B)**. Remove and discard filter cartridge **(C)**.

Clean the joint areas and wipe them and the seal of a new cartridge with hydraulic oil.

Install the new cartridge **(C)** and screw on the filter head **(B)**.

Run the engine to circulate the oil.

Operate the skip tipping level to purge any air from the system.

Stop the engine and top up the tank as required with clean oil of the correct type and grade. (For correct type and grade of oil, see "Specifications")

Check hydraulic oil pressures. (See "Checking hydraulic pressures")

**Every 500 operating hours****Change hydraulic oil filter element**

Change the hydraulic oil filter element, using the procedure described in “*First 50 operating hours*”

**Every 1000 operating hours or yearly****Change hydraulic oil and filter element**

Run the engine and operate the hydraulics to warm the oil.

Fully close the tipping rams.

Stop the engine and dump hydraulic pressure

Disengage the battery isolator switch

**WARNING**

*Wear gloves when working with hydraulic oil. Do not allow hydraulic oil to come in contact with skin.*

*Clean the area surrounding the drain plug and the filler cap.*

*Before removing the drain plug ensure a suitable container is placed on the ground to catch the oil.*

*When removing the drain plug, be sure to stand on one side to avoid oil that will spill from the hole.*

Remove the drain plug **(F)** and its sealing washer. Allow the oil to drain from the tank.

Remove the tank cover **(G)** as follows....First disconnecting the hose from the filter housing, then remove the tank cover retaining screws. Lift off the cover complete with filler and filter.

Locate within the tank the strainer **(E)**. Pierce the strainer with a screwdriver and unscrew it. Discard the strainer. No attempt should be made at cleaning and reusing it.

Flush out the tank with clean hydraulic oil, taking extreme care to remove all dirt and foreign matter.

Fit a new strainer **(E)**.

Refit the drain plug **(F)** and its sealing washer.

Refit the tank cover **(G)**.

Change the hydraulic oil filter element, using the procedure described in “*First 50 operating hours*”

Refill the tank with clean oil of the correct type and grade. (*For the correct type and grade of oil, see “Specifications”*).

Run the engine to circulate the oil and operate the skip tipping lever to purge any air. Stop the engine and top up the tank as required.

Check hydraulic oil pressures. (*See “Checking hydraulic pressures”*).

**Centre yoke installation (pivot pins guide tool)**

**Installing horizontal pivot pins**

Position the yoke (1) within the rear chassis.

Thrust washers (10 & 11) are to be fitted at each end of the yoke. To calculate the thickness of the thrust washers proceed as follows:

Push the yoke backwards until it touches the rear member of the chassis (R).

Measure the distance between the front of the yoke and the chassis (S). Halve this dimension (to the nearest millimetre). The resulting figure is to be the thickness of the rear thrust washer (10).

Using grease to hold it in place, position thrust washer (10) onto the chassis.

Insert thrust washer (11) in front of the yoke.

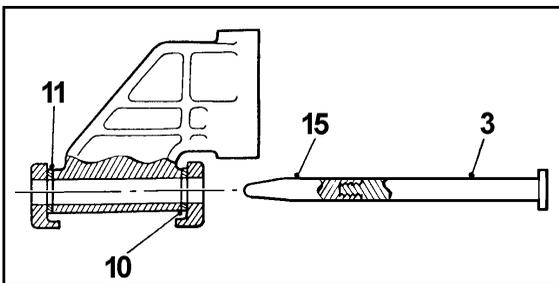
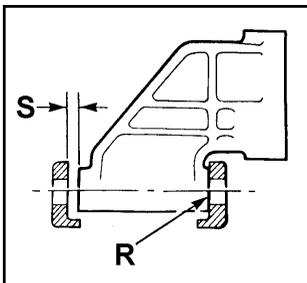
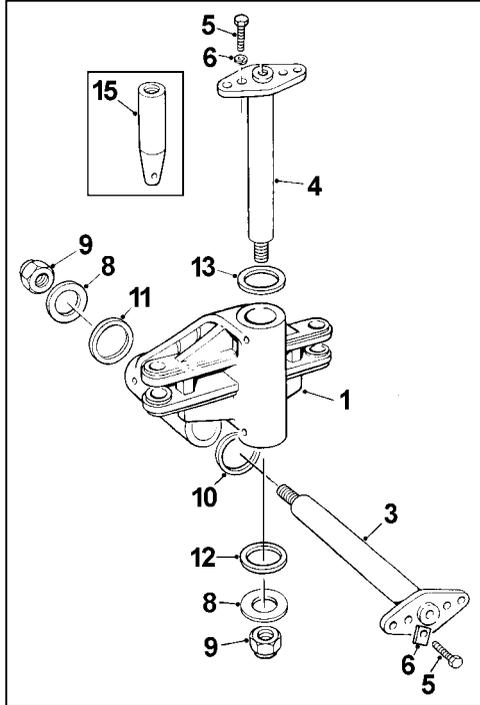
**IMPORTANT:** Thrust washer (11) must be of sufficient thickness to eliminate all horizontal float from the yoke.

Screw the guide (15) onto the pin (3).

From the rear of the chassis, insert the guide/pin through the chassis, thrust washers and yoke.

Secure the pin with screws (5), and washers (6).

Unscrew the guide from the pin and fit washer (8), nut (9).



### Installing vertical pivot pin

Bring the front and rear chassis together, so that the yoke sits on the pivot mount (**T**) of the rear chassis.

Measure the distance between the top of the yoke and the upper pivot mount (**U**). Halve this dimension (to the nearest millimetre). The resulting figure is to be the thickness of the lower thrust washer (**12**).

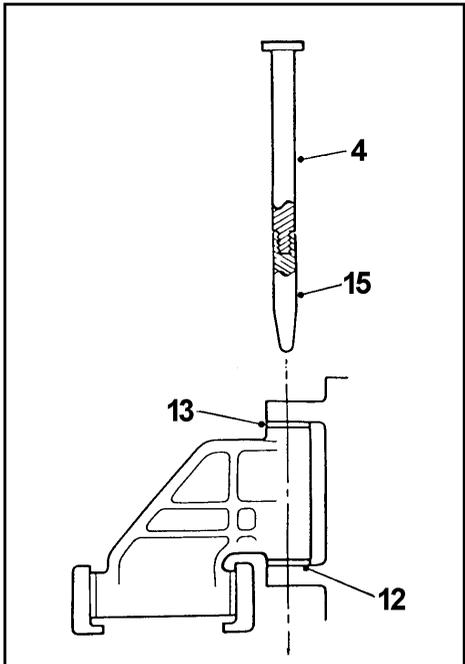
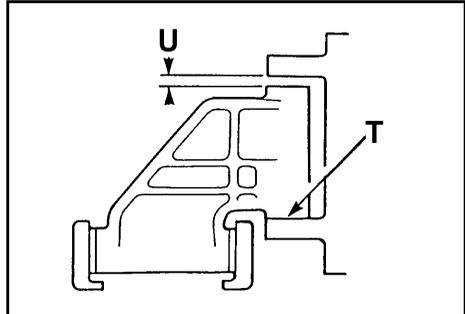
Insert thrust washer (**12**) beneath the yoke.

Insert thrust washer (**13**) above the yoke.

**IMPORTANT:** Thrust washer (**13**) must be of sufficient thickness to eliminate all vertical float from the yoke.

Screw the guide (**15**) onto the pivot pin (**4**) and insert downwards through the chassis, thrust washers and yoke.

Secure the pin in the same manner as horizontal pivot pin (**3**).



**Engine:-** Perkins 1004-40T Turbo-charged 4 Cylinder In-line Diesel Producing 75Kw @ 2200 r.p.m.  
Maximum Torque 402.5Nm @ 1400 r.p.m.

**Transmission:-** ZF Ergopower WG110 Full Power Shift. 6 Forward Speeds, 3 Reverse Speeds. Selectable between Fully Automatic or Manual via Rocker Switch

**Cooling:-** Liquid 50% Water with 50% Antifreeze Solution.

**Axles:-** Carraro Heavy Duty Rigid Axles with Limited Slip Differential to rear and integral Parking Brake fitted to front

**Brakes:-** Fail Safe Parking Brake, spring applied hydraulically powered off with Transmission Interlock to prevent driving through. Dual Circuit hydraulic powered brakes fully enclosed oil immersed within front and rear axles.

**Hydraulics:-** Gear Pump mounted on Transmission with Load Sensing and Priority Flow on Demand to Steering. Thermostatically Controlled Oil Cooler to maintain system temperature at optimum levels. Tank mounted Return Line Filter with Bypass Indicator and Fluid Level Gauge on Tank. Double Acting Twin Steer Rams with Emergency Steering provided by Dual Displacement Steering Valve. Hydraulic Tank Capacity 130 litres.

**Fuel System:-** Direct Injection DPA Fuel Injection Pump delivering fuel to four Mechanical Atomisers, designed to give optimum performance using low sulphur fuel with a minimum Cetane No. of 45. Integral ESOS fitted to pump. Mechanical Fuel Lift Pump with priming lever fitted to engine protected by internal removable strainer. Canister type Fuel Filter fitted protected by in-line Agglomerator and Water Trap provided with Drain Tap. Fuel Tank Capacity 143 Litres.

**Tyres:-** 600/55-26.5, 16 ply standard flotation tyres to minimise ground pressure. Tyre Pressure 3.4 Bar, 50 p.s.i.

**Noise levels:-** 85LpA, 106LwA.

**Maximum Payload:-** 10,000Kg

**Unladen Weight:-** 6960Kg

**Skip Capacity:-** 5.6m<sup>3</sup> (to ISO 6483)

**Skip Tipping Time:-** 8 seconds.

**Tipping Angle:-** 75<sup>0</sup>

**Turning Circle:-** 12335 mm

**Turning Radius:-** 6168 mm.

**Approach Angle:-** 28<sup>0</sup>

**Trailing Angle:-** 84<sup>0</sup>

**Steering/Articulation Angle:-** 34<sup>0</sup> per side

**Oscillation Angle:-** 12<sup>0</sup> per side

**Hydraulic Pressures:-** 175 Bar, 2540 p.s.i.

**Tyre Pressures:-** 3.4 Bar, 50 p.s.i.

**Wheel nut torque:-** 500Nm

**LUBRICANTS & FLUIDS****TOTAL OILS (Factory Fill)**

**Engine Oil:-** Rubia XT 15/W40, Approximate capacity 9.4 litres

**Transmission Oil:-** Total Fluid ATX, Approximate capacity 17 litres

**Cooling:-** Liquid 50% Water with 50% Antifreeze Solution.  
Approximate capacity 18.5 litres

**Axles:- (Hubs & Differential Casing)** Transmission MP or  
Universal Plant Oil (fill to level plugs)

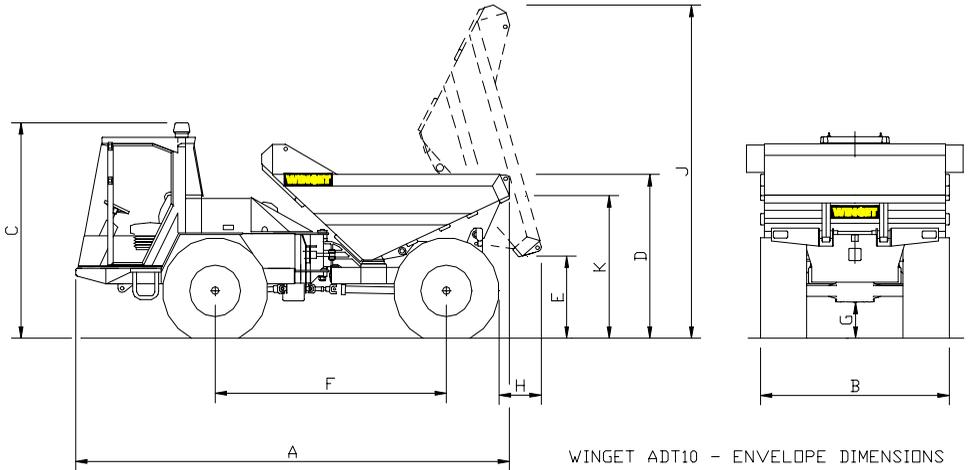
**Braking System:-** Azzola ZS46 (fed from main system)

**Hydraulic System:-** Azzola ZS46, Approximate capacity 160 litres

**Fuel System:-** Low sulphur Diesel Fuel, Approximate capacity 143  
litres.

**General Greasing:-** Multis EP2

## DIMENSIONS



WINGET ADT10 - ENVELOPE DIMENSIONS

<b>A</b>	Overall Length	5720mm
<b>B</b>	Overall Width	2490mm
<b>C</b>	Overall Height	2825mm
<b>D</b>	Loading Height	2147mm
<b>E</b>	Discharge Height	1090mm
<b>F</b>	Wheelbase	3050mm
<b>G</b>	Ground Clearance	470mm
<b>H</b>	Rear Discharge Distance	556mm
<b>J</b>	Max Skip Height (Tipped)	4366mm
<b>K</b>	Skip Lip to Ground	1880mm

## Transmission fault finding

### Introduction

#### Abbreviations

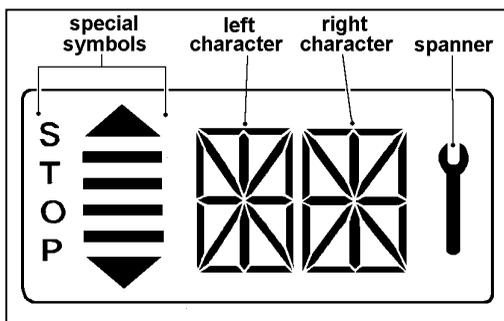
O.C.	Open circuit
S.C.	Short circuit
OP-Mode	Operating mode
TCU	Transmission control unit

#### Display

If a fault is detected, the display shows a spanner symbol.

The type of fault is shown as a code by the left and right characters. (These code numbers only appear when the gear selector is in neutral).

If more than one fault is detected, each fault code is shown for about a second.



#### Fault codings

The following pages list several fault codings that can be resolved by the vehicle's operator. There are other codings that are not listed here. If a coding should appear that is not listed, then consult your Distributor for advice.

Fault Code (hex)	MEANING OF THE FAULT CODE Possible reason for fault detection	Reaction of the TCU	Possible steps to repair
A5	Transmission Warning Light check. (Bulb on warning light cluster fails to illuminate.)	-----	<ul style="list-style-type: none"> <li>• Replace 'blown' bulb</li> <li>• Check for loose connection to bulb</li> </ul>
91	<p>S.C. TO GROUND AT RELAY REVERSE. WARNING ALARM. TCU detected a wrong voltage at the output pin, that looks like a s.c. to vehicle ground.</p> <ul style="list-style-type: none"> <li>• <i>Cable is defective and is contacted to vehicle ground.</i></li> <li>• <i>Backup alarm device has an internal defect.</i></li> <li>• <i>Connector pin is contacted to vehicle ground.</i></li> </ul>	<p>Backup alarm will be on until TCU power down even if fault vanishes (loose connection). OP-Mode: normal.</p>	<ul style="list-style-type: none"> <li>• Check the cable from TCU to the backup alarm device.</li> <li>• Check the connectors from backup alarm device to TCU.</li> <li>• Check the resistance of the backup alarm device.</li> </ul>
92	<p>S.C. TO BATTERY VOLTAGE AT RELAY REVERSE WARNING ALARM. TCU detected a wrong voltage at the output pin, that looks like a s.c. to battery voltage.</p> <ul style="list-style-type: none"> <li>• <i>Cable is defective and is contacted to battery voltage.</i></li> <li>• <i>Backup alarm device has an internal defect.</i></li> <li>• <i>Connector pin is contacted to battery voltage.</i></li> </ul>	<p>No reaction. OP-Mode: normal.</p>	<ul style="list-style-type: none"> <li>• Check the cable from TCU to the backup alarm device.</li> <li>• Check the connectors from backup alarm device to TCU.</li> <li>• Check the resistance of the backup alarm device.</li> </ul>
93	<p>O.C. AT RELAY REVERSE WARNING ALARM. TCU detected a wrong voltage at the output pin, that looks like an o.c. for this output pin.</p> <ul style="list-style-type: none"> <li>• <i>Cable is defective and has no connection to TCU.</i></li> <li>• <i>Backup alarm device has an internal defect.</i></li> <li>• <i>Connector has no connection to TCU.</i></li> </ul>	<p>No reaction. OP-Mode: normal.</p>	<ul style="list-style-type: none"> <li>• Check the cable from TCU to the backup alarm device.</li> <li>• Check the connectors from backup alarm device to TCU.</li> <li>• Check the resistance of the backup alarm device.</li> </ul>

# TECHNICAL INFORMATION

## 4.7

Fault Code (hex)	MEANING OF THE FAULT CODE Possible reason for fault detection	Reaction of the TCU	Possible steps to repair
B7	<p>OVERTEMP. SUMP TCU measured a temperature in the oil sump that is over the allowed threshold.</p>	<p>No reaction. OP-Mode: normal.</p>	<ul style="list-style-type: none"> <li>• Cool down machine.</li> <li>• Check oil level.</li> <li>• Check temperature sensor.</li> </ul>
B8	<p>OVERTEMP. CONVERTER OUPUT. TCU measured a temperature at the converter ouput that is over the allowed threshold.</p>	<p>No reaction. OP-Mode: normal.</p>	<ul style="list-style-type: none"> <li>• Cool down machine.</li> <li>• Check oil level.</li> <li>• Check temperature sensor.</li> </ul>
BA	<p>DIFFERENTIAL PRESSURE OIL FILTER. TCU measured a voltage at differential pressure switch out of the allowed range.</p> <ul style="list-style-type: none"> <li>• <i>Oil filter is polluted.</i></li> <li>• <i>Cable/connector is broken or cable/connector is contacted to battery voltage or vehicle ground.</i></li> <li>• <i>Differential pressure switch is defective.</i></li> </ul>	<p>No reaction. OP-Mode: normal</p>	<ul style="list-style-type: none"> <li>• Check oil filter.</li> <li>• Check wiring from TCU to differential pressure switch.</li> <li>• Check differential pressure switch (measure resistance).</li> </ul>
D3	<p>LOW POWER AT BATTERY. Measured voltage at power supply is lower than 24V.</p>	<p>Shift to neutral. OP-Mode: TCU shutdown.</p>	<ul style="list-style-type: none"> <li>• Check power supply battery.</li> <li>• Check cables from batteries to TCU.</li> <li>• Check connectors from batteries to TCU.</li> </ul>
D4	<p>HIGH POWER AT BATTERY. Measured voltage at power supply is higher than 24V.</p>	<p>Shift to neutral. OP-Mode: TCU shutdown.</p>	<ul style="list-style-type: none"> <li>• Check power supply battery.</li> <li>• Check cables from batteries to TCU.</li> <li>• Check connectors from batteries to TCU.</li> </ul>

# TECHNICAL INFORMATION

4.8

Fault Code (hex)	MEANING OF THE FAULT CODE Possible reason for fault detection	Reaction of the TCU	Possible steps to repair
F3	APPLICATION ERROR. Something of this application is wrong.  <i>(This fault occurs only if a test engineer did something wrong in the application of the vehicle.)</i>	Transmission stay neutral. OP-Mode: TCU Shutdown.	<ul style="list-style-type: none"><li>• Replace TCU.</li></ul>









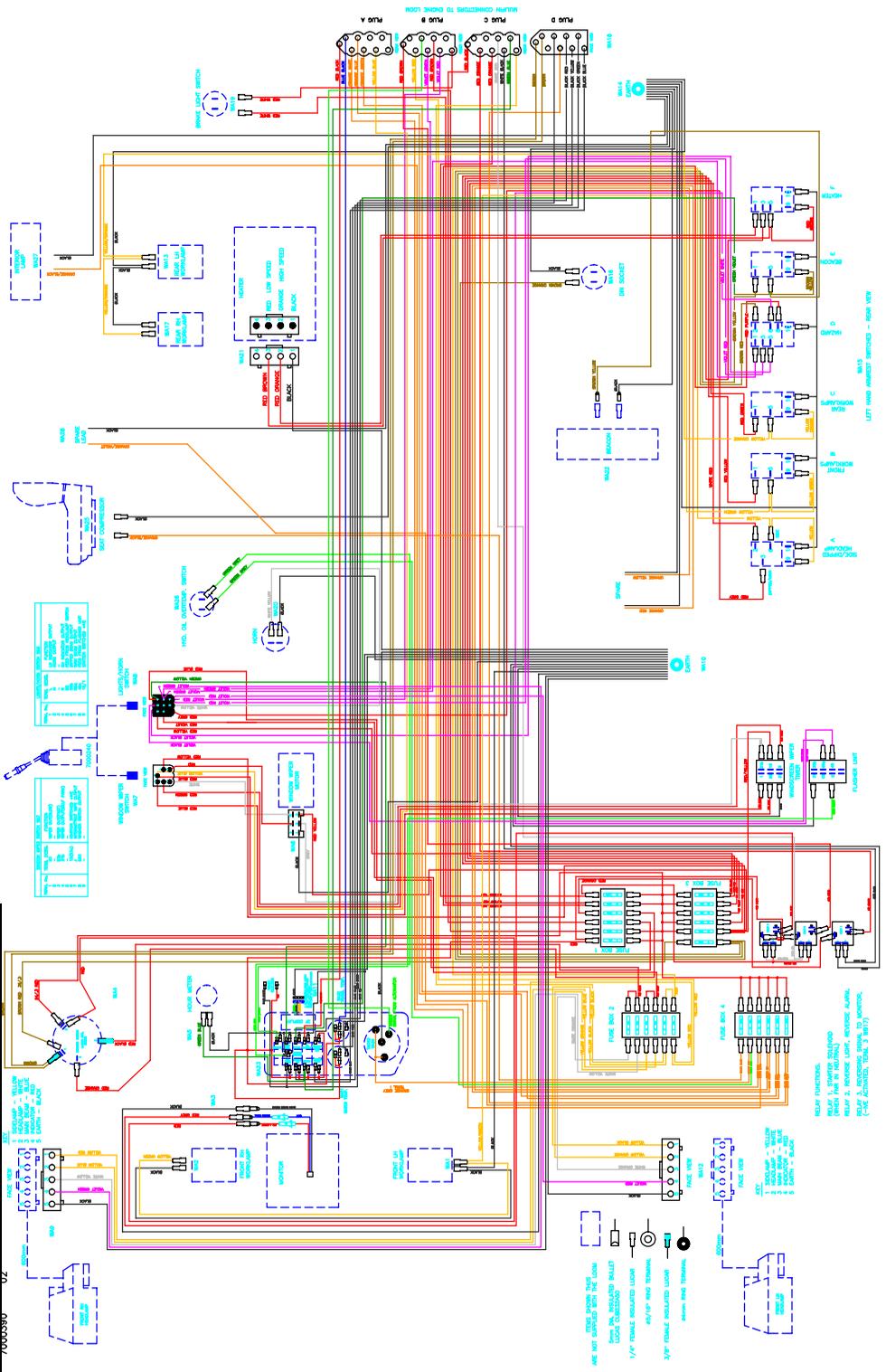
## WIRE RUN LIST ADT 10 CAB LOOM 7000390 M/C S/No 1002-1007

FROM	TO	COLOUR	SIZE	REMARKS
Fuses In	WA4 pin2	RD		See separate sheet
FB1 F1 out	WA23	RD	14/0.3	Positive common cluster
FB1 F1 out	Relay 2 com	RD/BN	14/0.3	
FB1 F2 out	WA18	RD/BN	28/0.3	ESOS
FB1 F3 out	WA18	RD/BK	28/0.3	Thermostart
FB1 F3 in	WA4 pin 3	RD/BK	28/0.3	
FB1 F4 out	Relay 1 com	RD/OR	28/0.3	Starter Solenoid
FB1 F4 in	WA4 pin 4	RD/OR	28/0.3	
FB1 F5 out	WA19	RD/WH	14/0.3	Brake stop switch
FB1 F5 out	WA15	RD/VI	14/0.3	Non permanent hazard switch
FB1 F6 out	WA18	RD/OR	14/0.3	Feed to ZF unit
FB1 F6 out	Relay 2 C+	RD/OR	14/0.3	
FB2 F1 top	WA18	YW/RD	9/0.3	R/H S/L R
FB2 F1 top	WA9 pin 1	YW/RD	9/0.3	R/H S/L F
FB2 F2 top	WA18	YW/BK	9/0.3	L/H S/L R
FB2 F2 top	WA12 pin 1	YW/BK	9/0.3	L/H S/L F
FB2 F3 top	WA9 pin 2	YW/BL	14/0.3	Dip beam R/H
FB2 F4 top	WA12 pin 2	YW/OR	14/0.3	Dip beam L/H
FB2 F5 top	WA9 pin 3	WH/YW	14/0.3	Main beam R/H
FB2 F6 top	WA12 pin 3	WH/OR	14/0.3	Main beam L/H
FB2 F1 bot	WA15	YW	14/0.3	
FB2 F2 bot	FB2 F1 bot	YW	14/0.3	
FB2 F2 bot	Relay 4 OC	YW	14/0.3	
FB2 F3 bot	WA8 pin 6	RD/VI	28/0.3	56b dip/main switch
FB2 F3 bot	FB2 F4 bot	RD/VI	28/0.3	Link
FB2 F5 bot	WA8 pin 7	RD/BL	28/0.3	56a Dip/main switch
FB2 F5 bot	FB2 F6 bot	RD/BL	28/0.3	Link
FB3 F1 out	WA15	BN/RD	14/0.3	Hazard permanent
FB3 F1 out	WA16	BN/OR	14/0.3	Din socket
FB3 F1 out	WA15	BN/YW	28/0.3	Beacon switch
FB3 F1 in	WA4 pin 1	BN/RD	35/0.3	Permanent live
FB3 F2 out	WA6 pin 3	RD/YW	14/0.3	Window wiper positive
FB3 F2 out	Washer T pin 15	RD/YW	14/0.3	Ignition switched positive
FB3 F2 out	WA7 pin 6	RD/YW	14/0.3	Window wiper switch
FB3 F3 out	WA15	RD/GY	9/0.3	Heater switch
FB3 F4 out	WA15 pin 1	RD/YW	9/0.3	Front work light switch
FB3 F5 out	WA15 pin 1	RD/GN	9/0.3	Rear work light switch
FB3 F6 out	WA15 pin 3	RD/WH	9/0.3	Headlamp switch
FB3 F6 out	Relay 5 oc	RD/GN	28/0.3	
FB3 F6 out	WA8 pin 9	RD/YW	28/0.3	15/1 dip/main switch
FB4 F1 out	WA28	OR/VI	14/0.3	Spare feed under seat
FB4 F1 out	WA18 con D	OR/BN	14/0.3	Feed to oil cooler at rear

FROM	TO	COLOUR	SIZE	REMARKS
FB4 F2 out	WA18 con A	OR/BL	14/0.3	Feed to R/H armrest
Fb4 F2 out	WA18 con A	OR/GN	14/0.3	Feed to R/H armrest
FB4 F3 out	WA15	OR/YW	14/0.3	Feed to L/H armrest
FB4 F3 out	WA15	OR/RD	14/0.3	Feed to L/H armrest
FB4 F4 out	WA27	OR/BK	9/0.3	Feed to roof mounted lamp
FB4 F4 out	WA18 con A	OR/WH	14/0.3	Spare feed to rear of machin
FB4 F5 out	WA26	GN/GY	9/0.3	Feed to oil temp switch
FB4 F5 out	WA29	OR/GY	14/0.3	Feed to tacho
FB4 F6 out	WA25	OR/BK	14/0.3	Feed to seat compressor
Relay 1 oc	WA18 con C	RD/OR	28/0.3	
Relay 1 c+	WA18 con C	WH/BK	9/0.3	Control from ZF
Relay 1 c-	WA10	BK	9/0.3	ER
Relay 1 c-	Relay 4 c-	BK	9/0.3	ER
Relay 2 oc	WA18 con B	RD/BN	14/0.3	Feed to reverse alarm & ligh
Relay 2 c+	Relay 3 c+	RD/OR	14/0.3	
Relay 2 c-	WA18 con C	WH/RD	9/0.3	Control from ZF
Relay 2 c-	Relay 3 c-	WH/RD	9/0.3	
Relay 2 com	Relay 3 com	RD/BN	14/0.3	
Relay 3 oc	WA3	RD/GY	14/0.3	
Relay 4 com	WA8 pin 5	RD/GY	28/0.3	Relay to 56 headlamp switch
Relay 4 com	Relay 5 com	RD/GY	28/0.3	Link
Relay 4 c+	WA15	RD/Vi	9/0.3	
Relay 4 c+	Relay 5 c+	RD/VI	9/0.3	
Relay 4 c-	Relay 5 c-	BK	9/0.3	ER
Flasher pin 31	WA10	BK	14/0.3	ER
Flasher pin 49	WA15 pin 6	VI/WH	14/0.3	To hazard switch
Flasher pin 49a	WA8 pin 8	VI/BK	14/0.3	Flasher output
Flasher pin C	WA23	GN/OR	9/0.3	Indicator warning lamp
Wiper T pin 31	WA10	BK	14/0.3	ER
Wiper T pin 86	WA7 pin 8	RD/BL	9/0.3	Washer switch
Wiper T pin I	WA7 pin 7	RD/BL	14/0.3	Intermittent wipe
Wiper T pin S	WA7 pin 4	RD/GN	14/0.3	31b wiper switch
Wiper T pin 31b	WA6 pin 2	GY	14/0.3	
WA1	WA15 pin 5	YW/GN	9/0.3	Front L/H work light
WA1	WA2	YW/GN	9/0.3	Front R/H work light
WA1	WA2	BK	9/0.3	ER
WA1	WA10	BK	9/0.3	ER
WA3	WA4 pin 2	RD	14/0.3	Camera ign positive unfused
WA3	WA10	BK	14/0.3	ER
WA4 pin 1	WA18 con D	BN	35/0.3	Main feed
WA4 pin 1	WA18 con D	BN	35/0.3	Main feed
WA5	WA23	GN/BL	9/0.3	Hour positive from alternator
WA5	WA23	BK	9/0.3	ER
WA6 pin 1	WA10	BK	14/0.3	ER
WA6 pin 5	WA7 pin 3	RD	14/0.3	

FROM	TO	COLOUR	SIZE	REMARKS
WA6 pin 6	WA7 pin 1	WH	14/0.3	
WA7 pin 8	WA18 con A	YW/BL	9/0.3	Washer switch
WA8 pin 2	WA20	WH/YW	9/0.3	Horn switch
WA8 pin 7	WA23	GN/YW	9/0.3	Main beam warning lamp
WA8 pin 4	WA9 pin 4	VI/GN	9/0.3	Indicator R/H front
WA8 pin 4	WA18 con B	VI/GN	9/0.3	Indicator R/H rear
WA8 pin 4	WA15	VI/GN	9/0.3	Hazard switch
WA8 pin 1	WA12 pin 4	VI/RD	9/0.3	Indicator L/H front
WA8 pin 1	WA18 con B	VI/RD	9/0.3	Indicator L/H rear
WA8 pin 1	WA15	VI/RD	9/0.3	Hazard switch
WA8 pin 8	WA15	VI/BK	14/0.3	Hazard switch
WA9 pin 5	WA10	BK	14/0.3	ER
WA10	WA11 pin 4	BK	9/0.3	ER
WA10	WA12 pin 5	BK	14/0.3	ER
WA10	WA20	BK	9/0.3	ER
WA10	WA21 pin 1	BK	9/0.3	ER
WA10	WA23	BK	14/0.3	ER
WA10	WA29	BK	14/0.3	ER
WA13	WA15	YW/OR	9/0.3	Rear L/H work light
WA13	WA17	YW/OR	9/0.3	Rear R/H work light
WA13	WA17	BK	9/0.3	ER
WA13	WA14	BK	9/0.3	ER
WA14	WA15	BK	14/0.3	ER
WA14	WA16	BK	14/0.3	ER
WA14	WA22	BK	28/0.3	ER
WA14	WA25	BK	14/0.3	ER
WA14	WA27	BK	9/0.3	ER
WA14	WA15	BK	14/0.3	ER (spare feeds)
WA14	WA15	BK	14/0.3	ER (spare feeds)
WA14	WA28	BK	14/0.3	ER (spare feeds)
WA15	WA23	GN/VI	9/0.3	Warning lamp on cluster beacon
WA15	WA15	YW/OR	9/0.3	Warning lamp on switch rear work light
WA15	WA15	YW/GN	9/0.3	Warning lamp on switch front work light
WA15	WA15	YW	9/0.3	Warning lamp on switch headlamp
WA15	WA15	RD/BN	9/0.3	Warning lamp on switch heater
WA15	WA15	BN/YW	9/0.3	Warning lamp on switch beacon
WA15	WA15	BK	9/0.3	Negatives on switch's warning lamps (D/chain)
WA15	WA22	BN/YW	28/0.3	Beacon lamp

FROM	TO	COLOUR	SIZE	REMARKS
WA15	WA21 pin 3	RD/BN	9/0.3	Heater medium speed
WA15	WA21 pin 2	RD/OR	9/0.3	Heater fast speed
WA18 con B	WA19	RD/WH	14/0.3	Brake lights
WA18 con A	WA32	BL/BK	9/0.3	Transmission temp gauge
WA18 con D	WA23	BK/RD	9/0.3	Stak valve warning lamp
WA18 con D	WA23	BK/OR	9/0.3	Water temperature warning lamp
WA18 con D	WA23	BK/YW	9/0.3	Oil pressure warning lamp
WA18 con D	WA31	BK/GN	9/0.3	Water temperature gauge (analogue)
WA18 con D	WA23	BK/BL	9/0.3	Transmission warning
WA18 con A	WA23	RD/BK	9/0.3	Parking brake warning lamp
WA18 con C	WA23	GN/BL	9/0.3	Battery charge warning lamp
WA18 con B	Wa29	GN	9/0.3	Signal to tacho
WA23	WA26	GN/GY	9/0.3	Hydraulic oil temp warning
WA23	WA31	RD	9/0.3	Feed to water temp gauge
WA23	WA31	BK	9/0.3	ER
WA23	WA33	BK/OR	9/0.3	
WA23	WA33	RD	9/0.3	
WA23	WA23	RD	14/0.3	Warning lamp cluster positives (D/Chain)
WA23	WA23	BK	14/0.3	Warning lamp cluster negative's (D/Chain)
WA29	WA29	OR/GY	14/0.3	
WA31	WA32	RD	9/0.3	
WA31	WA32	BK	9/0.3	



RELAY FUNCTIONING:  
 RELAY 1: FORWARD LIGHTS  
 RELAY 2: REVERSE LIGHTS  
 RELAY 3: REVERSE ALARM  
 RELAY 4: REVERSE ALARM  
 RELAY 5: REVERSE ALARM  
 RELAY 6: REVERSE ALARM  
 RELAY 7: REVERSE ALARM  
 RELAY 8: REVERSE ALARM

**WINGET**

PC 13.02.02  
 PC 13.02.02

ADT10 CAB LOOM (SERIAL NO 1008 OWNERS)

# WIRE RUN LIST ADT 10 CAB LOOM 7000390 S/NO 1008 ONWARDS

FROM	TO	COLOUR	SIZE	REMARKS
Fuses In	WA4 pin2	RD		See separate sheet
FB1 F1 out	WA23	RD	14/0.3	Positive common cluster
FB1 F1 out	Relay 2 com	RD/BN	14/0.3	
FB1 F2 out	WA18	RD/BN	28/0.3	ESOS
FB1 F3 out	WA18	RD/BK	28/0.3	Thermostart
FB1 F3 in	WA4 pin 3	RD/BK	28/0.3	
FB1 F4 out	Relay 1 com	RD/OR	28/0.3	Starter Solenoid
FB1 F4 in	WA4 pin 4	RD/OR	28/0.3	
FB1 F5 out	WA19	RD/WH	14/0.3	Brake stop switch
FB1 F5 out	WA15	RD/VI	14/0.3	Non permanent hazard switch
FB1 F6 out	WA18	RD/OR	14/0.3	Feed to ZF unit
FB1 F6 out	Relay 2 C+	RD/OR	14/0.3	
FB2 F1 top	WA18	YW/RD	9/0.3	R/H S/L R
FB2 F1 top	WA9 pin 1	YW/RD	9/0.3	R/H S/L F
FB2 F2 top	WA18	YW/BK	9/0.3	L/H S/L R
FB2 F2 top	WA12 pin 1	YW/BK	9/0.3	L/H S/L F
FB2 F3 top	WA9 pin 2	YW/BL	14/0.3	Dip beam R/H
FB2 F4 top	WA12 pin 2	YW/OR	14/0.3	Dip beam L/H
FB2 F5 top	WA9 pin 3	WH/YW	14/0.3	Main beam R/H
FB2 F6 top	WA12 pin 3	WH/OR	14/0.3	Main beam L/H
FB2 F1 bot	WA15 pin 6	YW	14/0.3	Side Lights
FB2 F2 bot	FB2 F1 bot	YW	14/0.3	
FB2 F2 bot	Relay 4 OC	YW	14/0.3	
FB2 F3 bot	WA8 pin 6	RD/VI	28/0.3	56b dip/main switch
FB2 F3 bot	FB2 F4 bot	RD/VI	28/0.3	Link
FB2 F5 bot	WA8 pin 7	RD/BL	28/0.3	56a Dip/main switch
FB2 F5 bot	FB2 F6 bot	RD/BL	28/0.3	Link
FB3 F1 out	WA15	BN/RD	14/0.3	Hazard permanent
FB3 F1 out	WA16	BN/OR	14/0.3	Din socket
FB3 F1 out	WA15	BN/YW	28/0.3	Beacon switch
FB3 F1 in	WA4 pin 1	BN/RD	35/0.3	Permanent live
FB3 F2 out	WA6 pin 3	RD/YW	14/0.3	Window wiper positive
FB3 F2 out	Washer T pin 15	RD/YW	14/0.3	Ignition switched positive
FB3 F2 out	WA7 pin 6	RD/YW	14/0.3	Window wiper switch
FB3 F3 out	WA15	RD/GY	9/0.3	Heater switch
FB3 F4 out	WA15 pin 1	RD/YW	9/0.3	Front work light switch
FB3 F5 out	WA15 pin 1	RD/GN	9/0.3	Rear work light switch
FB3 F6 out	WA15 pin 2	WH/RD	28/0.3	Headlamp switch
FB3 F6 out	WA8 pin 9	RD/YW	28/0.3	15/1 dip/main switch
FB4 F1 out	WA28	OR/VI	14/0.3	Spare feed under seat
FB4 F1 out	WA18 con D	OR/BN	14/0.3	Feed to oil cooler at rear

FROM	TO	COLOUR	SIZE	REMARKS
FB4 F2 out	WA18 con A	OR/BL	14/0.3	Feed to R/H armrest
Fb4 F2 out	WA18 con A	OR/GN	14/0.3	Feed to R/H armrest
FB4 F3 out	WA15	OR/YW	14/0.3	Feed to L/H armrest
FB4 F3 out	WA15	OR/RD	14/0.3	Feed to L/H armrest
FB4 F4 out	WA27	OR/BK	9/0.3	Feed to roof mounted lamp
FB4 F4 out	WA18 con A	OR/WH	14/0.3	Spare feed to rear of machin
FB4 F5 out	WA26	GN/GY	9/0.3	Feed to oil temp switch
FB4 F5 out	WA29	OR/GY	14/0.3	Feed to tacho
FB4 F6 out	WA25	OR/BK	14/0.3	Feed to seat compressor
Relay 1 oc	WA18 con C	RD/OR	28/0.3	
Relay 1 c+	WA18 con C	WH/BK	9/0.3	Control from ZF
Relay 1 c-	WA10	BK	9/0.3	ER
Relay 1 c-	Relay 4 c-	BK	9/0.3	ER
Relay 2 oc	WA18 con B	RD/BN	14/0.3	Feed to reverse alarm & ligh
Relay 2 c+	Relay 3 c+	RD/OR	14/0.3	
Relay 2 c-	WA18 con C	WH/RD	9/0.3	Control from ZF
Relay 2 c-	Relay 3 c-	WH/RD	9/0.3	
Relay 2 com	Relay 3 com	RD/BN	14/0.3	
Relay 3 oc	WA3	RD/GY	14/0.3	
Relay 4 com	WA8 pin 5	RD/GY	28/0.3	Relay to 56 headlamp switch
Relay 4 com	Relay 5 com	RD/GY	28/0.3	Link
Relay 4 c+	WA15	RD/VI	9/0.3	
Relay 4 c+	Relay 5 c+	RD/VI	9/0.3	
Relay 4 c-	Relay 5 c-	BK	9/0.3	ER
Flasher pin 31	WA10	BK	14/0.3	ER
Flasher pin 49	WA15 pin 6	VI/WH	14/0.3	To hazard switch
Flasher pin 49a	WA8 pin 8	VI/BK	14/0.3	Flasher output
Flasher pin C	WA23	GN/OR	9/0.3	Indicator warning lamp
Wiper T pin 31	WA10	BK	14/0.3	ER
Wiper T pin 86	WA7 pin 8	RD/BL	9/0.3	Washer switch
Wiper T pin I	WA7 pin 7	RD/BL	14/0.3	Intermittent wipe
Wiper T pin S	WA7 pin 4	RD/GN	14/0.3	31b wiper switch
Wiper T pin 31b	WA6 pin 2	GY	14/0.3	
WA1	WA15 pin 5	YW/GN	9/0.3	Front L/H work light
WA1	WA2	YW/GN	9/0.3	Front R/H work light
WA1	WA2	BK	9/0.3	ER
WA1	WA10	BK	9/0.3	ER
WA3	WA4 pin 2	RD	14/0.3	Camera ign positive unfused
WA3	WA10	BK	14/0.3	ER
WA4 pin 1	WA18 con D	BN	35/0.3	Main feed
WA4 pin 1	WA18 con D	BN	35/0.3	Main feed
WA5	WA23	GN/BL	9/0.3	Hour positive from alternator
WA5	WA23	BK	9/0.3	ER
WA6 pin 1	WA10	BK	14/0.3	ER
WA6 pin 5	WA7 pin 3	RD	14/0.3	

FROM	TO	COLOUR	SIZE	REMARKS
WA6 pin 6	WA7 pin 1	WH	14/0.3	
WA7 pin 8	WA18 con A	YW/BL	9/0.3	Washer switch
WA8 pin 2	WA20	WH/YW	9/0.3	Horn switch
WA8 pin 7	WA23	GN/YW	9/0.3	Main beam warning lamp
WA8 pin 4	WA9 pin 4	VI/GN	9/0.3	Indicator R/H front
WA8 pin 4	WA18 con B	VI/GN	9/0.3	Indicator R/H rear
WA8 pin 4	WA15	VI/GN	9/0.3	Hazard switch
WA8 pin 1	WA12 pin 4	VI/RD	9/0.3	Indicator L/H front
WA8 pin 1	WA18 con B	VI/RD	9/0.3	Indicator L/H rear
WA8 pin 1	WA15	VI/RD	9/0.3	Hazard switch
WA8 pin 5	Wa15 pin 3	RD/GY	28/0.3	Dipped/Main Beam switch
WA8 pin 8	WA15	VI/BK	14/0.3	Hazard switch
WA9 pin 5	WA10	BK	14/0.3	ER
WA10	WA11 pin 4	BK	9/0.3	ER
WA10	WA12 pin 5	BK	14/0.3	ER
WA10	WA20	BK	9/0.3	ER
WA10	WA21 pin 1	BK	9/0.3	ER
WA10	WA23	BK	14/0.3	ER
WA10	WA29	BK	14/0.3	ER
WA13	WA15	YW/OR	9/0.3	Rear L/H work light
WA13	WA17	YW/OR	9/0.3	Rear R/H work light
WA13	WA17	BK	9/0.3	ER
WA13	WA14	BK	9/0.3	ER
WA14	WA15	BK	14/0.3	ER
WA14	WA16	BK	14/0.3	ER
WA14	WA22	BK	28/0.3	ER
WA14	WA25	BK	14/0.3	ER
WA14	WA27	BK	9/0.3	ER
WA14	WA15	BK	14/0.3	ER (spare feeds)
WA14	WA15	BK	14/0.3	ER (spare feeds)
WA14	WA28	BK	14/0.3	ER (spare feeds)
WA15	WA23	GN/VI	9/0.3	Warning lamp on cluster beacon
WA15	WA15	YW/OR	9/0.3	Warning lamp on switch rear work light
WA15	WA15	YW/GN	9/0.3	Warning lamp on switch front work light
WA15	WA15	YW	9/0.3	Warning lamp on switch headlamp
WA15	WA15	RD/BN	9/0.3	Warning lamp on switch heater
WA15	WA15	BN/YW	9/0.3	Warning lamp on switch beacon
WA15	WA15	BK	9/0.3	Negatives on switch's warning lamps (D/chain)

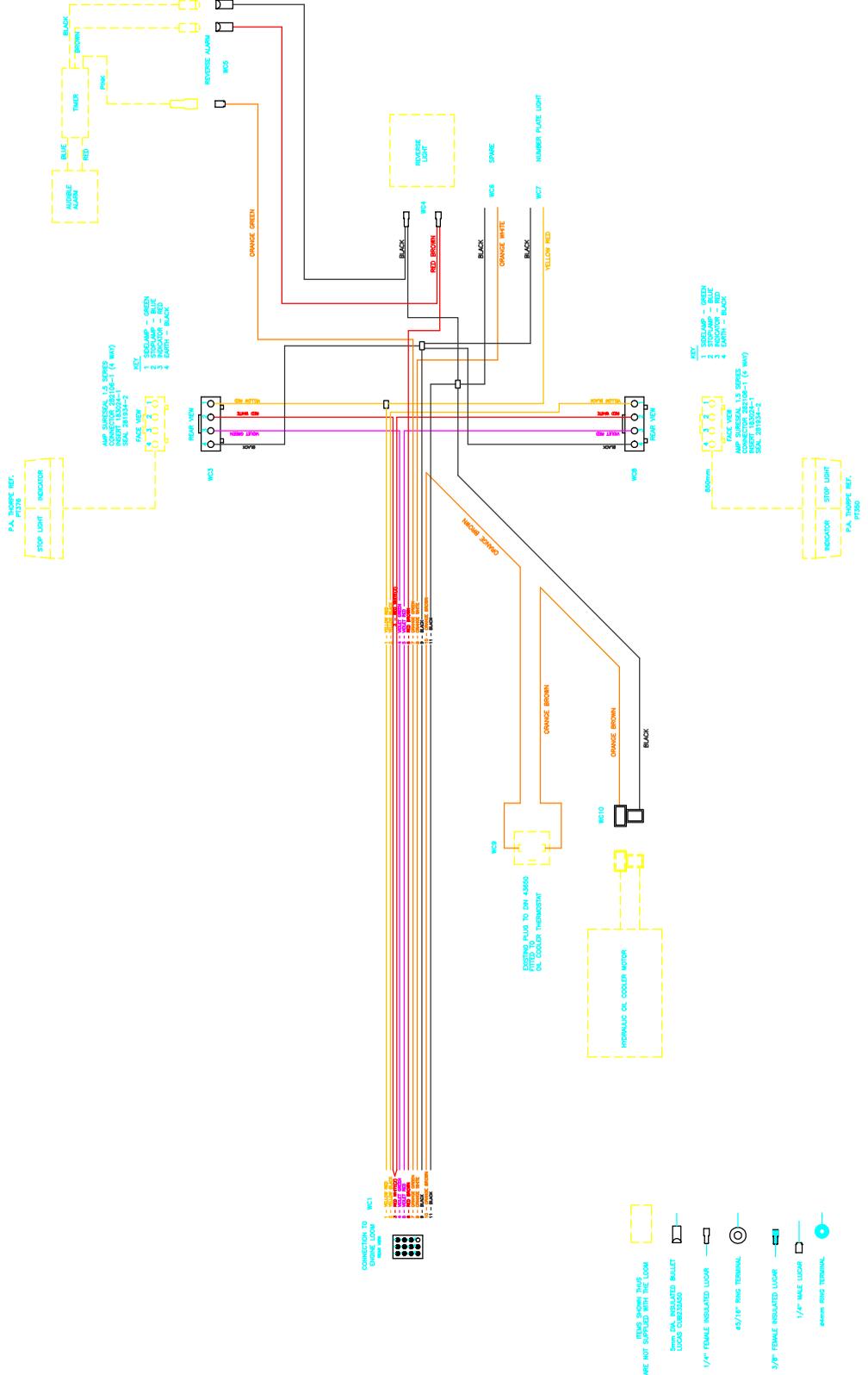
FROM	TO	COLOUR	SIZE	REMARKS
WA15	WA22	BN/YW	28/0.3	Beacon lamp
WA15	WA21 pin 3	RD/BN	9/0.3	Heater medium speed
WA15	WA21 pin 2	RD/OR	9/0.3	Heater fast speed
WA18 con B	WA19	RD/WH	14/0.3	Brake lights
WA18 con A	WA32	BL/BK	9/0.3	Transmission temp gauge
WA18 con D	WA23	BK/RD	9/0.3	Stak valve warning lamp
WA18 con D	WA23	BK/OR	9/0.3	Water temperature warning lamp
WA18 con D	WA23	BK/YW	9/0.3	Oil pressure warning lamp
WA18 con D	WA31	BK/GN	9/0.3	Water temperature gauge (analogue)
WA18 con D	WA23	BK/BL	9/0.3	Transmission warning
WA18 con A	WA23	RD/BK	9/0.3	Parking brake warning lamp
WA18 con C	WA23	GN/BL	9/0.3	Battery charge warning lamp
WA18 con B	Wa29	GN	9/0.3	Signal to tacho
WA23	WA26	GN/GY	9/0.3	Hydraulic oil temp warning
WA23	WA31	RD	9/0.3	Feed to water temp gauge
WA23	WA31	BK	9/0.3	ER
WA23	WA33	BK/OR	9/0.3	
WA23	WA33	RD	9/0.3	
WA23	WA23	RD	14/0.3	Warning lamp cluster positives (D/Chain)
WA23	WA23	BK	14/0.3	Warning lamp cluster negative's (D/Chain)
WA29	WA29	OR/GY	14/0.3	
WA31	WA32	RD	9/0.3	
WA31	WA32	BK	9/0.3	



## WIRE RUN LIST ADT 10 ENGINE LOOM 7000392

FROM	TO	COLOUR	SIZE	REMARKS
WB14 con C	WB3	RD/OR	28/0.3	Starter Wire
WB14 con C	WB17 pin 2	WH/BK	9/0.3	Interlock Starter (Control)
WB14 con B	WB15 pin 6	RD/BN	14/0.3	Feed to Rear Loom (Reverse Light & Alarm)
WB14 con C	WB17 pin 3	WH/RD	9/0.3	ZF Control (Reverse)
WB14 con B	WB7 a	RD/BN	28/0.3	ESOV Voltage Dropper
WB14 con C	WB5	RD/BK	28/0.3	Cold Start Voltage Dropper
WB14 con C	WB22 sp 1	RD/OR	14/0.3	Ignition Switched Positive to ZF Module
WB14 con C	WB15 pin 2	YW/BK	9/0.3	Side Light Feed Left Hand Rear
WB14 con B	WB15 pin 1	YW/RD	9/0.3	Side Light Feed Right Hand Rear
WB14 con D	WB3	BN	35/0.3	Main Feed
WB14 con D	WB3	BN	35/0.3	Main Feed
WB14 con B	WB15 pin 4	VI/GN	9/0.3	Indicator Feed Right Hand Rear
WB14 con B	WB15 pin 5	VI/RD	9/0.3	Indicator Feed Left Hand Rear
WB14 con B	WB15 pin 3	RD/WH	14/0.3	Brake Light Feed Rear
WB14 con D	WB13	BK/RD	9/0.3	Stak Valve Warning Lamp
WB14 con D	WB11	BK/OR	9/0.3	Water Temperature Warning Lamp
WB14 con D	WB9	BK/YW	9/0.3	Oil Pressure Warning Lamp
WB14 con D	WB12	BK/GN	9/0.3	Water Temperature Gauge (Analogue)
WB14 con D	WB17 pin 12	BK/BL	9/0.3	Transmission Warning
WB14 con C	WB2 a	GN/BL	9/0.3	Charge Light
WB14 con D	WB15 pin 10	OR/BN	14/0.3	Oil Cooler Feed
WB14 con B	WB2 a	GN	9/0.3	Signal for Tacho
WB14 con A	WB1	RD/BK	9/0.3	Parking Brake Warning Lamp
WB14 con A	WB15 pin 8	OR/WH	14/0.3	Feed to Rear of Machine (Spare)
WB14 con A	WB18	BL/BK	9/0.3	Transmission Temperature
WB14 con A	WB19	OR/GN	14/0.3	Feed RH armrest spare
WB14 con A	WB19	OR/BL	14/0.3	Feed RH armrest spare
WB14 con A	WB21	YW/BL	9/0.3	Washer Bottle
WB1	WB17	GN/BK	9/0.3	Parking Brake Interlock
WB1	WB22 sp1	RD/OR	14/0.3	Positive Feeds
WB1	WB19	RD/OR	14/0.3	Positive Feeds
WB2	WB3	BN	84/0.3	Charge Wire
WB4	WB5	RD/BK	28/0.3	Cold Start Pre Heat
WB7 b	WB10	RD/BN	28/0.3	ESOV
WB7 a	WB15 pin 7	OR/GN	9/0.3	Start Up Warming
WB7 a	WB23	BN/OR	14/0.3	
WB8	WB13	BK	9/0.3	Earth Return
WB8	WB10	BK	28/0.3	Earth Return
WB8	WB15 pin 9	BK	14/0.3	Earth Return

FROM	TO	COLOUR	SIZE	REMARKS
WB8	WB17 pin 14	BK	14/0.3	Earth Return
WB8	WB19	BK	14/0.3	Earth Return Spare Feed
WB8	WB19	BK	14/0.3	Earth Return Spare Feed
WB8	WB19	BK	9/0.3	Earth Return Semi/Auto Switch
WB8	WB21	BK	9/0.3	Earth Return Washer Bottle
WB8	WB18	BK	9/0.3	Earth Return Transmission Temperature
WB8	WB17 pin 15	BK	14/0.3	Earth Return
WB8	WB15 pin 11	BK	28/0.3	Earth Return
WB8	WB11	BK	9/0.3	Earth Return
WB17 pin 7	WB19	WH/OR	9/0.3	Semi/Auto Switch
WB17 pin 9	WB22 sp 2	BN	14/0.3	Feed to ZF Constant
WB17 pin 10	WB22 sp 2	BN	14/0.3	Feed to ZF Constant
WB17 pin 1	WB22 sp 1	RD/OR	14/0.3	
WB19	WB19	WH/OR	9/0.3	Warning Lamp on Switch
WB20	WB22 sp 2	BN	14/0.3	Feed to ZF Constant



CONNECTION TO ENGINE LOOM  
W1  
W2  
W3  
W4  
W5  
W6  
W7  
W8  
W9  
W10  
W11  
W12

- ITEMS SHOWN THIS ARE NOT SUPPLIED WITH THE LOOM
- 1/4" FEMALE INSULATED LOOP
- 1/4" MALE LOOP
- 3/8" FEMALE INSULATED LOOP
- 3/8" MALE LOOP
- 1/2" FEMALE INSULATED LOOP
- 1/2" MALE LOOP
- 3/4" FEMALE INSULATED LOOP
- 3/4" MALE LOOP

KEY  
1 STOP LAMP - GREEN  
2 STOP LAMP - RED  
3 STOP LAMP - BLACK  
4 STOP LAMP - BLACK  
5 STOP LAMP - BLACK

KEY  
1 STOP LAMP - GREEN  
2 STOP LAMP - RED  
3 STOP LAMP - BLACK  
4 STOP LAMP - BLACK  
5 STOP LAMP - BLACK

EXISTING PLUG TO DIN 43500  
OIL COOLER THERMOSTAT

HYDRAULIC OIL COOLER MOTOR

PA MAKE RET.  
STOP LIGHT INDICATOR  
PA MAKE RET.

PA MAKE RET.  
STOP LIGHT INDICATOR  
PA MAKE RET.

## WIRE RUN LIST ADT 10 REAR LOOM 7000393

FROM	TO	COLOUR	SIZE	REMARKS
WC1 pin 1	WC2 sp 3	YW/RD	9/0.3	Side Light Right Hand Rear
WC1 pin 2	WC8 pin 1	YW/BK	9/0.3	Side Light Left Hand Rear
WC1 pin 3	WC3 pin 2	RD/WH	9/0.3	Brake Light Right Hand Rear
WC1 pin 3	WC8 pin 2	RD/WH	9/0.3	Brake Light Left Hand Rear
WC1 pin 4	WC3 pin 3	VI/GN	9/0.3	Indicator Right Hand Rear
WC1 pin 5	WC8 pin 3	VI/RD	9/0.3	Indicator Left Hand Rear
WC1 pin 6	WC4	RD/BN	14/0.3	Reverse Light
WC1 pin 7	WC5	OR/GN	9/0.3	Start Up Warning
WC1 pin 8	WC6	OR/WH	14/0.3	Feed To Rear of Machine Spare
WC1 pin 9	WC2 sp 1	BK	28/0.3	Earth Return
WC1 pin 10	WC9	OR/BN	14/0.3	Oil Cooler Temperature Switch
WC1 pin 11	WC2 sp 2	BK	28/0.3	Earth Return
WC2 sp 1	WC3 pin 4	BK	14/0.3	Earth Return
WC2 sp 1	WC7	BK	9/0.3	Earth Return
WC2 sp 1	WC8 pin 4	BK	14/0.3	Earth Return
WC2 sp 2	WC4	BK	9/0.3	Earth Return
WC2 sp 2	WC6	BK	14/0.3	Earth Return
WC2 sp 2	WC10	BK	14/0.3	Earth Return
WC2 sp 3	WC3 pin 1	YW/RD	9/0.3	Side Light Right Hand Rear
WC2 sp 3	WC7	YW/RD	9/0.3	Number Plate Illumination
WC4	WC5	RD/BN	9/0.3	Reverse Alarm
WC4	WC5	BK	9/0.3	Earth Return
WC9	WC10	OR/BN	14/0.3	Oil Cooler Motor

# **ADT10 FUSE RATING & ASSIGNMENT**

## **FUSE BOX 1**

Fuse 1	5 amp	+ ive to lamp cluster, reverse lamp & alarm, monitor.
Fuse 2	10 amp	ESOS, Audible start up warning.
Fuse 3	10 amp	Thermostart heater.
Fuse 4	30 amp	Starter motor solenoid.
Fuse 5	10 amp	Brake lights, Indicator flasher unit.
Fuse 6	7.5 amp	ZF Control unit ignition live, + ive to Relay 1 via. FNR when in neutral, direct + ive to Relay 2 & Relay 3, park brake changeover switch, auto/manual switch.

## **FUSE BOX 2**

Fuse 1	5 amp	Side light RH front & rear.
Fuse 2	5 amp	Side light LH front & rear, ZF display back light.
Fuse 3	5 amp	Dipped beam RH side.
Fuse 4	5 amp	Dipped beam LH side.
Fuse 5	5 amp	Main beam RH side.
Fuse 6	5 amp	Main beam LH side.

## **FUSE BOX 3**

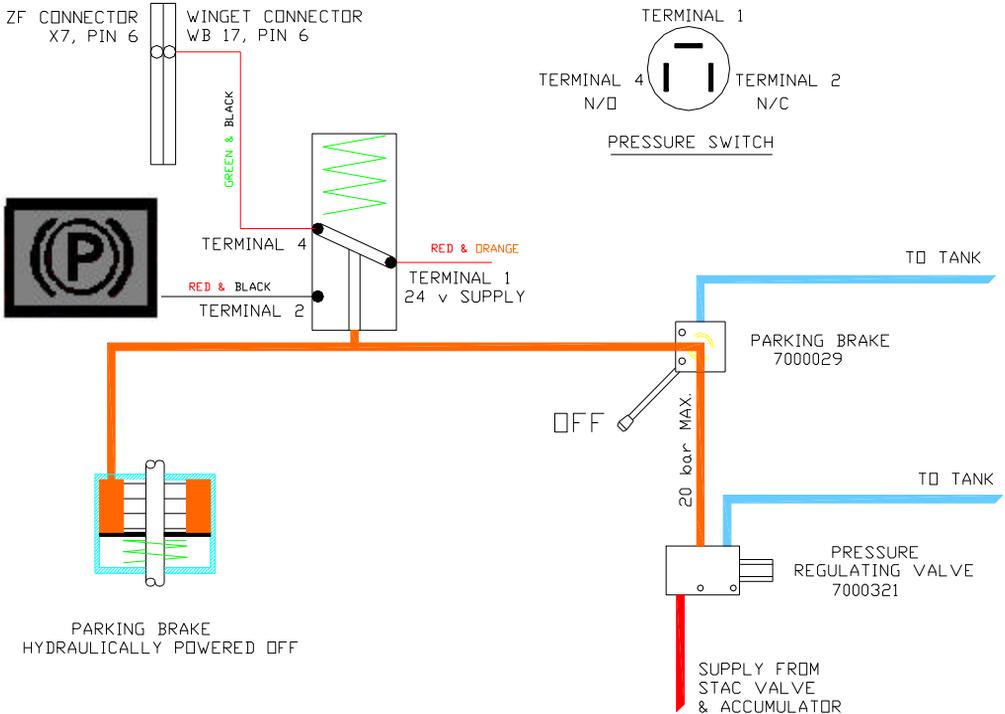
Fuse 1	15 amp	Hazard indicators, DIN socket, beacon.
Fuse 2	10 amp	Window wiper, washer bottle.
Fuse 3	5 amp	Heater.
Fuse 4	5 amp	Front work lights.
Fuse 5	5 amp	Rear work lights.
Fuse 6	20 amp	Headlamp.

## **FUSE BOX 4**

Fuse 1	15 amp	Hydraulic oil cooler, spare supply under seat.
Fuse 2	15 amp	2 off spare supply in RH armrest.
Fuse 3	15 amp	2 off spare supply in LH armrest.
Fuse 4	5 amp	Cab internal light.
Fuse 5	5 amp	Oil temp. warning switch, tachometer.
Fuse 6	10 amp	Seat compressor.

# AT10 PARKING BRAKE OPERATION CIRCUIT-OFF

## CONDITION:

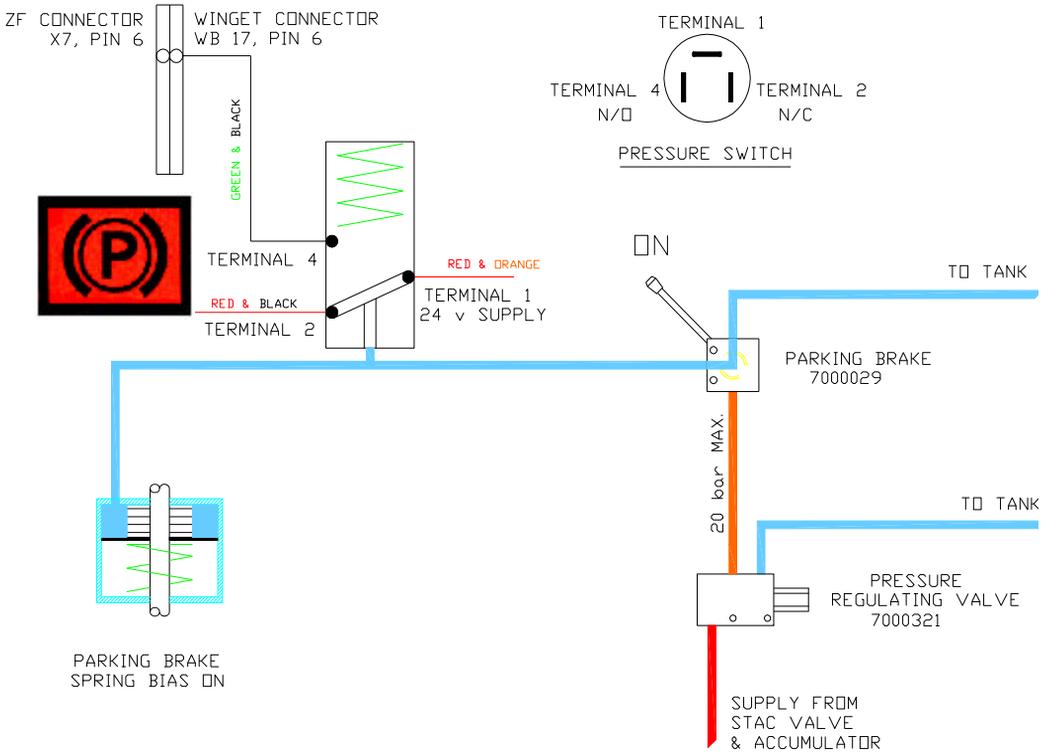


## HANDBRAKE OFF

### PARKING BRAKE HYDRAULICALLY POWERED **OFF**

CHANGEOVER SWITCH, ACTIVATED – NORMALLY OPEN,  
NOW CONNECTED TO ZF TRANSMISSION INTERLOCK  
CONNECTOR X7, PIN6

## ADT10 PARKING BRAKE OPERATION (CIRCUIT ON)



### CONDITION:

#### HANDBRAKE APPLIED

PARKING BRAKE SPRING BIASED **ON**

CHANGEVER SWITCH, NOT ACTIVATED –  
NORMALLY CLOSED CONNECTION TO LAMP



# ADT10 PARTS

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**3 Engine**

**4 Transmission**

**5 Electrics**

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**8 Chassis & Panels**

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ADT 10 Dump Truck

# Section 1

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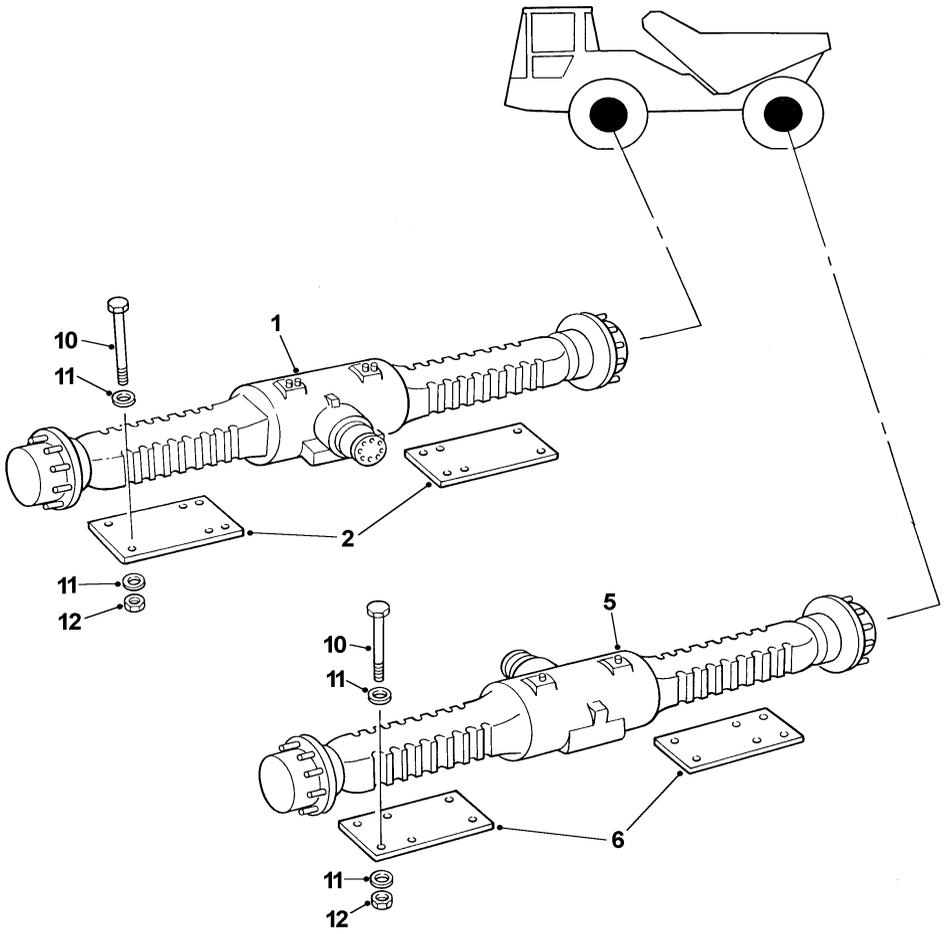
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**ADT 10 Dump Truck**

# **Section 2**

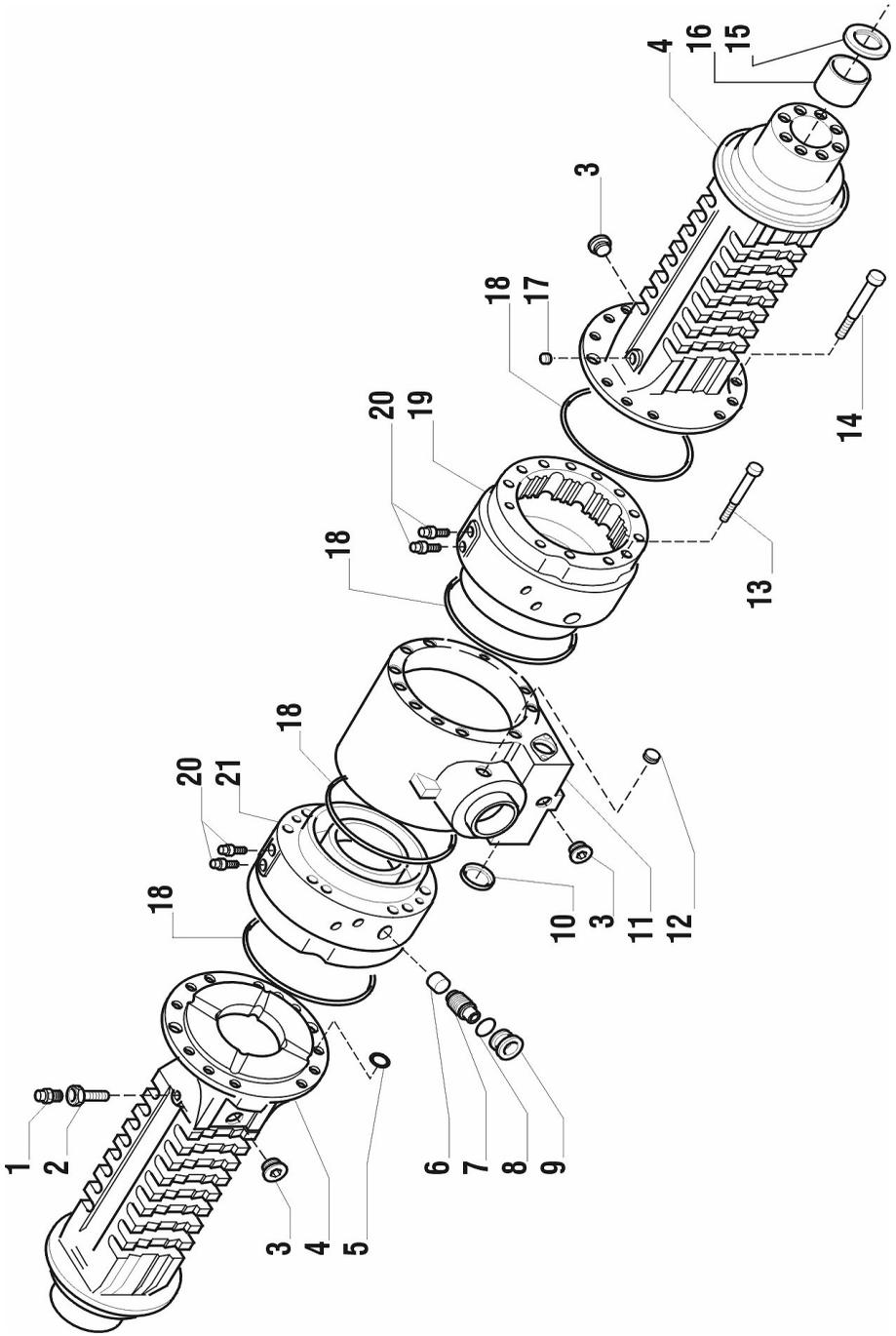
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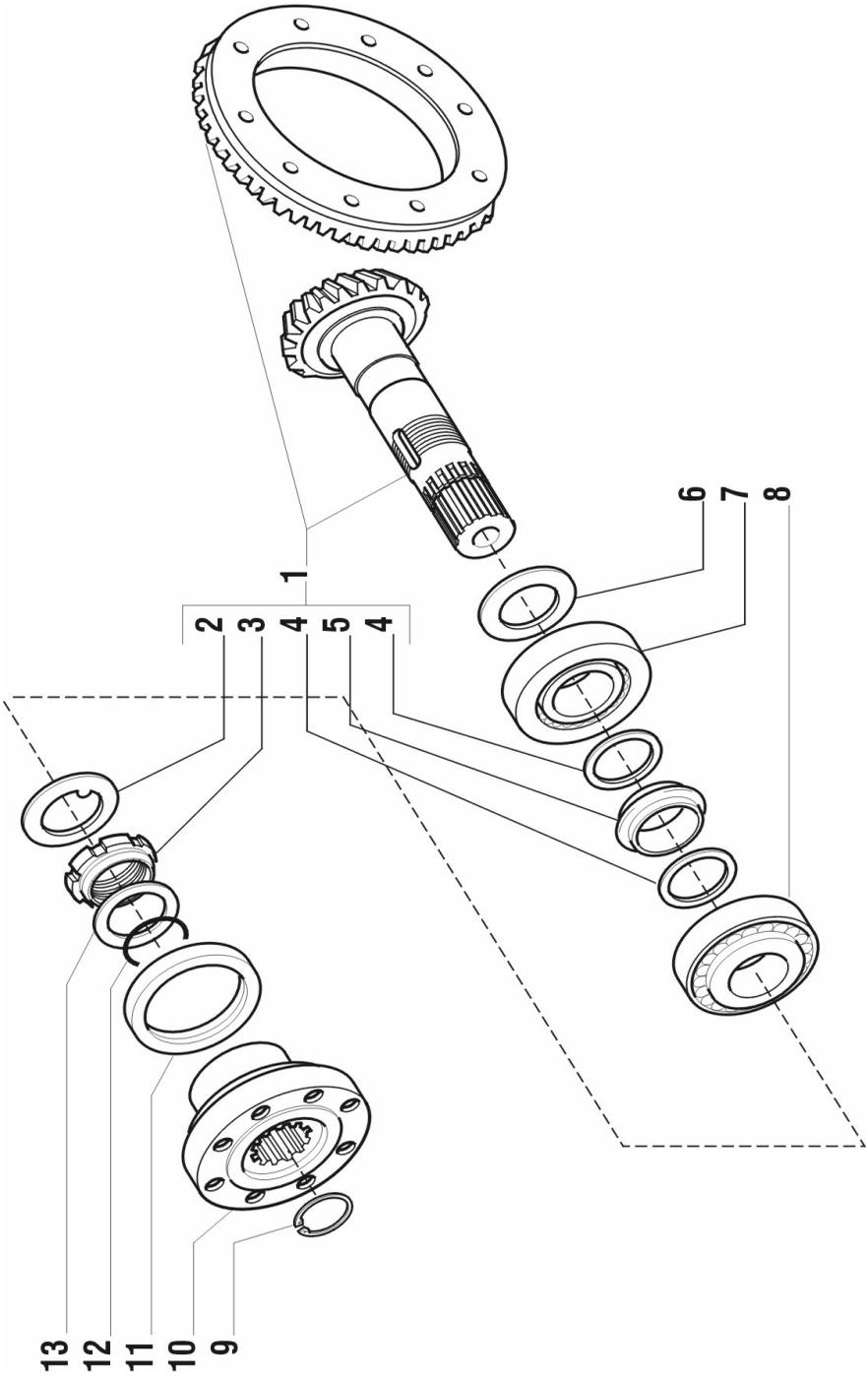
**AXLES****2 - A - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000003		AXLE, front	1
2	7000129		PLATE, front axle mounting	1
5	7000004		AXLE, rear	1
6	7000130		PLATE, rear axle mounting	1
10	8S07Y		BOLT	24
11	267S10		WASHER, flat	48
12	61S07		NUT, "Binx" self locking	24



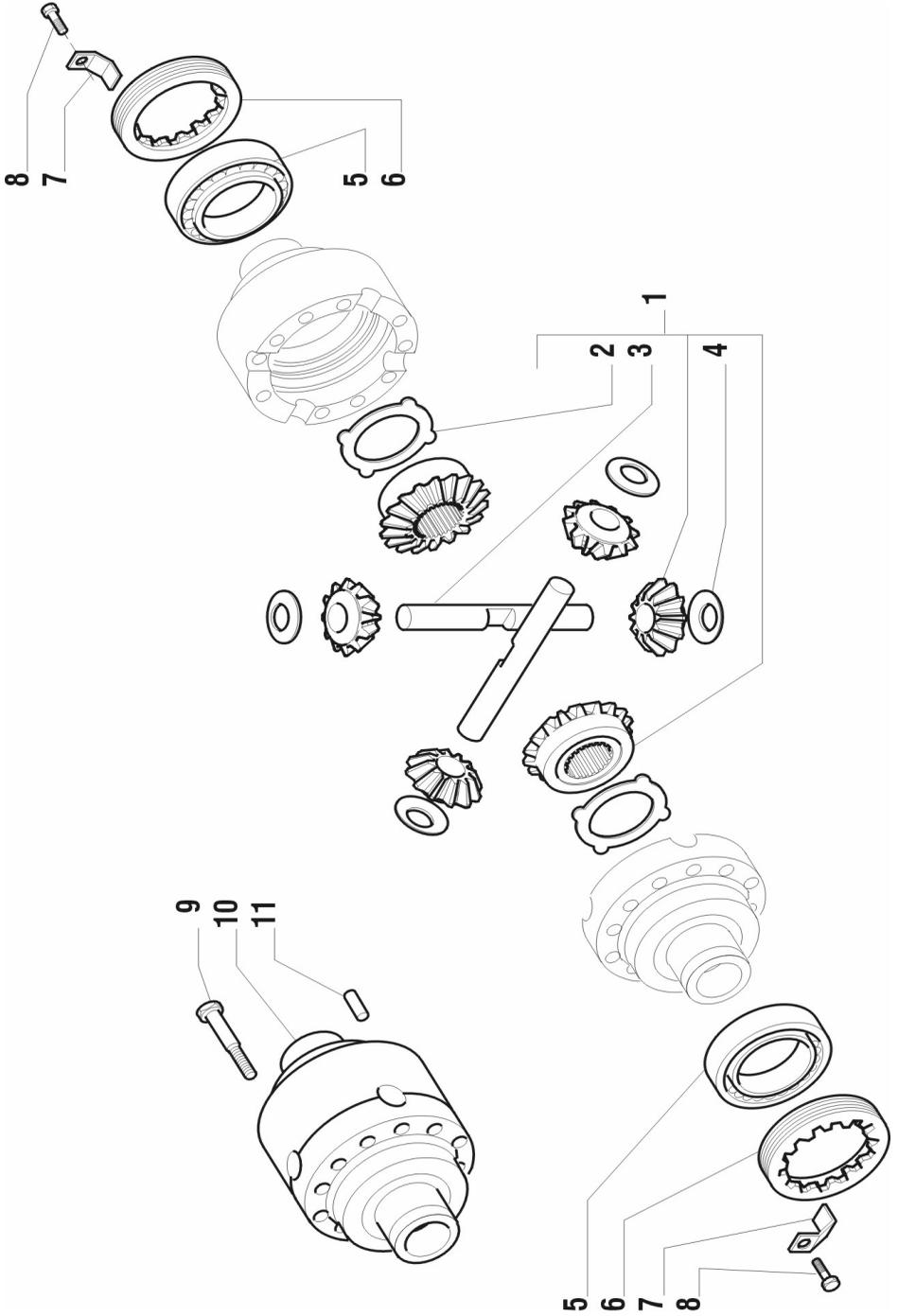
**AXLE HOUSING & ARMS**  
**Front Axle****2 - B - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	V600196		BREATHER	1
2	V600461		PIPE, breather	1
3	V602939		PLUG	3
4	V602835		ARM, axle	2
5	V602836		O' RING	2
6	V602837		PIN	6
7	V602838		BOLT	6
8	V602839		O' RING	6
9	V602840		BOLT	6
10	V602841		PLUG	2
11	V602842		HOUSING, axle centre	1
12	V602843		PLUG	1
13	V602844		BOLT	13
14	V602845		BOLT	22
15	V602846		SEAL, ring	2
16	V602847		BUSH	2
17	V600113		PLUG	1
18	V602848		O' RING	4
19	V602849		CYLINDER, R.H. brake	1
20	V600116		NIPPLE, brake bleed	4
21	V602850		CYLINDER, L.H. brake	1



**BEVEL GEAR & PINION**  
**Front Axle****2 - B - 2**

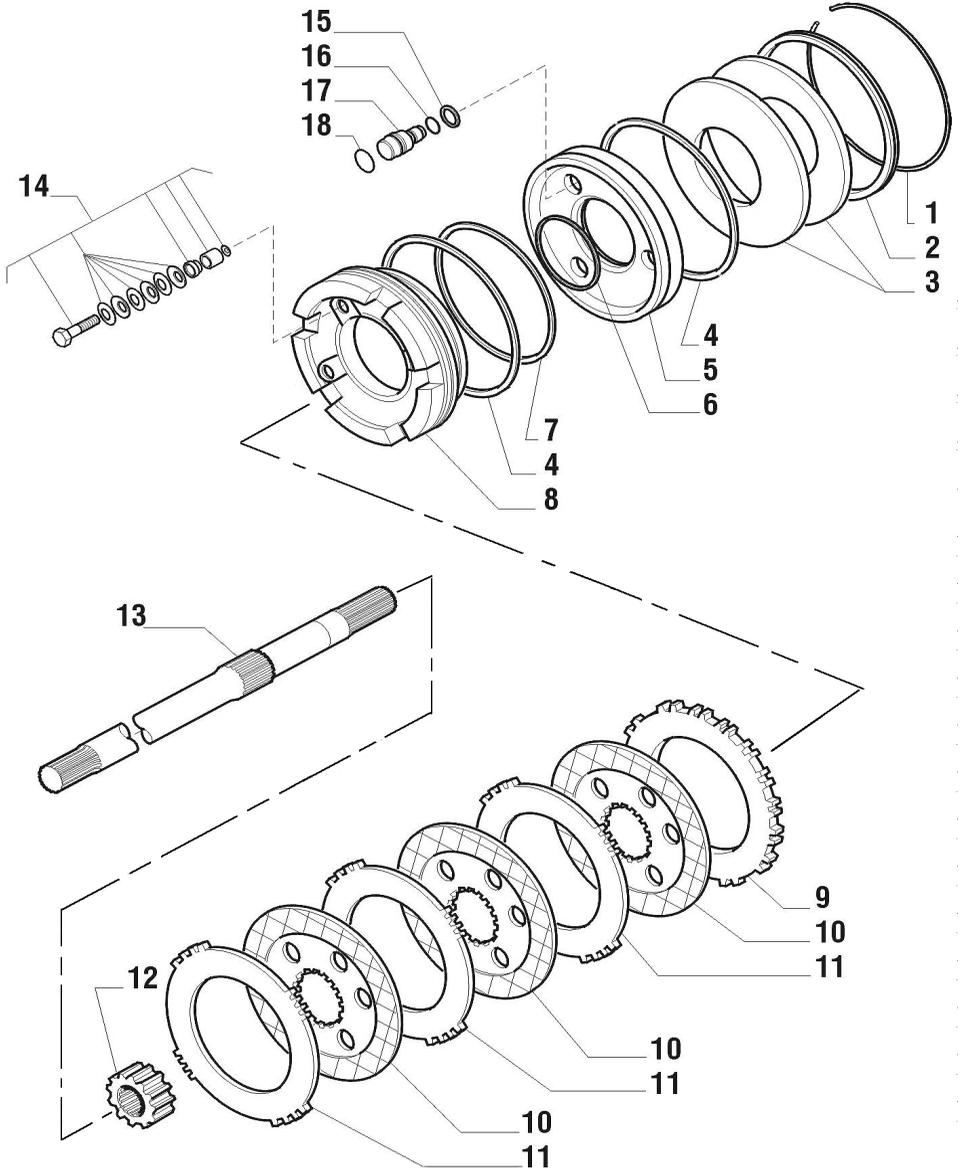
Item	Part no	Serial no	Description	Qty
.....	V602851		BEVEL GEAR/PINION, assembly	1
1	.....		BEVEL GEAR/PINION ( <i>order assembly.</i> )	
2	V600216		WASHER, locking	1
3	V600217		NUT, ring	1
4	V601132		WASHER	2
5	V602852		SPACER, collapsible	1
6	V602853		SHIM 2.50mm	AR
6	V602854		SHIM 2.60mm	AR
6	V602855		SHIM 2.70mm	AR
6	V602856		SHIM 2.80mm	AR
6	V602857		SHIM 2.90mm	AR
6	V602858		SHIM 3.00mm	AR
6	V602859		SHIM 3.10mm	AR
6	V602860		SHIM 3.20mm	AR
6	V602861		SHIM 3.30mm	AR
6	V602862		SHIM 3.40mm	AR
7	V602863		BEARING	1
8	V600215		BEARING	1
9	V600104		RING, snap	1
10	V602864		FLANGE	1
11	V602865		SEAL, ring	1
12	V602866		O' RING	1
13	V602867		WASHER	1



**DIFFERENTIAL**  
**Front Axle**

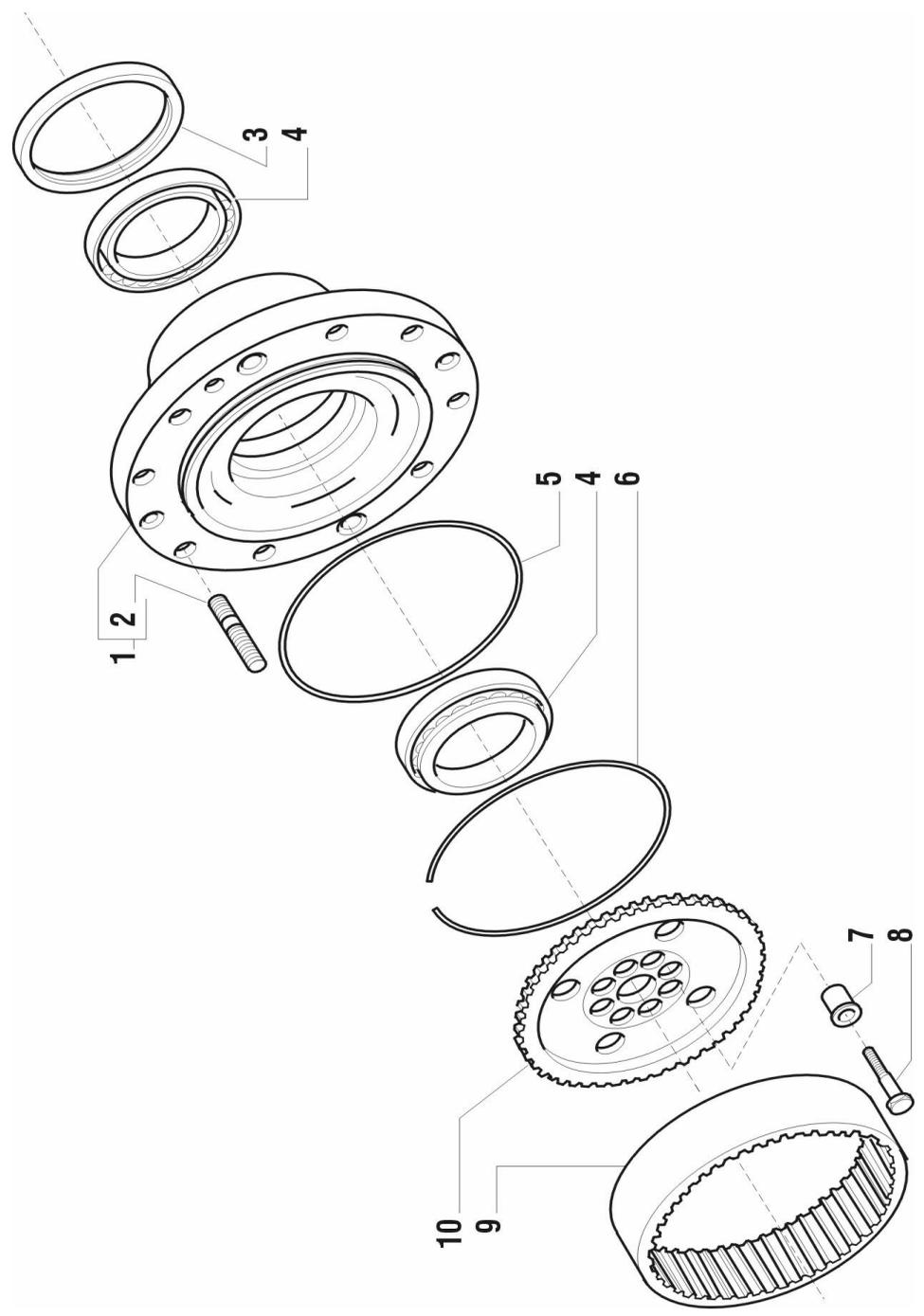
**2 - B - 3**

Item	Part no	Serial no	Description	Qty
.....	V602868		DIFFERENTIAL, assembly	1
1	.....		DIFFERENTIAL ( <i>order assembly</i> )	1
2	V602869		PLATE, drive	2
3	V602870		SHAFT	2
4	V602871		WASHER, thrust	4
5	V602872		BEARING	2
6	V600224		NUT, ring	2
7	V602873		PLATE, locking	2
8	V600222		BOLT	2
9	V602874		BOLT	10
10	V602875		HOUSING, differential	1
11	V602876		PIN	1



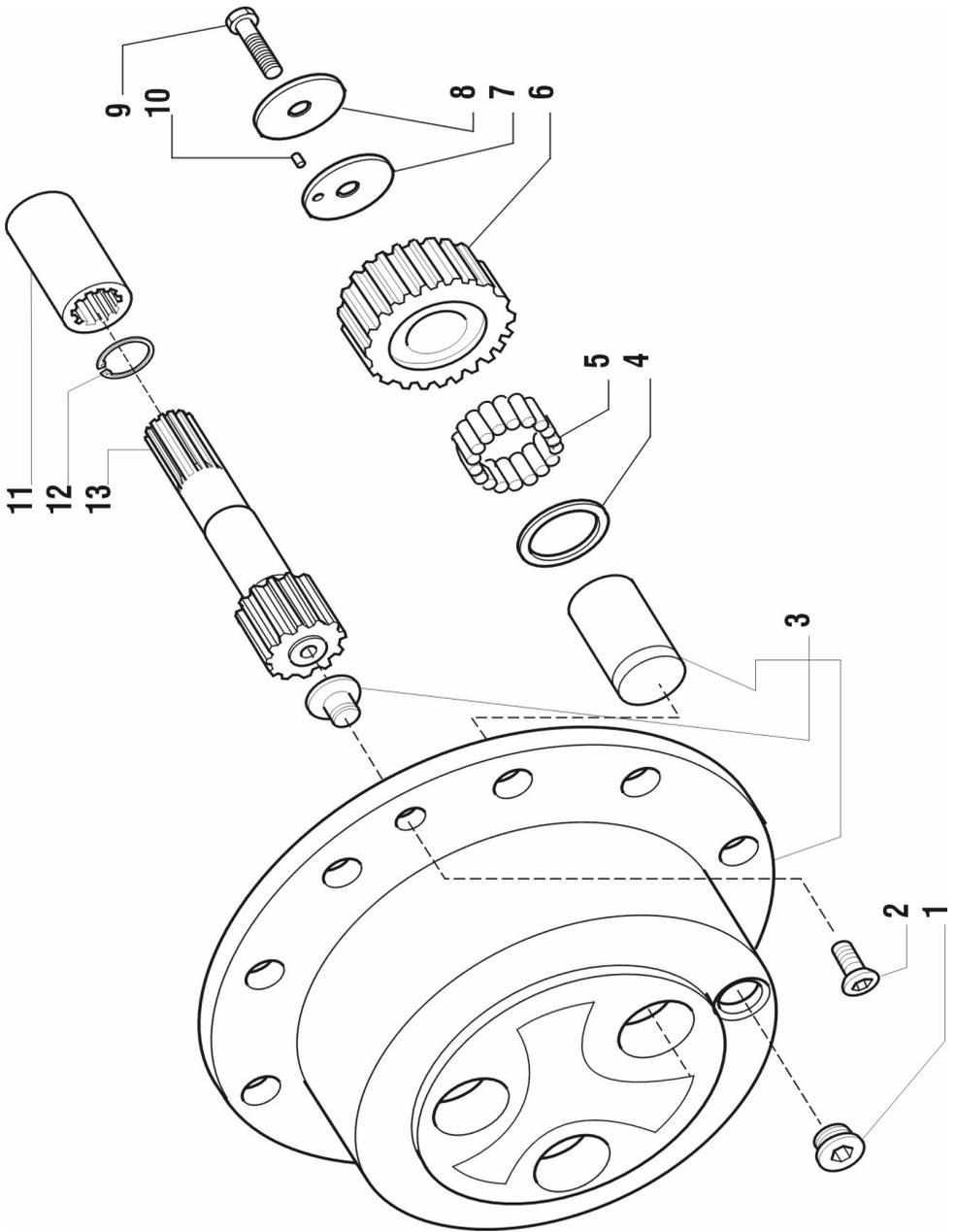
**BRAKES**  
**Front Axle****2 - B - 4**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	V602877		RING	2
2	V602878		SLEEVE	2
3	V602879		WASHER, 'Belleville'	4
4	V602880		RING, quad	4
5	V602881		PISTON, negative	2
6	V602882		RING, quad	2
7	V601525		RING, quad	2
8	V602883		PISTON, positive	2
9	V602884		PLATE, brake drive	2
10	V602885		PLATE, brake	6
11	V602886		PLATE, brake drive	6
12	V602887		SLEEVE	2
13	V602888		SHAFT, half	2
14	V602889		KIT, self-adjusting	2
15	V602890		WASHER	6
16	V602891		O' RING	6
17	V602892		PIN	6
18	V602893		O' RING	6



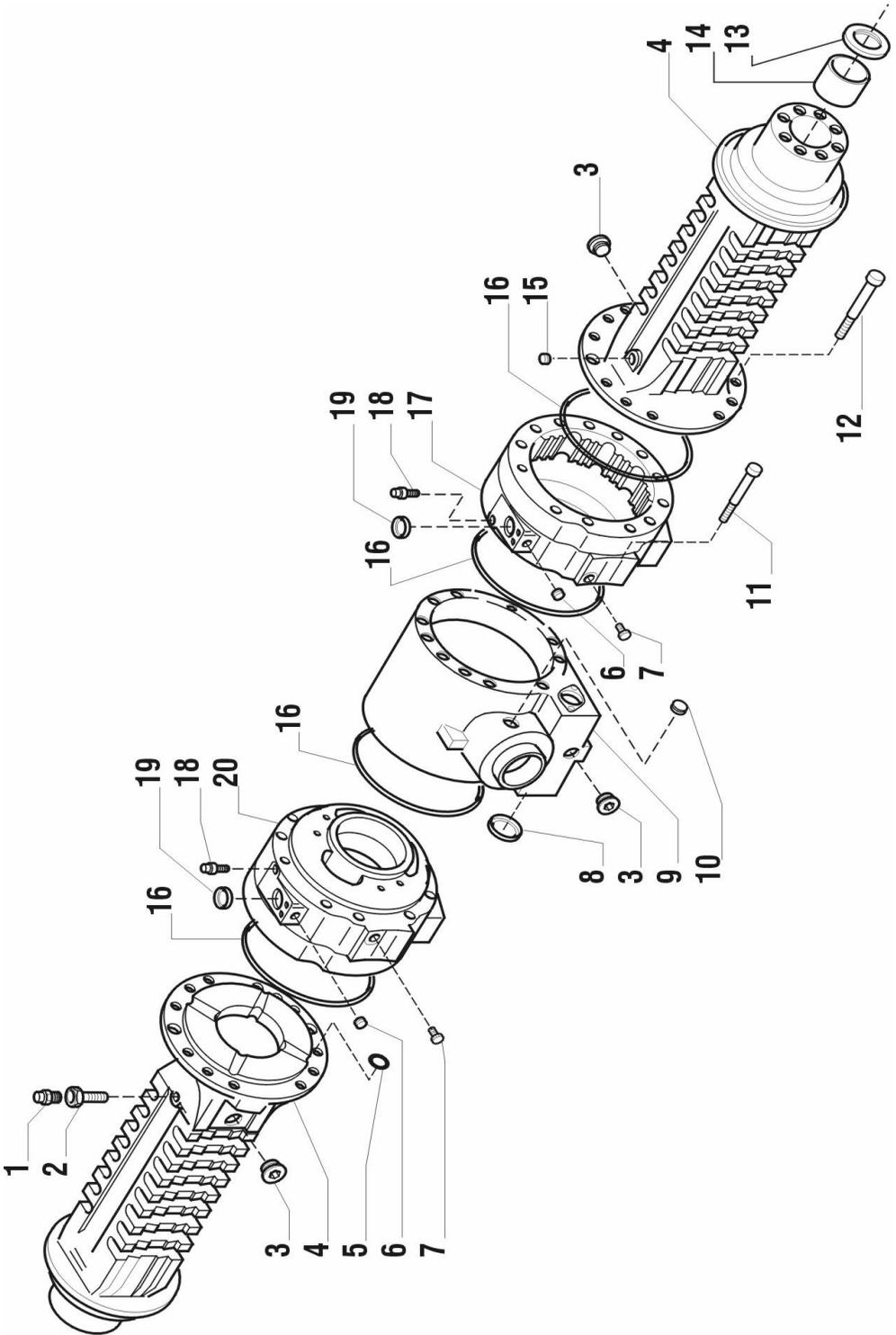
**WHEEL HUB**  
**Front Axle****2 - B - 5**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
.....	V602894		HUB, wheel, assembly	2
1	.....		HUB, wheel ( <i>order assembly</i> )	1
2	V602227		STUD	10
3	V600501		SEAL, ring	2
4	V600232		BEARING	4
5	V602895		O' RING	2
6	V602896		RING	2
7	V601134		BUSH	16
8	V600229		BOLT	16
9	V602897		GEAR, crown	2
10	V602898		CARRIER, wheel	2



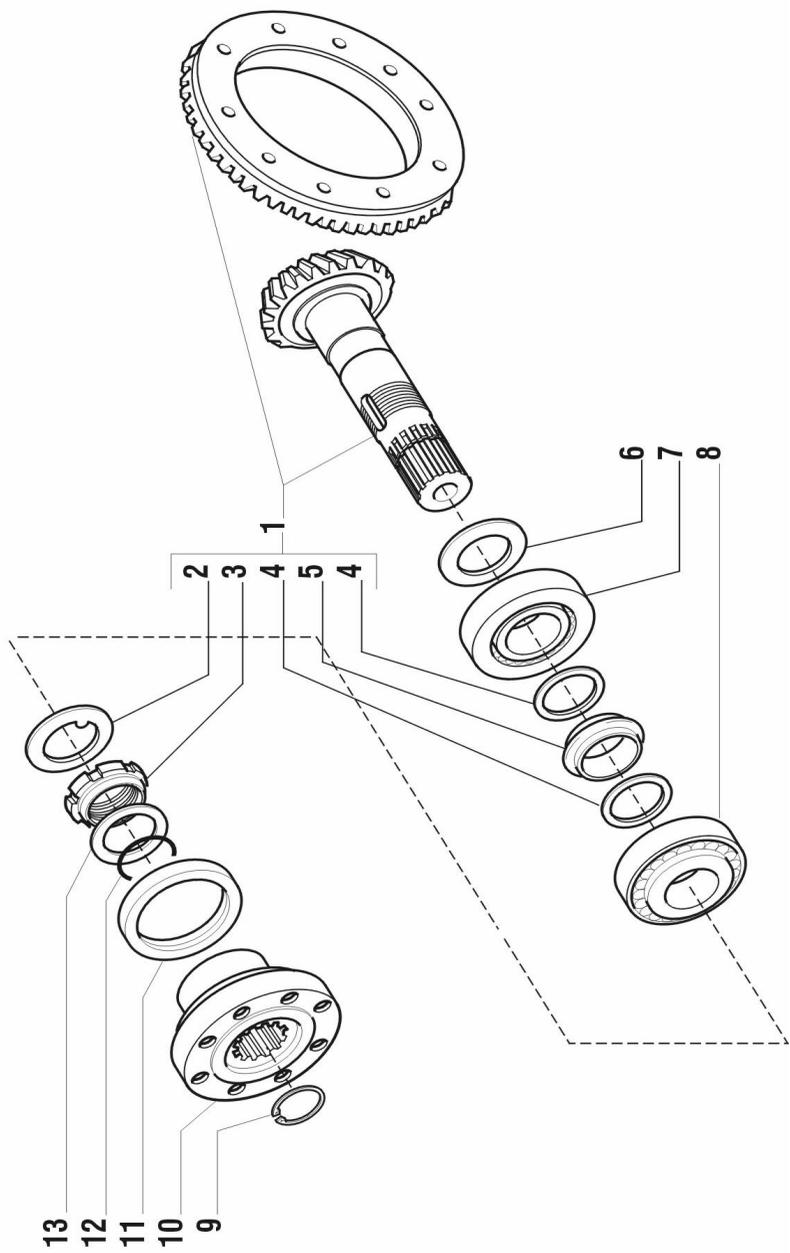
**EPICYCLE REDUCTION GEARS**  
**Front Axle****2 - B - 6**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	V602939		PLUG	2
2	52S03D		SCREW, countersunk socket head	4
3	V602899		CARRIER, planets	2
4	V602900		WASHER, thrust	6
5	V602901		BEARING, needles, 62 per gear	(pks of 10)
6	V602902		GEAR, 31 teeth	6
7	V602903		WASHER, thrust	6
8	V602904		WASHER, thrust	6
9	V602905		BOLT	6
10	V602906		BEARING, needles (packs of 10)	6
11	V602907		BUSH	2
12	V602908		CIRCLIP, internal	2
13	V602909		SHAFT, 13 teeth	2



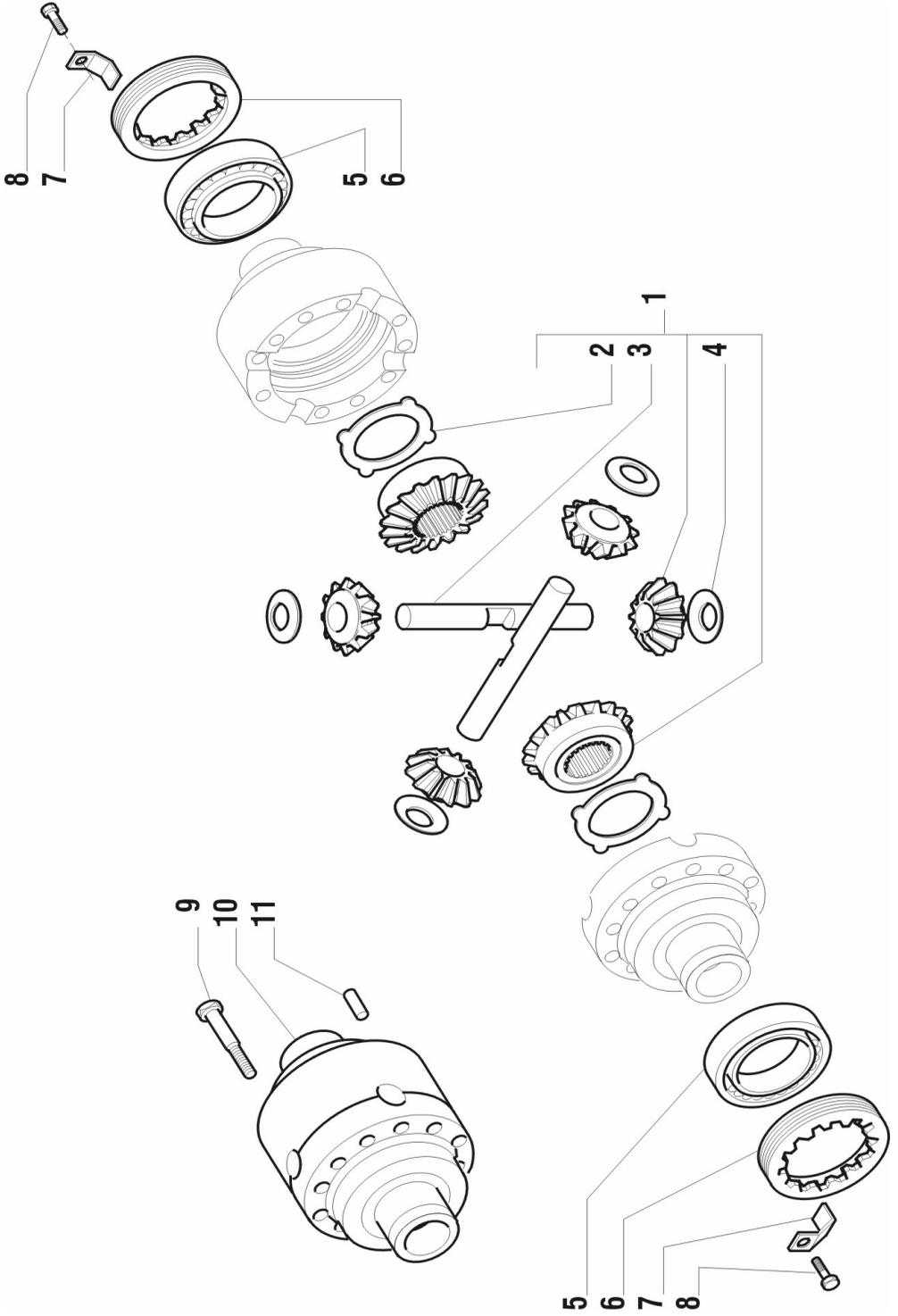
**AXLE HOUSING & ARMS**  
**Rear Axle****2 - C - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	V600196		BREATHER	1
2	V600461		PIPE, breather	1
3	V602939		PLUG	3
4	V602910		ARM, axle	2
5	V602836		O' RING	2
6	V602911		PLUG	2
7	V602912		PLUG	2
8	V602913		PLUG	2
9	V602842		HOUSING, axle centre	1
10	V602843		PLUG	1
11	V602844		BOLT	2
12	V602845		BOLT	22
13	V602914		SEAL, ring	2
14	V602915		BUSH	2
15	V600113		PLUG	1
16	V602848		O' RING	4
17	V602916		CYLINDER, R.H. brake	1
18	V600116		NIPPLE, brake bleed	2
19	V602917		PLUG	2
20	V602918		CYLINDER, L.H. brake	1



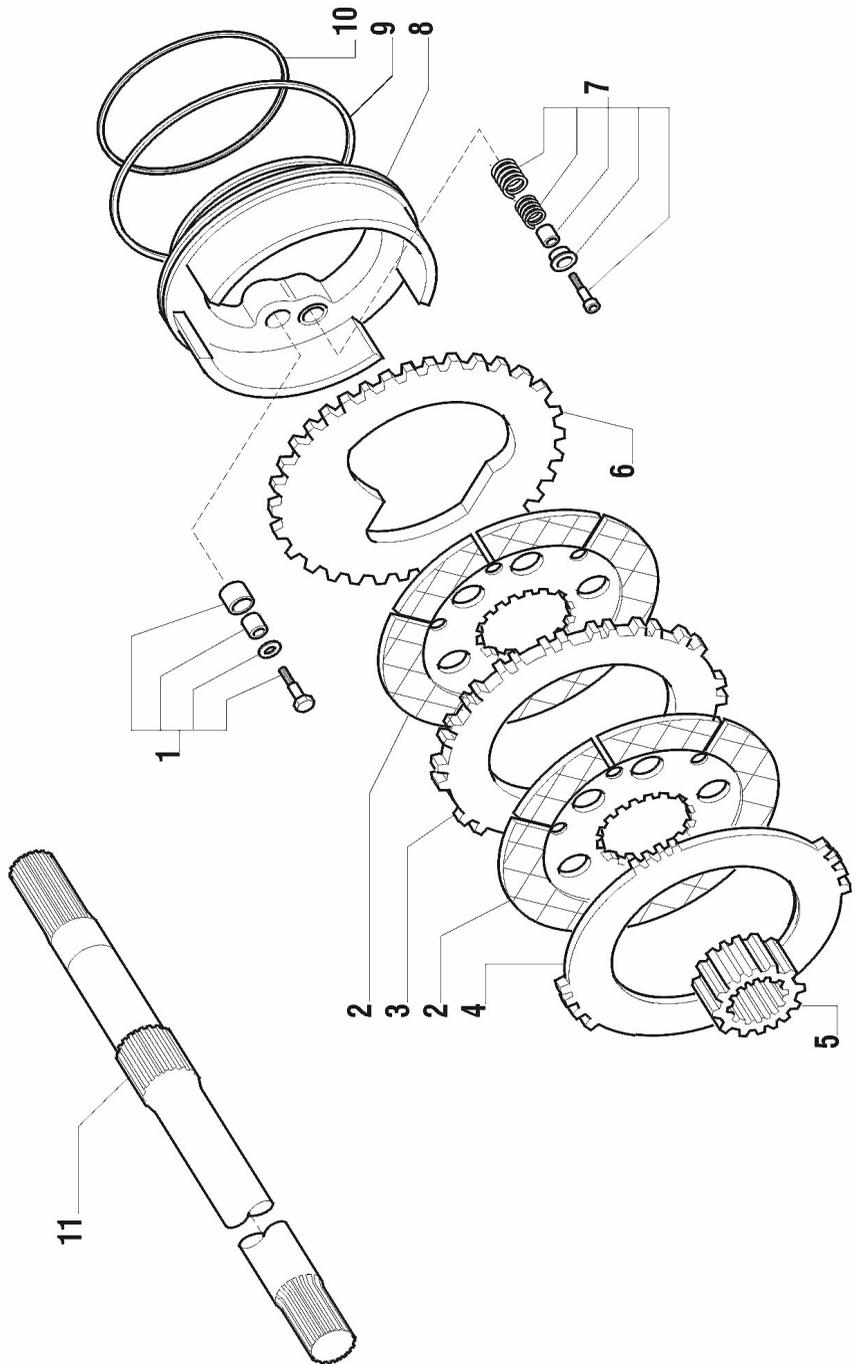
**BEVEL GEAR & PINION**  
**Rear Axle****2 - C - 2**

Item	Part no	Serial no	Description	Qty
.....	V602919		BEVEL GEAR/PINION, assembly	1
1	.....		BEVEL GEAR/PINION ( <i>order assembly.</i> )	
2	V600216		WASHER, locking	1
3	V600217		NUT, ring	1
4	V601132		WASHER	2
5	V602852		SPACER, collapsible	1
6	V602853		SHIM 2.50mm	AR
6	V602854		SHIM 2.60mm	AR
6	V602855		SHIM 2.70mm	AR
6	V602856		SHIM 2.80mm	AR
6	V602857		SHIM 2.90mm	AR
6	V602858		SHIM 3.00mm	AR
6	V602859		SHIM 3.10mm	AR
6	V602860		SHIM 3.20mm	AR
6	V602861		SHIM 3.30mm	AR
6	V602862		SHIM 3.40mm	AR
7	V602863		BEARING	1
8	V600215		BEARING	1
9	V600104		RING, snap	1
10	V602864		FLANGE	1
11	V602865		SEAL, ring	1
12	V602866		O' RING	1
13	V602867		WASHER	1



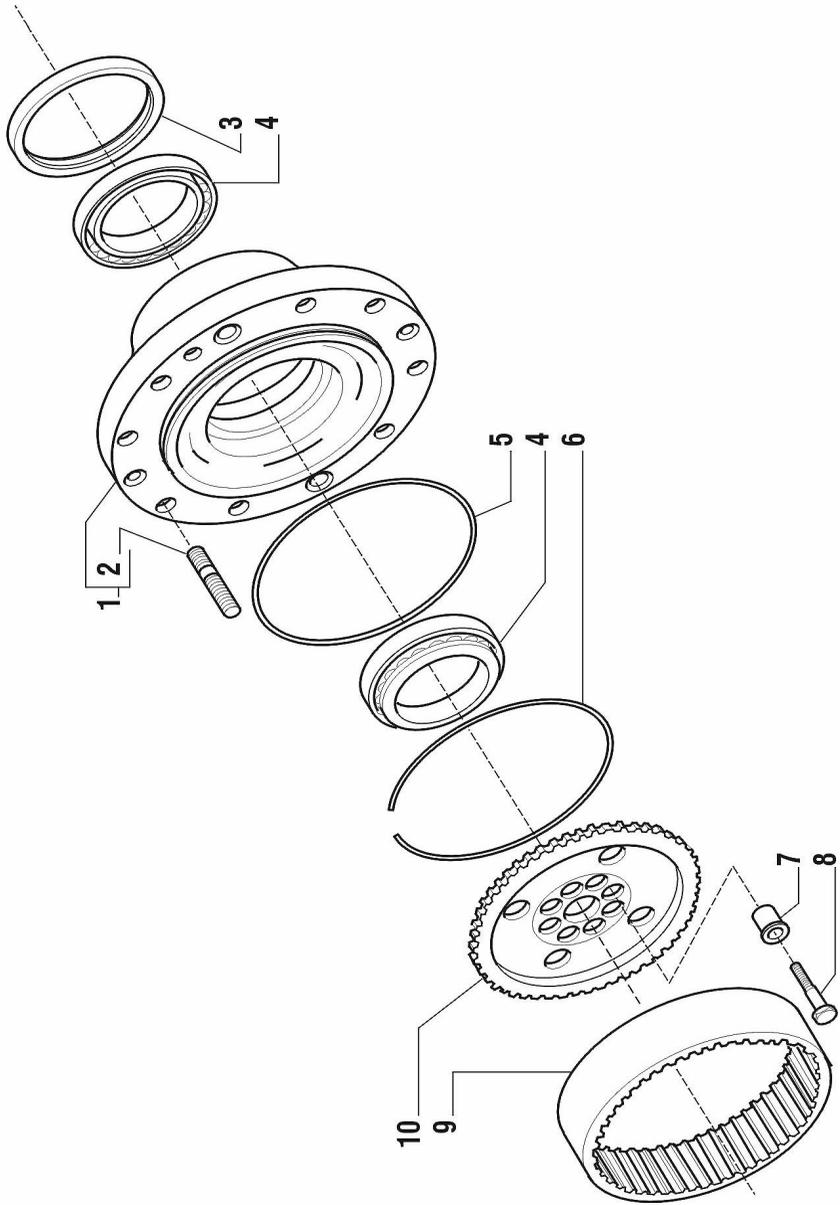
**DIFFERENTIAL**  
**Rear Axle****2 - C - 3**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
.....	V602920		DIFFERENTIAL, assembly	1
1	.....		DIFFERENTIAL ( <i>order assembly</i> )	1
2	V602871		WASHER, thrust	4
3	V602870		SHAFT	2
4	V602921		PLATE	2
5	V602922		PLATE drive	10
6	V602923		PLATE	8
7	V600222		BOLT	2
8	V602924		PLATE, locking	2
9	V602925		NUT, ring	2
10	V602926		BEARING	2
11	V602874		BOLT	10
12	V602875		HOUSING, differential	1
13	V602876		PIN	1



**BRAKES**  
**Rear Axle****2 - C - 4**

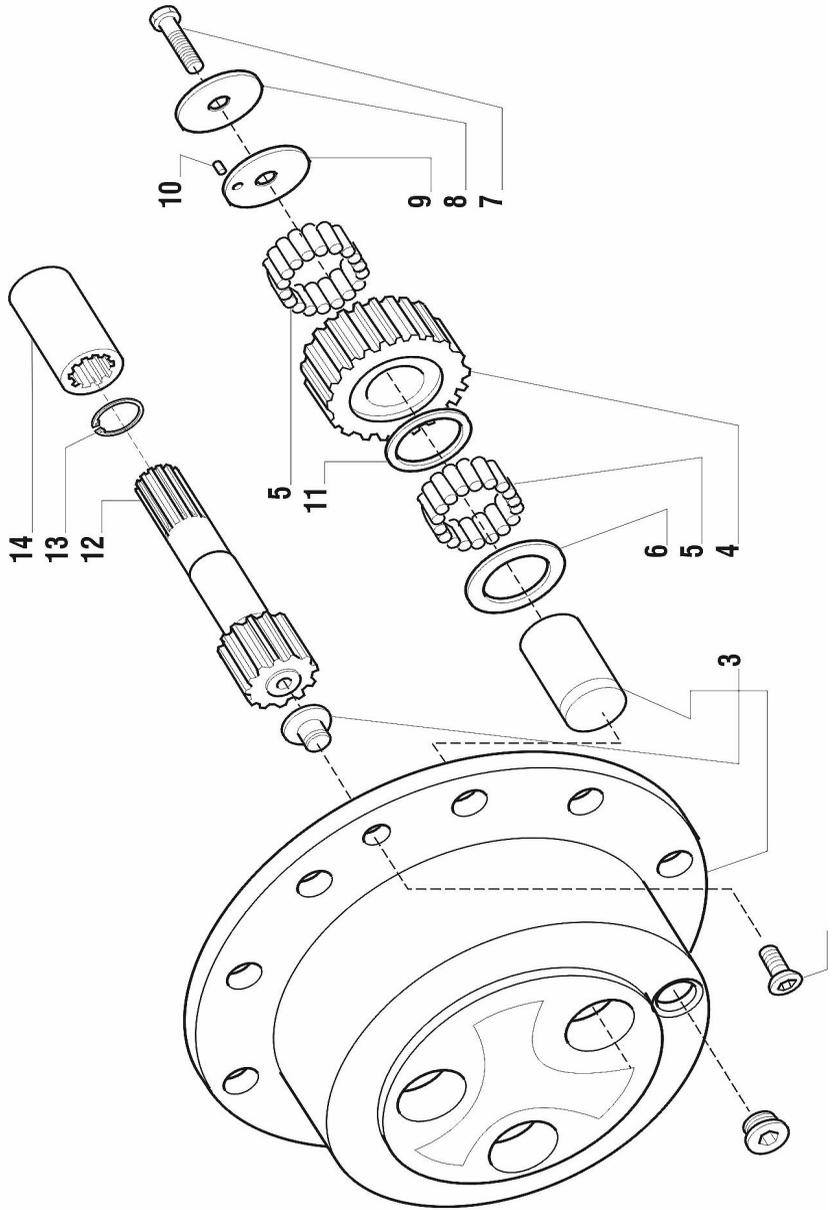
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	V602927		KIT, self-adjusting	2
2	V602885		PLATE, brake	4
3	V602884		PLATE, drive	2
4	V602886		PLATE, drive	2
5	V602928		HUB	2
6	V602929		PLATE, drive	2
7	V602930		KIT, self-adjusting	2
8	V602931		PISTON	2
9	V602932		RING, quad	2
10	V602933		RING, quad	2
11	V602934		SHAFT, half	2



**WHEEL HUB**  
**Rear Axle**

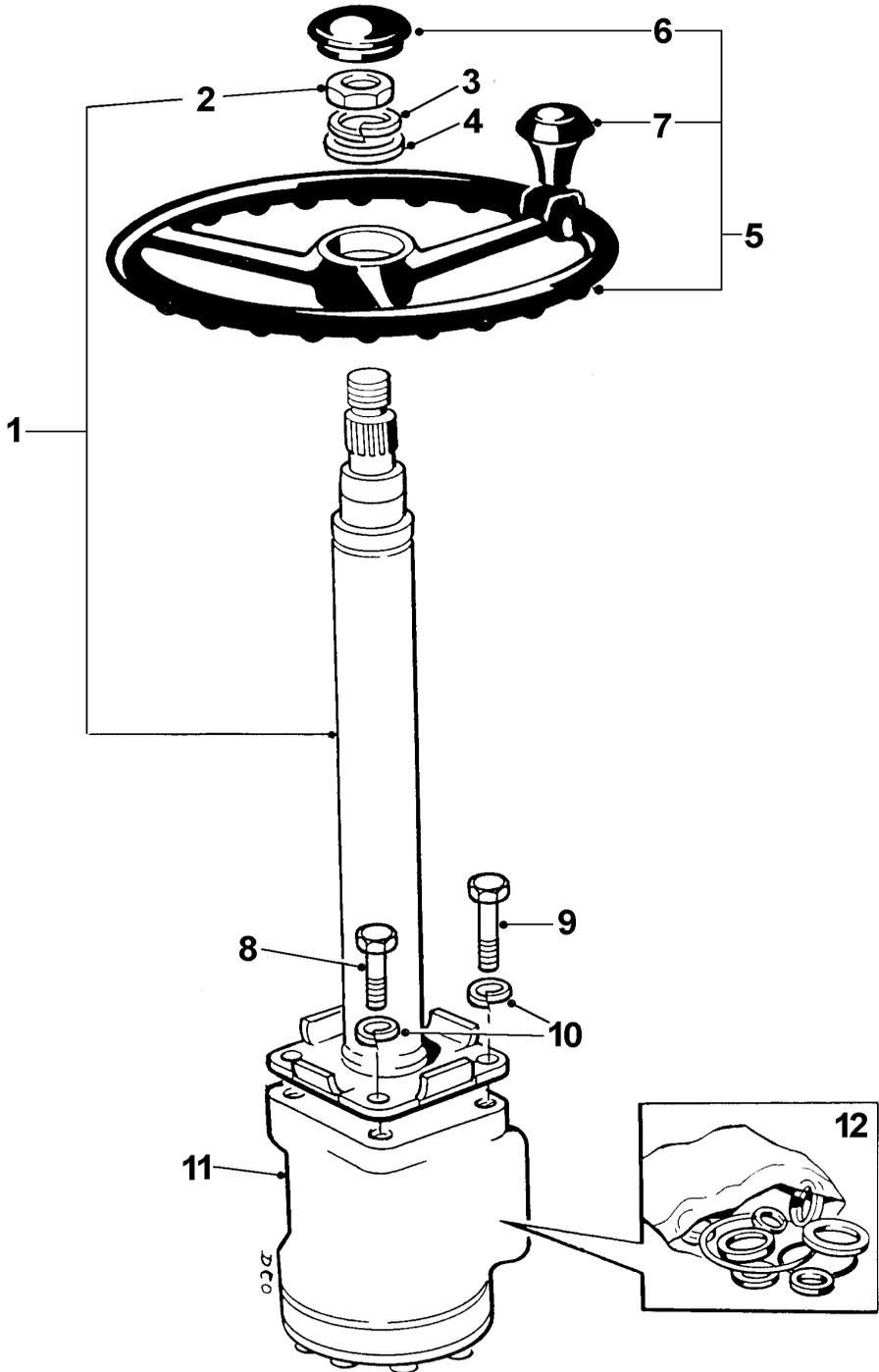
**2 - C - 5**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
.....	V602894		HUB, wheel, assembly	2
1	.....		HUB, wheel ( <i>order assembly</i> )	1
2	V602227		STUD	10
3	V600501		SEAL, ring	2
4	V600232		BEARING	4
5	V602895		O' RING	2
6	V602896		RING	2
7	V601134		BUSH	16
8	V600229		BOLT	16
9	V602935		GEAR, crown	2
10	V602936		CARRIER, wheel	2



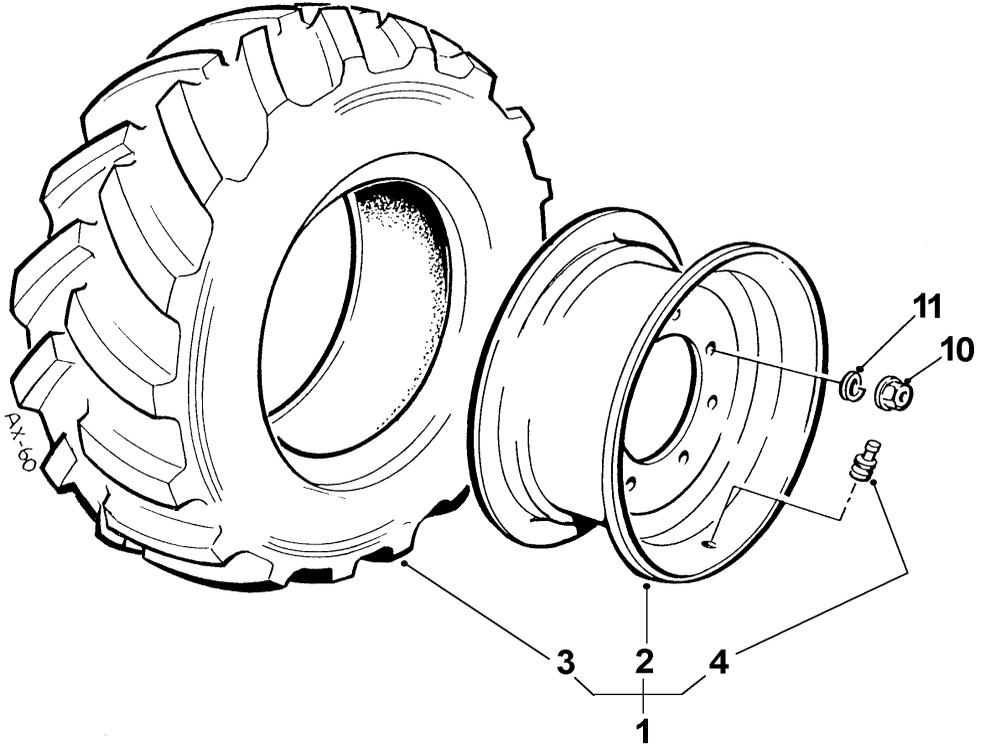
**EPICYCLE REDUCTION GEARS**  
**Rear Axle****2 - C - 6**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	V602939		PLUG	2
2	52S03D		BOLT	4
3	V602937		CARRIER, planets	2
4	V602938		GEAR, 31 teeth	6
5	V602940		BEARING, needles	(packs of 10)
6	V602941		WASHER, thrust	6
7	V602942		BOLT	6
8	V602943		WASHER, thrust	6
9	V602944		WASHER, thrust	6
10	V602906		BEARING, needles	(packs of 10)
11	V602945		WASHER, thrust	6
12	V602946		SHAFT, c/w gear, 13 teeth	2
13	V602947		RING, snap	2
14	V602948		BUSH	2



**STEERING COLUMN****2 - S - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	V2002872		COLUMN, steering assembly	1
2	95S06		NUT	1
3	17S08		WASHER, spring	1
4	267S09		WASHER, flat	1
5	V2004152		WHEEL, steering, assembly	1
6	V2004153		CAP, wheel centre	1
7	V600491		SPINNER, knob	1
8	11S04C		SCREW, set	2
9	11S04E		SCREW, set	2
10	17S05		WASHER, spring	4
11	7000006		VALVE, steer	1
12	.....		KIT, seals	AR



**WHEELS****2 - W - 1**

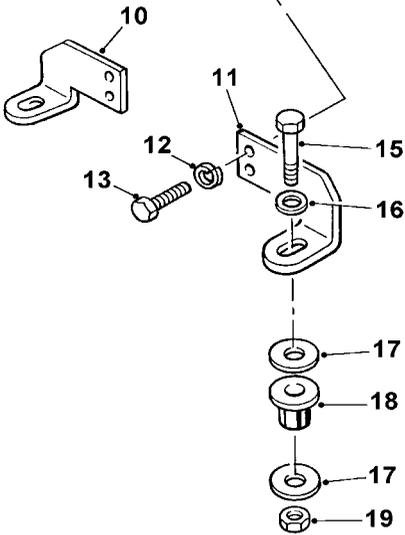
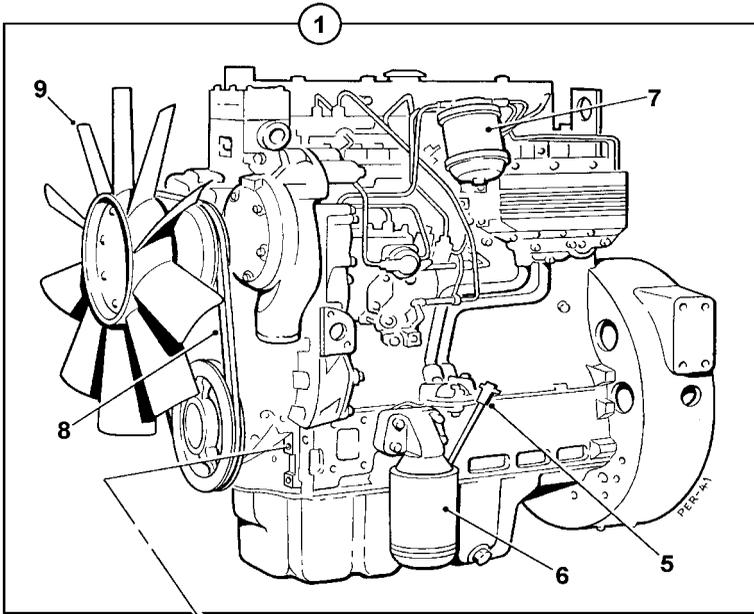
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	24S88		WHEEL, assembly, L.H.	2
1	24S89		WHEEL, assembly, R.H.	2
2	7000076		RIM, wheel, W20 x 26.5	1
3	20S24		TYRE, 600/55-26.5	1
4	V602834		VALVE	1
10	V601391		NUT, wheel	40
11	V601450		WASHER, split cone	40

**ADT 10 Dump Truck**

# **Section 3**

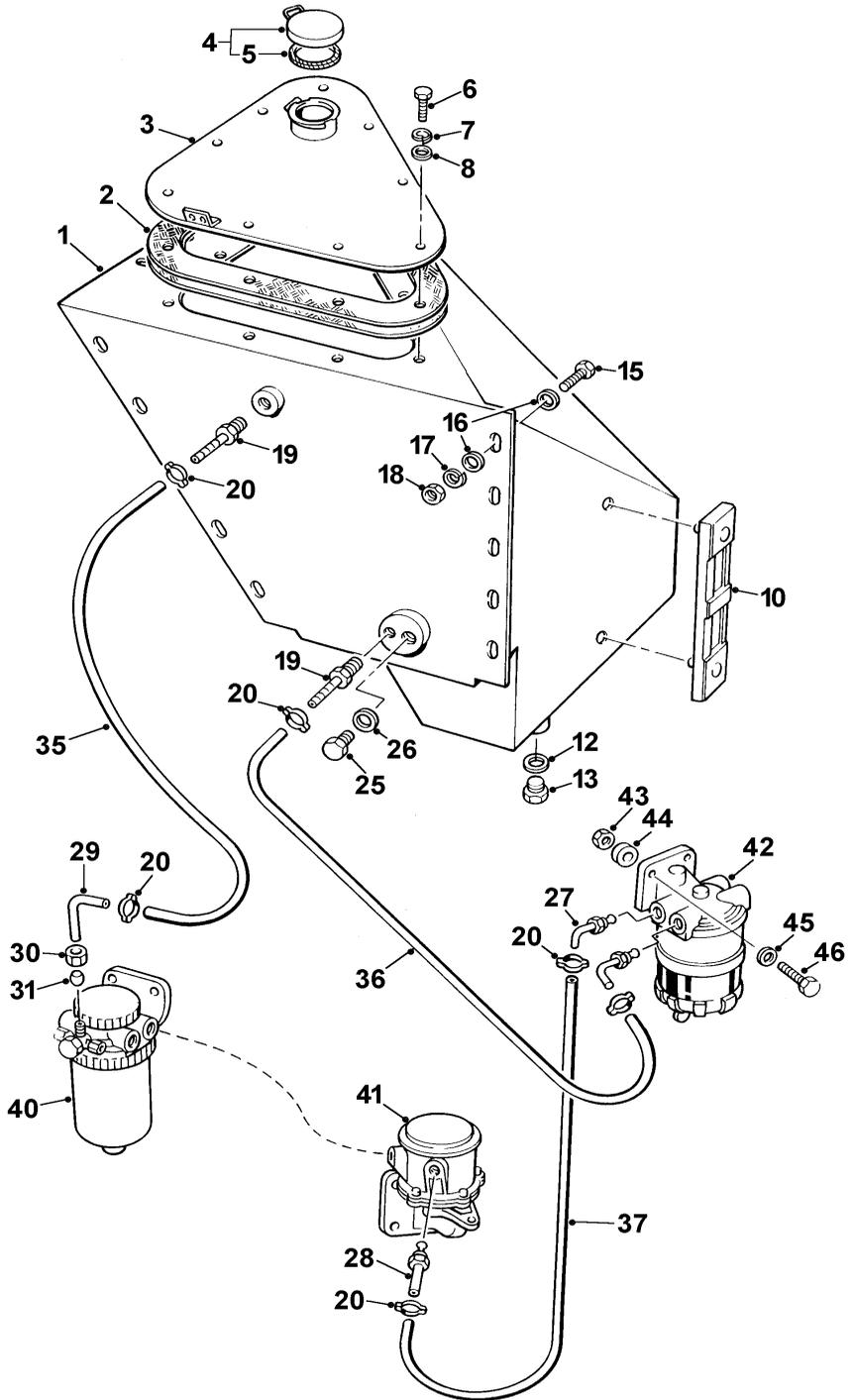
# **Engine**

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<b>RADIATOR &amp; HOSES</b>	<b>3 - R - 1</b>
<b>RADIATOR &amp; RECIRCULATING GUARDS</b>	<b>3 - R - 2</b>



**ENGINE & mountings****3 - A - 1**

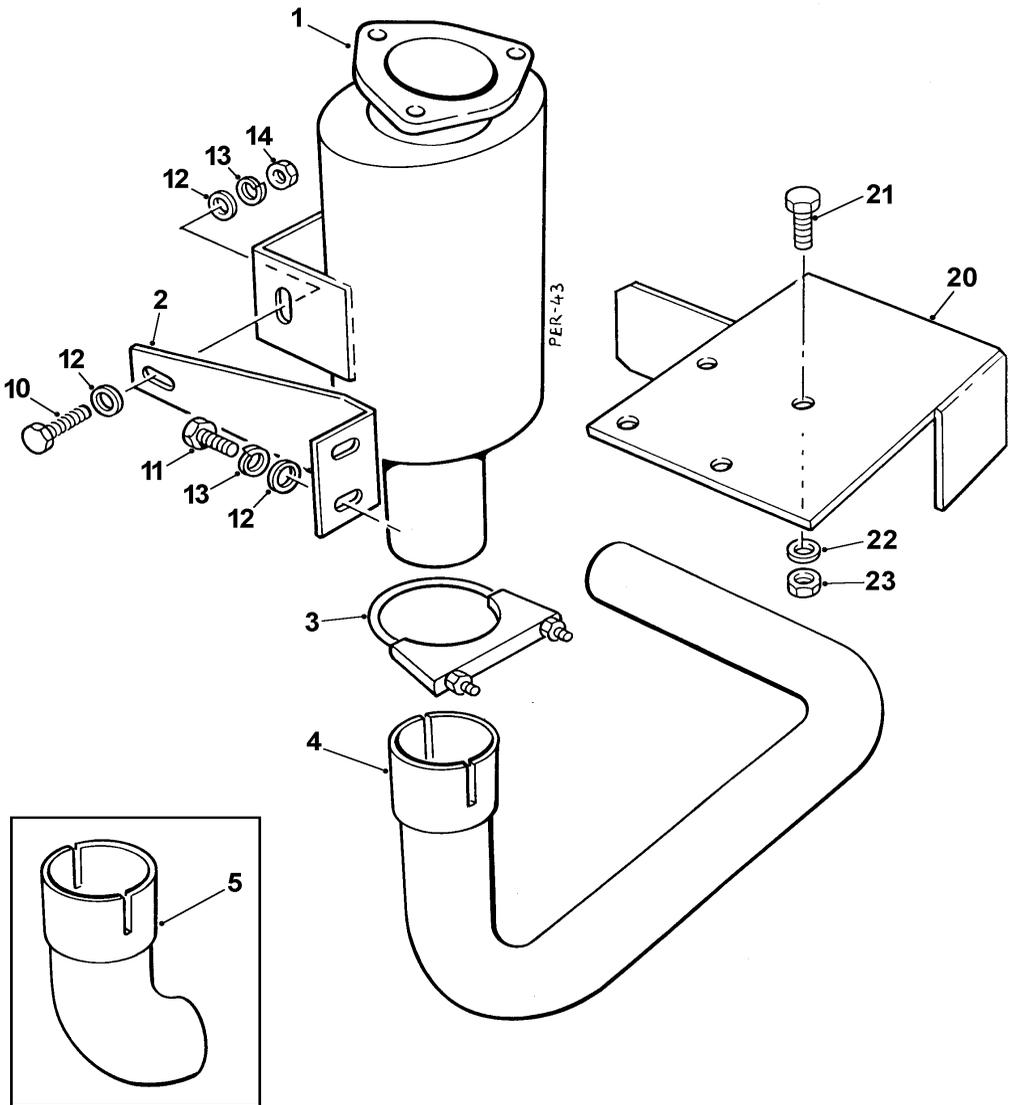
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000001		ENGINE Perkins 1004-40T Stage 1 emission compliant 24 volt	1
.....	V602779		KIT CONVERSION, ESOS valve	1
5	.....		DIPSTICK	1
6	V602637		OIL FILTER	1
7	V602695		FUEL FILTER	1
8	V602698		FAN BELT	1
9	V602984		FAN, 20 inch	1
10	V2004751		BRACKET, R.H. engine mounting	
11	V2004750		BRACKET, L.H. engine mounting	
12	17S08		WASHER, spring	4
13	11S06F		SCREW, set	4
15	8S06N		BOLT	2
16	267S09		WASHER, flat	4
17	V2000148		WASHER, special	2
18	V2001643		MOUNT, rubber	2
19	61S06		NUT, self locking	2



# FUEL TANK & LOW PRESSURE FUEL SYSTEM

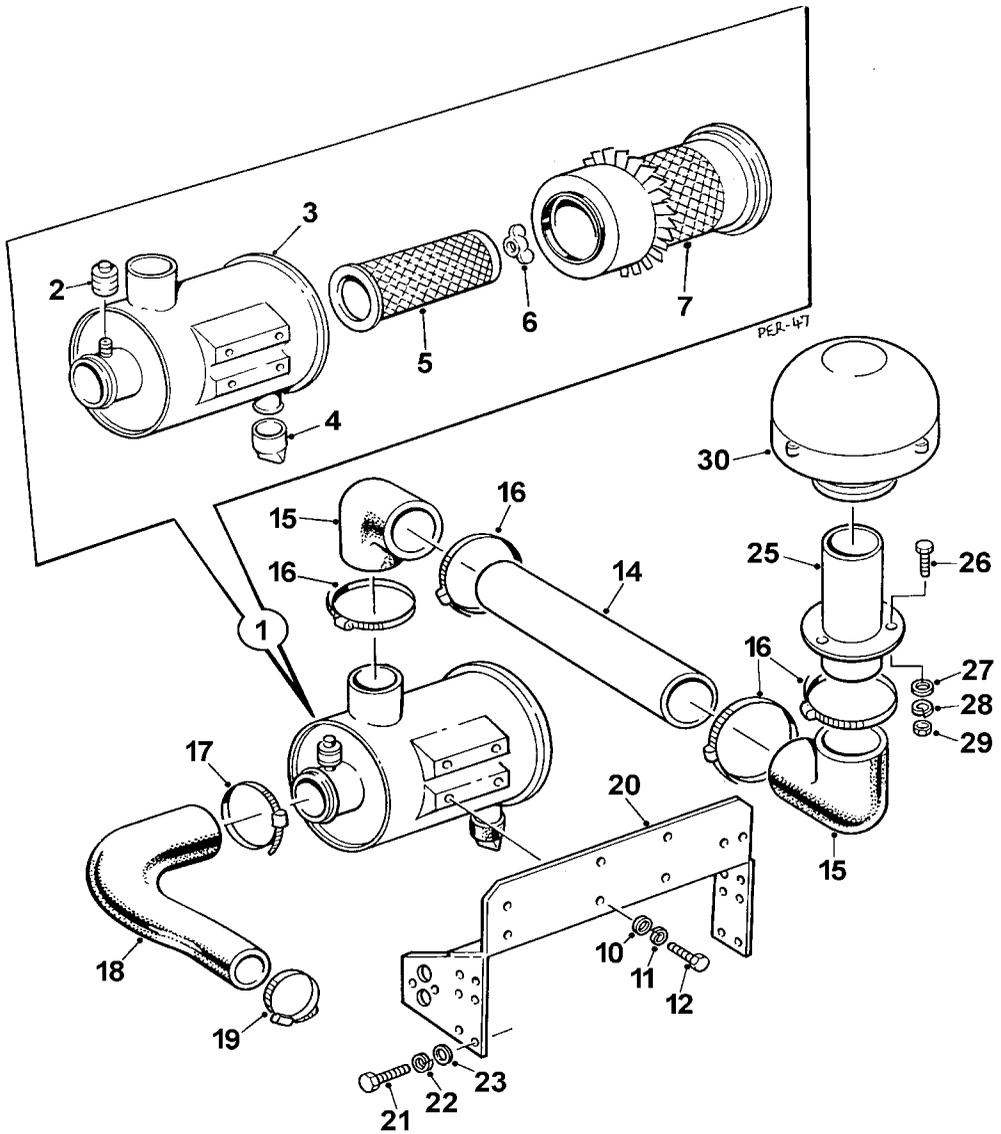
3 - B - 1

Item	Part no	Serial no	Description	Qty
1	7000148		TANK, fuel	1
2	7000301		GASKET	2
3	7000239		COVER, fuel tank	1
4	V2003295		CAP, filler, assembly	1
5	V602660		GASKET, cap	1
6	11S03D		SCREW, set	9
7	17S04		WASHER, spring	9
8	267S05		WASHER, flat	9
10	V2004928		GAUGE, fuel	1
12	100S04		SEAL, bonded	1
13	127S04		PLUG, drain	1
15	11S05F		SCREW, set	10
16	267S07		WASHER, flat	20
17	17S06		WASHER, spring	10
18	7S05		NUT	10
19	V2003209		PIPE, fuel, straight	2
20	V2003029		CLIP, hose	6
25	127S04		PLUG, drain	1
26	100S04		SEAL, bonded	1
27	V2003339		PIPE, fuel, 90 <sup>o</sup>	2
28	V2003327		PIPE, fuel, straight	1
29	V2003357		PIPE, fuel, 90 <sup>o</sup>	1
30	V600613		NUT	1
31	V600614		FITTING, ferrule	1
35	V2002991		HOSE, fuel line ( <i>order by metre</i> )	AR
36	V2002991		HOSE, fuel line ( <i>order by metre</i> )	AR
37	V2002991		HOSE, fuel line ( <i>order by metre</i> )	AR
40	V602695		FILTER, fuel	
41	.....		LIFT PUMP, fuel ( <i>see Engine Parts Cat.</i> )	
42	V601004		PRE-FILTER, fuel	
43	61S03		NUT, 'Binx', self locking	2
44	CSE182		SPACER	2
45	267S05		WASHER, flat	2
46	11S03F		SCREW, set	2

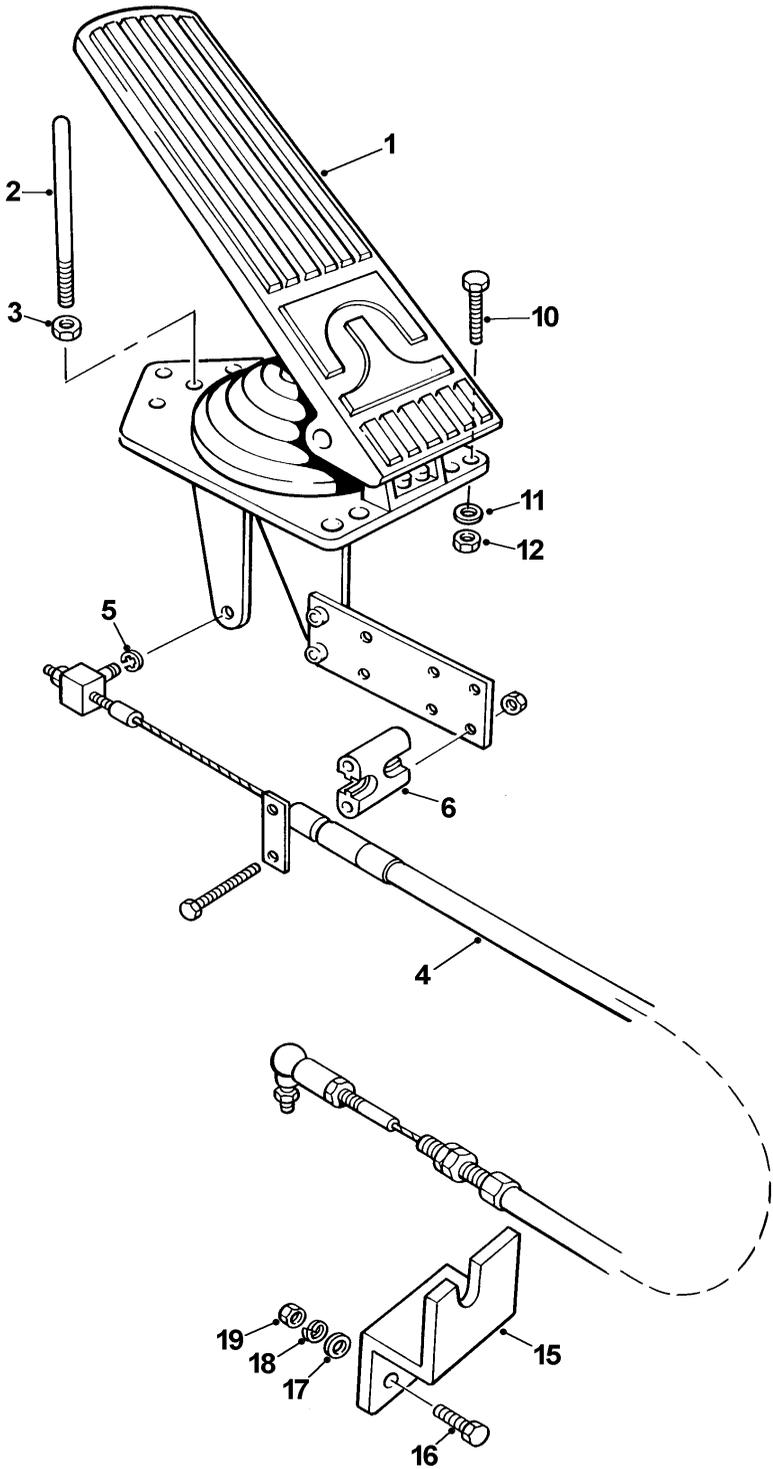


**EXHAUST SYSTEM****3 - C - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000360		SILENCER	1
2	7000366		BRACKET, silencer support	1
3	153S12		CLAMP	1
4	7000425		PIPE, silencer tail	1
5	7000330		or ELBOW, silencer tail	1
10	11S05D		SCREW, set	1
11	11S05C		SCREW, set	2
12	267S07		WASHER, flat	4
13	17S06		WASHER, spring	3
14	7S05		NUT	1
20	7000452		GUARD, tail pipe	1
21	11S05D		SCREW, set	4
22	267S07		WASHER, flat	4
23	61S05		NUT, 'Binx', self locking	4

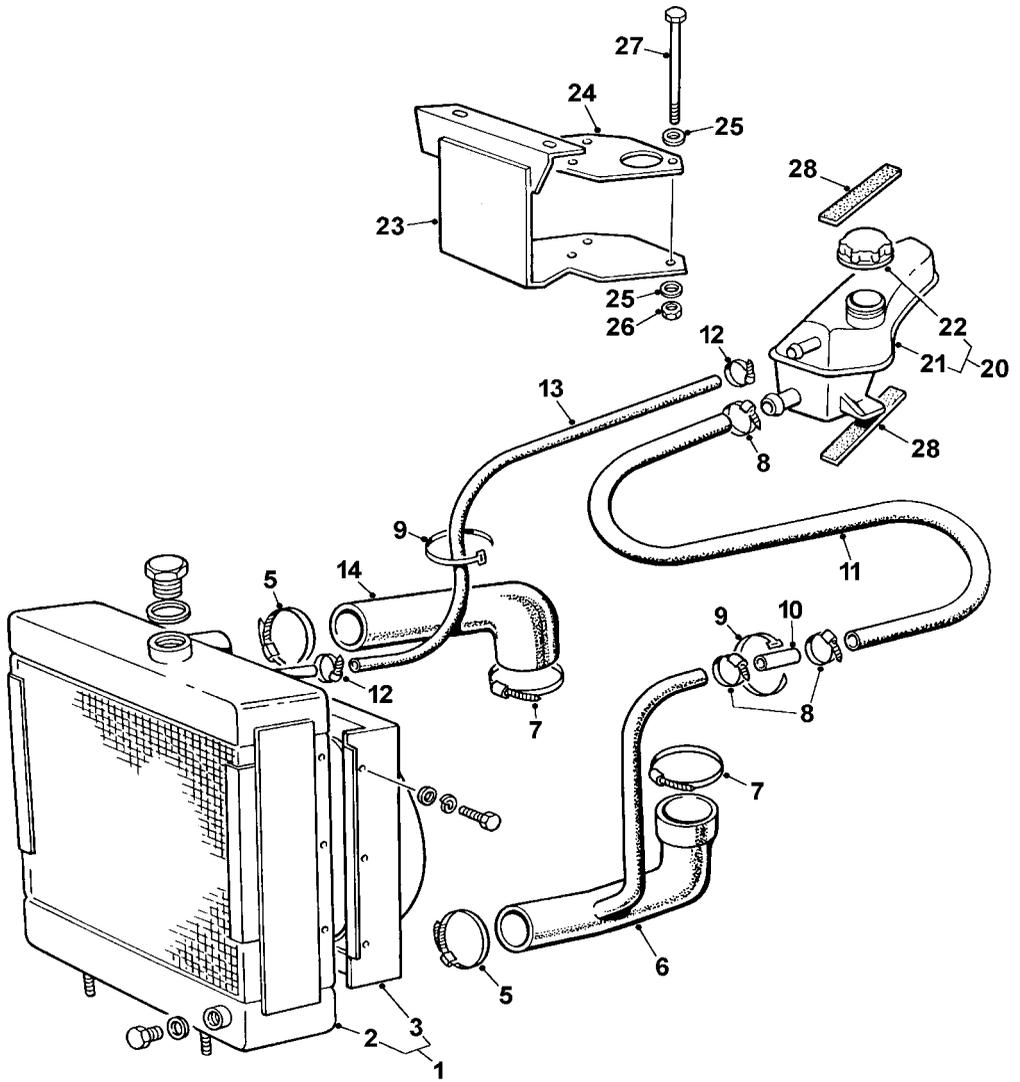


Item	Part no	Serial no	Description	Qty
1	V2004764		AIR CLEANER, assembly	1
2	V602665		INDICATOR, restrictor	1
3	.....		BODY ( <i>order assembly</i> )	1
4	V602688		COLLECTOR, dust	1
5	V602664		ELEMENT, inner	1
6	V602687		NUT wing	1
7	V602663		ELEMENT, outer	1
10	267S05		WASHER, flat	4
11	17S04		WASHER, spring	4
12	11S03B		SCREW, set	4
14	7000431		PIPE, pre-filter	1
15	V2003188		HOSE, elbow	2
16	97S17		CLIP, hose	4
17	97S15		CLIP, hose	1
18	7000309		HOSE, elbow, filter to engine	1
19	97S13		CLIP, hose	1
20	7000262		BRACKET, air cleaner	1
21	11S05C		SCREW, set	8
22	17S06		WASHER, spring	8
23	267S07		WASHER, flat	8
25	7000429		PIPE, with mounting flange	1
26	11S02B		SCREW, set	3
27	267S04		WASHER, flat	3
28	17S03		WASHER, spring	3
29	7S02		NUT	3
30	7000430		FILTER, pre-cleaner	1



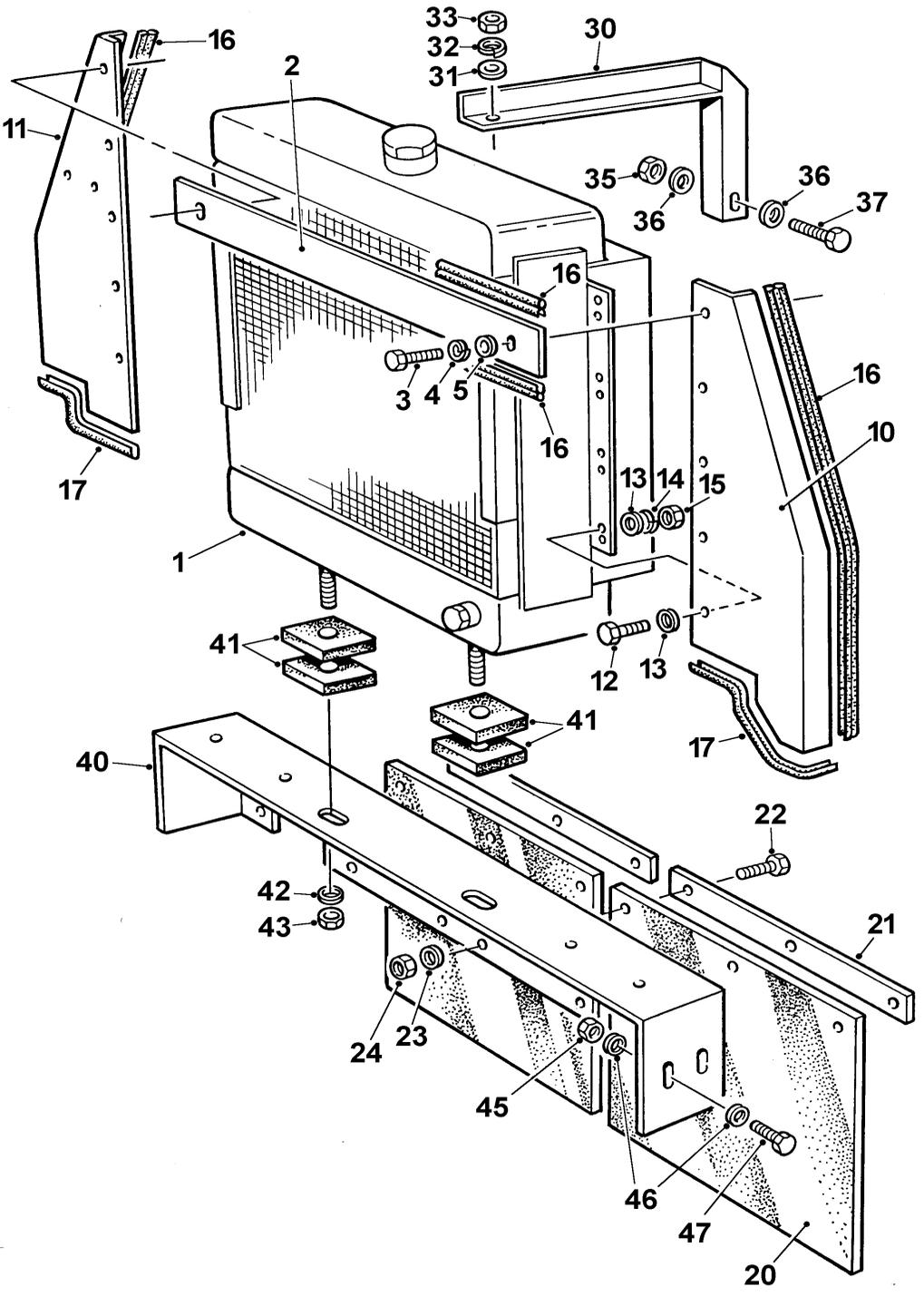
**ACCELERATOR****3 - D - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
.....	7000024		ACCELERATOR PEDAL & CABLE	
1	V602812		PEDAL, assembly	1
2	V602813		ROD, pedal stop	1
3	7S03		NUT	1
4	V602814		CABLE, assembly	1
5	V602815		CIRCLIP	1
6	V602816		BRACKET, cable clamp	1
10	11S02F		SCREW, set	4
11	267S04		WASHER, flat	4
12	61S02		NUT, 'Binx', self locking	4
15	7000302		BRACKET, cable to engine	1
16	11S02		SCREW, set	2
17	267S04		WASHER, flat	2
18	17S03		WASHER, spring	2
19	7S02		NUT	2



**RADIATOR & HOSES****3 - R - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000016		RADIATOR, assembly	1
2	.....		RADIATOR, engine cooling	1
3	V602809		COWL, fan	1
5	97S11		CLIP, hose	2
6	7000432		HOSE, radiator bottom	1
7	97S13		CLIP, hose	2
8	97S07		CLIP, hose	3
9	V2003111		TIE, hose, 200mm long	
10	7000442		PIPE, hose connecting	
11	7000441		HOSE, bottom hose to expansion tank	1
12	97S05		CLIP, hose	
13	7000389		HOSE	
14	V2001698		HOSE, radiator top	1
20	V602810		TANK, expansion c/w cap, assembly	1
21	.....		TANK, expansion	1
22	V602807		CAP	1
23	7000391		BRACKET, expansion tank	1
24	7000446		PLATE, expansion tank	1
25	267S04		WASHER, flat	6
26	61S02		NUT, 'Binx' self locking	3
27	8S02R		BOLT	3
28	106209000		STRIP, self adhesive rubber	A/R



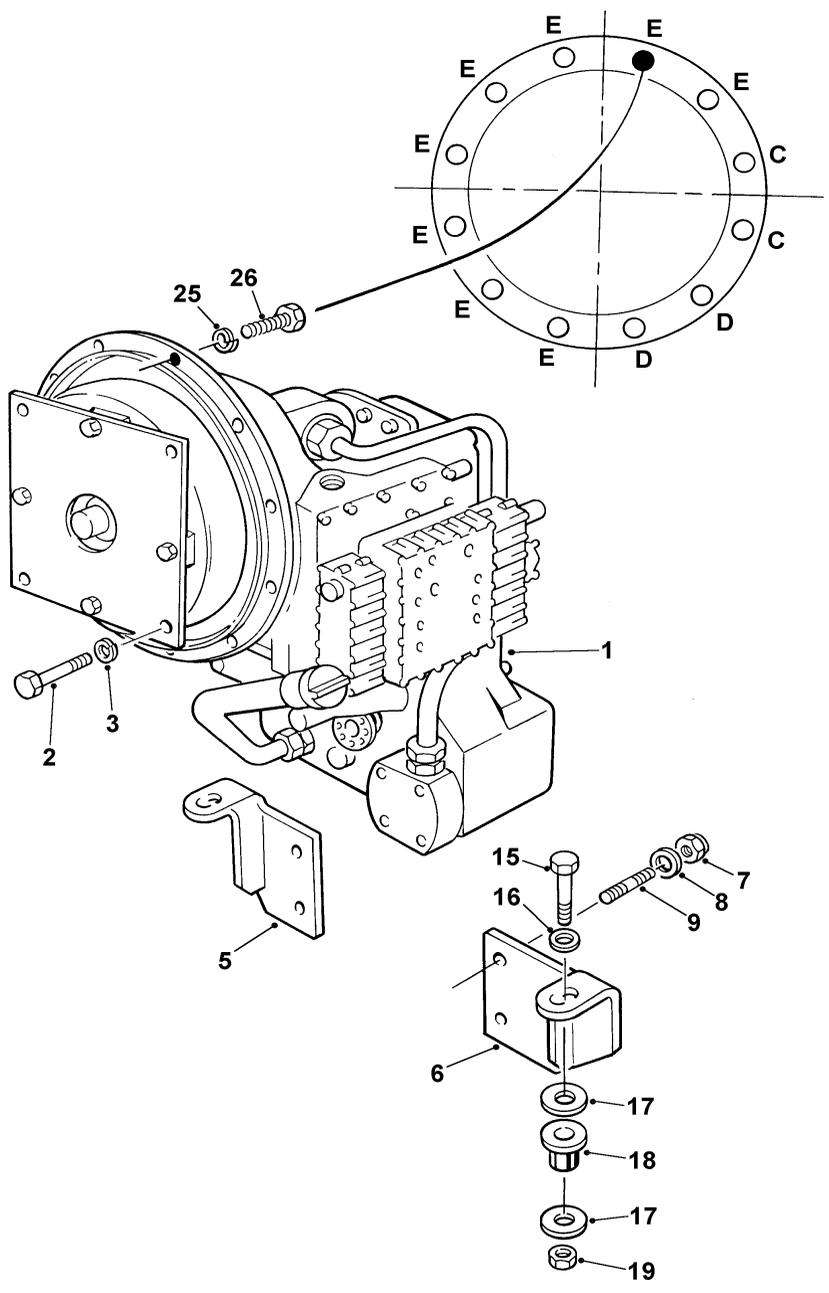
Item	Part no	Serial no	Description	Qty
1	700016		RADIATOR ( <i>see page 3-R-1</i> )	1
2	7000320		GUARD, recirculating, top	1
3	11S02A		SCREW, set	2
4	17S03		WASHER, spring	2
5	267S04		WASHER, flat	2
10	7000318		GUARD, recirculating, L.H.	1
11	7000319		GUARD, recirculating, R.H.	1
12	11S02A		SCREW, set	8
13	267S04		WASHER, flat	16
14	17S03		WASHER, spring	8
15	7S02		NUT	8
16	V2003587		STRIP, sealing ( <i>order by metre</i> )	AR
17	V2003199		STRIP, trim ( <i>order by metre</i> )	AR
20	7000435		GUARD, rubber, recirculating	2
21	7000436		RETAINER, guard recirculating	2
22	11S03D		SCREW, set	6
23	267S05		WASHER, flat	6
24	61S03		NUT, 'Binx', self locking	6
30	7000306		BRACKET, radiator stay	1
31	267S05		WASHER, flat	1
32	17S04		WASHER, spring	1
33	7S03		NUT	1
35	61S03		NUT	1
36	267S05		WASHER, flat	2
37	11S03B		SCREW, set	1
40	7000158		BRACKET, radiator mounting	1
41	V2003328		SPACER, rubber	4
42	267S06		WASHER, flat	2
43	61S04		NUT, 'Binx', self locking	2
45	61S04		NUT, 'Binx', self locking	4
46	267S06		WASHER, flat	8
47	11S04D		SCREW, set	4

ADT 10 Dump Truck

# Section 4

# Transmission

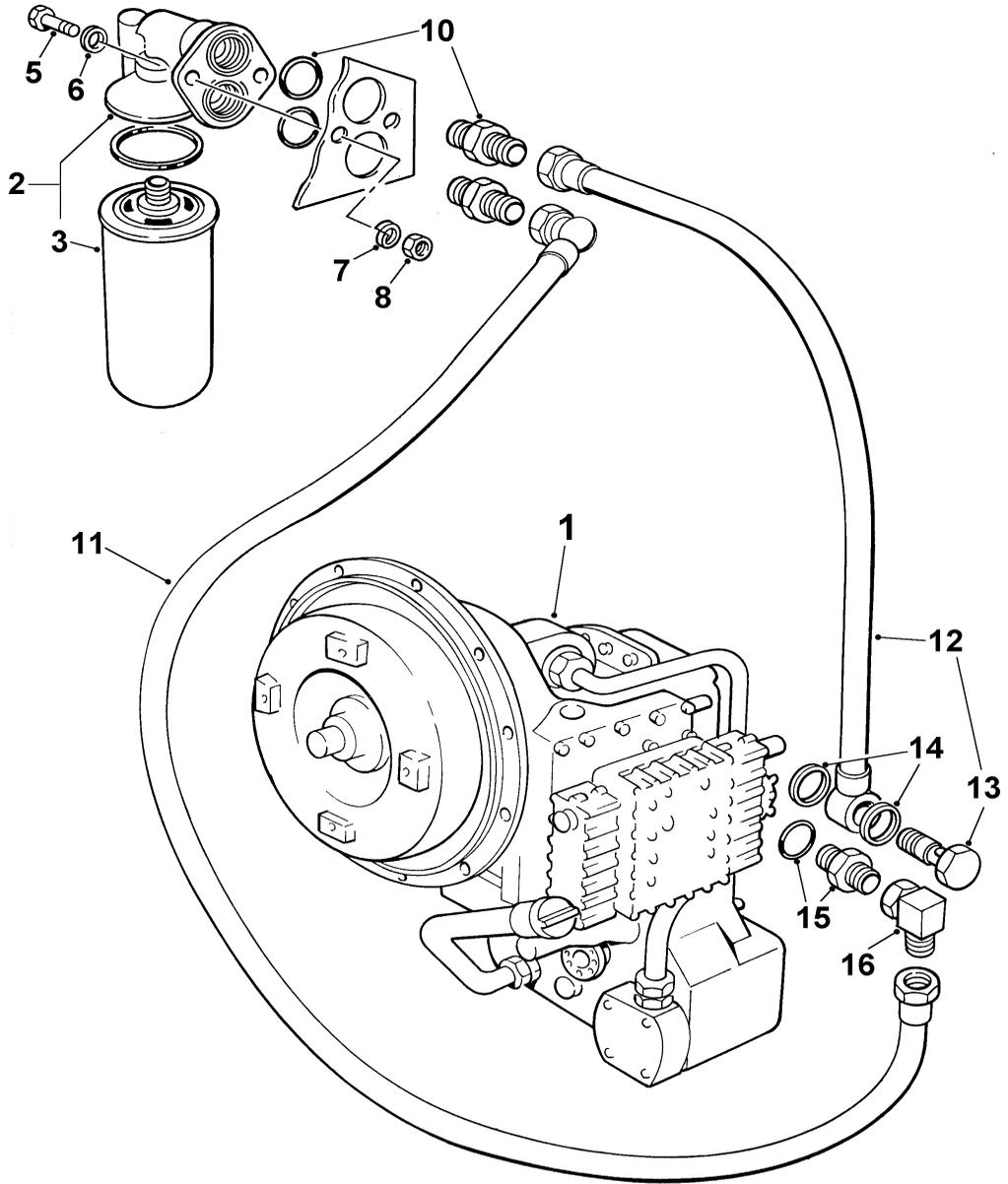
<b>Contents</b>	<b>Page</b>
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<b>K3 / K4 CLUTCH</b>	<b>4 - C - 8</b>
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# TRANSMISSION & mountings

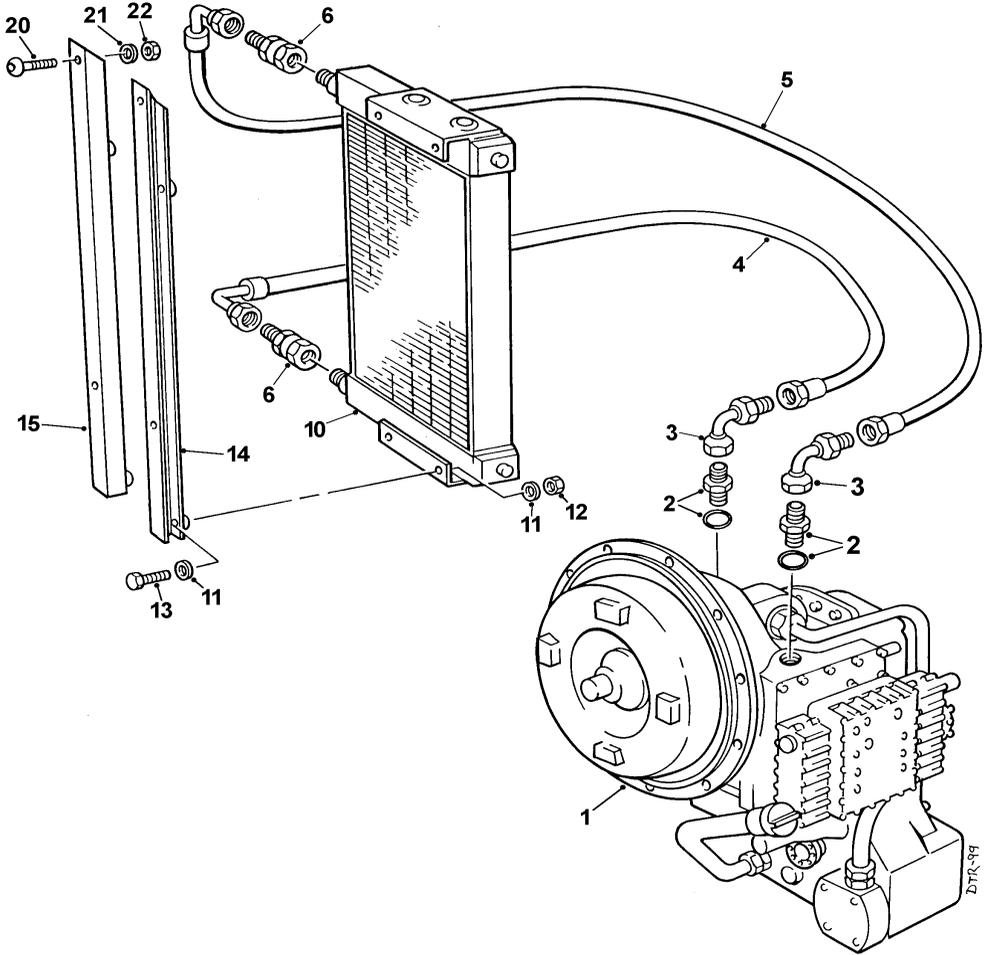
4 - A - 1

Item	Part no	Serial no	Description	Qty
1	7000310		TRANSMISSION UNIT	1
2	8S04J		BOLT	
3	17S05		WASHER, spring	
5	7000135		BRACKET, R.H. trans. mounting	1
6	7000136		BRACKET, L.H. trans. mounting	1
7	59S05		NUT, 'Nylloc', self locking	4
8	267S10		WASHER, flat	4
9	700428		STUD	4
15	8S06N		BOLT	2
16	267S09		WASHER, flat	2
17	V2002148		WASHER, 'Special'	4
18	V2001643		MOUNT, rubber	2
19	61S06		NUT, self-locking	2
25	17S05		WASHER, spring	
26	.....		SCREW, set ( <i>see below</i> )	
C	11S04C		"	2
D	11S04D		"	2
E	11S04E		"	8



**OIL FILTER, transmission****4 - A - 2**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000310		TRANSMISSION UNIT	1
2	.....		FILTER assembly ( <i>part of transmission</i> )	1
3	V603009		CARTRIDGE, filter	1
5	8S03D		BOLT	2
6	267S05		WASHER, flat	2
7	17S04		WASHER, spring	2
8	7S03		NUT	2
10	V2005025		ADAPTOR c/w 'O' ring	2
11	32S05K		HOSE	1
12	7000365		HOSE c/w banjo bolt	1
13	.....		BOLT, banjo ( <i>part of hose item 12</i> )	1
14	100S06		SEAL, bonded	2
15	V2005025		ADAPTOR c/w 'O' ring	1
16	96S06		FITTING, elbow	1



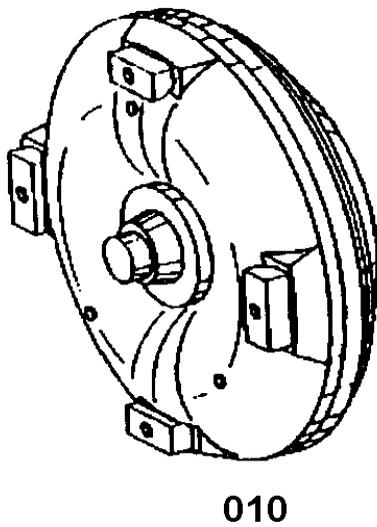
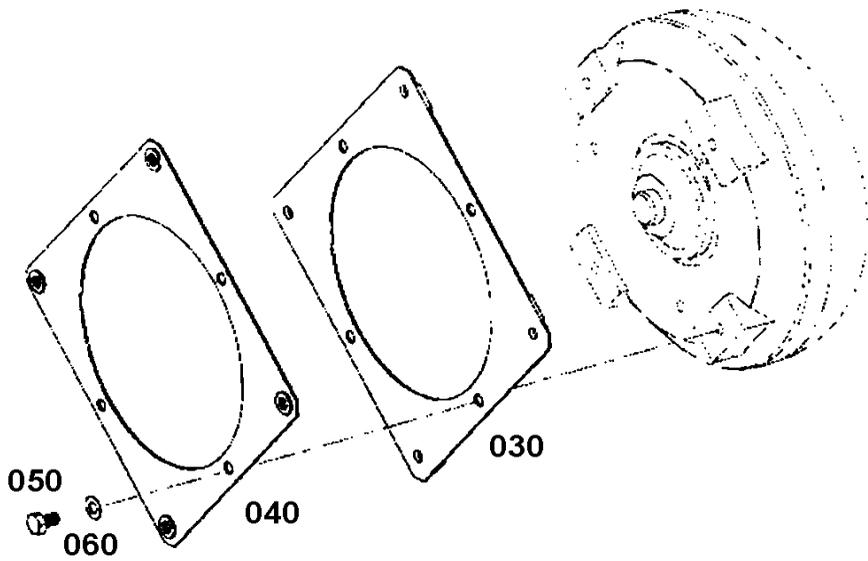
**OIL COOLER, transmission****4 - A - 3**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000310		TRANSMISSION UNIT	1
2	V2005025		ADAPTOR c/w 'O' ring	2
3	128S05		FITTING, elbow, swept	2
4	73S04H		HOSE	1
5	73S04M		HOSE	1
6	122S12		ADAPTOR, male/female	2
10	7000438		COOLER, transmission oil	2
11	267S05		WASHER, flat	4
12	61S03		NUT, 'Binx' self locking	4
13	11S03D		SCREW, set	4
14	7000440		CHANNEL, L.H.	1
15	7000439		CHANNEL, R.H.	1
20	301S05H		SCREW, button head socket	4
21	267S05		WASHER, flat	4
22	61S03		NUT, 'Binx' self locking	4



**PROPELLER SHAFTS****4 - B - 1**

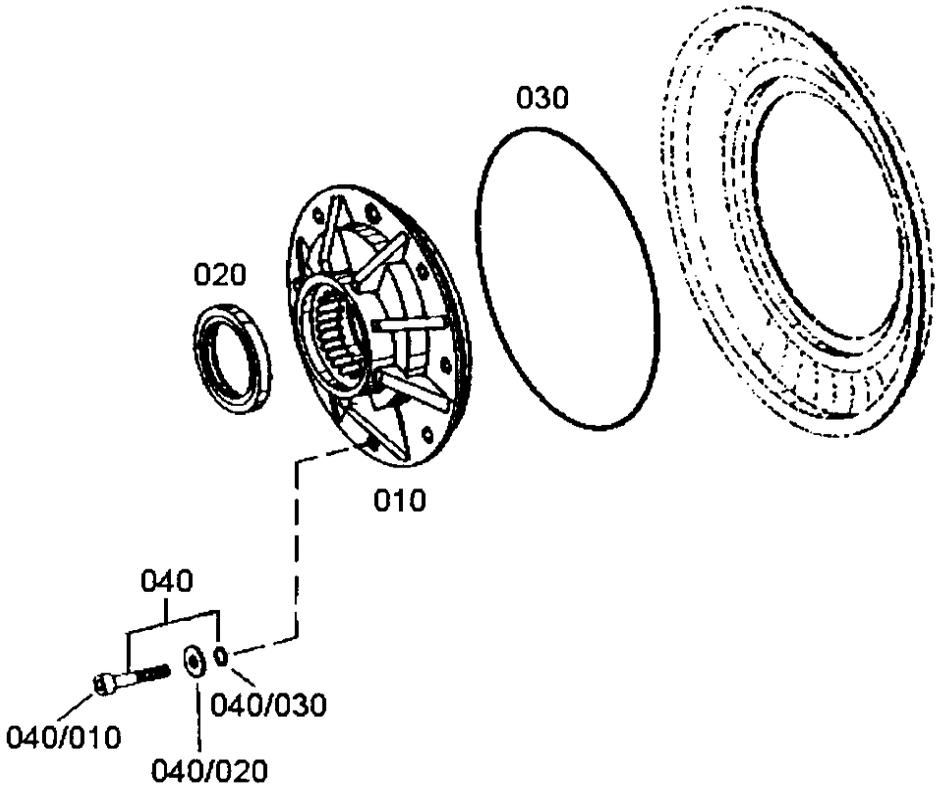
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000013		PROPELLER SHAFT, front	1
2	176S01		CAP, grease nipple	2
3	316S04B		SCREW, set	4
4	316S04C		SCREW, set	4
5	61S04		NUT, "Binx", self locking	8
6	8S04B		BOLT	8
10	7000014		PROPELLER SHAFT, centre	1
11	176S01		CAP, grease nipple	2
12	61S04		NUT, "Binx", self locking	8
13	8S04B		BOLT	8
14	7000018		KIT, half yoke, straps & bolts	1
20	7000017		PROPELLER SHAFT, rear, assembly	1
20A	V602794		END YOKE	
20B	V602795		NUT, end yoke retaining	
21	V602793		BEARING, support	1
22	V2004180		GUARD, prop. shaft bearing	1
23	61S05		NUT, "Binx", self locking	2
24	267S07		WASHER, flat	4
25	11S05D		SCREW, set	2
26	316S04B		SCREW, set	4
27	316S04C		SCREW, set	4
35	V602792		KIT, U.J. repair	AR
36	V602791		FLANGE	AR



**Transmission Unit**  
**ENGINE CONNECTION & CONVERTER**

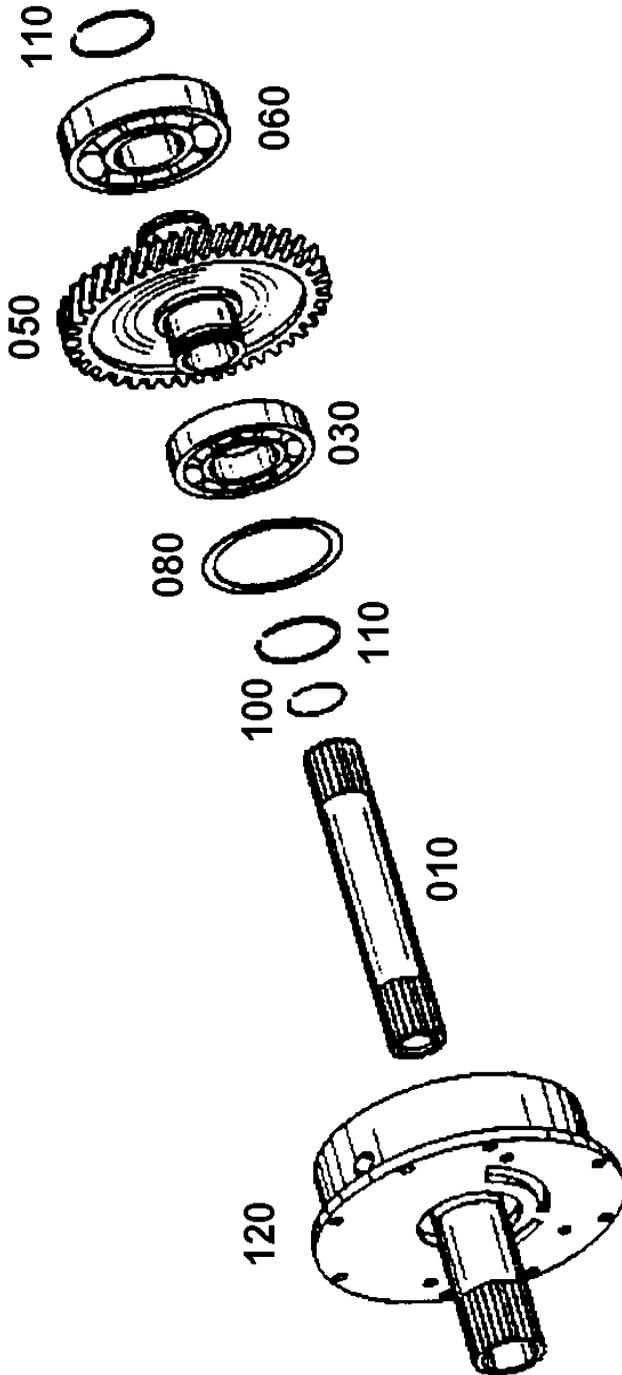
**4 - C - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
030	V603070		DIAPHRAM	1
040	V603071		DIAPHRAM	1
050	V603072		SCREW	4
060	V603073		WASHER	8
10	V603074		CONVERTER	1



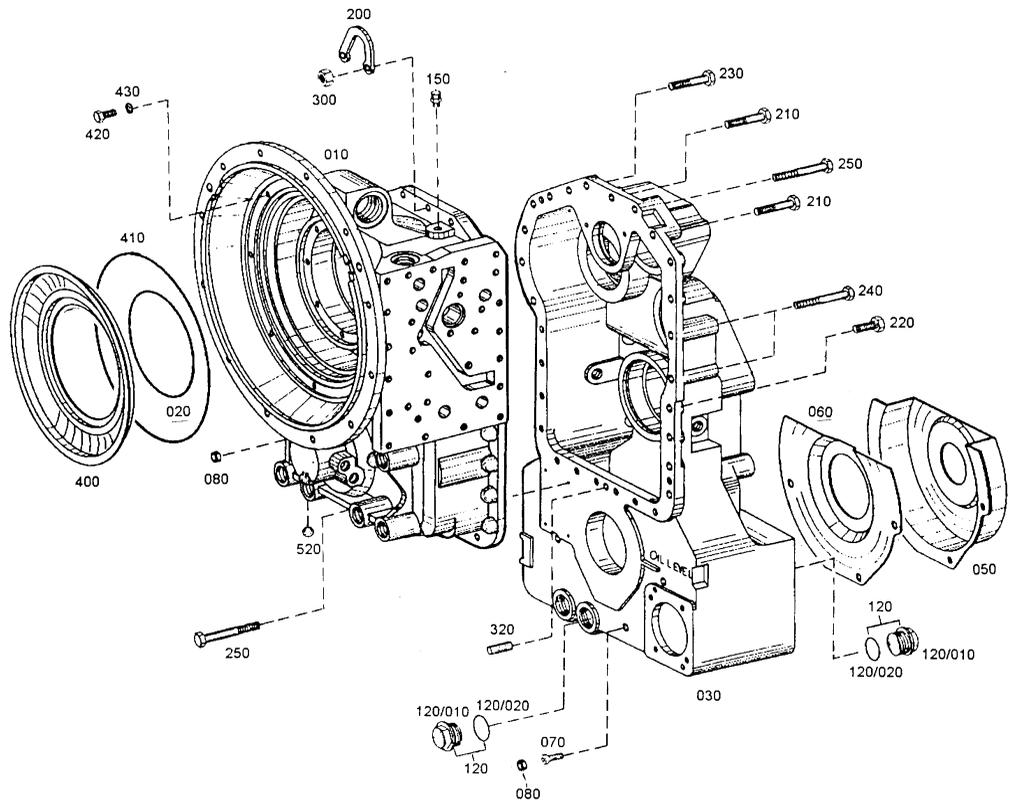
**Transmission Unit  
PRESSURE OIL PUMP**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603075		PUMP	1
020	V603076		SEAL, shaft	1
030	V603077		O' ring	1
040	.....		SCREW, assembly	8
/010	V603079		SCREW, cap	1
/020	V603080		WASHER	1
/030	V603081		O' ring	1



**Transmission Unit  
INPUT SHAFT****4 - C - 3**

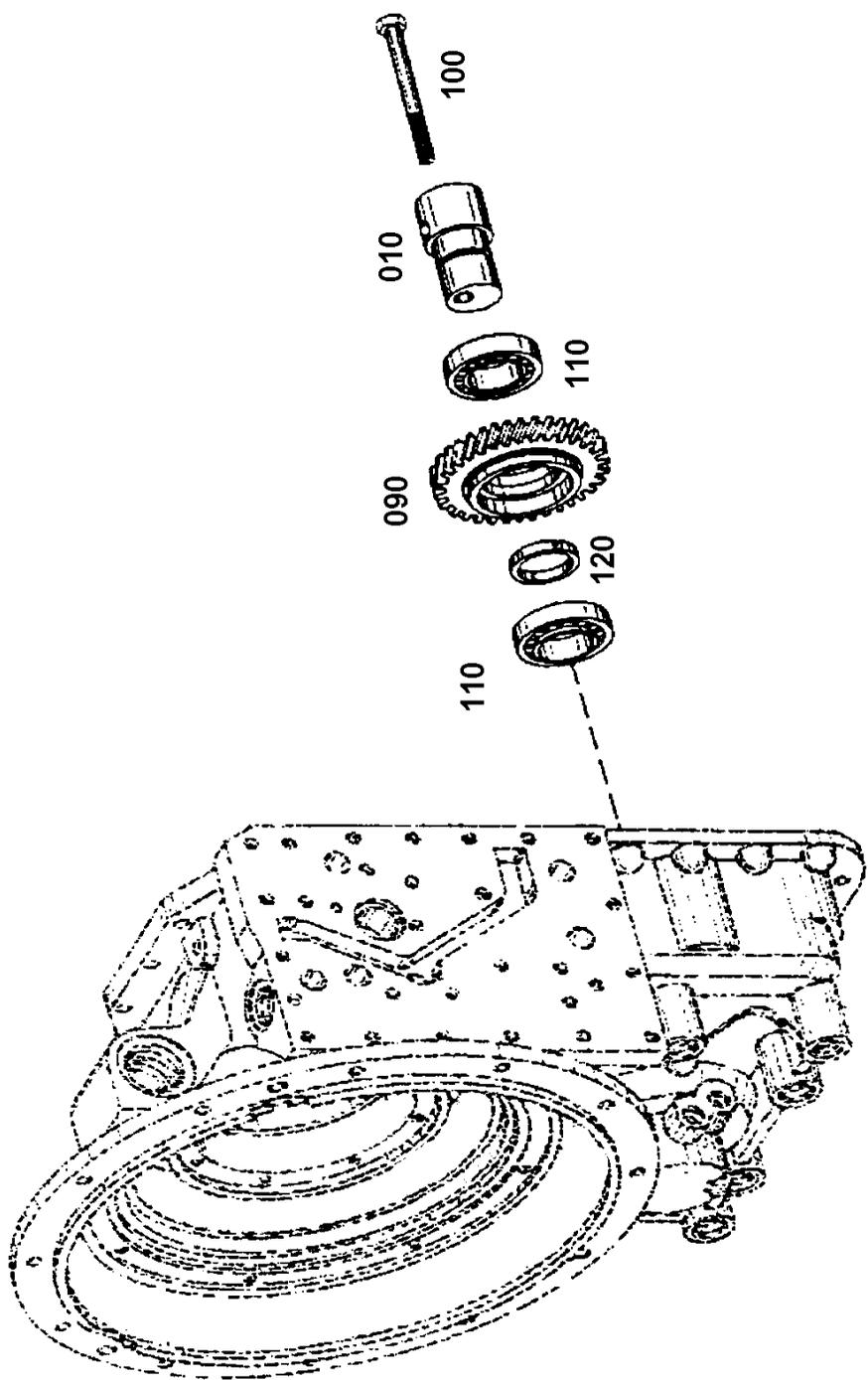
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603082		SHAFT, turbine	1
030	V603083		BEARING, roller	1
050	V603084		GEAR, input	1
060	V603085		BEARING, roller	1
080	V603087		SHIM, 1,2 mm	1
080	V603088		SHIM, 1,25 mm	1
080	V603089		SHIM, 1,35 mm	1
080	V603090		SHIM, 0,5 mm	1
080	V603091		SHIM, 0,6 mm	1
080	V603092		SHIM, 0,7 mm	1
080	V603093		SHIM, 0,8 mm	1
080	V603094		SHIM, 0,9 mm	1
080	V603095		SHIM, 1,0 mm	1
080	V603096		SHIM, 1,1 mm	1
080	V603097		SHIM, 1,3 mm	1
080	V603098		SHIM, 1,4 mm	1
080	V603099		SHIM, 1,5 mm	1
080	V603100		SHIM, 0,65 mm	1
080	V603101		SHIM, 0,75 mm	1
080	V603102		SHIM, 0,85 mm	1
080	V603103		SHIM, 0,95 mm	1
080	V603104		SHIM, 1,05 mm	1
080	V603105		SHIM, 1,15 mm	1
100	V603106		RING, snap	1
110	V603107		RING, piston	2
120	V603108		FLANGE, oil feed	1



**Transmission Unit  
GEARBOX HOUSING**

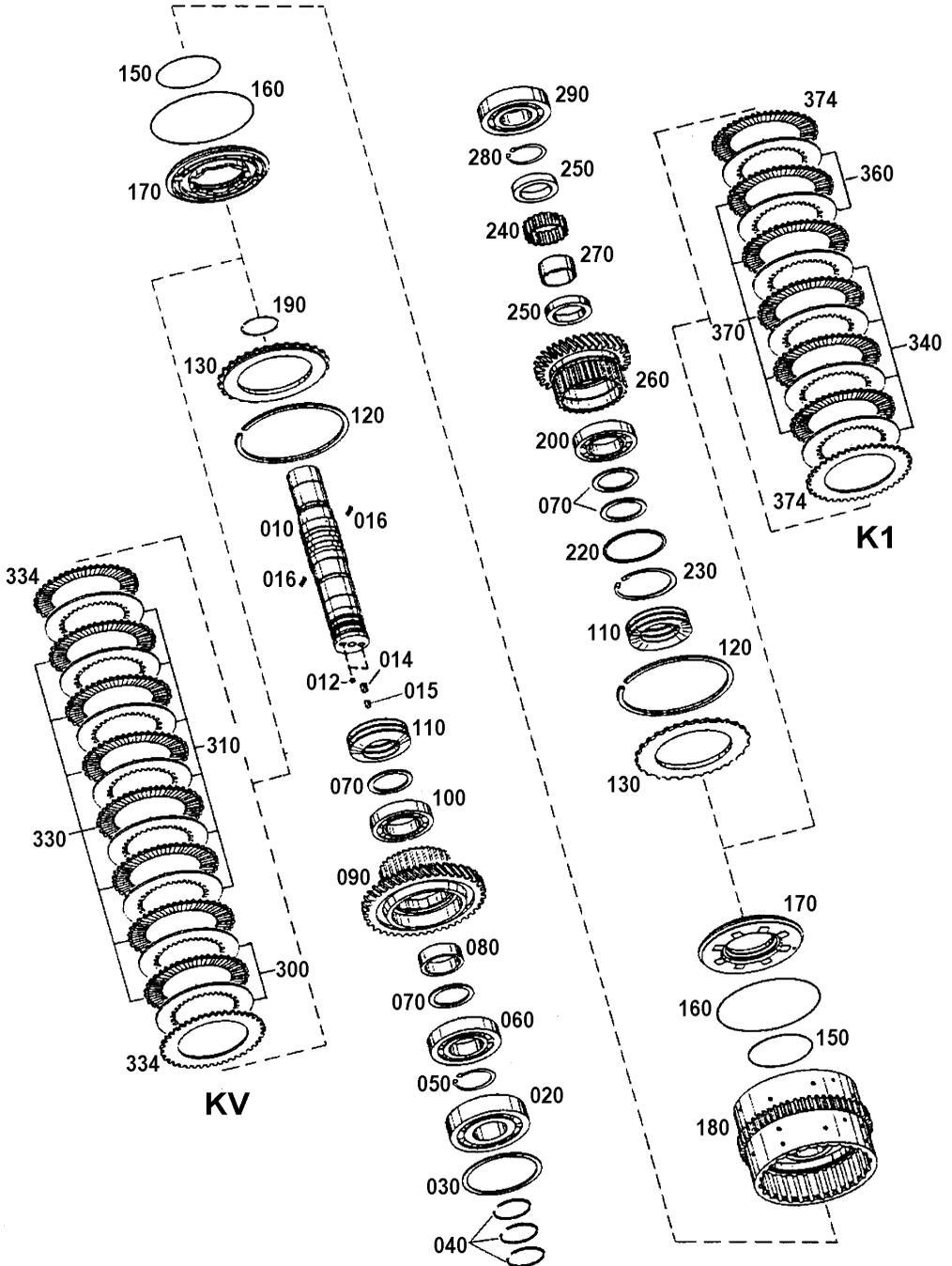
**4 - C - 4**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603109		HOUSING	1
020	V603110		O' ring	1
030	V603111		HOUSING	1
050	V603112		SCREEN SHEET	1
060	V603113		SCREEN SHEET	1
070	V603114		SCREW, cap	3
080	V603115		CAP, sealing	5
120	.....		PLUG, c/w 'O' ring	2
/010	V603117		PLUG	2
/020	V603118		O' ring	2
150	V603119		BREATHER	1
200	V603120		BRACKET	1
210	V603121		SCREW	3
220	V603122		SCREW	17
230	V603123		SCREW	3
240	V603124		SCREW	2
250	V603125		SCREW	3
300	V603126		NUT	6
320	V603127		PIN, cylindrical	1
400	V603128		COVER SHEET	1
410	V603129		O' ring	1
420	V603130		SCREW	8
430	V603131		WASHER	8
520	V603134		BALL	1



**Transmission Unit  
LAYSHAFT****4 - C - 5**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603135		AXLE	1
090	V603136		GEAR, idler	1
100	V603137		SCREW	1
110	V603138		BEARING, roller	8
120	V603139		BUSH, 7.20 mm	1
120	V603140		BUSH, 7.25 mm	1
120	V603141		BUSH, 7.30 mm	1
120	V603142		BUSH, 7.35 mm	1
120	V603143		BUSH, 7.40 mm	1
120	V603144		BUSH, 7.45 mm	1
120	V603145		BUSH, 7.50 mm	1
120	V603146		BUSH, 7.55 mm	1
120	V603147		BUSH, 7.60 mm	1



**Transmission Unit  
KV / K1 CLUTCH****4 - C - 6**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603148		SHAFT	1
012	V603149		BALL	2
014	V603150		PIN, slotted, 10x16	1
015	V603151		PIN, slotted, 8x12	1
016	V603152		PIN, slotted, 8x14	2
020	V603153		BEARING, ball	1
030	V603154		SHIM, 0.9 mm	1
030	V603155		SHIM, 0.95 mm	1
030	V603156		SHIM, 1.0 mm	1
030	V603157		SHIM, 1.05 mm	1
030	V603158		SHIM, 1.1 mm	1
030	V603159		SHIM, 1.15 mm	1
030	V603160		SHIM, 1.2 mm	1
030	V603161		SHIM, 1.25 mm	1
030	V603162		SHIM, 1.3 mm	1
030	V603163		SHIM, 1.35	1
030	V603164		SHIM 1.4 mm	1
030	V603165		SHIM 1.45 mm	1
030	V603166		SHIM 1.5 mm	1
030	V603167		SHIM 1.55 mm	1
030	V603168		SHIM, 1.6 mm	1
030	V603169		SHIM, 1.65 mm	1
030	V603170		SHIM, 1.7 mm	1
030	V603171		SHIM, 1.75 mm	1
030	V603172		SHIM, 1.8 mm	1
030	V603173		SHIM, 1.85 mm	1
030	V603174		SHIM, 1.9 mm	1
030	V603175		SHIM, 1.95 mm	1
030	V603176		SHIM, 2.0 mm	1
030	V603177		SHIM 2.05 mm	1
030	V603178		SHIM, 2.1 mm	1
030	V603179		SHIM, 2.15 mm	1
030	V603180		SHIM, 2.2 mm	1
030	V603181		SHIM, 2.25 mm	1
030	V603182		SHIM, 2.3 mm	1
040	V603183		RING, piston	3

**Transmission Unit  
KV / K1 CLUTCH**

**4 - C - 6**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
050	V603184		RING, retaining	1
060	V603185		BEARING, ball	1
070	V603186		SHIM, 1.3 mm	2
070	V603187		SHIM, 1.35mm	2
070	V603189		SHIM, 1.4 mm	2
070	V603190		SHIM, 1.45 mm	1
070	V603191		SHIM, 1.5 mm	1
070	V603192		SHIM, 1.55 mm	1
070	V603193		SHIM, 1.6 mm	2
070	V603194		SHIM, 1.65 mm	2
070	V603195		SHIM, 1.7 mm	2
070	V603196		SHIM, 1.75 mm	2
070	V603197		SHIM, 1.8 mm	2
070	V603198		SHIM, 1.85 mm	4
070	V603199		SHIM, 1.9 mm	4
070	V603200		SHIM, 1.95 mm	4
070	V603201		SHIM, 2.0 mm	4
070	V603202		SHIM, 2.05 mm	4
070	V603203		SHIM, 2.1 mm	4
070	V603204		SHIM, 2.15 mm.	4
070	V603205		SHIM, 2.2 mm.	4
070	V603206		SHIM, 2.25 mm.	4
070	V603207		SHIM, 2.3 mm.	4
070	V603208		SHIM, 2.35 mm.	4
070	V603209		SHIM, 2.4 mm.	4
070	V603210		SHIM, 2.45 mm.	4
070	V603211		SHIM, 2.5 mm.	4
070	V603212		SHIM, 2.55 mm.	4
070	V603213		SHIM, 2.6 mm.	4
070	V603214		SHIM, 2.65 mm.	4
070	V603215		SHIM, 2.7 mm.	4
070	V603216		SHIM, 2.75 mm.	4
070	V603217		SHIM, 2.8 mm.	4
080	V603218		BUSH	1
090	V603219		GEAR, spur	1
100	V603220		BEARING, ball	1

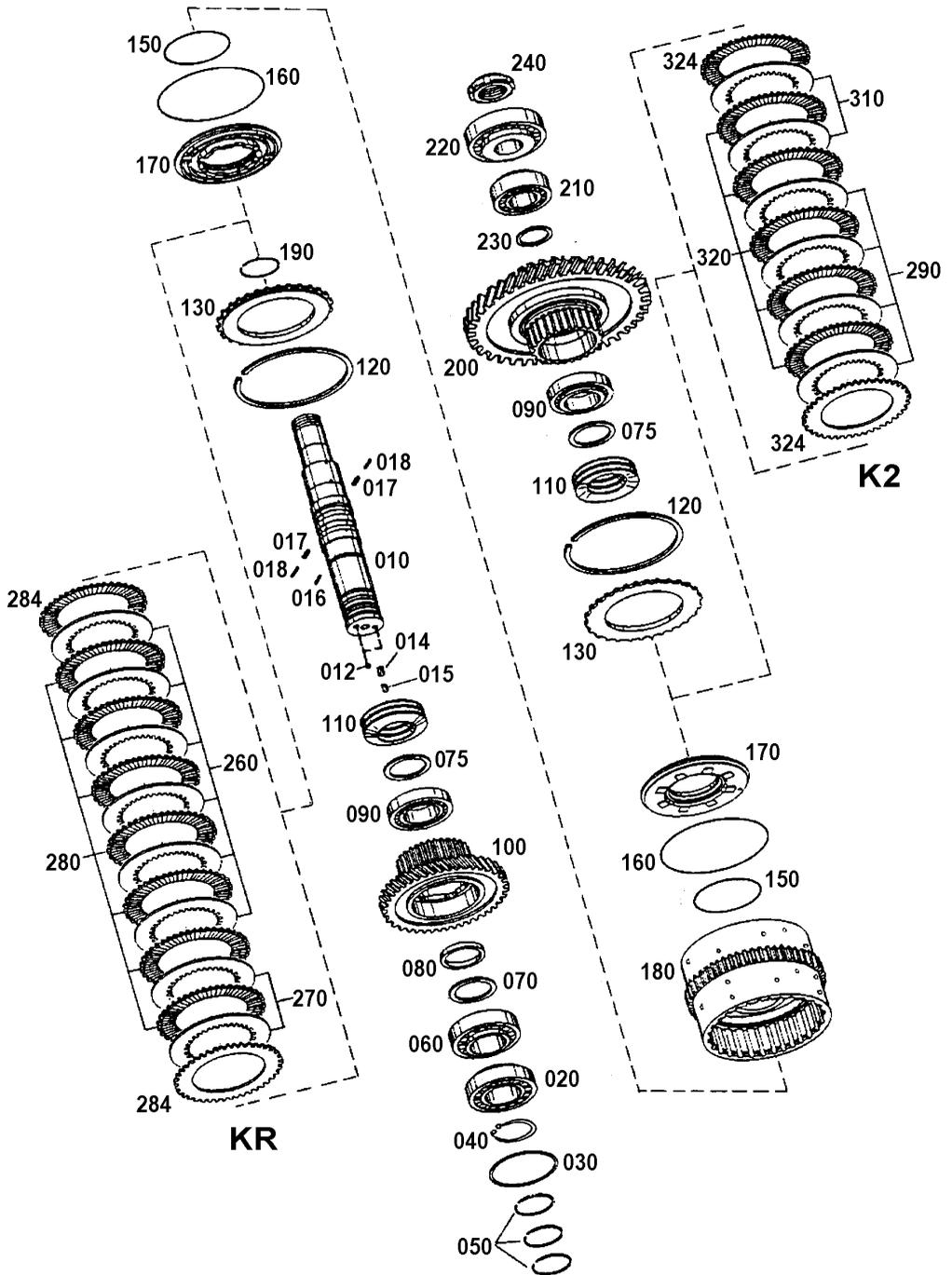
**Transmission Unit  
KV / K1 CLUTCH****4 - C - 6**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
110	V603221		CUP SPRING	10
120	V603222		RING, snap, 2.25 mm	2
120	V603223		RING, snap, 2.30 mm	2
120	V603224		RING, snap, 2.35 mm	2
120	V603225		RING, snap, 2.40 mm	2
120	V603226		RING, snap, 2.45 mm	2
120	V603227		RING, snap, 2.50 mm	2
120	V603228		RING, snap, 2.2 mm	2
120	V603229		RING, snap, 2.15 mm	2
120	V603230		RING, snap, 2.10 mm	2
130	V603231		END SHIM	2
150	V603232		'O' RING, 60x3 mm	2
160	V603233		'O' RING, 120x3 mm	2
170	V603234		PISTON	2
180	V603235		CARRIER, disc	1
190	V603236		RING, snap	1
200	V603237		BEARING, ball	1
220	V603238		SHIM, 0.8 mm	1
220	V603239		SHIM, 0.9 mm	1
220	V603240		SHIM, 0.95 mm	1
220	V603241		SHIM, 1.0 mm	1
220	V603242		SHIM, 1.1 mm	1
220	V603243		SHIM, 1.2 mm	1
220	V603244		SHIM, 1.3 mm	1
230	V603245		RING, retaining	1
240	V603246		CAGE, needle	1
250	V603247		BUSH	2
260	V603248		GEAR, spur	1
270	V603249		RING, internal	1
280	V603250		RING, retaining	1
290	V603251		BEARING, ball	1
300	V603252		DISC, clutch, 2.0 mm	2
300	V603253		DISC, clutch, 2.5 mm	2
310	V603252		DISC, clutch, 2.0 mm	6

**Transmission Unit  
KV / K1 CLUTCH**

**4 - C - 6**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
330	V603255		DISC	7
334	V603256		DISC	2
340	V603252		DISC, clutch, 2.0 mm	4
360	V603252		DISC, clutch, 2.0 mm	2
360	V603253		DISC, clutch, 2.5 mm	2
370	V603255		DISC	5
374	V603256		DISC	2



**Transmission Unit  
KR / K2 CLUTCH****4 - C - 7**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603262		SHAFT	1
012	V603149		BALL	2
014	V603150		PIN, slotted, 10x16 mm	1
015	V603151		PIN, slotted, 8x12 mm	1
016	V603266		PIN, slotted, 4.5x12 mm	2
017	V603152		PIN, slotted, 8x14 mm	2
018	V603268		PIN, slotted, 5x10 mm	2
020	V603269		BEARING, roller	1
030	V603270		SHIM, 0.8 mm	1
030	V603271		SHIM, 0.85 mm	1
030	V603272		SHIM, 0.9 mm	1
030	V603273		SHIM, 0.95 mm	1
030	V603274		SHIM, 1.0 mm	1
030	V603275		SHIM, 1.05 mm	1
030	V603276		SHIM, 1.1 mm	1
030	V603277		SHIM, 1.15 mm	1
030	V603278		SHIM, 1.2 mm	1
030	V603279		SHIM, 1.25 mm	1
030	V603280		SHIM, 1.3 mm	1
030	V603281		SHIM, 1.35	1
030	V603282		SHIM 1.4 mm	1
030	V603283		SHIM 1.45 mm	1
030	V603284		SHIM 1.5 mm	1
030	V603285		SHIM 1.55 mm	1
030	V603286		SHIM, 1.6 mm	1
030	V603287		SHIM, 1.65 mm	1
030	V603288		SHIM, 1.7 mm	1
030	V603289		SHIM, 1.75 mm	1
030	V603290		SHIM, 1.8 mm	1
030	V603291		SHIM, 1.85 mm	1
030	V603292		SHIM, 1.9 mm	1
030	V603293		SHIM, 1.95 mm	1
030	V603294		SHIM, 2.0 mm	1
030	V603295		SHIM 2.05 mm	1
030	V603296		SHIM, 2.1 mm	1
030	V603297		SHIM, 2.15 mm	1

**Transmission Unit  
KR / K2 CLUTCH**

**4 - C - 7**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
030	V603298		SHIM, 2.2 mm	1
030	V603299		SHIM, 2.25 mm	1
030	V603300		SHIM, 2.3 mm	1
030	V603301		SHIM, 2.35 mm	1
030	V603302		SHIM, 2.4 mm	1
040	V603303		RING, retaining	3
050	V603304		RING, piston	1
060	V603305		BEARING, roller	1
070	V603186		SHIM, 1.3 mm	2
070	V603187		SHIM, 1.35 mm	2
070	V603189		SHIM, 1.4 mm	1
070	V603190		SHIM, 1.45 mm	1
070	V603191		SHIM, 1.5 mm	1
070	V603192		SHIM, 1.55 mm	1
070	V603193		SHIM, 1.6 mm	1
070	V603194		SHIM, 1.65 mm	1
070	V603195		SHIM, 1.7 mm	1
070	V603196		SHIM, 1.75 mm	1
070	V603197		SHIM, 1.8 mm	1
070	V603198		SHIM, 1.85 mm	1
070	V603199		SHIM, 1.9 mm	11
070	V603200		SHIM, 1.95 mm	1
070	V603201		SHIM, 2.0 mm	1
070	V603202		SHIM, 2.05 mm	1
070	V603203		SHIM, 2.1 mm	1
070	V603204		SHIM, 2.15 mm.	1
070	V603205		SHIM, 2.2 mm.	1
070	V603206		SHIM, 2.25 mm.	1
070	V603207		SHIM, 2.3 mm.	1
070	V603208		SHIM, 2.35 mm.	1
070	V603209		SHIM, 2.4 mm.	1
070	V603210		SHIM, 2.45 mm.	1
070	V603211		SHIM, 2.5 mm.	1
070	V603212		SHIM, 2.55 mm.	1
070	V603213		SHIM, 2.6 mm.	1
070	V603214		SHIM, 2.65 mm.	1

**Transmission Unit  
KR / K2 CLUTCH****4 - C - 7**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
070	V603215		SHIM, 2.7 mm.	1
070	V603216		SHIM, 2.75 mm.	1
070	V603217		SHIM, 2.8 mm.	1
075	V603337		SHIM, 2.0 mm.	2
080	V603338		BUSH	1
090	V603339		BEARING, roller	2
100	V603340		GEAR, spur	1
110	V603341		CUP SPRING	10
120	V603222		RING, snap, 2.25 mm	2
120	V603223		RING, snap, 2.30 mm	2
120	V603224		RING, snap, 2.35 mm	2
120	V603225		RING, snap, 2.40 mm	2
120	V603226		RING, snap, 2.45 mm	2
120	V603227		RING, snap, 2.50 mm	2
120	V603228		RING, snap, 2.2 mm	2
120	V603229		RING, snap, 2.15 mm	2
120	V603230		RING, snap, 2.10 mm	2
130	V603231		END SHIM	2
150	V603232		O' RING, 60x3 mm	2
160	V603233		O' RING, 120x3 mm	2
170	V603234		PISTON	2
180	V603235		CARRIER, disc	1
190	V603236		RING, snap	1
200	V603357		GEAR, spur	1
210	V603358		BEARING, roller	1
220	V603359		BEARING, roller	1
230	V603360		SHIM, 1.0 mm	1
230	V603361		SHIM, 1.05 mm	1
230	V603362		SHIM, 1.1 mm	1
230	V603363		SHIM, 1.15 mm	1
230	V603364		SHIM, 1.2 mm	1
230	V603365		SHIM, 1.25 mm	1
230	V603366		SHIM, 1.3 mm	1
230	V603367		SHIM, 1.35 mm	1
230	V603368		SHIM, 1.4 mm	1

**Transmission Unit  
KR / K2 CLUTCH****4 - C - 7**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
230	V603369		SHIM, 1.45 mm	1
230	V603370		SHIM, 1.5 mm	1
230	V603371		SHIM, 1.55 mm	1
230	V603372		SHIM, 1.6 mm	1
230	V603373		SHIM, 1.65 mm	1
230	V603374		SHIM, 1.7 mm	1
230	V603375		SHIM, 1.75 mm	1
230	V603376		SHIM, 1.8 mm	1
240	V603377		NUT, slotted	1
260	V603252		DISC, clutch, 2.0 mm	6
270	V603252		DISC, clutch, 2.0 mm	2
270	V603253		DISC, clutch, 2.5 mm	2
280	V603255		DISC	7
284	V603256		DISC	2
290	V603252		DISC, clutch, 2.0 mm	4
310	V603252		DISC, clutch, 2.0 mm	2
310	V603253		DISC, clutch, 2.5 mm	2
320	V603255		DISC	5
324	V603256		DISC	2



**Transmission Unit  
K3 / K4 CLUTCH****4 - C - 8**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603388		SHAFT	1
012	V603149		BALL	2
014	V603390		PIN, slotted, 4.5x12 mm	1
020	V603391		BEARING, ball	1
030	V603392		RING, snap	1
040	V603393		WASHER	1
050	V603394		SCREW, cap	2
060	V603395		RING, retaining	1
070	V603396		RING, piston	3
080	V603397		GEAR, spur	1
090	V603398		CAGE, needle	1
100	V603399		RING, internal	1
110	V603400		BUSH	1
120	V603401		BEARING, ball	1
130	V603402		SHIM, 0.8 mm	1
130	V603403		SHIM, 0.9 mm	1
130	V603404		SHIM, 0.95 mm	1
130	V603405		SHIM, 1.0 mm	1
130	V603406		SHIM, 1.1 mm	1
130	V603407		SHIM, 1.2 mm	1
130	V603408		SHIM, 1.3 mm	1
140	V603409		RING, retaining	1
150	V603186		SHIM, 1.3 mm	2
150	V603187		SHIM, 1.35	2
150	V603189		SHIM 1.4 mm	2
150	V603190		SHIM 1.45 mm	2
150	V603191		SHIM 1.5 mm	2
150	V603192		SHIM 1.55 mm	2
150	V603193		SHIM, 1.6 mm	2
150	V603194		SHIM, 1.65 mm	2
150	V603195		SHIM, 1.7 mm	2
150	V603196		SHIM, 1.75 mm	2
150	V603197		SHIM, 1.8 mm	2
150	V603198		SHIM, 1.85 mm	2
150	V603199		SHIM, 1.9 mm	2

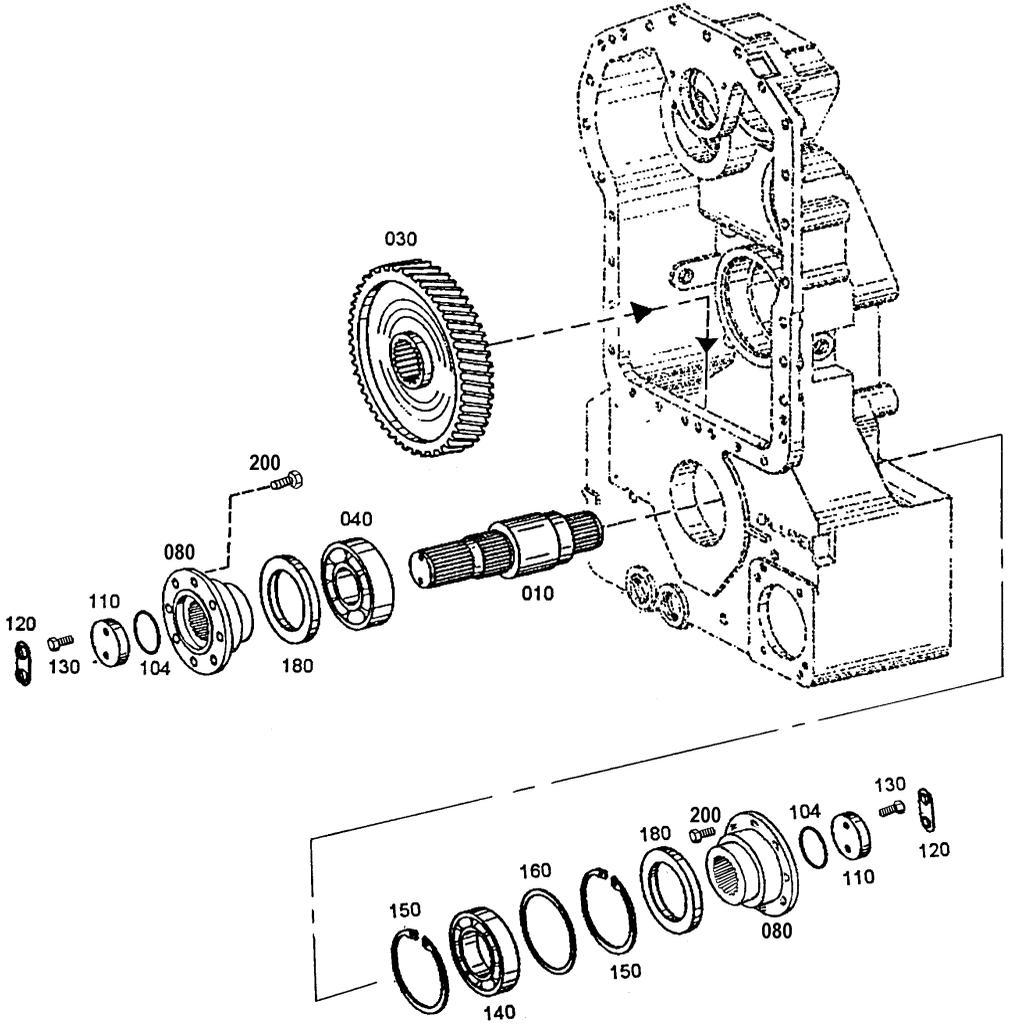
**Transmission Unit**  
**K3 / K4 CLUTCH**

**4 - C - 8**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
150	V603200		SHIM, 1.95 mm	2
150	V603201		SHIM, 2.0 mm	2
150	V603202		SHIM 2.05 mm	2
150	V603203		SHIM, 2.1 mm	2
150	V603204		SHIM, 2.15 mm	2
150	V603205		SHIM, 2.2 mm	2
150	V603206		SHIM, 2.25 mm	2
150	V603207		SHIM, 2.3 mm	2
150	V603208		SHIM, 2.35 mm	2
150	V603209		SHIM, 2.4 mm	2
150	V603210		SHIM, 2.45 mm	2
150	V603211		SHIM, 2.5 mm	2
150	V603212		SHIM, 2.55 mm	2
150	V603213		SHIM, 2.6 mm	2
150	V603214		SHIM, 2.65 mm	2
150	V603215		SHIM, 2.7 mm	2
150	V603216		SHIM, 2.75 mm	2
150	V603217		SHIM, 2.8 mm	2
160	V603221		CUP SPRING	10
170	V603227		RING, snap	2
180	V603231		END SHIM	2
200	V603232		'O' RING, 60x3 mm	2
210	V603233		'O' RING, 120x3 mm	2
220	V603234		PISTON	2
230	V603410		CARRIER, disc	1
240	V603236		RING, snap	1
250	V603411		GEAR, spur	1
260	V603412		CAGE, roller	1
270	V603413		SHIM, 3.4 mm	1
270	V603414		SHIM, 1.6 mm	1
280	V603415		RING, retaining, 48x1.75 mm	2
290	V603416		WASHER, thrust	2
300	V603417		BEARING, roller	1
310	V603418		RING, retaining, 120x4 mm	1
320	V603419		SHIM, 1.0 mm	1

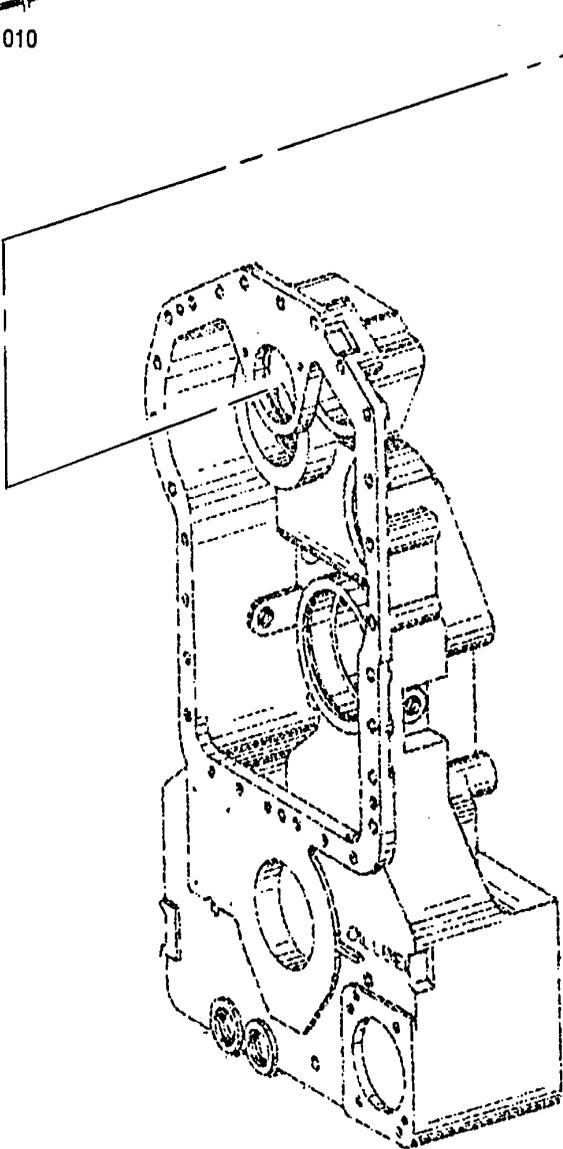
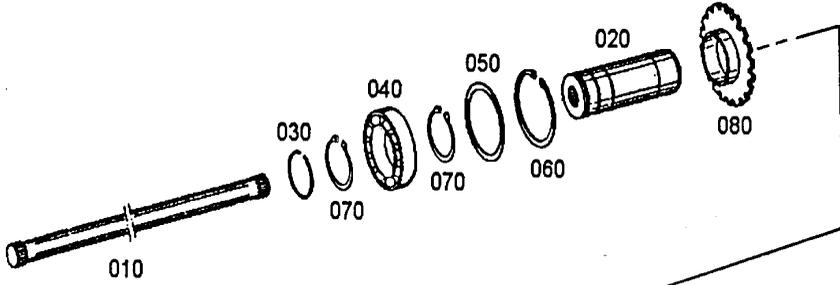
**Transmission Unit  
K3 / K4 CLUTCH****4 - C - 8**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
320	V603420		SHIM, 1.05 mm	1
320	V603421		SHIM, 1.1 mm	1
320	V603422		SHIM, 1.15 mm	1
320	V603423		SHIM, 1.2 mm	1
320	V603424		SHIM, 1.25 mm	1
320	V603425		SHIM, 1.3 mm	1
320	V603426		SHIM, 1.35 mm	1
320	V603427		SHIM, 1.4 mm	1
330	V603428		SHIM, 0.8 mm	1
330	V603429		SHIM, 0.85 mm	1
330	V603430		SHIM, 0.9 mm	1
330	V603431		SHIM, 0.95 mm	1
330	V603432		SHIM, 1.0 mm	1
330	V603433		SHIM, 1.05 mm	1
330	V603434		SHIM, 1.1 mm	1
330	V603435		SHIM, 1.15 mm	1
330	V603436		SHIM, 1.2 mm	1
330	V603437		SHIM, 1.25 mm	1
330	V603438		SHIM, 1.3 mm	1
340	V603439		RING, retaining, 65x2.5 mm	1
350	V603440		CAGE, needle	1
360	V603441		SHIM, 1.5 mm	1
370	V603442		RING, retaining, 30x1.5 mm	1
380	V603252		DISC, clutch, 2.0 mm	4
400	V603252		DISC, clutch, 2.5 mm	2
400	V603253		DISC, clutch, 2.0 mm	2
410	V603255		DISC	5
414	V603256		DISC	2
420	V603252		DISC, clutch, 2.0 mm	4
440	V603252		DISC, clutch, 2.0 mm	2
440	V603253		DISC, clutch, 2.5 mm	2
450	V603255		DISC	5
454	V603256		DISC	2



**Transmission Unit  
OUTPUT SHAFT****4 - C - 9**

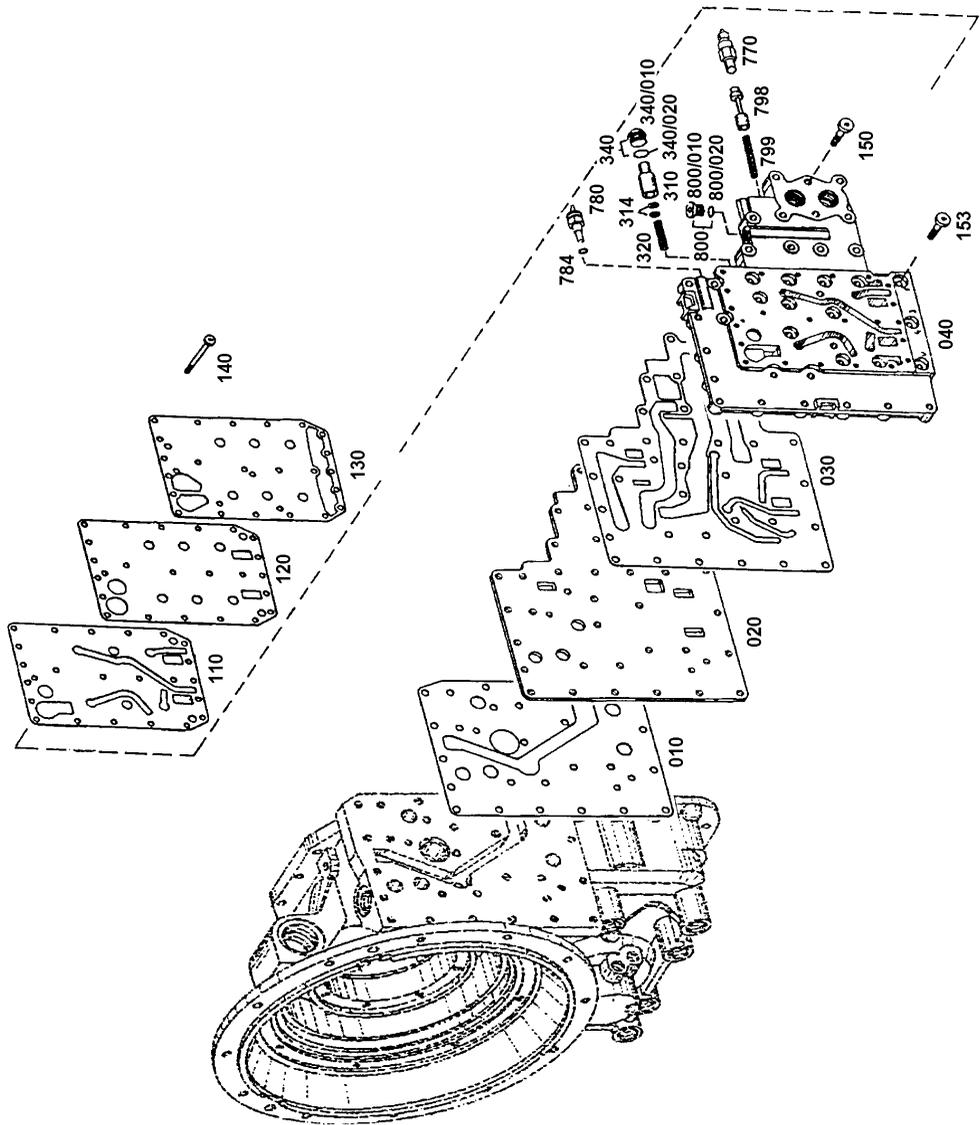
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603188		SHAFT, output	1
030	V603254		GEAR output	1
040	V603257		BEARING, ball	1
080	V603263		FLANGE, output	2
104	V603258		'O' RING	2
110	V603259		WASHER	2
120	V603260		WASHER, tab	2
130	V603261		SCREW	4
140	V603265		BEARING, ball	1
150	V603267		RING, retaining	2
160	V603306		SHIM, 1.0 mm	1
160	V603307		SHIM, 1.05 mm	1
160	V603308		SHIM, 1.1 mm	1
160	V603309		SHIM, 1.15 mm	1
160	V603310		SHIM, 1.2 mm	1
160	V603311		SHIM, 1.25 mm	1
160	V603312		SHIM, 1.3 mm	1
160	V603313		SHIM, 1.35 mm	1
160	V603314		SHIM, 1.4 mm	1
160	V603315		SHIM, 1.45 mm	1
160	V603316		SHIM, 1.5 mm	1
160	V603317		SHIM, 1.55 mm	1
160	V603318		SHIM, 1.6 mm	1
160	V603319		SHIM, 1.65 mm	1
160	V603320		SHIM, 1.7 mm	1
180	V603321		SEAL, shaft	2
200	V603264		SCREW	16



**Transmission Unit  
POWER TAKE OFF**

**4 - C - 10**

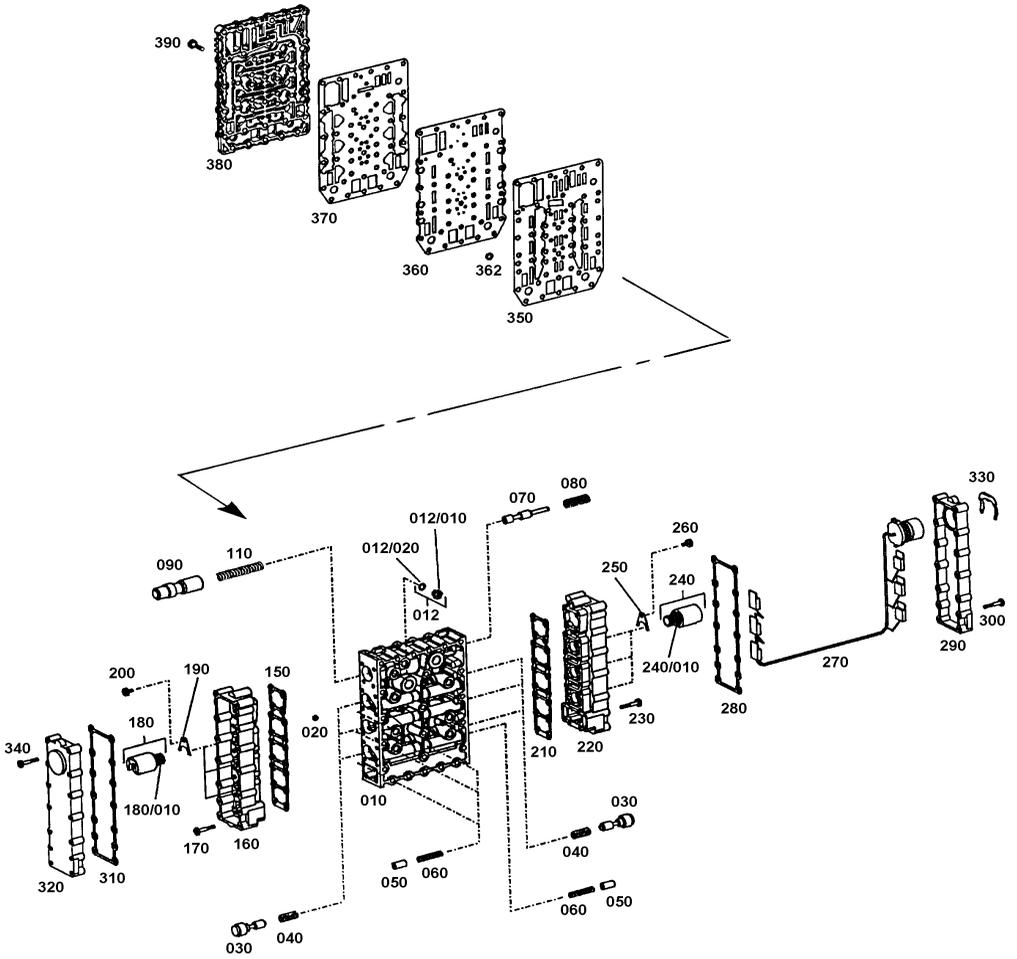
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603322		SHAFT, central	1
020	V603323		BUSH	1
030	V603324		RING, piston	1
040	V603325		BEARING, ball	1
050	V603326		SHIM, 1.0 mm	1
050	V603327		SHIM, 1.05 mm	1
050	V603328		SHIM, 1.1 mm	1
050	V603329		SHIM, 1.15 mm	1
050	V603330		SHIM, 1.2 mm	1
050	V603331		SHIM, 1.25 mm	1
050	V603332		SHIM, 1.3 mm	1
050	V603333		SHIM, 1.35 mm	1
050	V603334		SHIM, 1.4 mm	1
050	V603335		SHIM, 1.45 mm	1
050	V603336		SHIM, 1.5 mm	1
050	V603342		SHIM, 1.55 mm	1
050	V603343		SHIM, 1.6 mm	1
050	V603344		SHIM, 1.65 mm	1
050	V603345		SHIM, 1.7 mm	1
050	V603346		SHIM, 1.75 mm	1
050	V603347		SHIM, 1.8 mm	1
050	V603348		SHIM, 1.85 mm	1
050	V603349		SHIM, 1.9 mm	1
050	V603350		SHIM, 1.95 mm	1
050	V603351		SHIM, 2.0 mm	1
050	V603352		SHIM, 2.05 mm	1
050	V603353		SHIM, 210 mm	1
050	V603354		SHIM, 2.15 mm	1
050	V603356		SHIM, 2.20 mm	1
060	V603378		RING, retaining, 68x2.5 mm	1
070	V603379		RING, retaining, 40x1.75 mm	2
080	V603380		DISC, toothed	1



**Transmission Unit  
GEAR SHIFT MANIFOLDS**

**4 - C - 11**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603381		GASKET	1
020	V603382		SHEET, intermediate	1
030	V603383		GASKET	1
040	V603384		PLATE, duct	1
110	V603385		GASKET	1
120	V603386		SHEET, intermediate	1
130	V603387		GASKET	1
140	V603389		SCREW, cap	23
140	V603443		SCREW, cap	23
150	V603444		SCREW, cap	9
153	V603445		SCREW, cap	27
310	V603446		VALVE SPOOL	1
314	V603447		WASHER	2
320	V603448		SPRING, compression	1
340	.....		PLUG, c/w 'O' ring	1
/010	V603449		PLUG	1
/020	V603450		'O' RING	1
770	V603451		SWITCH	1
780	V603452		SENSOR, temperature	1
784	V603453		'O' RING	1
798	V603454		PISTON	1
799	V603455		SPRING, compression	1
800	.....		PLUG, c/w 'O' ring	1
/010	V603456		PLUG	1
/020	V603457		'O' RING	1



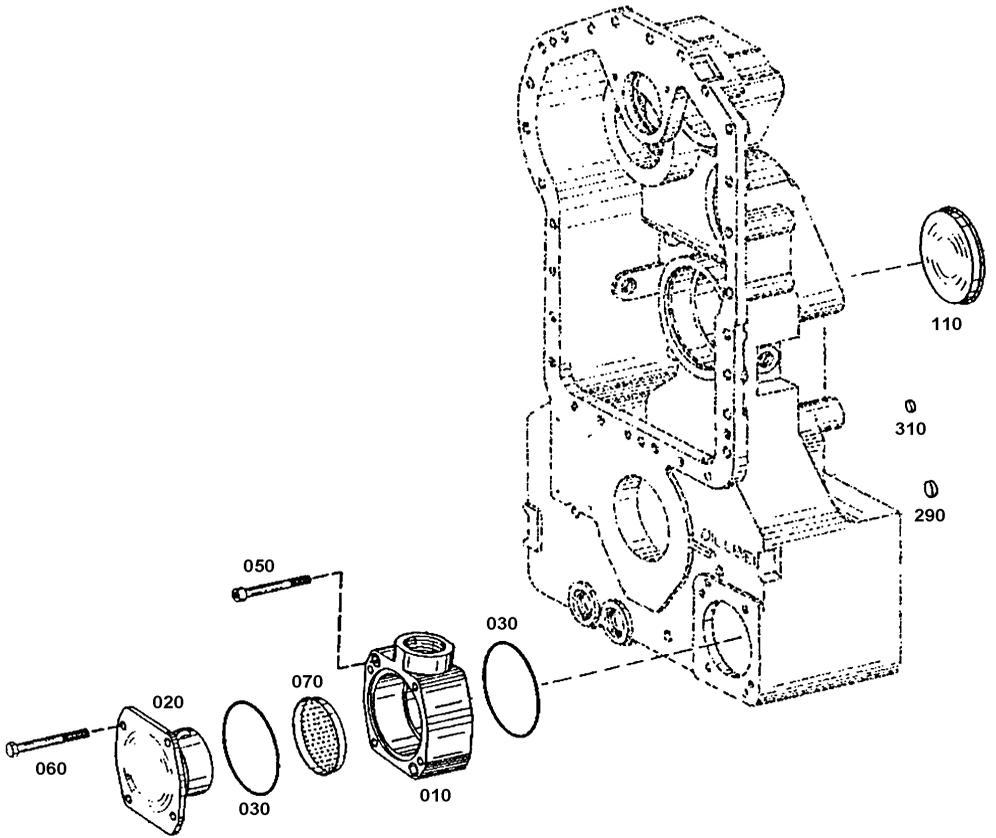
**Transmission Unit  
SOLENOID BLOCK**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603458		BLOCK, valve	1
012	V603459		PLUG	8
/010	V603460		PLUG	8
/020	V603461		'O' RING	8
020	V603462		ORIFICE	6
030	V603463		PISTON	6
040	V603464		SPRING, compression	6
050	V603465		PISTON	6
060	V603466		SPRING, compression	6
070	V603467		PISTON	1
080	V603468		SPRING, compression	1
090	V603469		PISTON, control	1
110	V603470		SPRING, compression	1
150	V603471		GASKET	1
150	V603472		GASKET	1
160	V603473		HOUSING	1
170	V603474		SCREW, cap	18
180	V603475		REGULATOR, pressure	3
/010	V603476		'O' RING	3
190	V603477		PLATE, fixing	3
200	V603478		SCREW, cap	3
210	V603479		GASKET	1
210	V603480		GASKET	1
220	V603481		HOUSING	1
230	V603482		SCREW, cap	18
240	V603483		REGULATOR, pressure	3
/010	V603484		'O' RING	3
250	V603485		PLATE, fixing	3
260	V603486		SCREW, cap	3
270	V603487		LOOM, wiring	1
280	V603488		GASKET	1
280	V603489		GASKET	1
290	V603490		COVER	1
300	V603491		SCREW, cap	14
310	V603492		GASKET	1
310	V603493		GASKET	1
320	V603494		COVER	1

**Transmission Unit  
SOLENOID BLOCK**

**4 - C - 12**

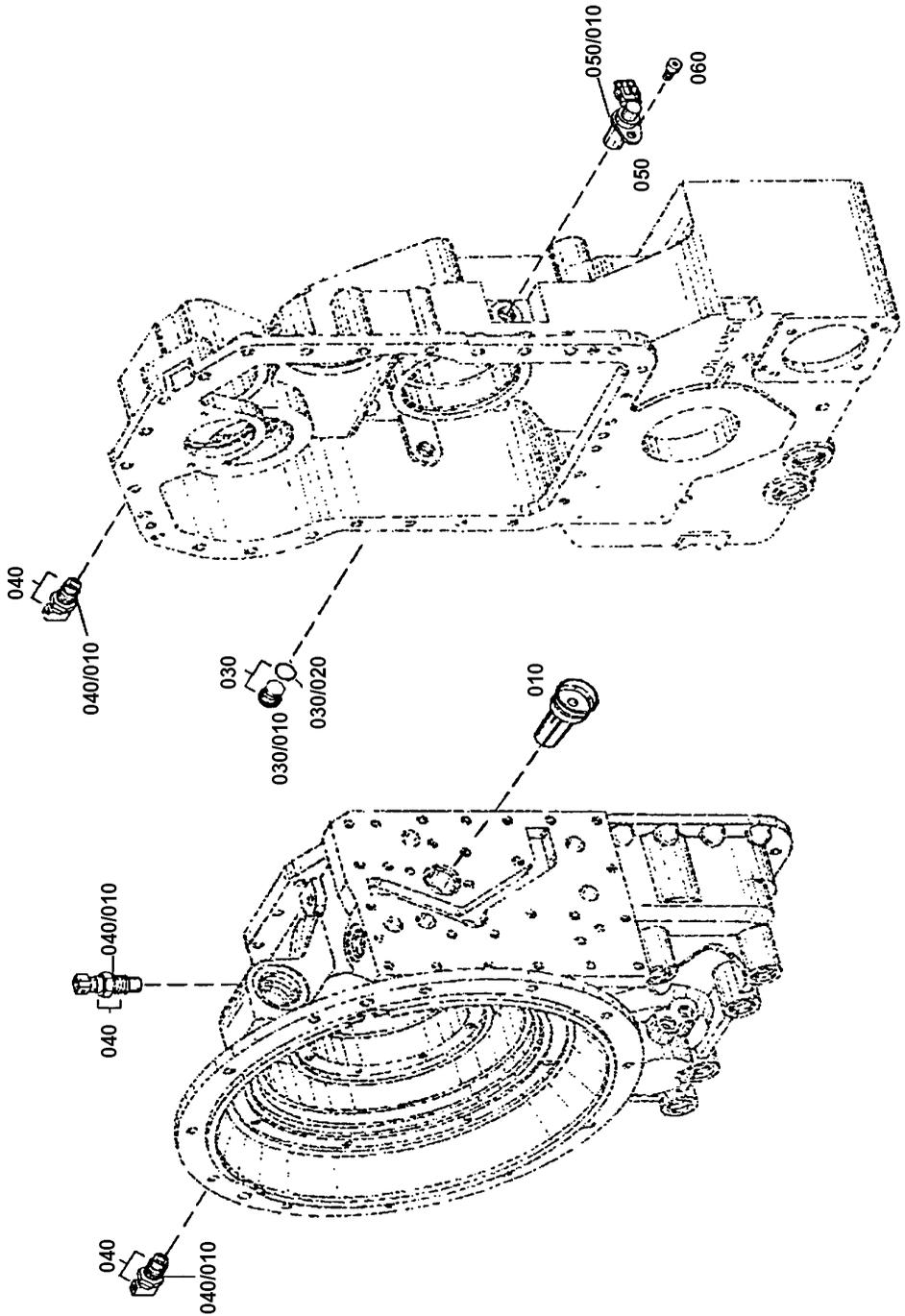
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
330	V603459		CLAMP, retaining	1
340	V603495		SCREW, cap	14
350	V603496		GASKET	1
360	V603497		SHEET, intermediate	1
362	V603498		SCREEN	6
370	V603499		GASKET	1
380	V603500		PLATE, duct	1
390	V603501		SCREW, cap	18



**Transmission Unit  
FILTER & SEALING CAPS**

**4 - C - 13**

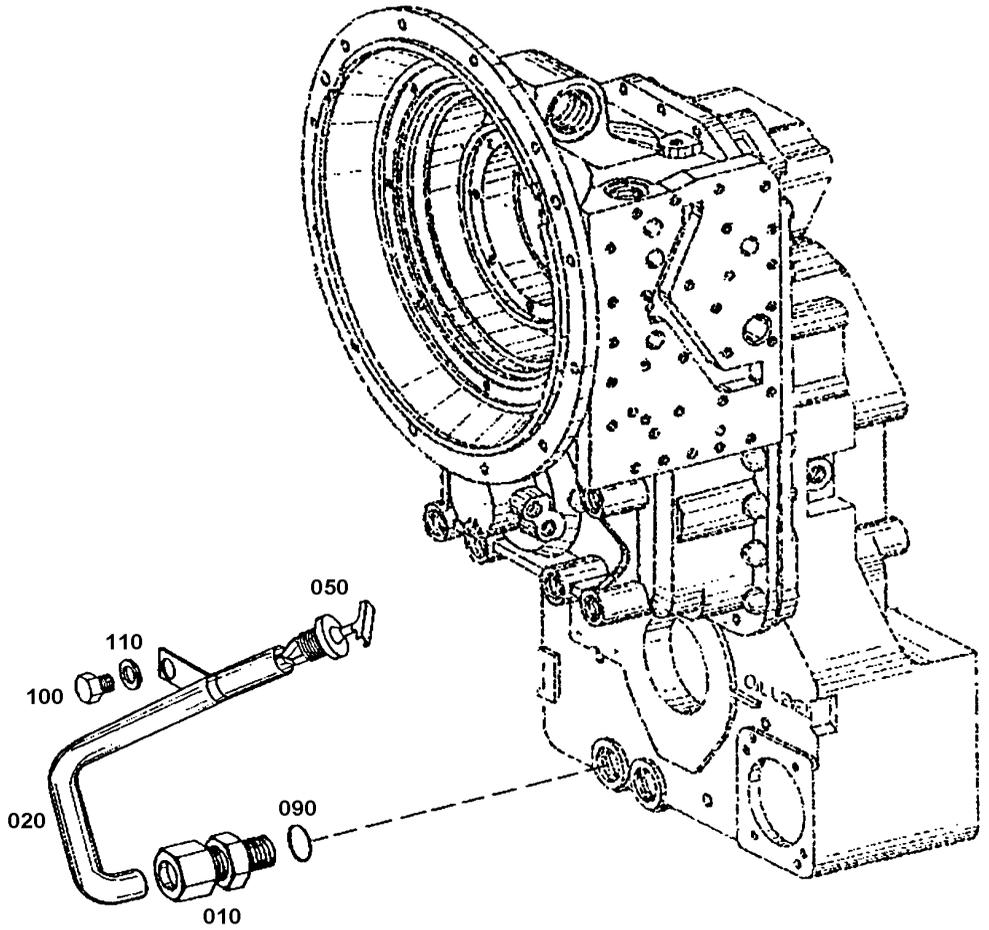
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603502		HOUSING, filter	1
020	V603503		COVER	1
030	V603504		'O'RING	2
050	V603505		SCREW, cap	2
060	V603506		SCREW	4
070	V603507		FILTER	1
110	V603508		CAP, sealing	1
290	V603509		CAP, sealing	1
310	V603510		CAP, sealing	1



**Transmission Unit**  
**IND. TRANSMITTER & PRESSURE REGULATOR**

**4 - C - 14**

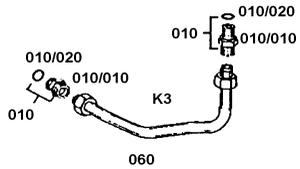
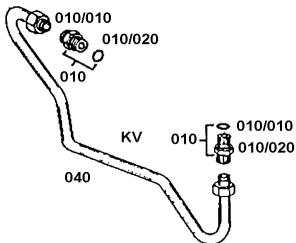
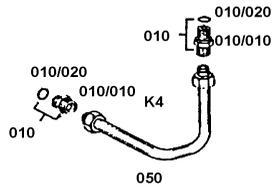
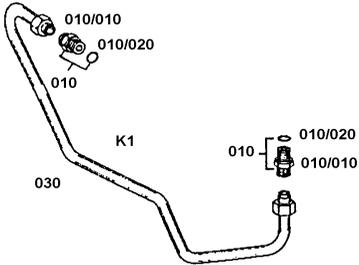
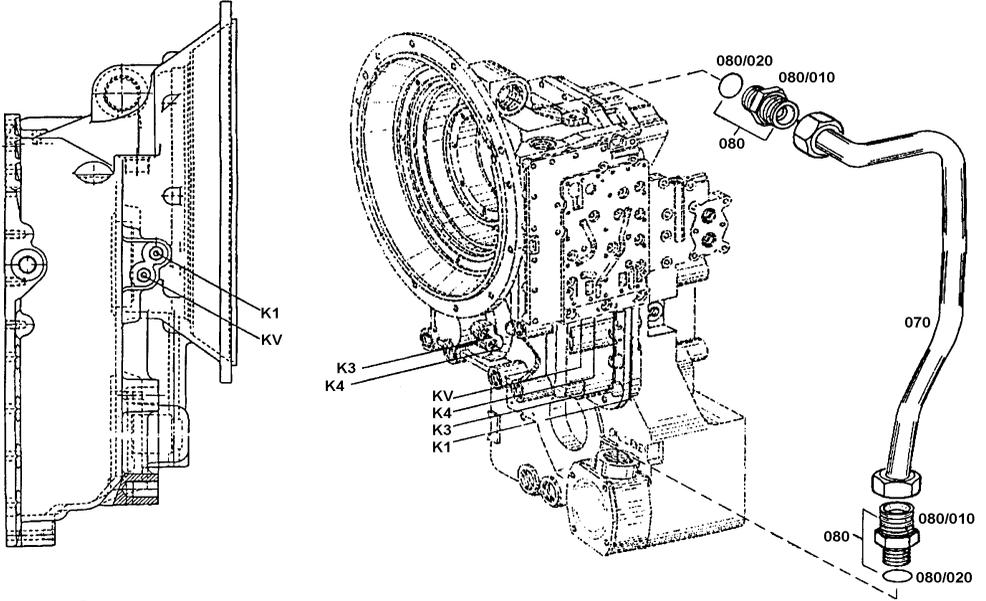
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603511		VALVE	1
030	.....		PLUG c/w 'o' ring	1
/010	V603512		PLUG	1
/020	V603513		'O' RING	1
040	V603514		IND. TRANSMITTER c/w 'o' ring	
/010	V603513		'O' RING	3
050	V603515		SPEED TRANSMITTER c/w 'o' ring	1
/010	V603516		'O' RING	1
060	V603517		SCREW, cap	1



**Transmission Unit  
DIPSTICK**

**4 - C - 15**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	V603518		UNION, pipe	1
020	V603519		TUBE, oil level	1
050	V603520		DIPSTICK, oil	1
090	V603521		'O' RING	1
100	V603522		SCREW	1
110	V603523		WASHER	1



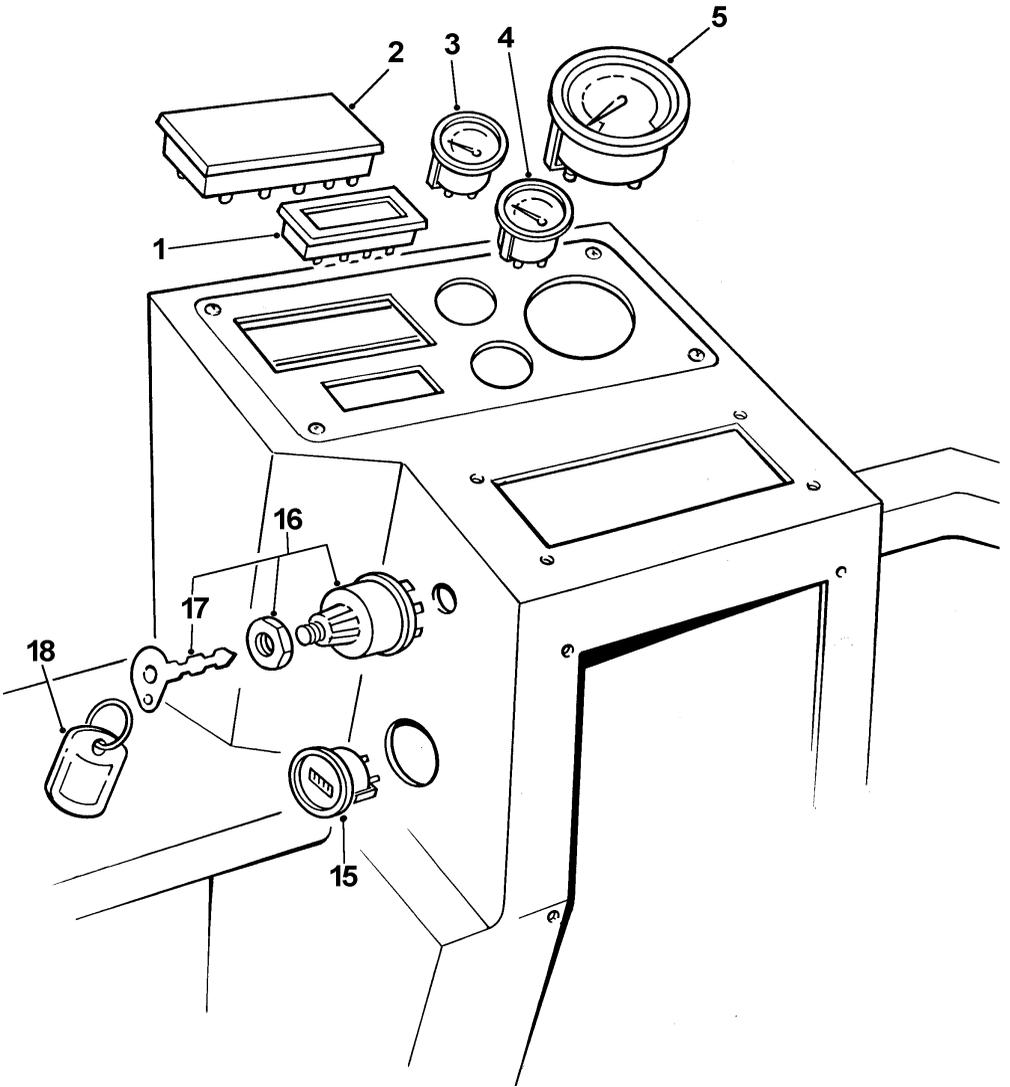
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
010	.....		SLEEVE c/w 'o' ring	8
/010	V603524		SLEEVE, screw-in	8
/020	V603525		'O' RING	8
030	V603526		PIPE	1
040	V603527		PIPE	1
050	V603528		PIPE	1
060	V603529		PIPE	1
070	V603530		TUBE, suction	1
080	.....		UNION c/w 'o' ring	2
/010	V603531		SLEEVE, screw-in	2
/020	V603532		'O' RING	2

**ADT 10 Dump Truck**

# **Section 5**

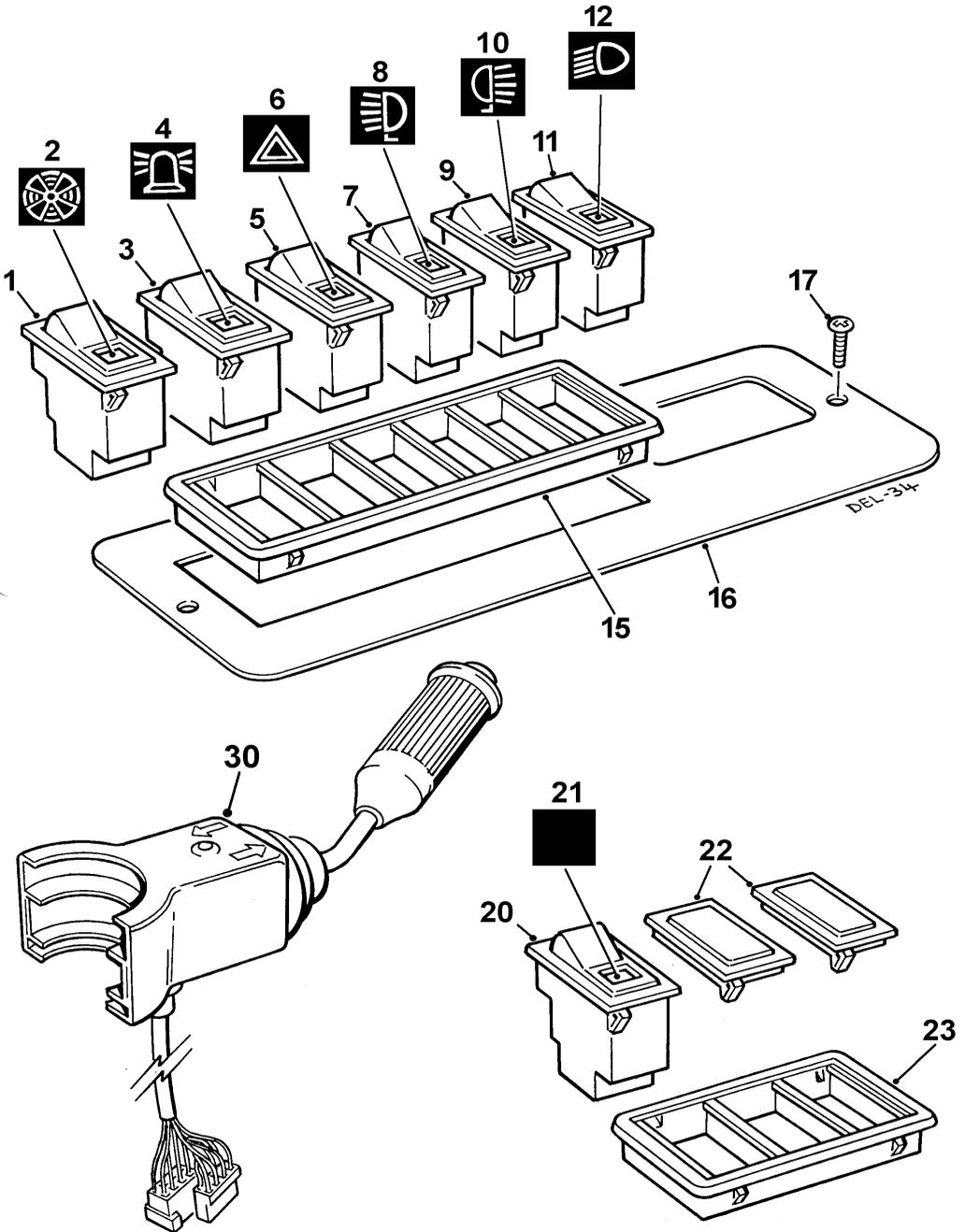
# **Electrics**

<b><i>Contents</i></b>	<b><i>Page</i></b>
<b>GAUGES &amp; START SWITCH</b>	<b>5 - A - 1</b>
<b>SWITCHES</b>	<b>5 - A - 2</b>
<b>RADIO CASSETTE PLAYER</b>	<b>5 - A - 3</b>
<b>CAMERA &amp; MONITOR</b>	<b>5 - A - 4</b>
<b>BATTERIES &amp; ISOLATOR SWITCH</b>	<b>5 - A - 5</b>
<b>LIGHTS</b>	<b>5 - A - 6</b>
<b>REVERSE ALARM &amp; TIMER</b>	<b>5 - A - 7</b>
<b>SCREEN WIPER &amp; WASHER</b>	<b>5 - A - 8</b>
<b>MAIN LOOM &amp; FITTINGS</b>	<b>5 - B - 1</b>
<b>CONSOLE ELECTRICAL PANEL</b>	<b>5 - B - 2</b>
<b>TRANSMISSION ELECTRONICS</b>	<b>5 - B - 3</b>



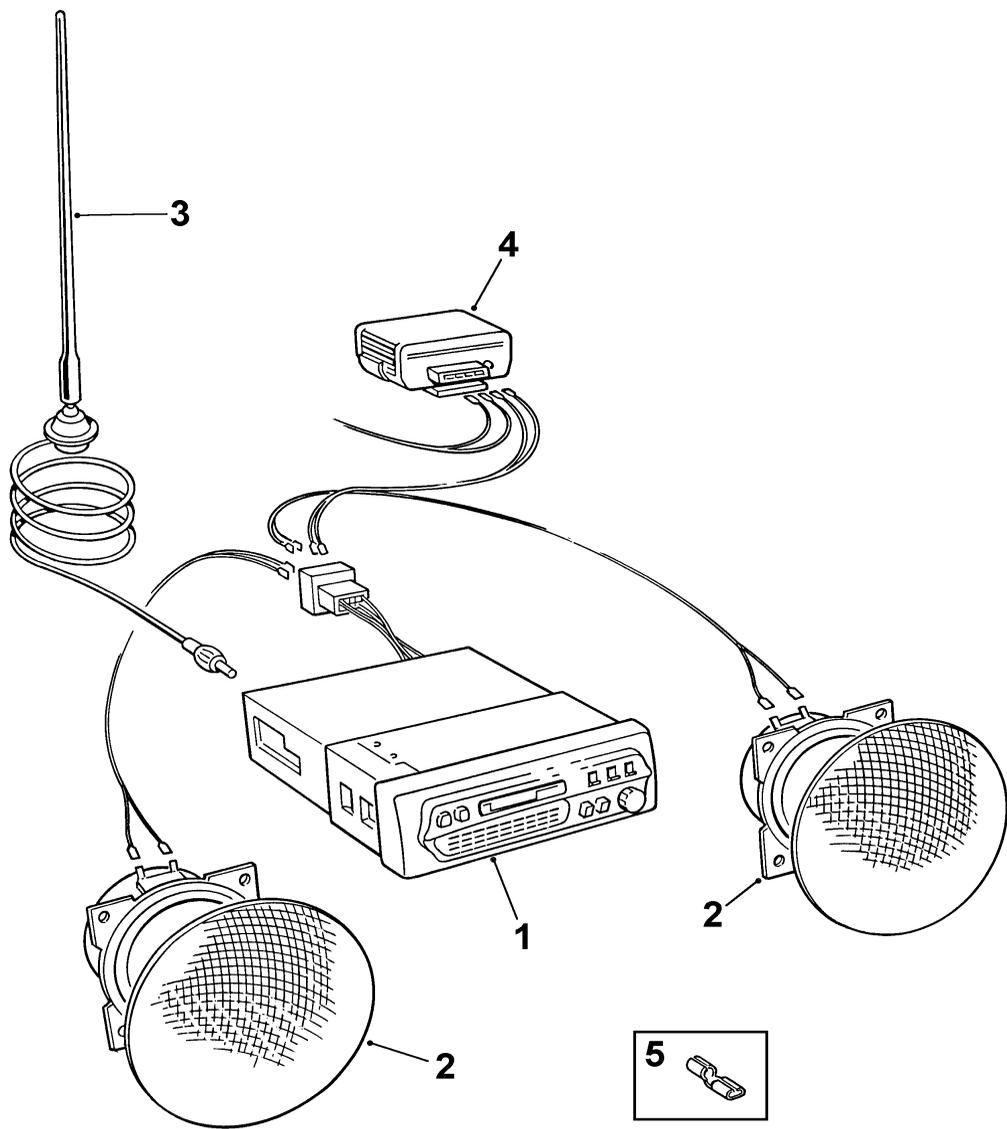
**GAUGES & START SWITCH****5 - A - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	V602951		DISPLAY, transmission	1
2	7000324		PANEL, warning lights	1
3	7000386		GAUGE, engine coolant temperature	1
4	7000378		GAUGE, transmission oil temperature	1
5	7000351		GAUGE, tachometer	1
15	V2003123		GAUGE, hour meter	1
16	V2003561		SWITCH, start, c/w keys	1
17	V601179		KEY, start switch	2
18	V2003540		KEY RING	1



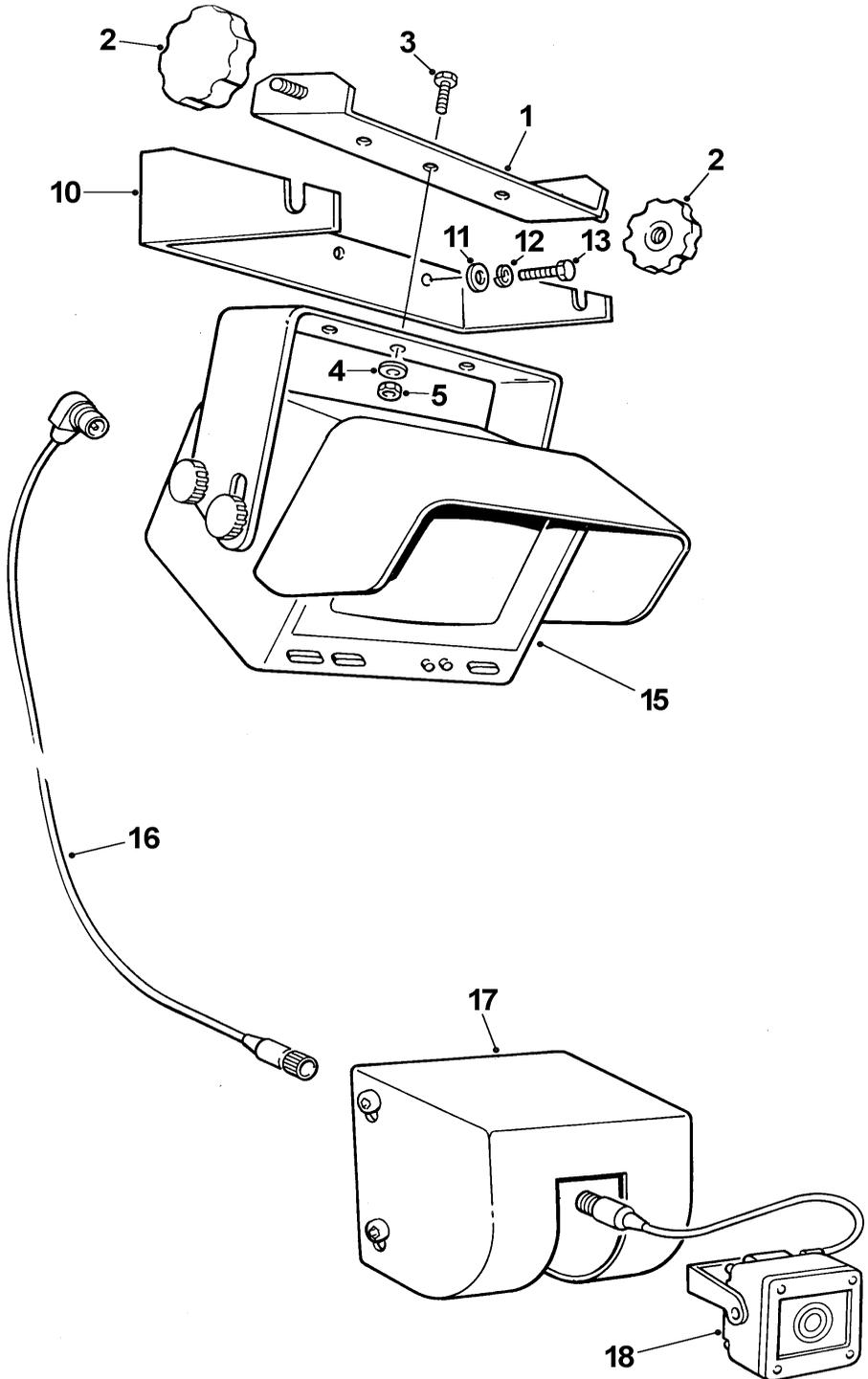
**SWITCHES****5 - A - 2**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000308	1007/	SWITCH, heater fan	1
1	7000455	1008/	SWITCH, heater fan	1
2	V2004354		INSERT, heater fan	1
3	7000307		SWITCH, beacon	1
4	V2003578		INSERT, beacon	1
5	7000325		SWITCH, hazard	1
6	V2003647		INSERT, hazard	1
7	7000307		SWITCH, rear working lights	1
8	V2005017		INSERT, rear working lights	1
9	7000307		SWITCH, front working lights	1
10	V2004219		INSERT, front working lights	1
11	7000308	1002/1007	SWITCH, side/head lights	1
11	7000455	1008/	SWITCH, side/head lights	1
12	V2005020		INSERT, dipped beam	1
15	V2004285		HOLDER, 6 switches	1
16	7000382		PANEL, switches	1
17	219S04C		SCREW, posidrive	2
20	7000307		SWITCH, auto/manual transmission	1
21	7000493		INSERT, auto/manual transmission	1
22	V2003348		BLANK, switch	2
23	V2003643		HOLDER, 3 switches	1
30	7000240		SWITCH, multi	1



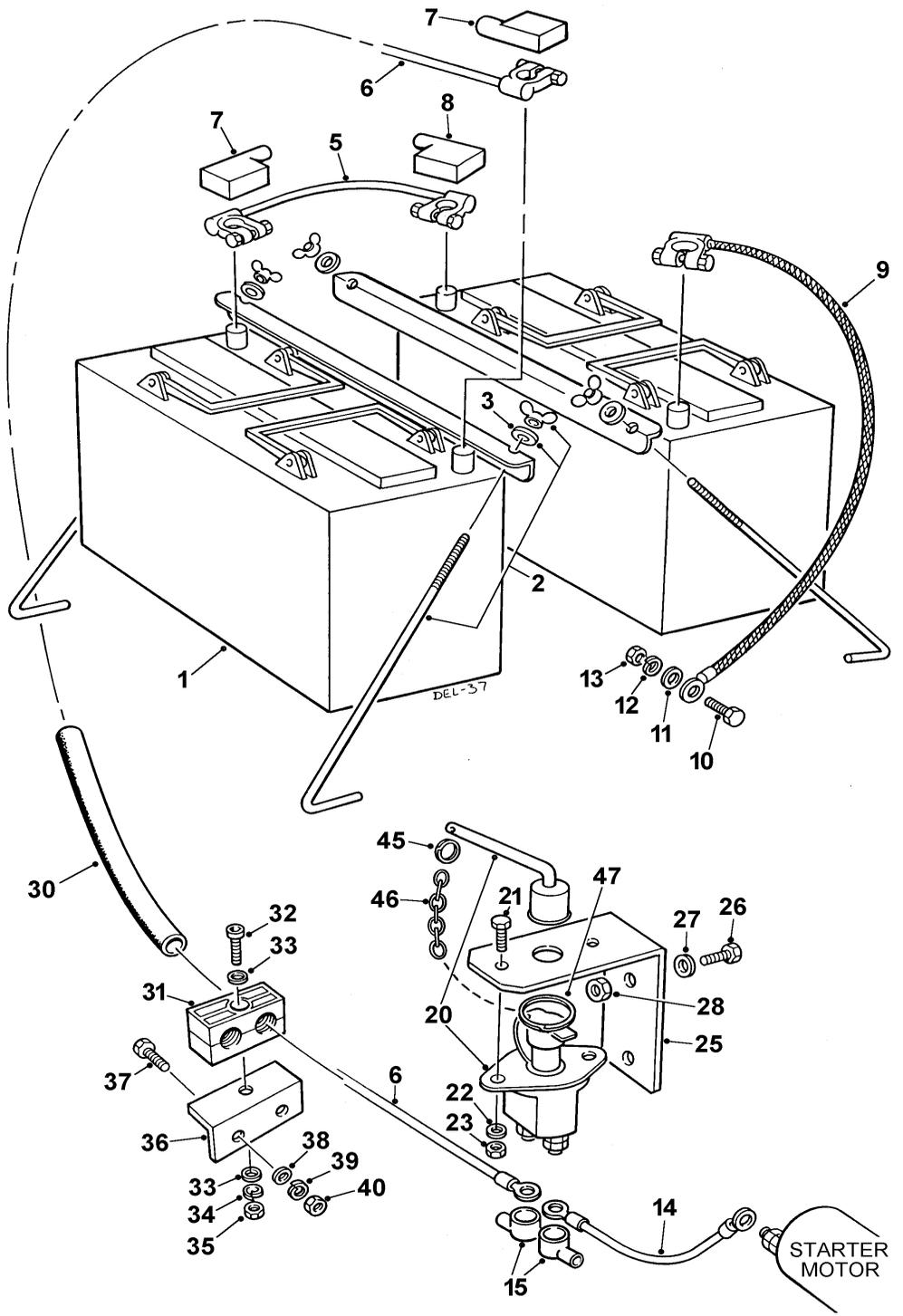
**RADIO CASSETTE PLAYER****5 - A - 3**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000414		RADIO CASSETTE PLAYER	1
2	7000415		SPEAKER	2
3	7000416		AERIAL, rubber	1
4	7000417		DROPPER, voltage	1
5	191908000		CONNECTOR, Lucar, 2.8mm, female	6

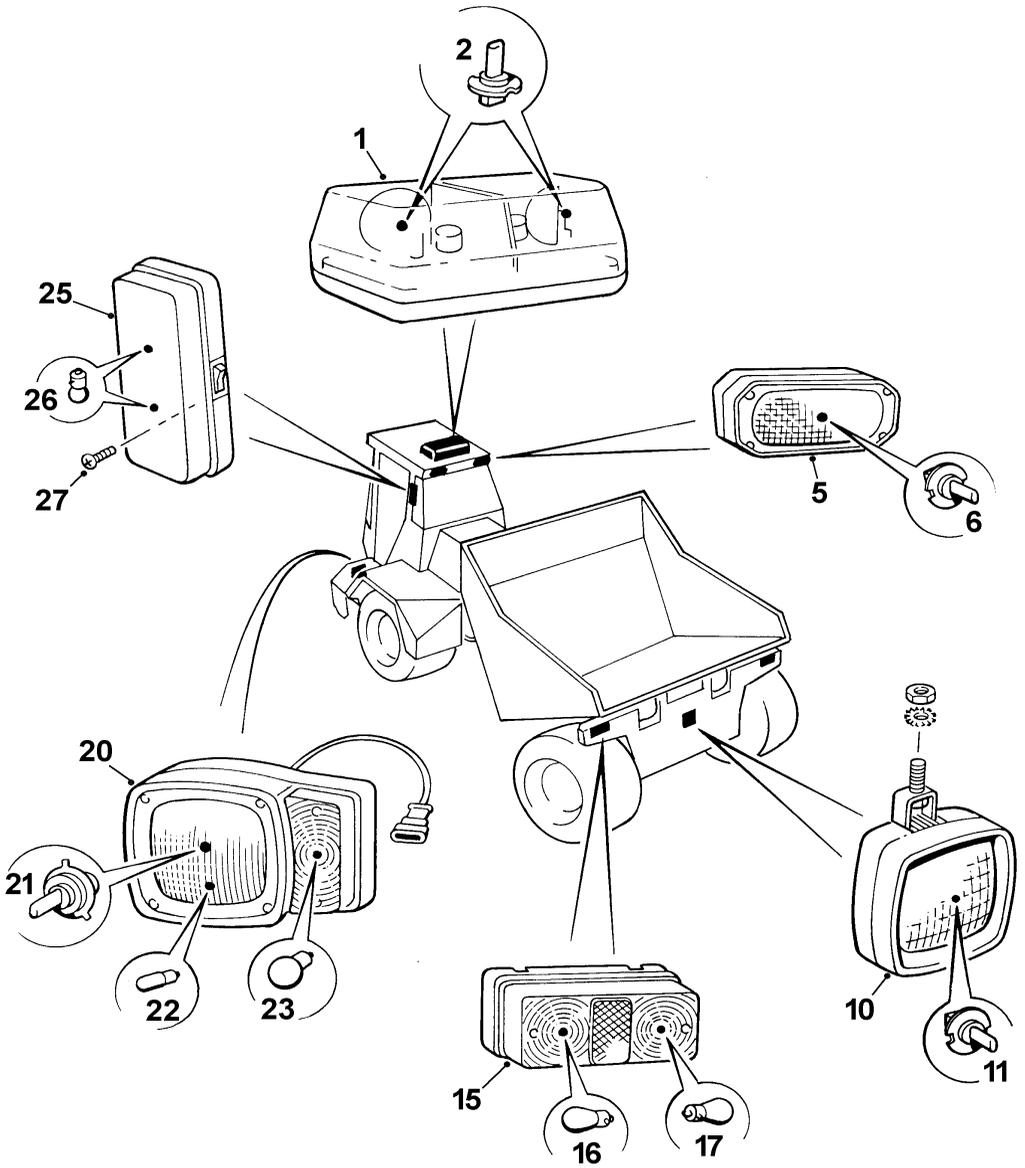


**CAMERA & MONITOR****5 - A - 4**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000315		BRACKET, monitor swivel mount	1
2	7000317		KNOB, monitor retaining	2
3	11S01A		SCREW, set	3
4	267S03		WASHER, flat	3
5	61S01		NUT, 'Binx', self locking	3
10	7000316		BRACKET, swivel mount to cab	1
11	267S04		WASHER, flat	3
12	17S03		WASHER, spring	3
13	11S02B		SCREW, set	3
.....	7000313		CAMERA & MONITOR assembly	1
15	V602962		MONITOR	1
16	V602949		CABLE, 15 meters	1
17	V602964		GUARD, camera	1
18	V602963		CAMERA, reverse	1

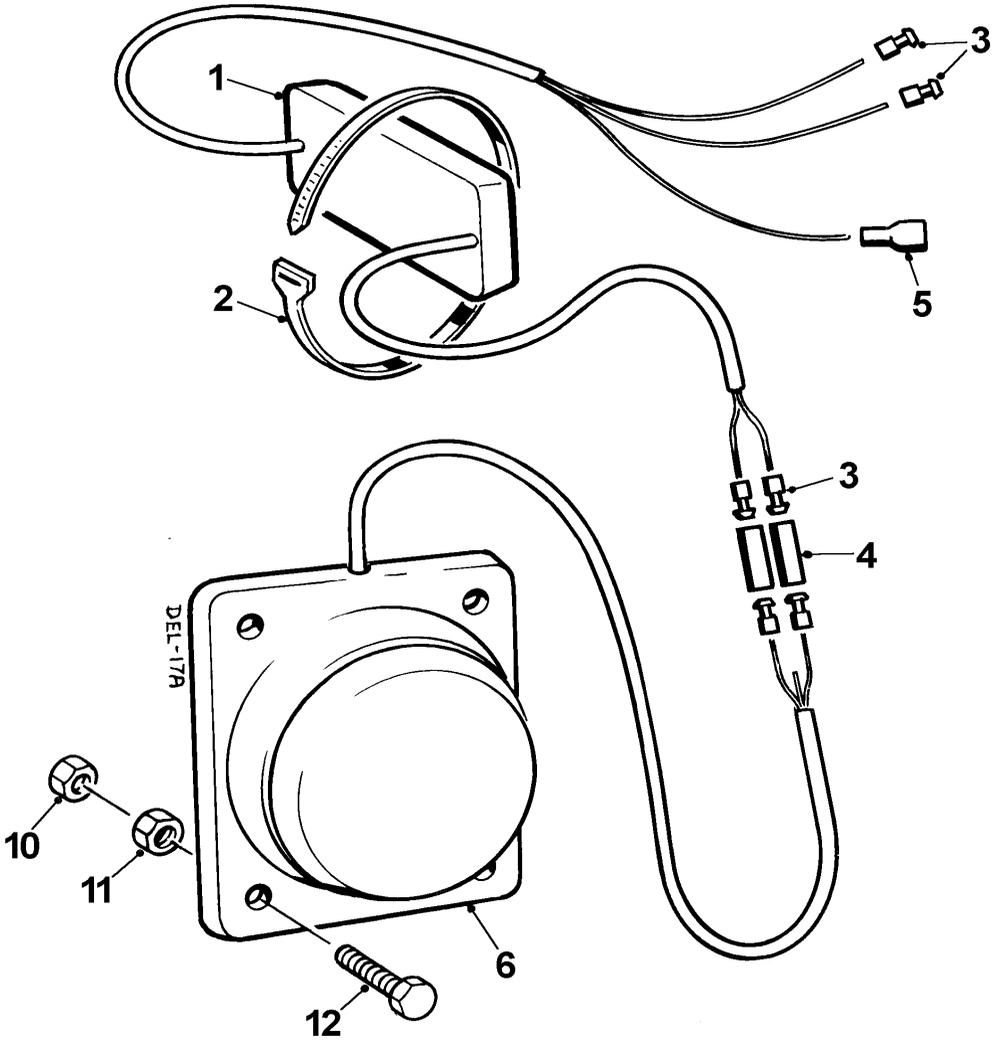


Item	Part no	Serial no	Description	Qty
1	V2003511		BATTERY, 12 volt	2
2	7000288		CLAMP, rods & nuts assembly	2
3	267S04		WASHER, flat	4
				3
5	7000293		CABLE, battery to battery	1
6	10989A02		CABLE, battery to isolator switch	1
7	V2004204		INSULATOR, battery terminal	2
8	V2005277		INSULATOR, battery terminal	1
9	10990A01		CABLE, earth	
10	11S03A		SCREW, set	1
11	267S05		WASHER, flat	1
12	17S04		WASHER, spring	1
13	7S03		NUT	1
14	7000354		CABLE, isolator switch to starter motor	1
15	7000412		INSULATOR, cable terminal	1
				1
20	7000372		SWITCH, isolator	1
21	11S01B		SCREW, set	2
22	267S03		WASHER, flat	1
23	61S01		NUT, "Binx", self locking	2
25	7000373		BRACKET, isolator switch mounting	1
26	11S05D		SCREW, set	2
27	267S07		WASHER, flat	2
28	61S05		NUT, "Binx", self locking	2
30	7000434		COVER, anti-chafe, 300mm long	1
31	187S08JJ		CLAMP, cable	1
32	68S03J		SCREW, socket cap head	1
33	267S04		WASHER, flat	2
34	17S03		WASHER, spring	1
35	7S02		NUT	1
36	7000371		BRACKET, clamp mounting	1
37	11S02B		SCREW, set	2
38	267S04		WASHER, flat	2
39	17S03		WASHER, spring	2
40	7S02		NUT	2
45	124108001		RING, split, 20mm dia.	1
46	V602983		CHAIN, 75mm long	1
47	383106000		RING, split, 35mm dia.	1



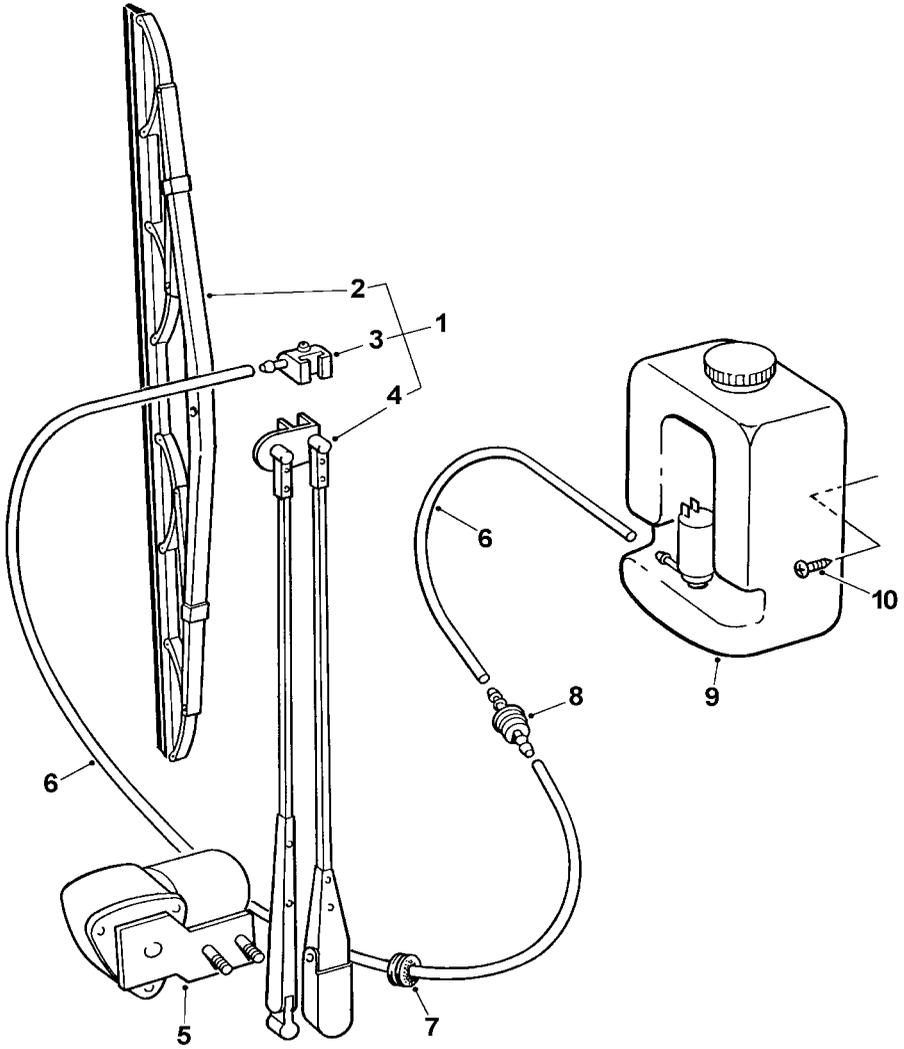
**LIGHTS****5 - A - 6**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000159		BEACON, bar, assembly	1
2	V602967		BULB	2
5	V602966		LIGHT, working, assembly	4
6	V602968		BULB	1
10	7000334		LIGHT, reversing	1
11	V602969		BULB	
15	7000128		LIGHT, side, rear, L.H. assembly	1
.....	7000131		LIGHT, side, rear, R.H. ( <i>not illustrated</i> )	1
16	V602970		BULB, indicator	1
17	V602971		BULB, rear side/brake light	1
20	7000126		LIGHT, head, L.H. assembly	1
.....	7000127		LIGHT, head, R.H. ( <i>not illustrated</i> )	1
21	V602972		BULB, main beam	1
22	V602973		BULB, side light	1
23	V602974		BULB, indicator	1
25	V602965		LIGHT, interior, assembly	1
26	V602975		BULB	2
27	.....		SCREW, round head, self tapping	2



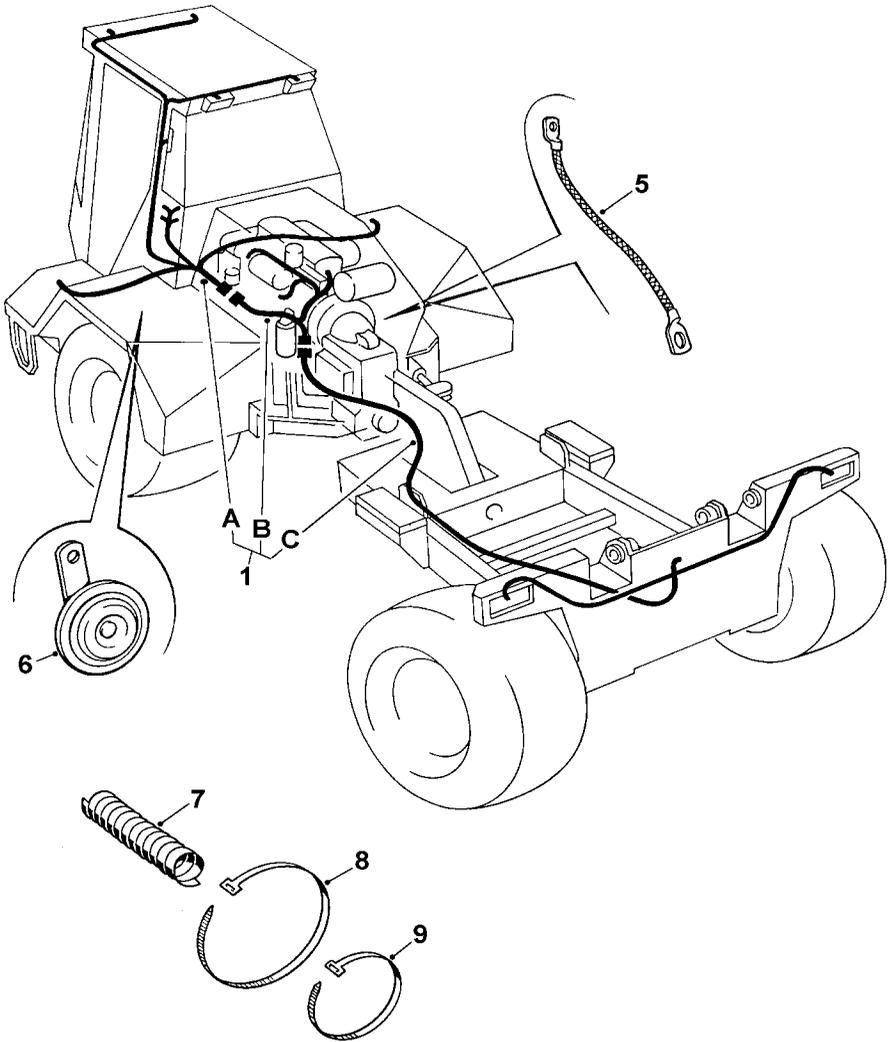
**REVERSE ALARM AND TIMER****5 - A - 7**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	V2003748		TIMER	1
2	V2003111		TIE	2
3	191901100		BULLET	6
4	191901800		CONNECTOR, 'female'	2
5	191906000		CONNECTOR, lucar, 1/4" 'f', insulated	1
6	V2003528		ALARM, reverse	1
10	61S02		NUT, "Binx", self locking	4
11	7S02		NUT	4
12	11S02D		SCREW, set	4



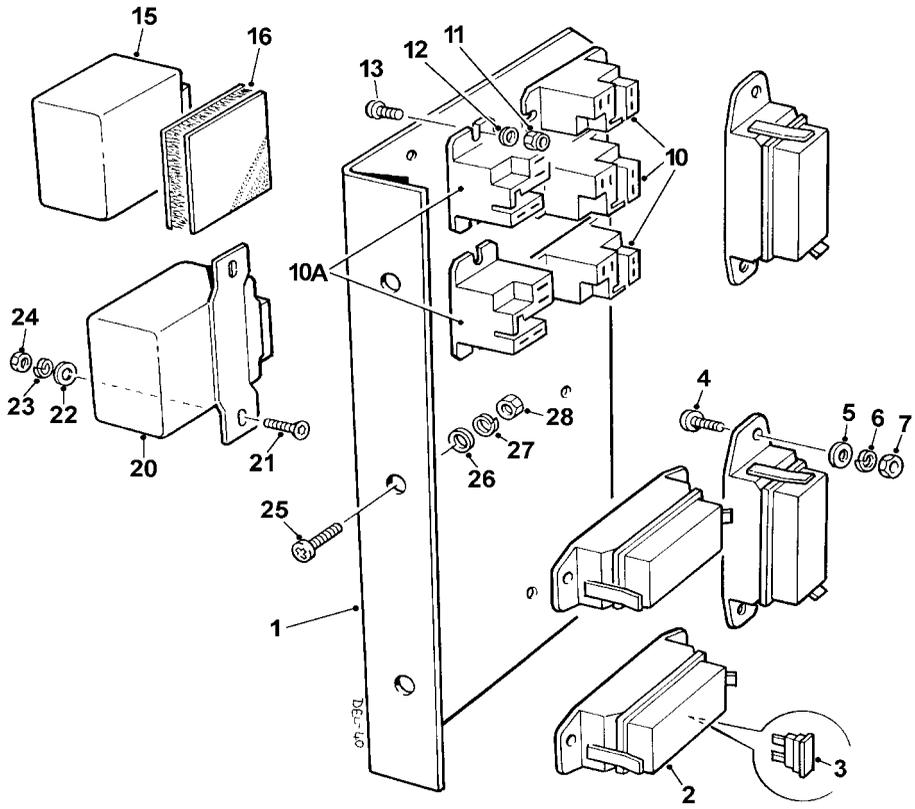
**SCREEN WIPER & WASHER****5 - A - 8**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	.....		WIPER BLADE & ARM assembly	1
2	V602993		BLADE, wiper	1
3	V603006		NOZZLE, washer	1
4	V602995		ARM, wiper	1
5	V603007		MOTOR, wiper arm	1
6	V602467		HOSE, washer	1
7	V2003252		GROMMET, open	1
8	V2003266		VALVE, non return	1
9	7000312		BOTTLE, washer	1
10			SCREW, self tapping	2



**MAIN LOOM AND FITTINGS****5 - B - 1**

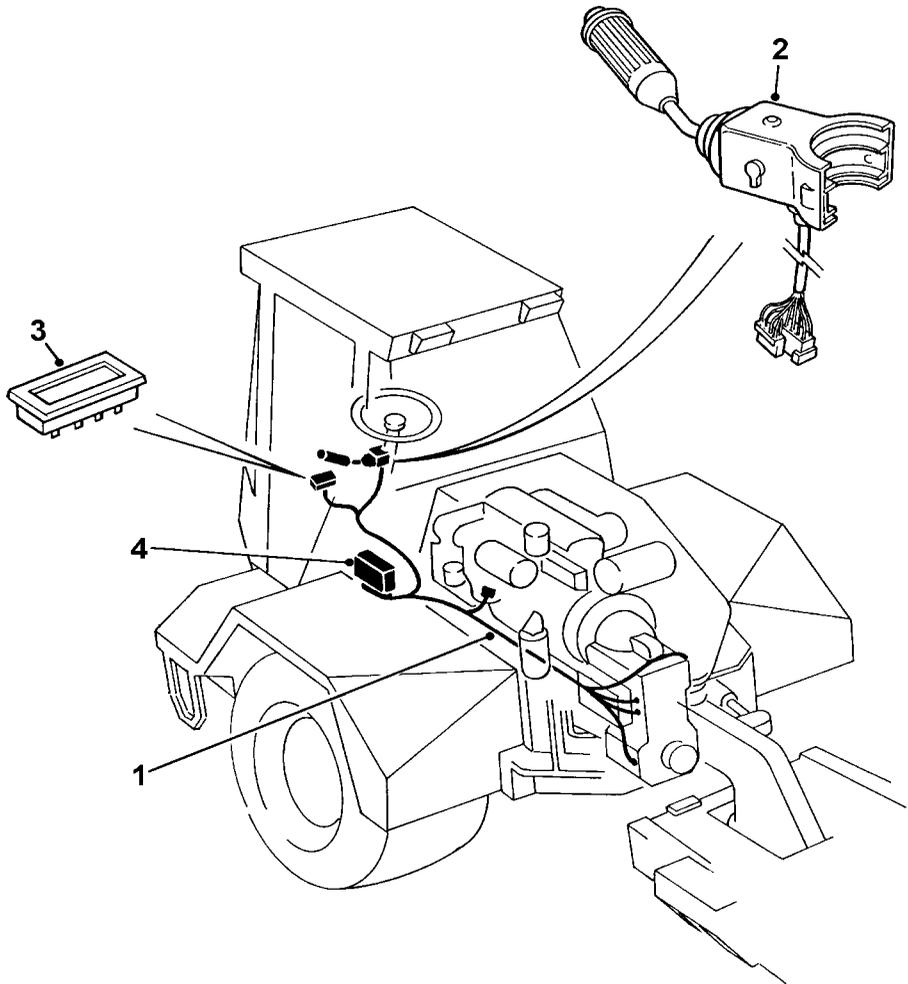
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000335		LOOM, wiring assembly	1
A	.....		LOOM, cab	1
B	.....		LOOM, engine	1
C	.....		LOOM, rear	1
5	V2003510		CABLE, earth, starter motor to chassis	1
6	7000323		HORN	1
7			GUARD, plastic spiral wrap	AR
8	V2003253		STRAP, nylon, 385mm long	AR
9	V2003111		STRAP, nylon, 200mm long	AR



**CONSOLE ELECTRICAL PANEL**

**5 - B - 2**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000337		PANEL, fusebox & relay mounting	1
2	V601177		FUSEBOX	4
3	V601171		FUSE, 5 amp, light brown	AR
3	V601172		FUSE, 7.5 amp, dark brown	AR
3	V601173		FUSE, 10 amp, red	AR
3	V601174		FUSE, 15 amp, blue	AR
3	V601175		FUSE, 20 amp, yellow	AR
3	V601176		FUSE, 25 amp, white	AR
4	219S05A		SCREW, posidrive, pan head	8
5	267S04		WASHER, flat	8
6	17S03		WASHER, spring	8
7	7S02		NUT	8
10	V602982		RELAY	3
10A	V602982	1002/1007	RELAY	2
11	59S01		NUT, "Nyloc" self locking	10
12	267S01		WASHER, flat	10
13	219S02A		SCREW, posidrive, pan head	10
15	V602980		UNIT, intermittent screen wipers	1
16	.....		STRIP, "Velcro"	AR
20	V602981		UNIT, hazard flasher	1
21	52S01B		SCREW, counter sunk socket head	2
22	267S03		WASHER, flat	2
23	17S02		WASHER, spring	2
24	7S01		NUT	2
25	301S05H		SCREW, button head socket	3
26	267S05		WASHER, flat	3
27	17S04		WASHER, spring	3
28	7S03		NUT	3



## TRANSMISSION ELECTRONICS

5 - B - 3

Item	Part no	Serial no	Description	Qty
1	V602985		LOOM, transmission	1
2	V602986		# LEVER, forward/neutral/reverse # <i>item 2 includes a set of reducing collars and two socket cap screws <b>68S02B</b></i>	1
3	V602951		DISPLAY, transmission (see also page 5-A-1)	1
4	V602987		UNIT, electronic control	1

**ADT 10 Dump Truck**

# **Section 6**

# **Skip**

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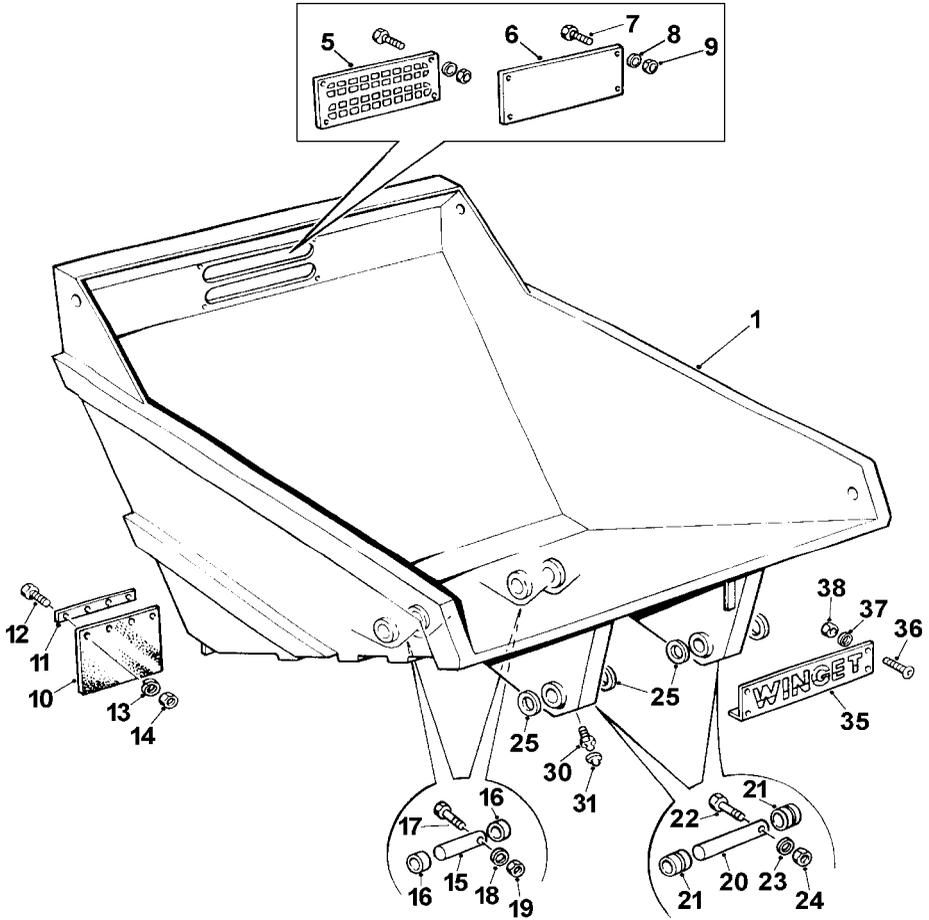
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**SKIP**

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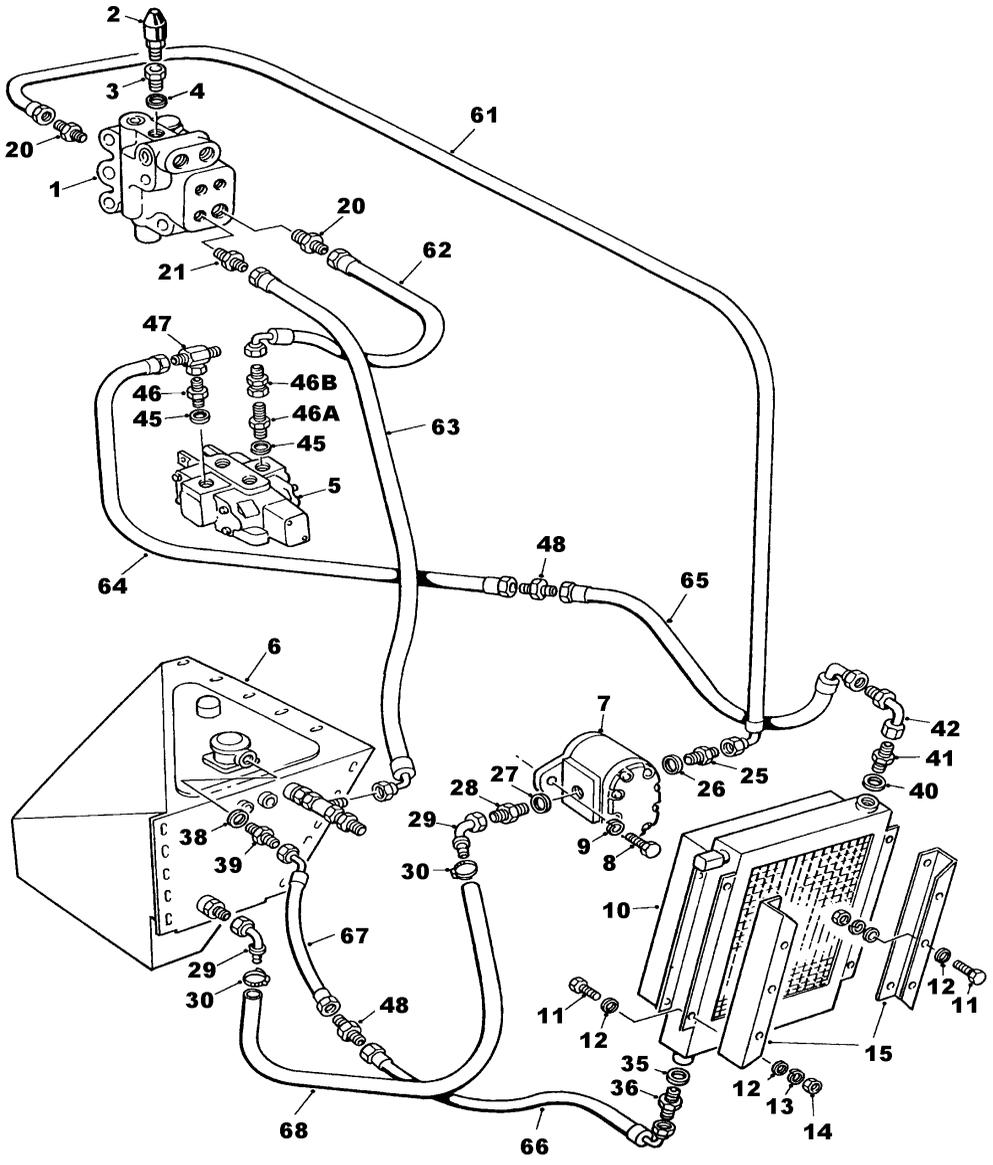
Item	Part no	Serial no	Description	Qty
1	7000160		SKIP	1
5	7000403		PLATE, grill	1
			or	
6	7000401		PLATE, blanking	1
7	11S03C		SCREW, set	4
8	267S05		WASHER, flat	4
9	61S03		NUT, "Binx" self locking	4
10	7000331		MUDFLAP, rubber	2
11	7000332		RETAINER, mudflap	2
12	11S03C		SCREW, set	4
13	17S04		WASHER, spring	4
14	7S03		NUT	4
15	7000194		PIN, tipping ram upper eye	2
16	7000041		BUSH	4
17	8S05R		BOLT	2
18	267S07		WASHER, flat	2
19	61S05		NUT, "Binx" self locking	2
20	7000119		PIN, skip pivot	2
21	V2001237		BUSH	4
22	8S05R		BOLT	2
23	267S07		WASHER, flat	2
24	61S05		NUT	2
25	V2004442		WASHER, thrust, 4.5mm thick	AR
25	V2004443		WASHER, thrust, 5.5mm thick	AR
30	131S01		NIPPLE, grease	4
31	176S01		CAP, grease nipple	4
35	7000275		PLATE, "WINGET"	1
36	301S04E		SCREW, button head socket	4
37	267S04		WASHER, flat	4
38	61S02		NUT, "Binx" self locking	4

**ADT 10 Dump Truck**

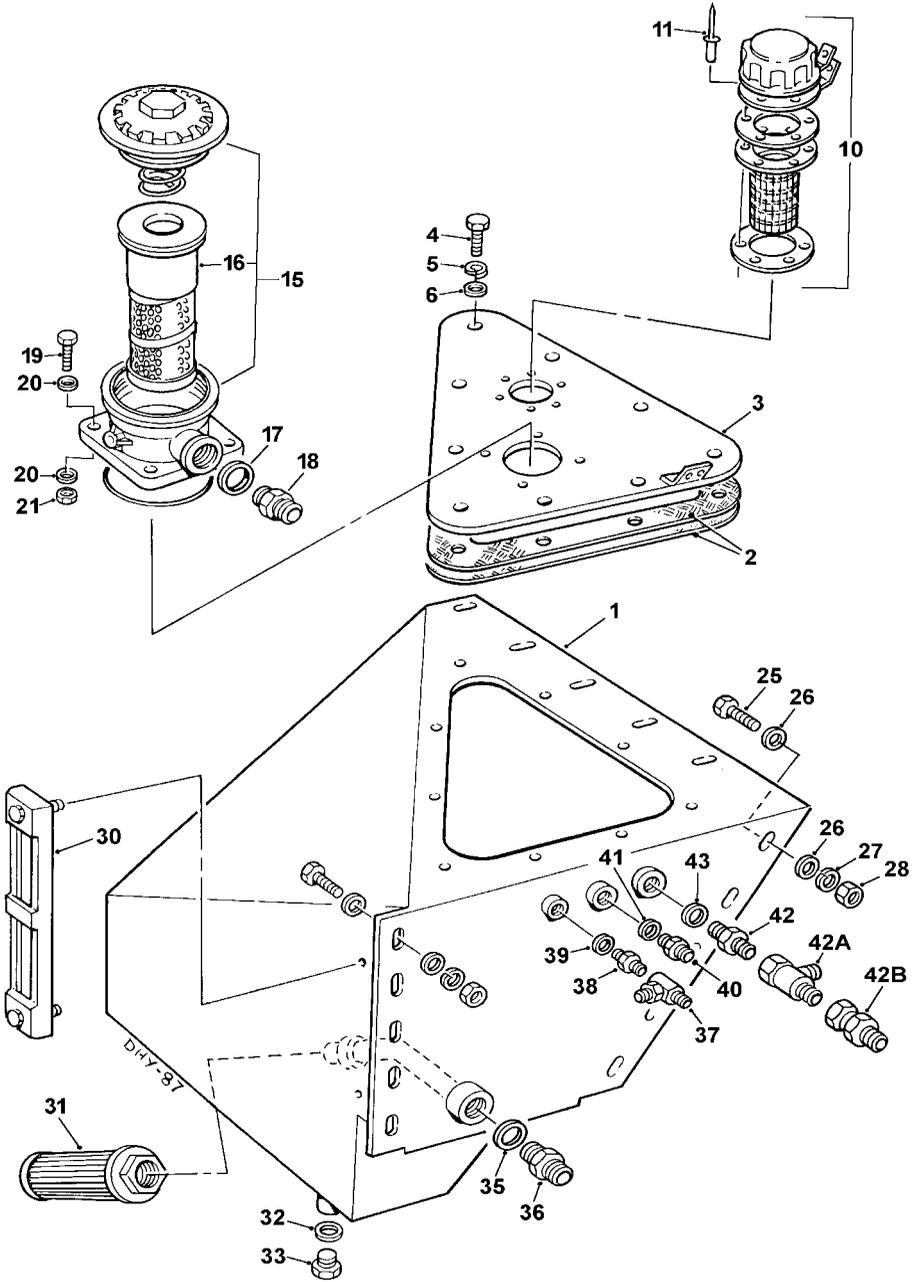
# **Section 7**

# **Hydraulics**

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<b>STAC VALVE, TIP VALVE, PUMP, COOLER &amp; TANK</b>	<b>7 - A - 1</b>
<b>HYDRAULIC TANK</b>	<b>7 - A - 2</b>
<b>STEER UNIT, STAC &amp; TIP VALVES</b>	<b>7 - B - 1</b>
<b>STEER UNIT to STEERING RAMS</b>	<b>7 - B - 2</b>
<b>SERVICE BRAKES</b>	<b>7 - C - 1</b>
<b>BRAKE VALVE, ACCUMULATORS &amp; TANK</b>	<b>7 - C - 2</b>
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<b>SKIP TIPPING</b>	<b>7 - D - 1</b>
<b>RAM, STEERING</b>	<b>7 - R - 1</b>
<b>RAM, SKIP TIPPING</b>	<b>7 - R - 2</b>

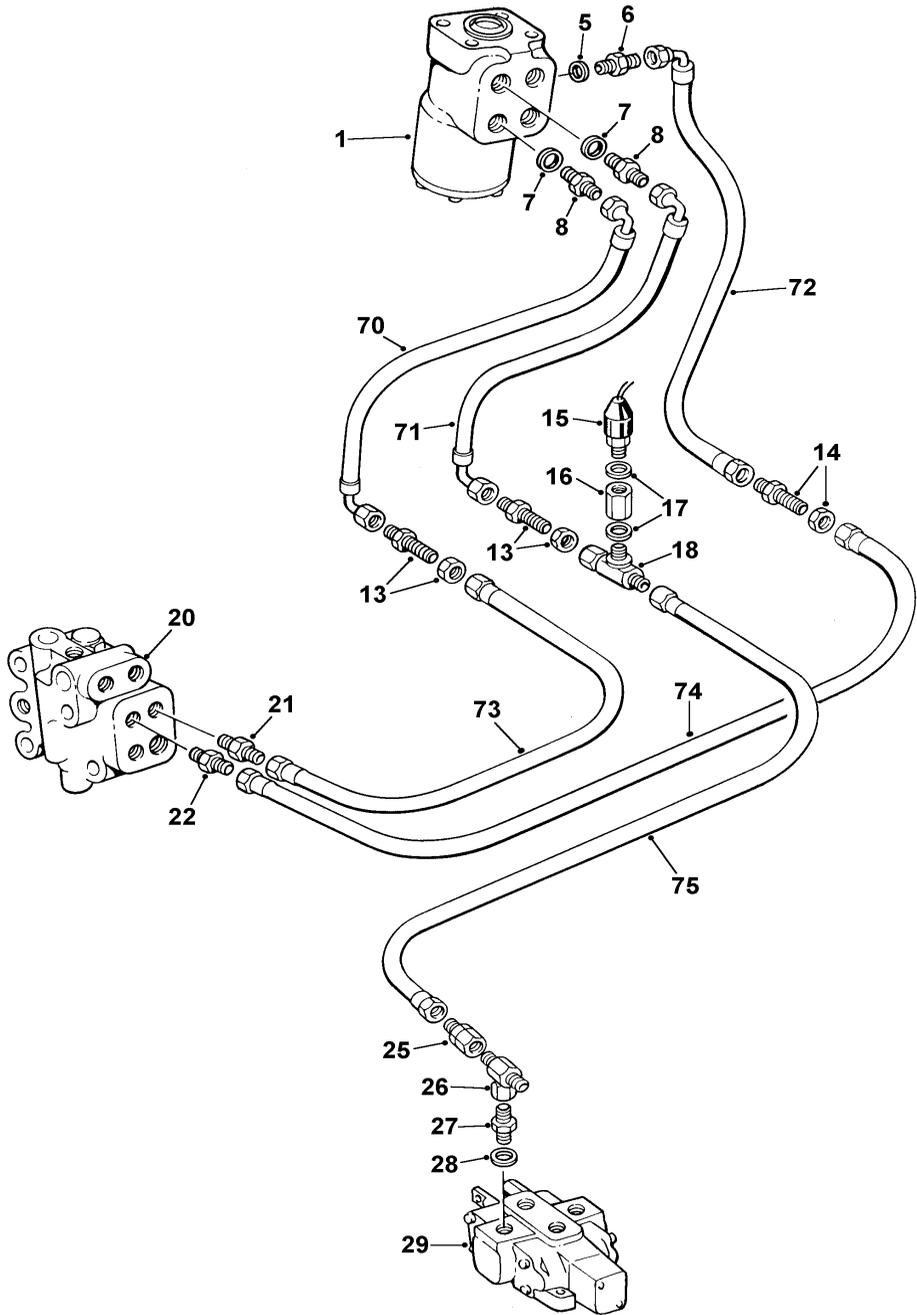


Item	Part no	Serial no	Description	Qty
1	7000007		VALVE, stac	1
2	7000027		SWITCH, low brake pressure	1
3	V2003530		ADAPTOR, m/f	1
4	100S02		SEAL, bonded	1
5	7000015		VALVE, skip tipping	1
6	.....		TANK, hydraulic ( <i>see page 7-A-2</i> )	1
7	7000012		PUMP	1
8	11S13E		SCREW, set	2
9	17S07		WASHER, spring	2
10	7000346		COOLER, hydraulic oil	1
11	11S03B		SCREW, set	8
12	267S05		WASHER, flat	16
13	17S04		WASHER, spring	8
14	7S03		NUT	8
15	7000375		BRACKET, cooler mounting	2
20	126S07		ADAPTOR, m/m	2
21	126S11		ADAPTOR, m/m	1
25	119S15		ADAPTOR, m/m	1
26	100S08		SEAL, bonded	1
27	100S09		SEAL, bonded	1
28	119S17		ADAPTOR, m/m	1
29	129S07G		FITTING, swept hosetail	2
30	97S11		CLIP, hose	2
35	100S08		SEAL, bonded	1
36	119S15		ADAPTOR, m/m	1
37	122S06		ADAPTOR, m/m	1
38	100S06		SEAL, bonded	1
40	100S08		SEAL, bonded	1
41	119S15		ADAPTOR, m/m	1
42	128S05		FITTING, swept elbow	1
45	100S06		SEAL, bonded	1
46	122S06		ADAPTOR, m/m	1
46A	93S06		ADAPTOR, bulkhead	1
46B	112S11		FITTING, swivel, m/f	1
47	154S12		FITTING, tee, m/m/f	1
48	122S06		ADAPTOR, m/m	2
61	73S04H		HOSE, stac valve to pump	1
62	73S04F		HOSE, stac valve to tip valve	1
63	73S03J		HOSE, stac valve to tank	1
64	321S04F		HOSE, tip valve to adaptor (cooler)	1
65	73S04H		HOSE, adaptor (tip valve) to cooler	1
66	73S04J		HOSE, cooler to adaptor (tank)	1
67	321S04E		HOSE, adaptor (cooler) to tank	1
68	7000364		HOSE, pump to tank	1



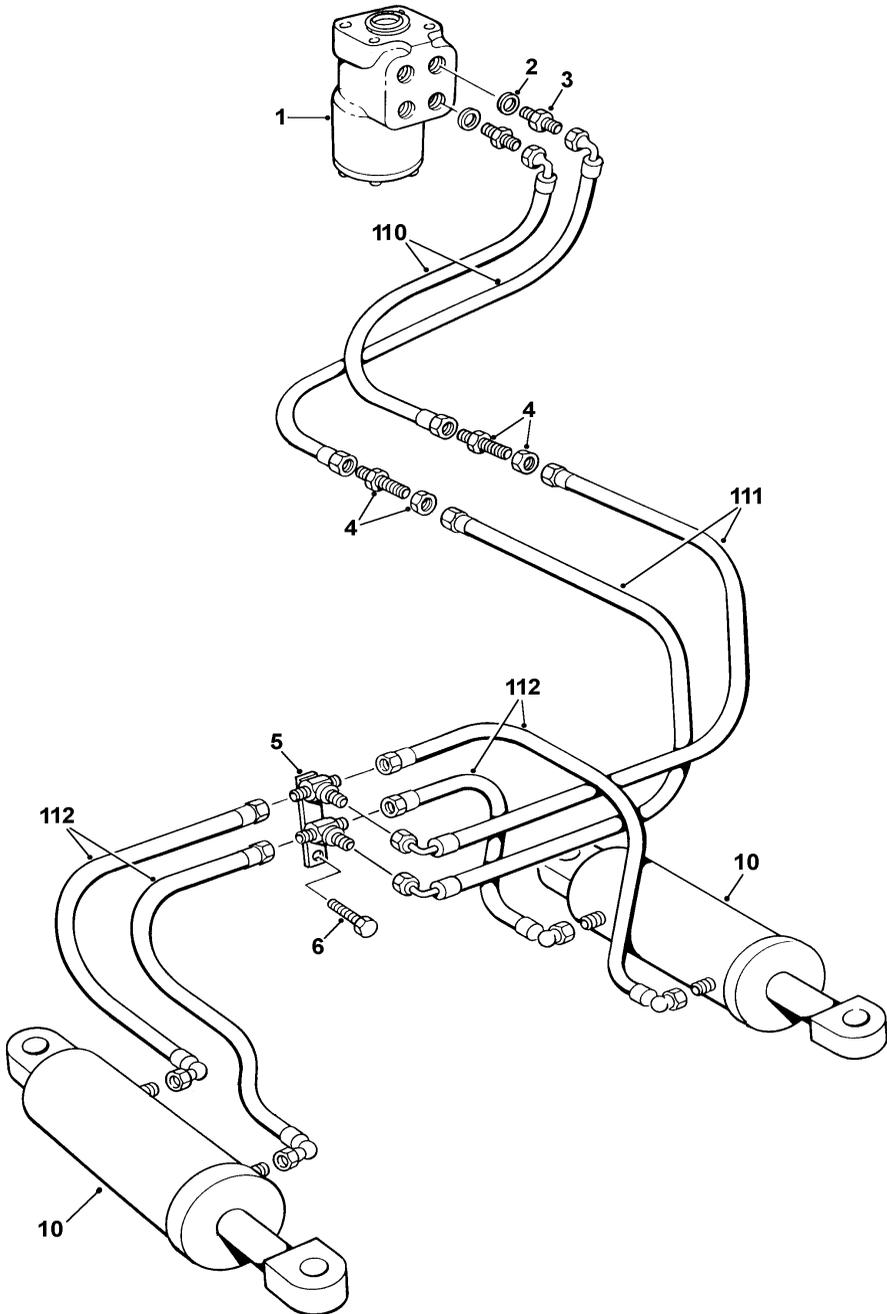
**TANK, hydraulic****7 - A - 2**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000137		TANK, hydraulic	1
2	7000301		GASKET	2
3	7000238		COVER, tank	1
4	11S03D		SCREW, set	9
5	17S04		WASHER, spring	9
6	267S05		WASHER, flat	9
10	V2004291		BREATHER / FILLER	1
11	101S07F		RIVET	6
15	7000022		FILTER, assembly	1
16	V603566		ELEMENT, filter	1
17	100S06		SEAL, bonded	1
18	122S06		ADAPTOR	1
19	11S02D		SCREW, set	4
20	267S04		WASHER, flat	8
21	59S14		NUT	4
25	11S05F		SCREW, set	10
26	267S07		WASHER, flat	20
27	17S06		WASHER, spring	10
28	7S05		NUT	10
30	V2004928		GAUGE, fluid level	1
31	7000023		STRAINER	1
32	100S04		SEAL, bonded	1
33	127S04		PLUG, drain	1
35	100S10		SEAL, bonded	1
36	122S09		ADAPTOR	1
37	154S02		FITTING, tee	1
38	119S03		ADAPTOR	1
39	100S02		SEAL, bonded	1
40	122S03		ADAPTOR	1
41	100S03		SEAL, bonded	1
42	122S04		ADAPTOR	1
42A	154S03		FITTING, tee	1
42B	112S17		FITTING, swivel, male/female	1
43	100S04		SEAL, bonded	1



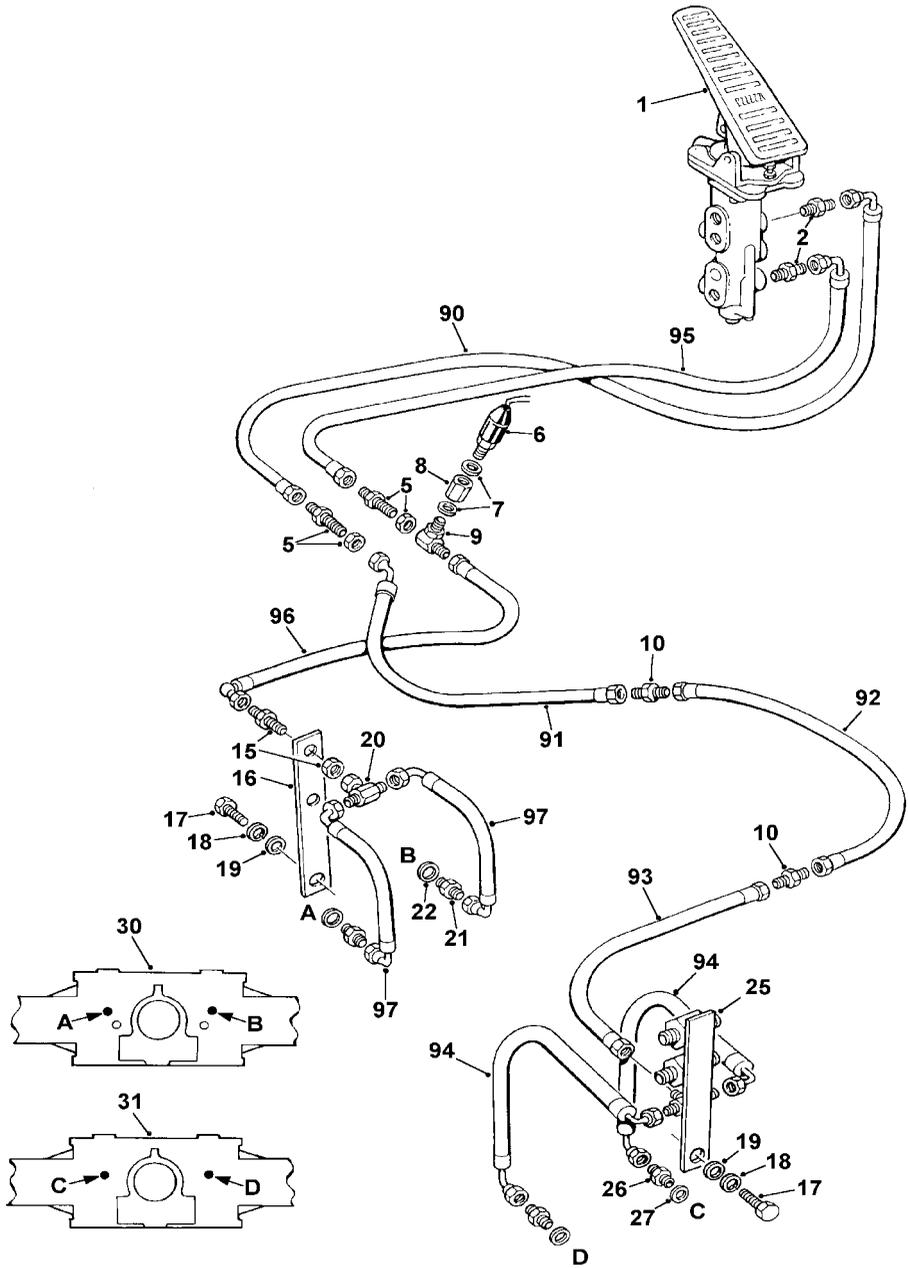
**STEER UNIT, STAC & TIP VALVES****7 - B - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000006		VALVE, steer unit	1
5	100S02		SEAL, bonded	1
6	119S03		ADAPTOR, m/m	1
7	100S04		SEAL, bonded	2
8	122S04		ADAPTOR, m/m	2
13	93S02		FITTING, bulkhead	2
14	93S01		FITTING, bulkhead	1
15	7000349		SWITCH, temperature sender	1
16	7000350		FITTING barrel nut	1
17	100S04		SEAL, bonded	2
18	154S03		FITTING, tee, f/m/m	1
20	.....		VALVE, stac	2
21	126S06		ADAPTOR, m/m	1
22	126S03		ADAPTOR, m/m	1
25	112S15		FITTING, m/f swivel	1
26	154S12		FITTING, m/m/f swivel	1
27	122S06		ADAPTOR, m/m	1
28	100S06		SEAL, bonded	1
29	.....		VALVE, skip tipping	1
70	63S03D		HOSE, steer unit to bulkhead	1
71	63S03D		HOSE, steer unit to bulkhead (temp. switch)	1
72	63S02A		HOSE, steer unit "LS" to bulkhead	1
73	25S03F		HOSE, bulk head to stac valve "P"	1
74	25S02A		HOSE, bulkhead to stac valve "LS"	1
75	25S03G		HOSE, temp. switch to tip valve "T"	1



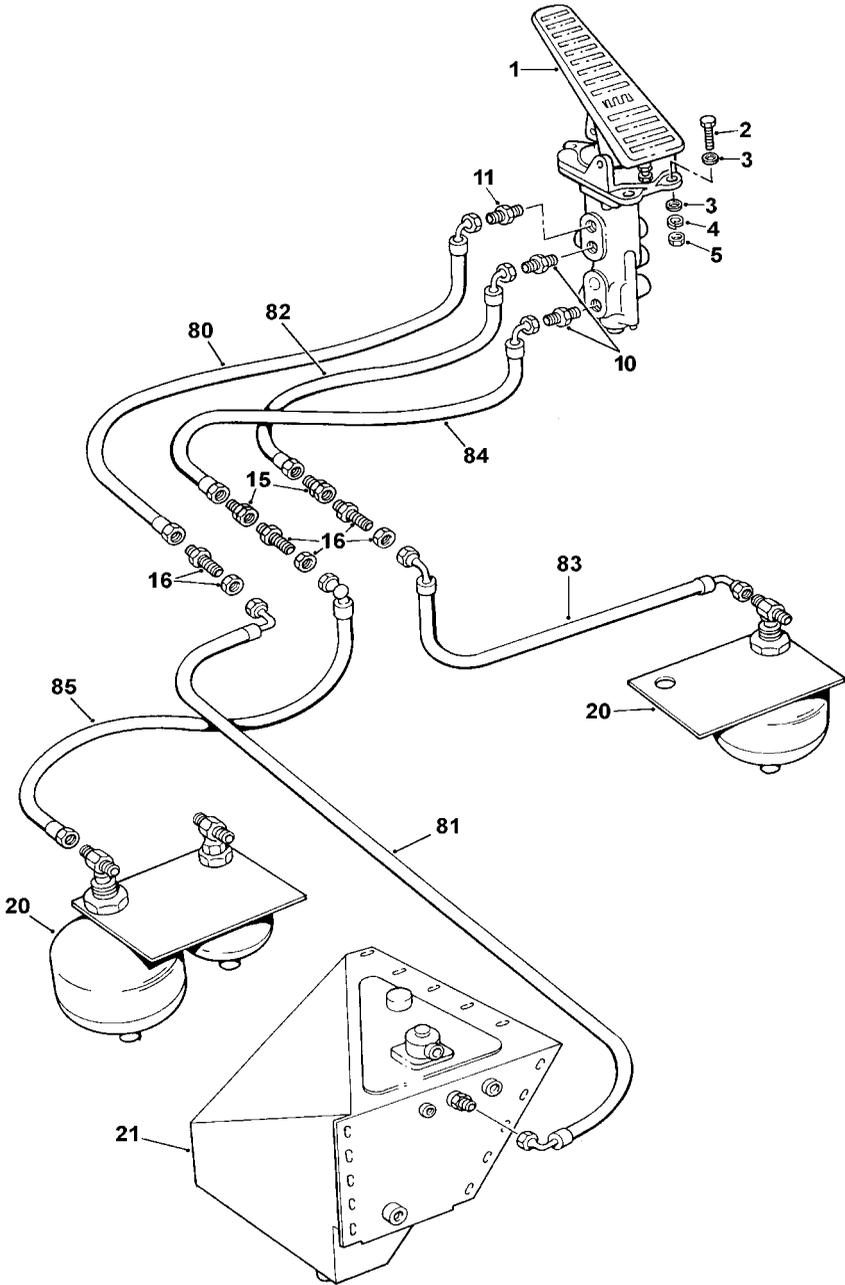
**STEER UNIT to STEERING RAMS****7 - B - 2**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000006		VALVE, steer unit	1
2	100S04		SEAL, bonded	2
3	119S08		ADAPTOR	2
4	93S01		FITTING, bulkhead	2
5	7000281		BRACKET, with tees	1
6	.....		BOLT, (supplied with transmission)	
10	7000355		RAM, steering ( <i>see page 7-R-1</i> )	2
110	73S02G		HOSE, steer unit to bulkhead	2
111	73S02E		HOSE, bulkhead to bracket	2
112	32S02H		HOSE, bracket to ram	4

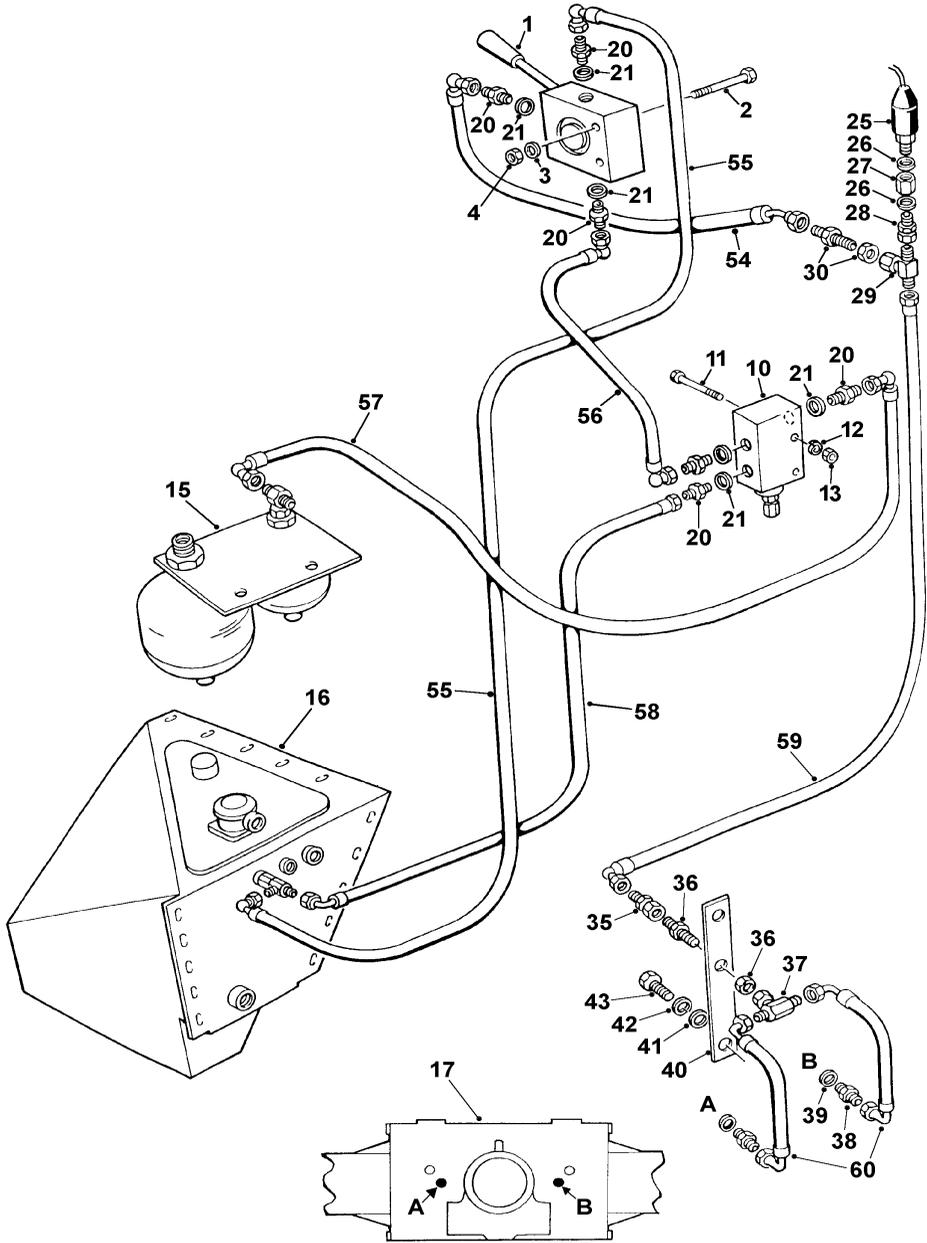


**SERVICE BRAKES****7 - C - 1**

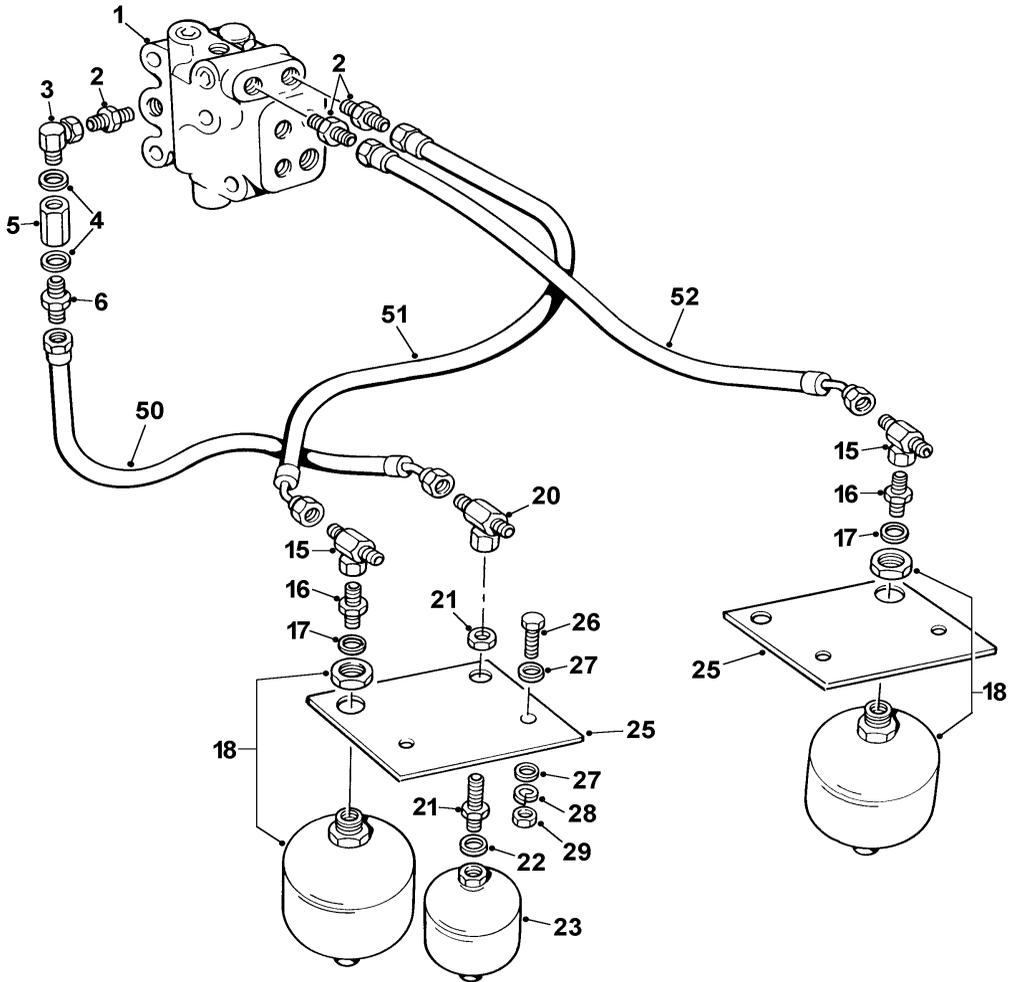
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000008		VALVE, footbrake	1
2	126S10		ADAPTOR	2
5	93S03		FITTING, bulkhead	2
6	7000300		SWITCH, rear brake lights	1
7	100S02		SEAL, bonded	2
8	7000327		FITTING, barrel nut	1
9	154S01		FITTING, tee, f/m/m	1
10	122S02		ADAPTOR, m/m	2
15	93S03		FITTING, bulkhead	1
16	7000290		BRACKET	1
17	11S14G		SCREW, set	2
18	17S15		WASHER, spring	2
19	267S24		WASHER, flat	2
20	154S08		FITTING, tee	1
21	V2005019		ADAPTOR, m/m	2
22	298S02		SEAL, bonded	2
25	7000282		BRACKET, c/w welded adaptors	1
26	126S01		ADAPTOR, m/m	2
27			SEAL, bonded	2
30	.....		AXLE, front	
31	.....		AXLE, rear	
<b>Rear Brakes</b>				
90	73S01K		HOSE, brake valve "B1" to bulkhead	1
91	26S01J		HOSE, bulkhead to adaptor	1
92	321S01C		HOSE, adaptor to adaptor	1
93	25S01G		HOSE, adaptor to bracket	1
94	63S01G		HOSE, bracket to axle ports	2
<b>Front Brakes</b>				
95	73S01K		HOSE, brake v. "B2" to bulkhead (switch)	
96	34S01K		HOSE, switch to bracket	1
97	63S01G		HOSE, bracket to axle ports	2



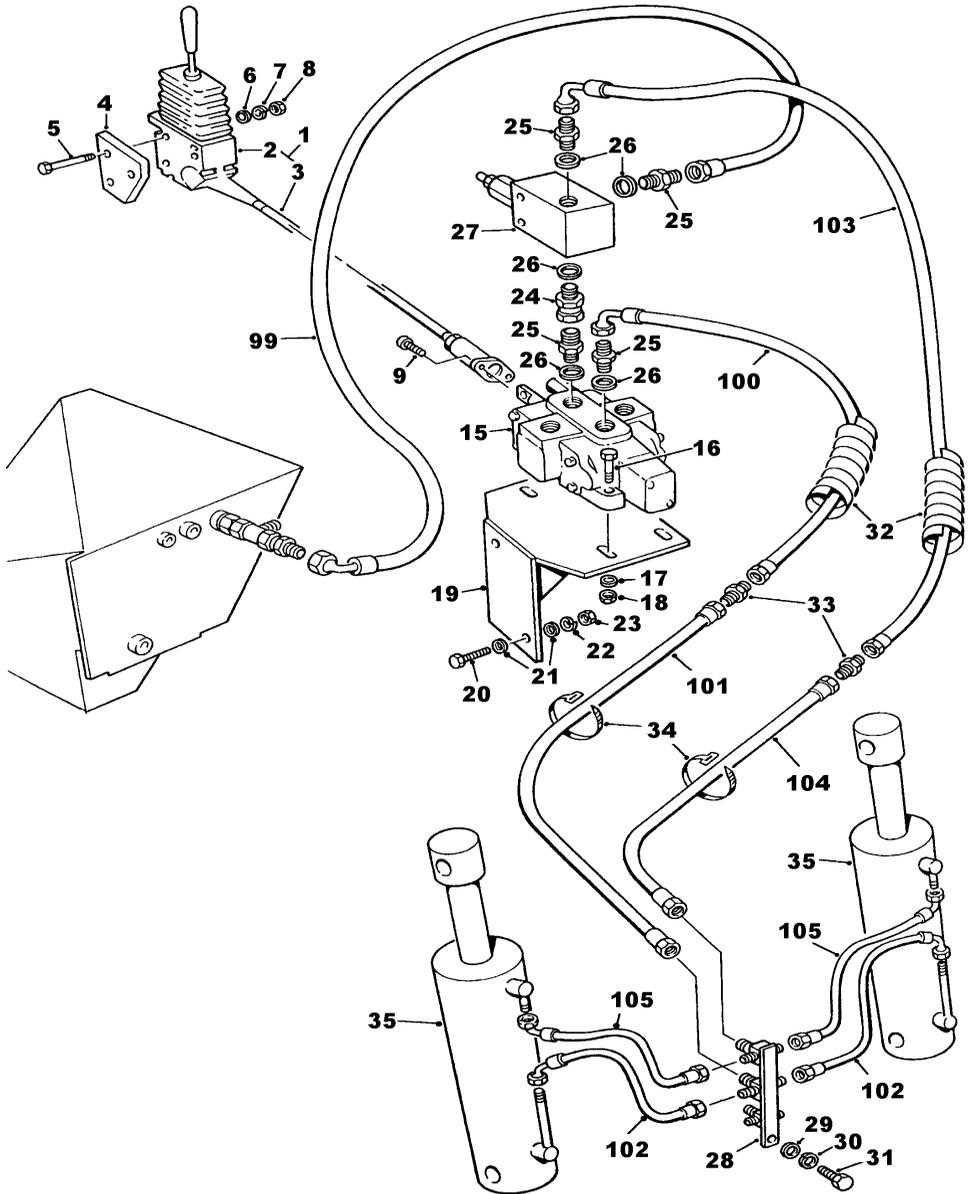
Item	Part no	Serial no	Description	Qty
1	7000008		VALVE, foot brake	1
2			SCREW, set	3
3			WASHER, flat	3
4			WASHER, spring	3
5			NUT	3
10	126S10		ADAPTOR	2
11	126S03		ADAPTOR	1
15	112S05		ADAPTOR, m/f	2
16	93S01		FITTING, bulkhead	3
20	.....		ACCUMULATORS ( <i>see page 7-C-4</i> )	
21	.....		TANK ( <i>see page 7-A-2</i> )	
80	73S01K		HOSE, brake valve "T1" to bulkhead	1
81	63S02H		HOSE, bulkhead to tank	1
82	73S02G		HOSE, brake valve "P1" to bulkhead	1
83	63S02K		HOSE, bulkhead to rear accumulator	1
84	73S01K		HOSE, brake valve "P2" to bulkhead	1
85	32S02H		HOSE, bulkhead to front accumulator	1



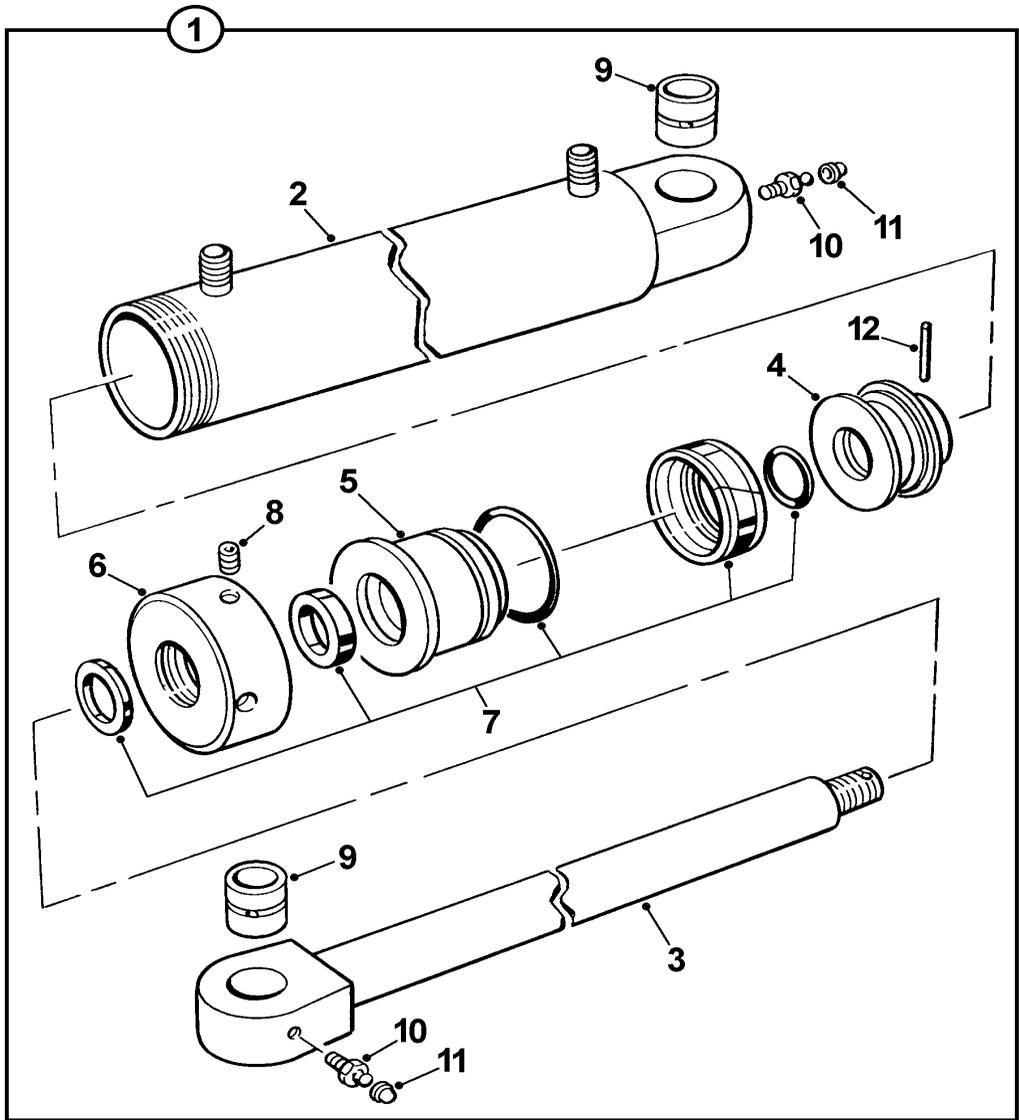
Item	Part no	Serial no	Description	Qty
1	7000029		VALVE, parking brake	1
2	8S03E		BOLT	2
3	267S05		WASHER, flat	2
4	59S12		NUT 'Nyloc', self locking	2
10	7000321		VALVE, pressure regulating	1
11	8S03J		BOLT	2
12	17S04		WASHER, spring	2
13	7S03		NUT	2
15	.....		ACCUMULATORS ( <i>see page 7-C-4</i> )	
16	.....		TANK ( <i>see page 7-A-2</i> )	
17	.....		AXLE, front	
20	122S03		ADAPTOR, m/m	6
21	100S03		SEAL, bonded	6
25	7000279		SWITCH, interlock changeover	1
26	100S02		SEAL, bonded	1
27	7000327		FITTING, barrel nut	1
28	12S05		FITTING, m/f swivel	1
29	154S09		FITTING, tee, m/m/f swivel	1
30	93S01		FITTING, bulkhead	1
35	112S06		FITTING, m/f swivel	1
36	93S03		FITTING, bulkhead	1
37	154S08		FITTING, tee, m/m/f swivel	1
38	V2005019		ADAPTOR, m/m	2
39	298S02		SEAL, bonded	2
40	7000290		BRACKET	1
41	267S24		WASHER, flat	1
42	17S15		WASHER, spring	1
43	11S14G		SCREW, set	1
54	34S02J		HOSE, parking valve to interlock switch	1
55	53S02Z		HOSE, parking valve to tank	1
56	53S02Y		HOSE, parking valve to regulating valve	1
57	53S02O		HOSE, regulating valve to park accum.	1
58	26S02L		HOSE, regulating valve to tank	1
59	34S02K		HOSE, interlock switch to axle bracket	1
60	63S01G		HOSE, axle bracket to axle ports	2



Item	Part no	Serial no	Description	Qty
1	7000007		VALVE, stac	1
2	126S03		ADAPTOR, m/m	3
3	96S04		FITTING, elbow, f/m	1
4	100S03		SEAL, bonded	2
5	7000242		VALVE, non return	1
6	122S03		ADAPTOR, m/m	1
15	154S09		FITTING, tee	2
16	119S08		ADAPTOR, m/m	2
17	100S04		SEAL, bonded	2
18	7000019		ACCUMULATOR, service brakes	2
20	159S08		FITTING, tee	1
21	93S02		FITTING, bulkhead	1
22	100S04		SEAL, bonded	1
23	7000028		ACCUMULATOR, parking brake	1
25	7000280		PLATE, accumulator mounting	2
26	11S03D		SCREW, set	4
27	267S05		WASHER, flat	8
28	17S04		WASHER, spring	4
29	7S03		NUT	4
50	26S02G		HOSE, stac valve to parking accum.	1
51	26S02G		HOSE, stac valve to front accumulator	1
52	26S02L		HOSE, stac valve to rear accumulator	1

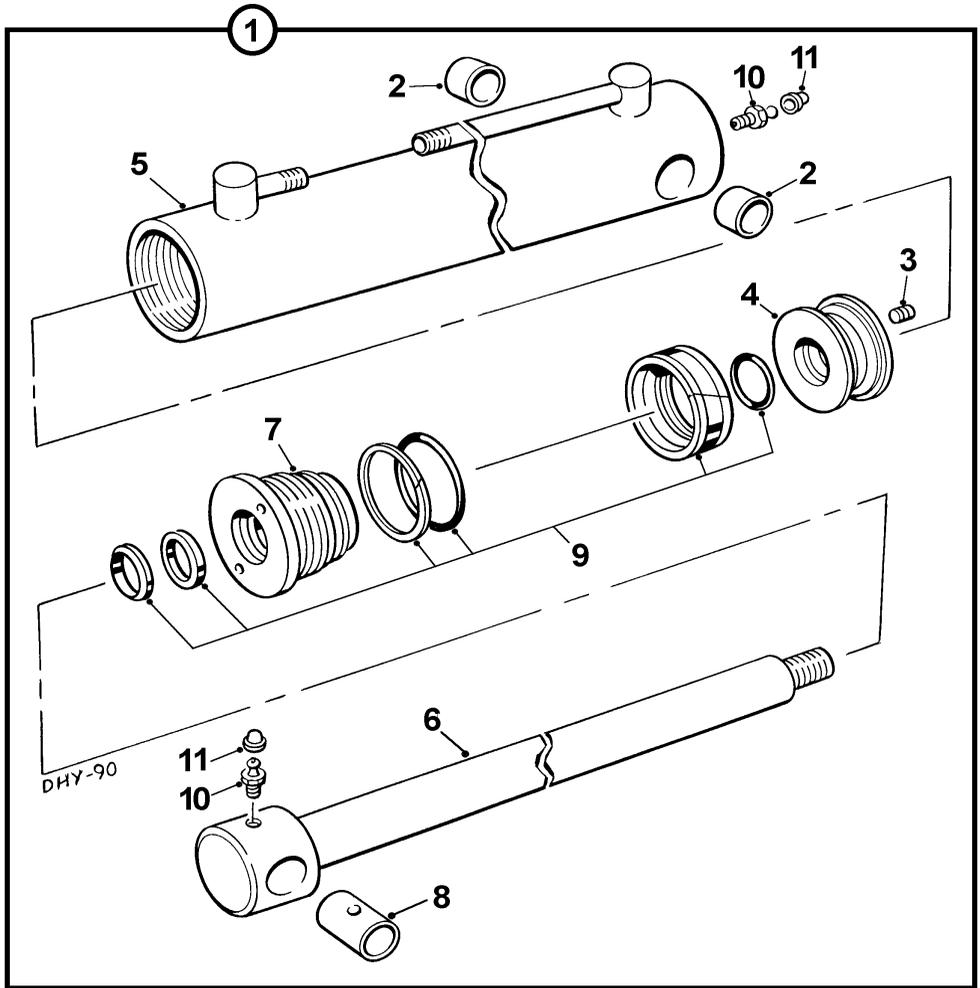


Item	Part no	Serial no	Description	Qty
1	7000025		LEVER, assembly	1
2	V602783		LEVER	1
3	V602784		CABLE	1
4	7000235		SPACER	3
5	8S02J		BOLT	3
6	267S04		WASHER, flat	3
7	17S03		WASHER, spring	3
8	7S02		NUT	3
9	68S03B		SCREW	2
15	7000015		VALVE, skip tipping	1
16	8S03F		BOLT	3
17	267S05		WASHER, spring	3
18	61S03		NUT	3
19	7000266		BRACKET, valve mounting	1
20			SCREW, set	2
21	267S07		WASHER, flat	2
22	17S06		WASHER, spring	2
23	7S05		NUT	2
24	112S11		FITTING, male/female swivel	1
25	122S06		ADAPTOR, male/male	2
26	100S06		SEAL, bonded	3
27	7000419		VALVE, relief	1
28	7000282		BRACKET	1
29	267S24		WASHER, flat	1
30	17S15		WASHER, spring	1
31	11S14G		SCREW, set	1
32	7000377		GUARD, plastic sheath	AR
33	122S06		ADAPTOR, m/m	2
34	V2003253		TIE, nylon	AR
35	7000033		RAM, skip tipping (see page 7-R-2)	2
99	26S04M		HOSE, relief valve to tank	
100	318S04K		HOSE, tipping valve to adaptor	1
101	25S05H		HOSE, adaptor to bracket	1
102	26S03A		HOSE, bracket to rams (lift)	2
103	318S04J		HOSE, relief valve valve to adaptor	1
104	25S05H		HOSE, adaptor to bracket	1
105	26S03A		HOSE, bracket to rams (lower)	2



**RAM, STEERING****7 - R - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	700355		RAM, steering	1
2	V602988		CYLINDER	1
3	V602989		ROD	1
4	V602990		PISTON	1
5	V602991		RETAINER	1
6	V602992		END CAP	1
7	V602997		KIT, seals	1
8	V602993		SCREW, grub	1
9	V602994		BUSH	2
10	131S01		NIPPLE, grease	2
11	176S01		CAP, grease nipple	2
12	V602996		PIN, roll	1



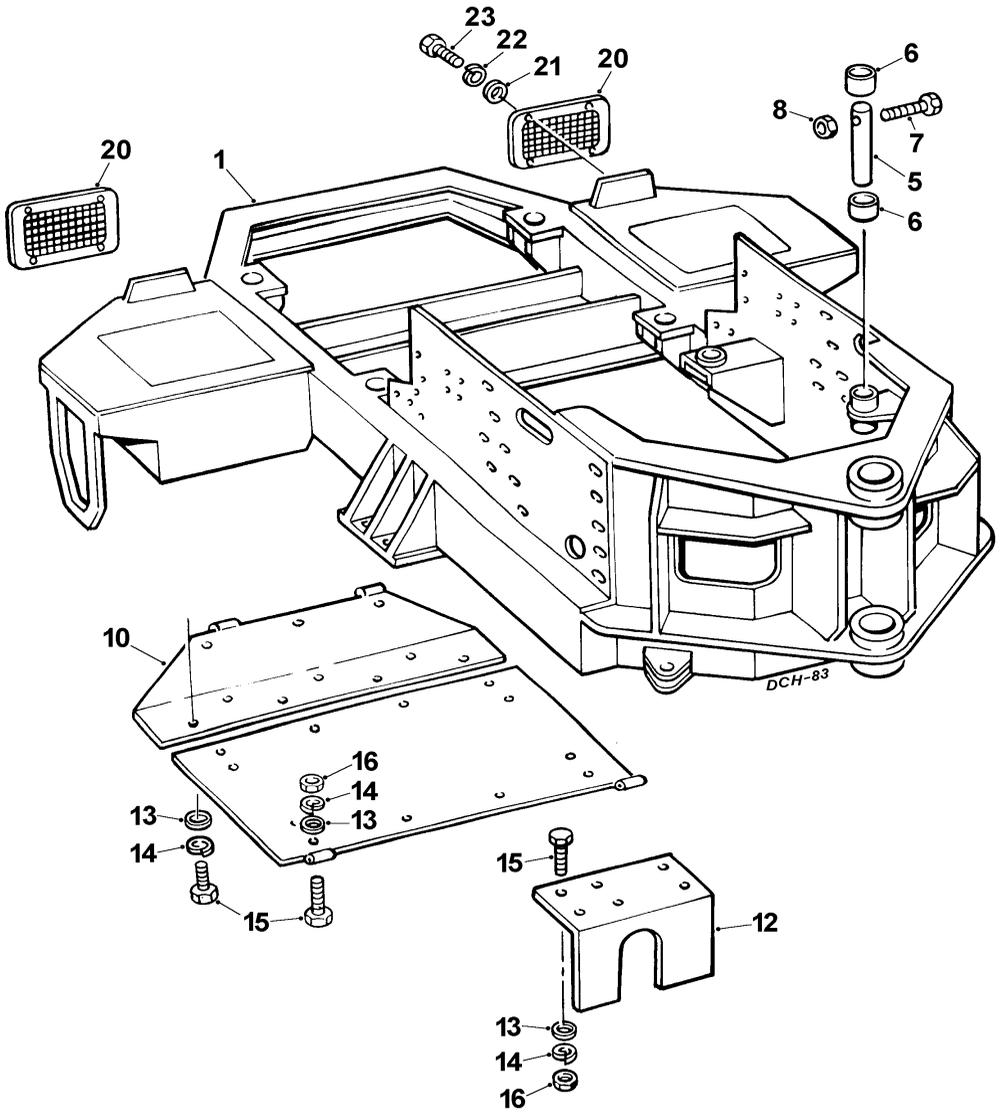
Item	Part no	Serial no	Description	Qty
1	700033		RAM, skip tipping	1
2	V602998		BUSH	2
3	V602999		SCREW, grub	1
4	V603000		PISTON	1
5	V603001		CYLINDER	1
6	V603002		ROD	1
7	V603003		RETAINER	1
8	V603004		BUSH	1
9	V603005		KIT, seals	1
10	131S01		NIPPLE, grease	2
11	176S01		CAP, grease nipple	2

ADT 10 Dump Truck

# Section 8

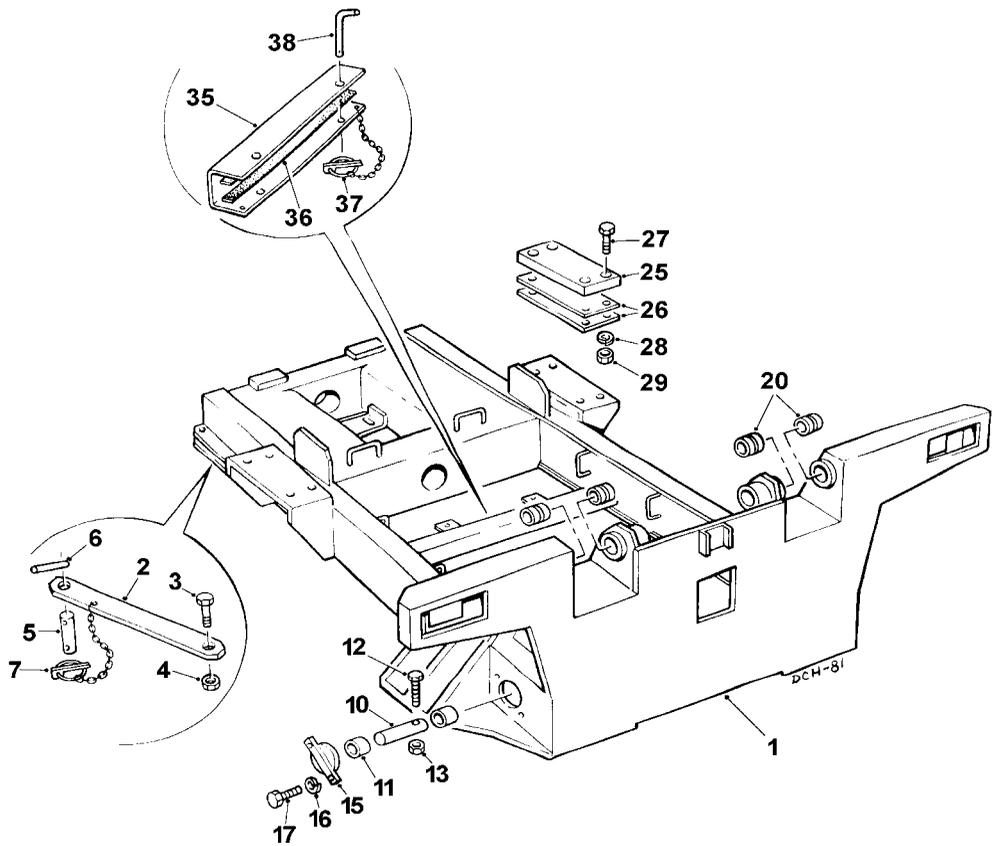
# **Chassis & panels**

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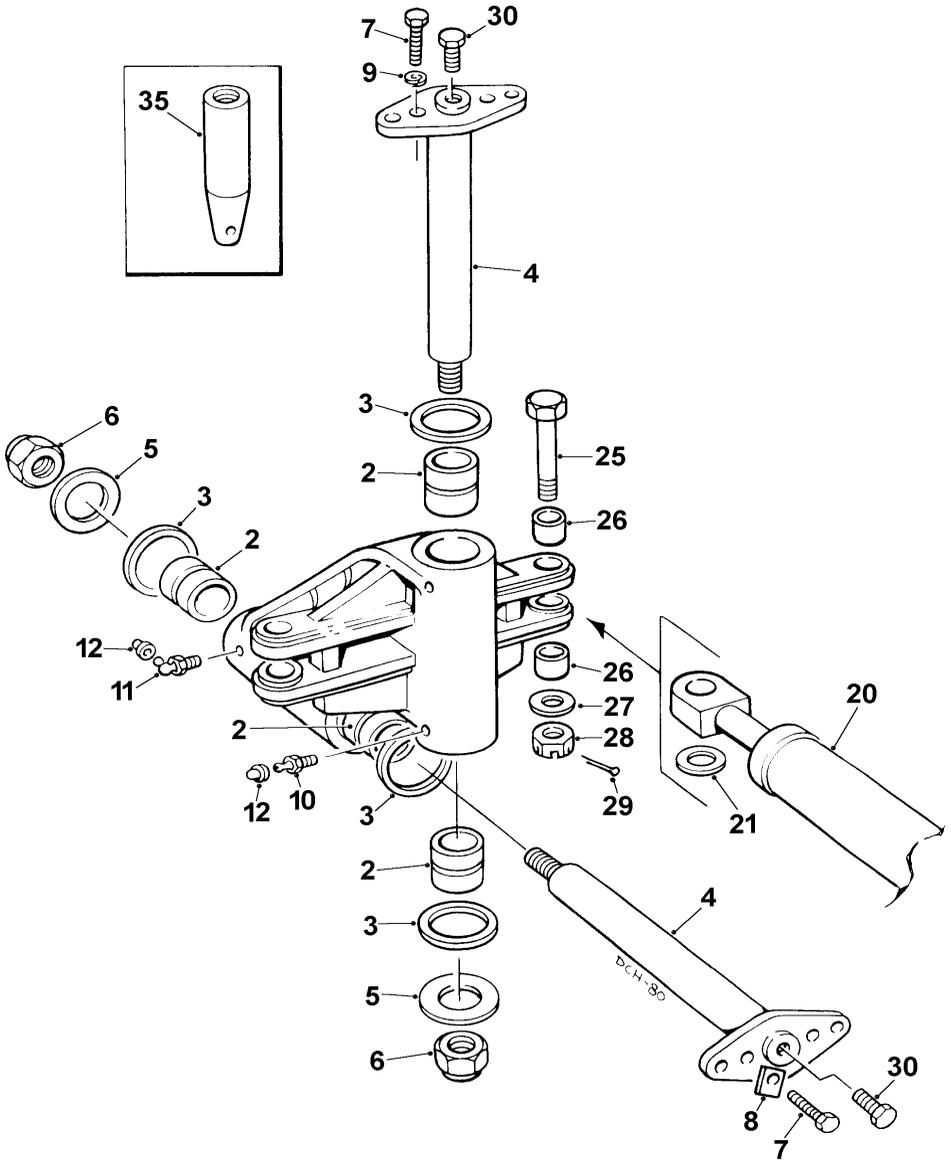
**CHASSIS, front****8 - A - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000080		CHASSIS, front	1
5	7000132		PIN, steer ram pivot	2
6	7000020		BUSH	4
7	8S04K		BOLT	2
8	61S04		NUT, self locking	2
10	7000261		PLATE, sump, front	1
11	7000260		PLATE sump, rear	1
12	7000283		GUARD, transmission	1
13	267S07		WASHER, flat	25
14	17S06		WASHER, spring	25
15	11S05D		SCREW, set	25
16	7S05		NUT	10
20	7000358		GRILL, headlamp	2
21	267S05		WASHER, flat	8
22	17S04		WASHER, spring	8
23	11S03B		SCREW, set	8



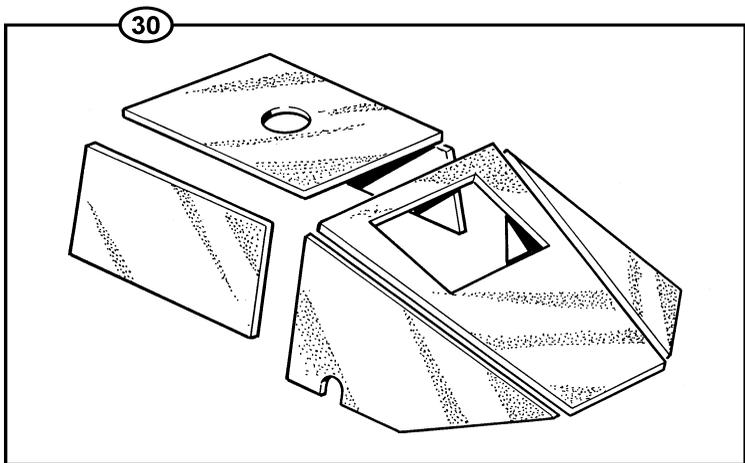
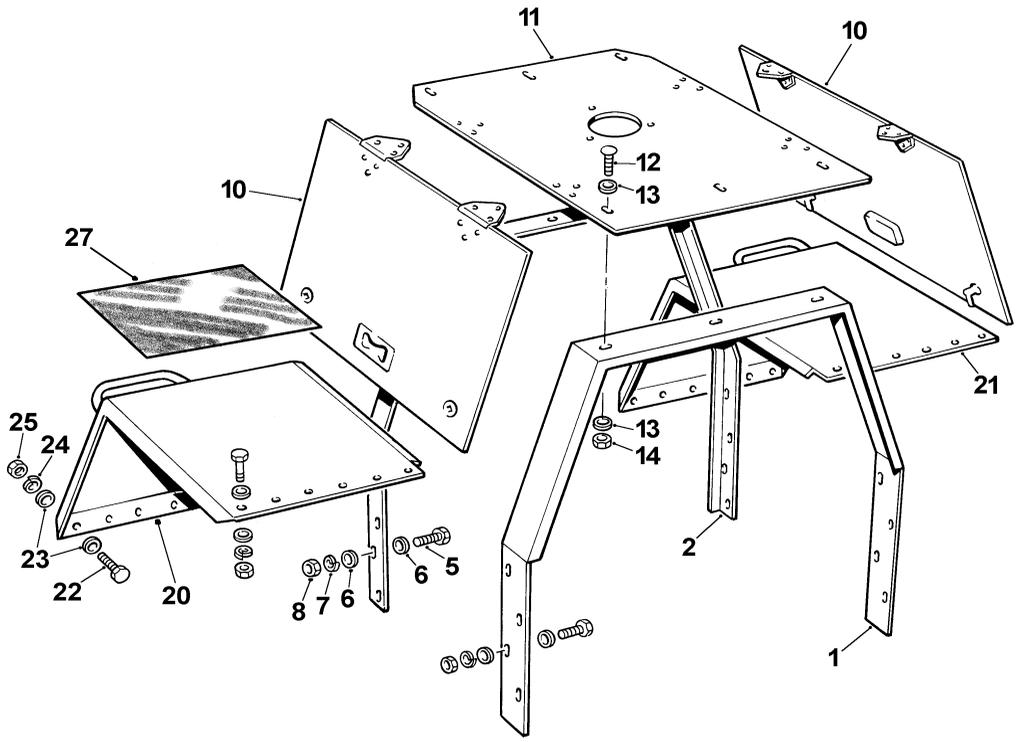
**CHASSIS, rear****8 - A - 2**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000043		CHASSIS, rear	1
2	7000305		SUPPORT, articulation lock	1
3	8S07K		BOLT	1
4	61S07		NUT, self locking	1
5	V2003851		PIN	1
6	55S02D		PIN, spirol	1
7	902S02		PIN, lynch c/w chain	1
10	7000118		PIN, tipping ram lower pivot	2
11	7000041		BUSH	4
12	8S05R		BOLT	
13	61S05		NUT, self locking	
15	.....		PLATE, cover	1
16	17S04		WASHER, spring	2
17	11S03C		SCREW, set	2
20	V2001237		BUSH, skip pivot pin	4
25	7000237		STOP, skip	2
26	7000243		SHIM, 3mm	AR
26	7000244		SHIM, 5mm	AR
26	7000245		SHIM, 8mm	AR
27	11S05H		SCREW, set	8
28	17S06		WASHER, flat	8
29	7S05		NUT	8
35	7000340		SUPPORT, skip	1
36	106209000		STRIP, self adhesive rubber	1 metre
37	902S02		PIN, lynch c/w chain	2
38	V2004217		PIN	2



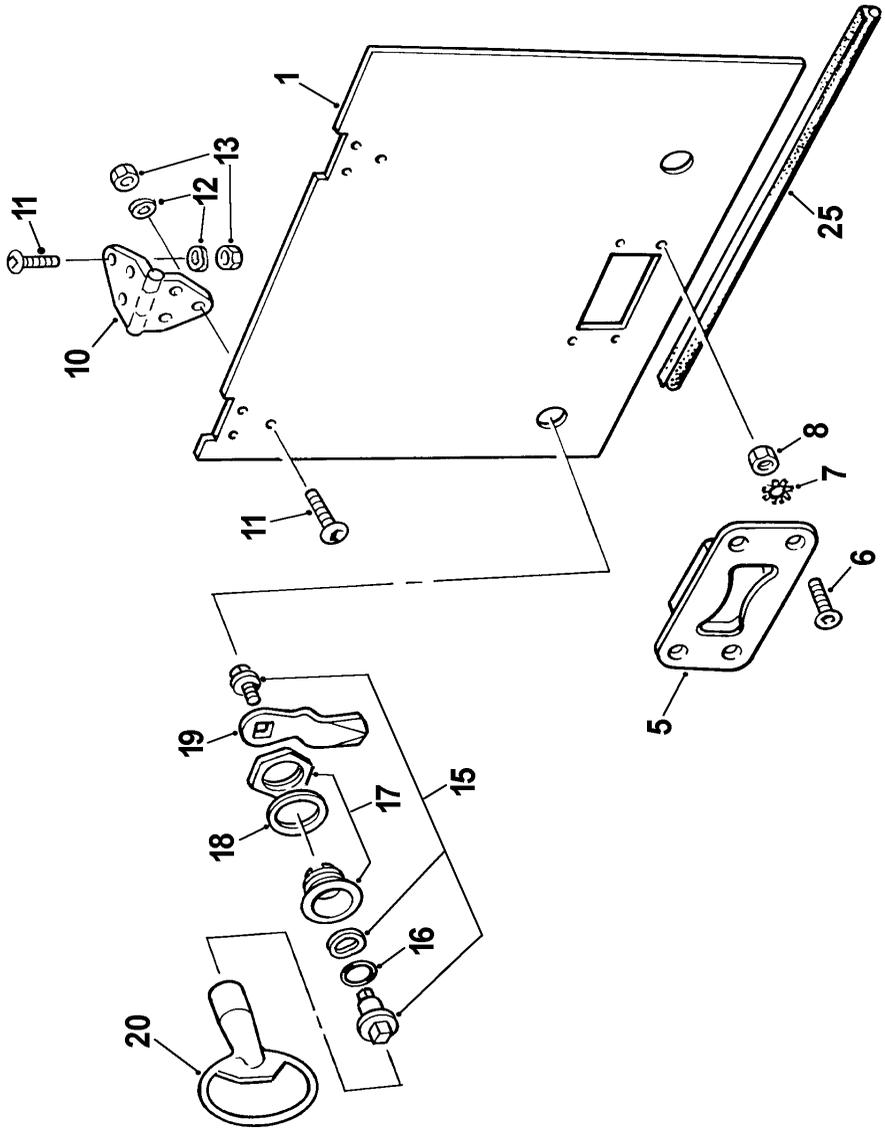
**CENTRE PIVOT****8 - A - 3**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000030		YOKE, centre pivot	1
2	7000031		BUSH	4
3	7000120		WASHER, thrust, 7.5mm	AR
3	7000121		WASHER, thrust, 8mm	AR
4	7000032		PIN, yoke centre pivot	2
5	7000157		WASHER, special	2
6	59S18		NUT, 'Nylloc', self-locking	2
7	11S04C		SCREW, set	4
8	513211900		WASHER, tab	2
9	17S05		WASHER, spring	2
10	131S01		NIPPLE, grease, straight	2
11	131S02		NIPPLE, grease, 90 <sup>o</sup>	2
12	176S01		CAP, grease nipple	4
20	7000355		RAM, steering	2
21	10S20		WASHER, flat (spacer)	AR
25	7000134		BOLT	2
26	7000133		BUSH	4
27	10S20		WASHER	2
28	102S12		NUT, slotted	2
29	44S05H		PIN, split	2
30	11S06D		SCREW, set (blanking plug)	2
35	7000079		TOOL, pivot pin guide	1

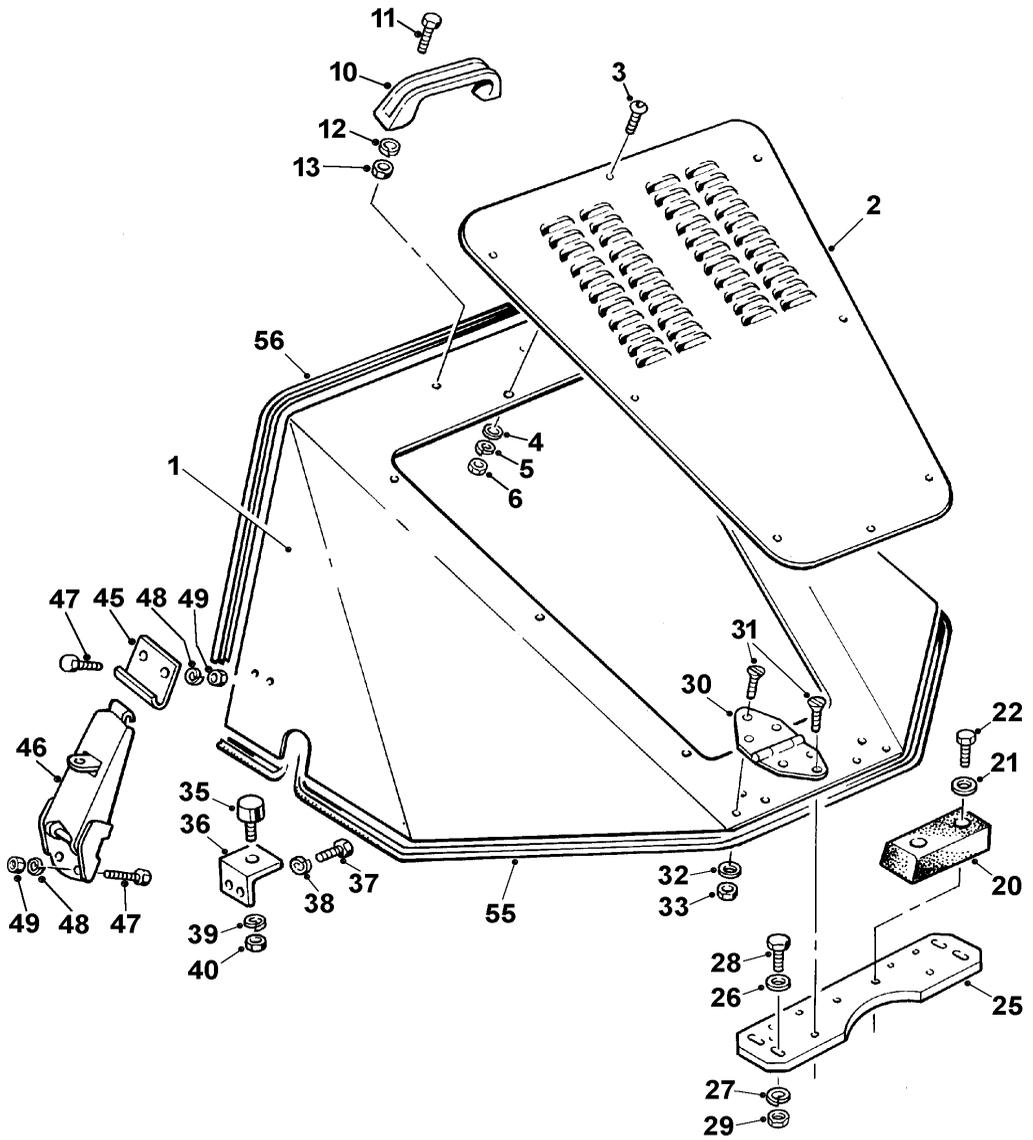


**MUDGUARDS, ENGINE COVERS & CLADDING****8 - B - 1**

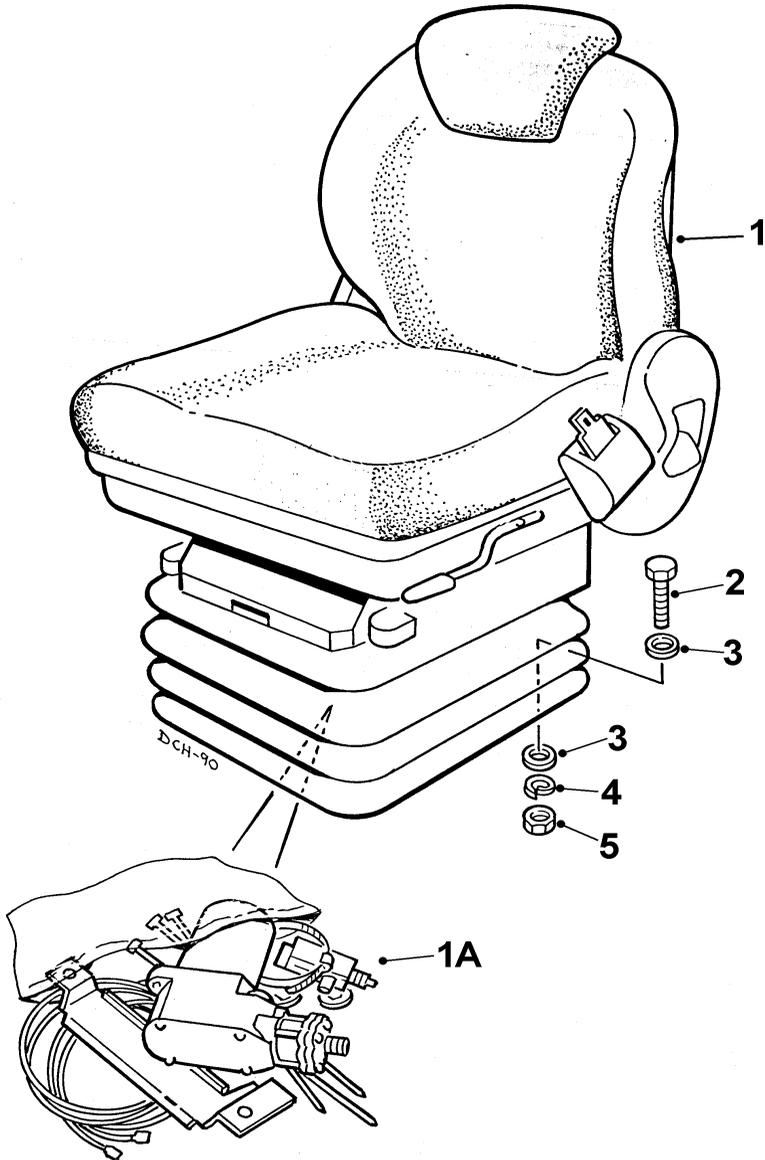
<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000195		BRACKET, rear, engine cover	1
2	7000196		BRACKET, front, engine cover	1
5	11S05E		SCREW, set	6
6	267S07		WASHER, flat	12
7	17S06		WASHER, spring	6
8	7S05		NUT	6
10	7000247		COVER, side ( <i>see page 8-B-2</i> )	2
11	7000248		COVER, engine	1
12	301S05H		SCREW, socket button head	6
13	267S05		WASHER, flat	12
14	61S03		NUT, "Binx", self locking	6
20	7000268		MUDGUARD, L.H.	
21	7000269		MUDGUARD, R.H.	
22	11S04D		SCREW, set	20
23	267S06		WASHER, flat	40
24	17S05		WASHER, spring	20
25	7S04		NUT	20
27	V2003183		SAFETY-WALK	AR
30	7000353		KIT, engine & transmission cladding	1



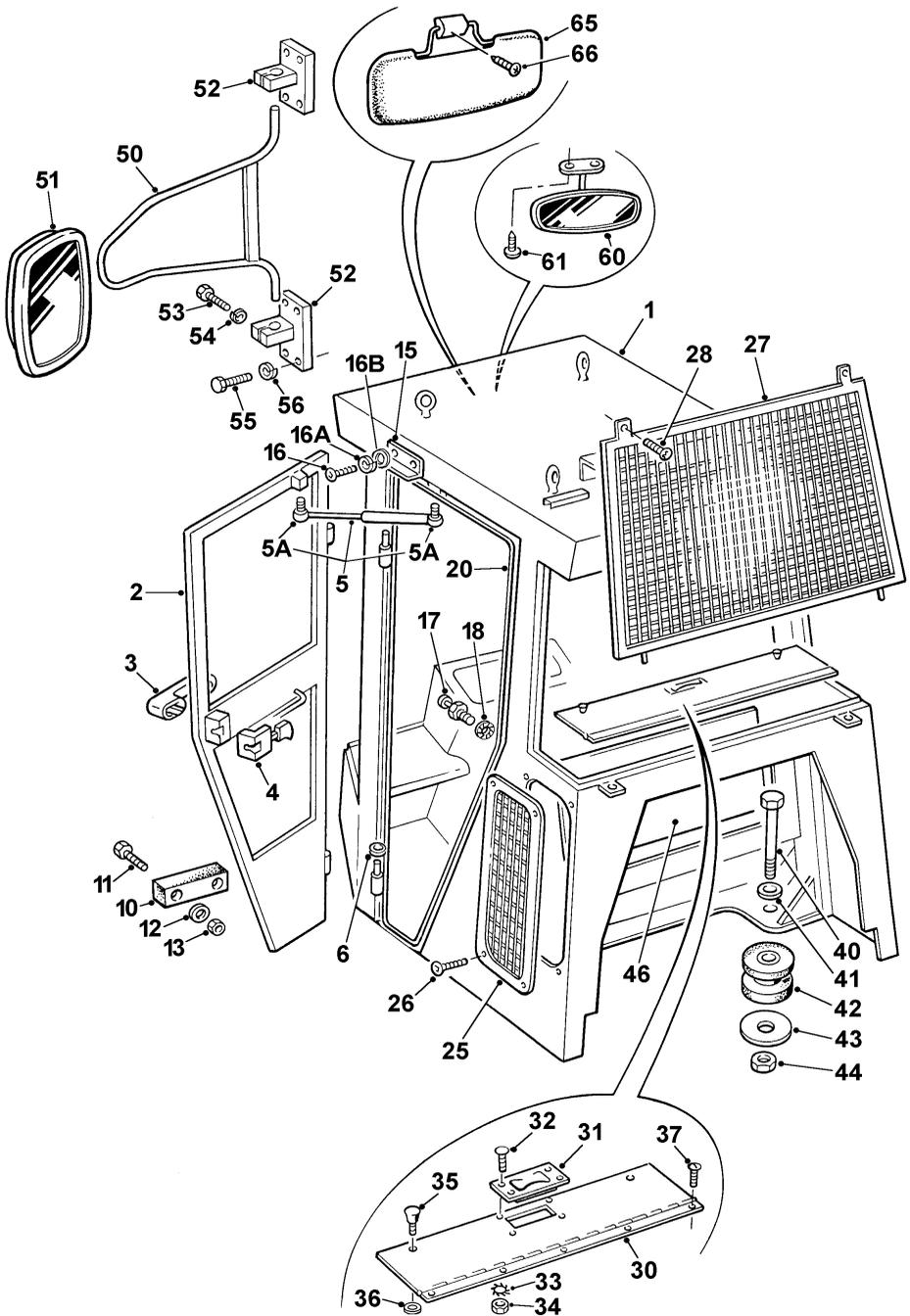
Item	Part no	Serial no	Description	Qty
1	7000247		COVER, L.H. side	1
.....	7000298		COVER, R.H. side ( <i>not illustrated</i> )	1
5	7000246		HANDLE	2
6	52S01C		SCREW, socket head	8
7	17S02		WASHER, shake proof	8
8	7S01		NUT	8
10	V2002839		HINGE	4
11	301S04E		SCREW, dome head	24
12	267S04		WASHER, flat	24
13	61S02		NUT, 'binx' self locking	24
15	7000250		DRIVE LOCK, wave washer & screw	4
16	7000252		SEAL, 'O' ring	4
17	7000249		BODY c/w nut	4
18	7000253		SEAL, external	4
19	7000251		CAM	4
20	7000254		KEY	4



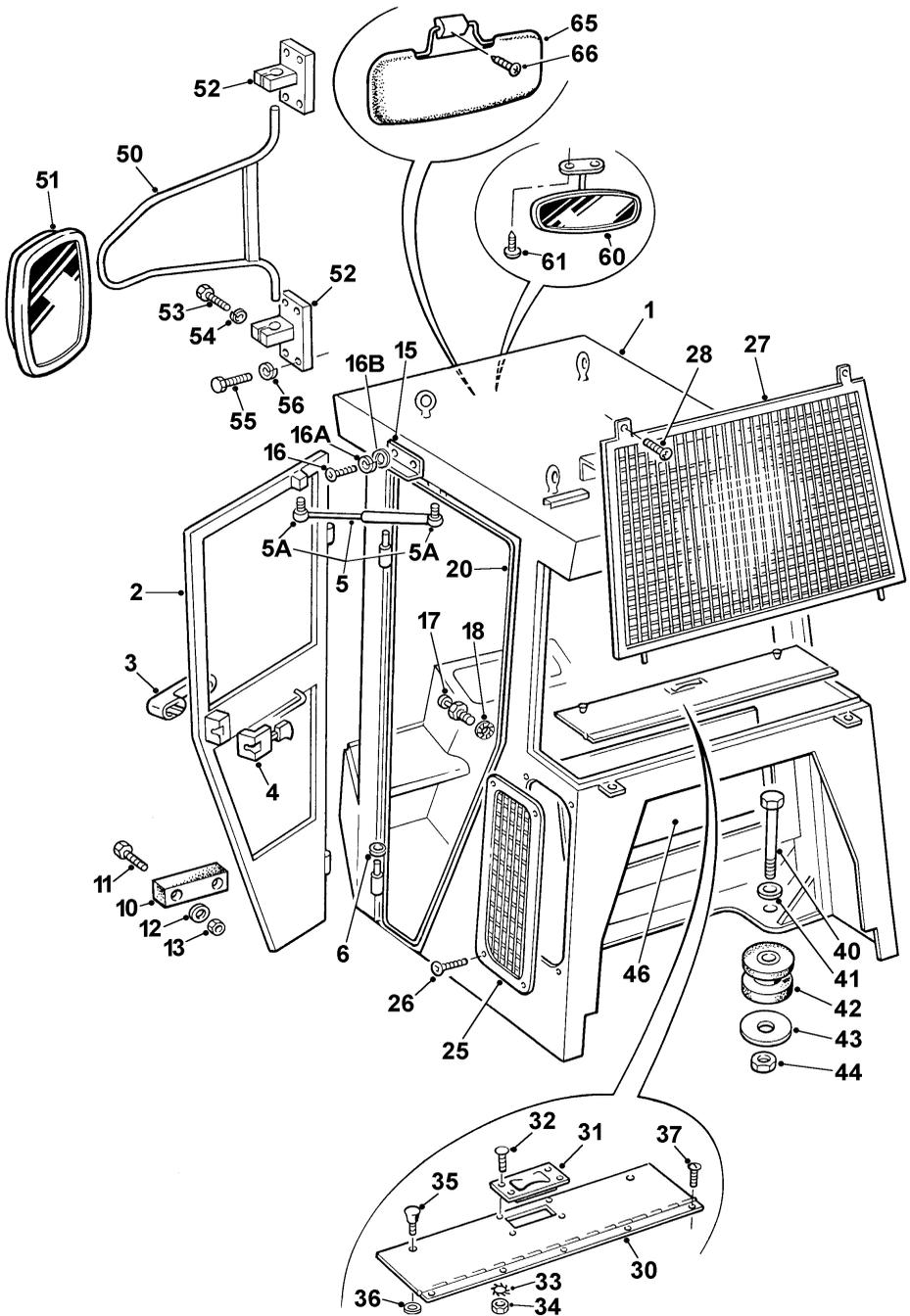
Item	Part no	Serial no	Description	Qty
1	7000236		COVER, transmission	1
2	7000362		COVER, louvred	1
3	301S04E		SCREW, dome headed	8
4	267S04		WASHER, flat	8
5	17S03		WASHER, spring	8
6	7S02		NUT	8
10	V2003215		DOOR PULL	1
11	11S02A		SCREW, set	2
12	17S03		WASHER, spring	2
13	7S02		NUT	2
20	7000295		STOP, rubber	1
21	V2004220		WASHER, 'special'	2
22	8S03F		BOLT	2
25	7000294		PLATE, hinge	1
26	267S06		WASHER, flat	4
27	17S05		WASHER, spring	4
28	11S04G		SCREW, set	4
29	7S04		NUT	4
30	V2002839		HINGE	2
31	14S04D		SCREW, counter sunk slotted	12
32	267S04		WASHER, flat	6
33	61S02		NUT, "Binx", self-locking	6
35	V2003109		STOP, rubber	2
36	7000296		BRACKET, rubber stop	2
37	11S03A		SCREW, set	4
38	17S04		WASHER, spring	4
39	17S03		WASHER, spring	2
40	7S02		NUT	2
45	10538A02		PLATE	1
46	10537A02		FASTENER, toggle	1
47	11S01A		SCREW, set	4
48	17S02		WASHER, spring	4
49	7S01		NUT	4



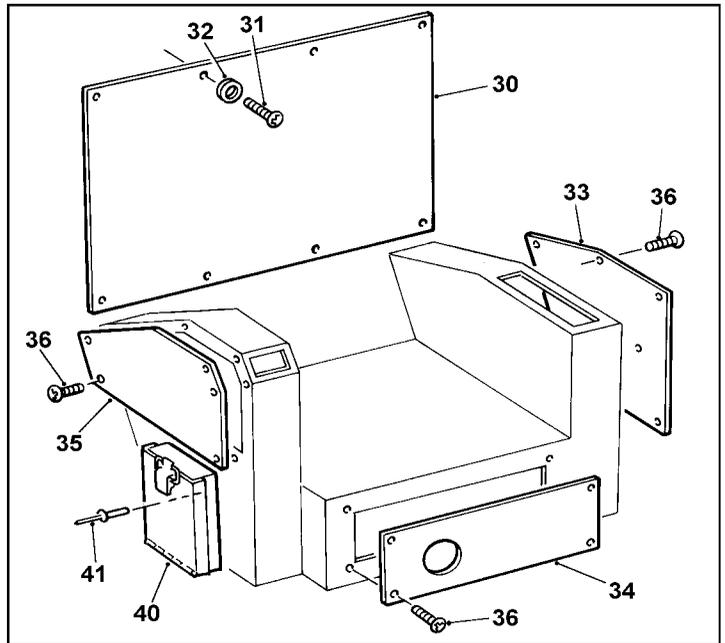
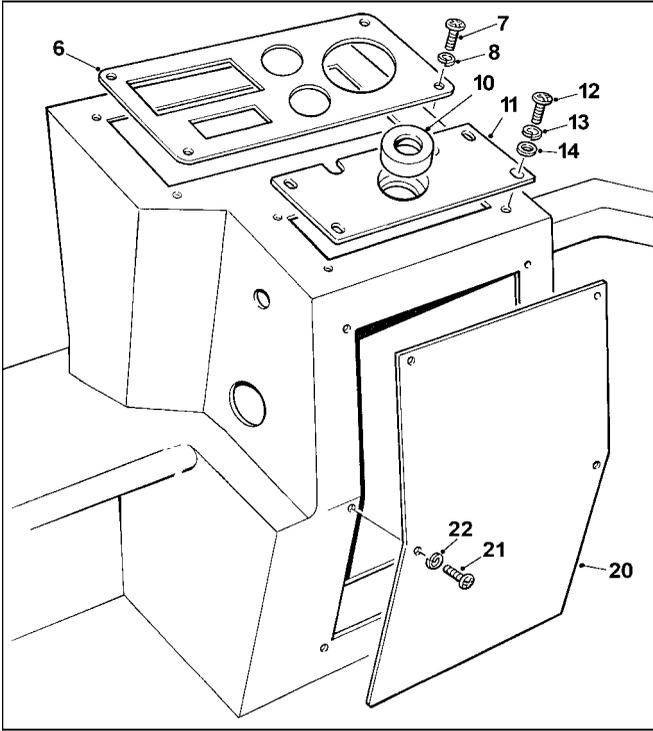
Item	Part no	Serial no	Description	Qty
1	7000011	/ 1005	SEAT, "Grammer" with air suspension	1
1	7000433	1006 /	SEAT, "Kab" with air suspension	1
1A	V603615		REPAIR KIT, motor, air suspension with blue/black tubes <i>(early "Kab" seats only)</i>	AR
1A	V603616		REPAIR KIT, motor, air suspension with green tubes <i>(later "Kab" seats only)</i>	AR
2	11S03B		SCREW, set	4
3	267S05		WASHER, flat	8
4	17S04		WASHER, spring	4
5	7S03		NUT	4



Item	Part no	Serial no	Description	Qty
....	7000005		CAB, c/w glazing & insulation, assembly	1
1	.....		CAB, frame (order complete cab assy.)	1
2	V602952		DOOR, L.H. (frame only) <i>illustrated</i>	1
....	V602953		DOOR, R.H. (frame only) <i>not illustrated</i>	1
....	V602817		HINGE (welded) c/w grease nipple	AR
3	V602818		HANDLE, push button, exterior	2
4	V602819		LATCH, interior L.H. <i>illustrated</i>	1
....	V602820		LATCH, interior R.H. <i>not illustrated</i>	1
5	V602824		STRUT, gas	2
5A	V603625		BALL JOINT	2
6	V600494		WASHER, flat	4
10	7000295		STOP, rubber, door	2
11	8S03E		BOLT	4
12	V2004220		WASHER, flat	4
13	61S03		NUT, Binx, self locking	4
15	V602956		BRACKET, door retaining	1
16	11S02B		SCREW, set	4
16A	17S03		WASHER, spring	4
16B	267S04		WASHER, flat	4
17	V602821		PIN, latch striker	2
18	.....		WASHER, shake proof	2
20	V602957		SEAL, door ( <i>order by metre</i> )	AR
25	7000357		GRILL, side, radiator inlet	2
26	219S06E		SCREW, posidrive panhead	8
27	V602950		GRILL, rear	1
28	219S05E		SCREW, posidrive panhead	2
30	V602955		PANEL, access	1
31	7000246		HANDLE	1
32	52S01C		SCREW, socket head	4
33	17S02		WASHER, shake proof	4
34	7S01		NUT	4
35	7000336		KNOB, panel locking	2
36	7000424		WASHER, anti-loss	2
37	219S05E		SCREW, posidrive panhead	5
40	7000197		BOLT, cab mounting	4
41	267S11		WASHER, flat	4
42	7000026		MOUNT, rubber	4
43	7000156		WASHER, 'Special', rebound	4
44	61S11		NUT, Binx, self locking	4
46	V602954		PANEL, back	1



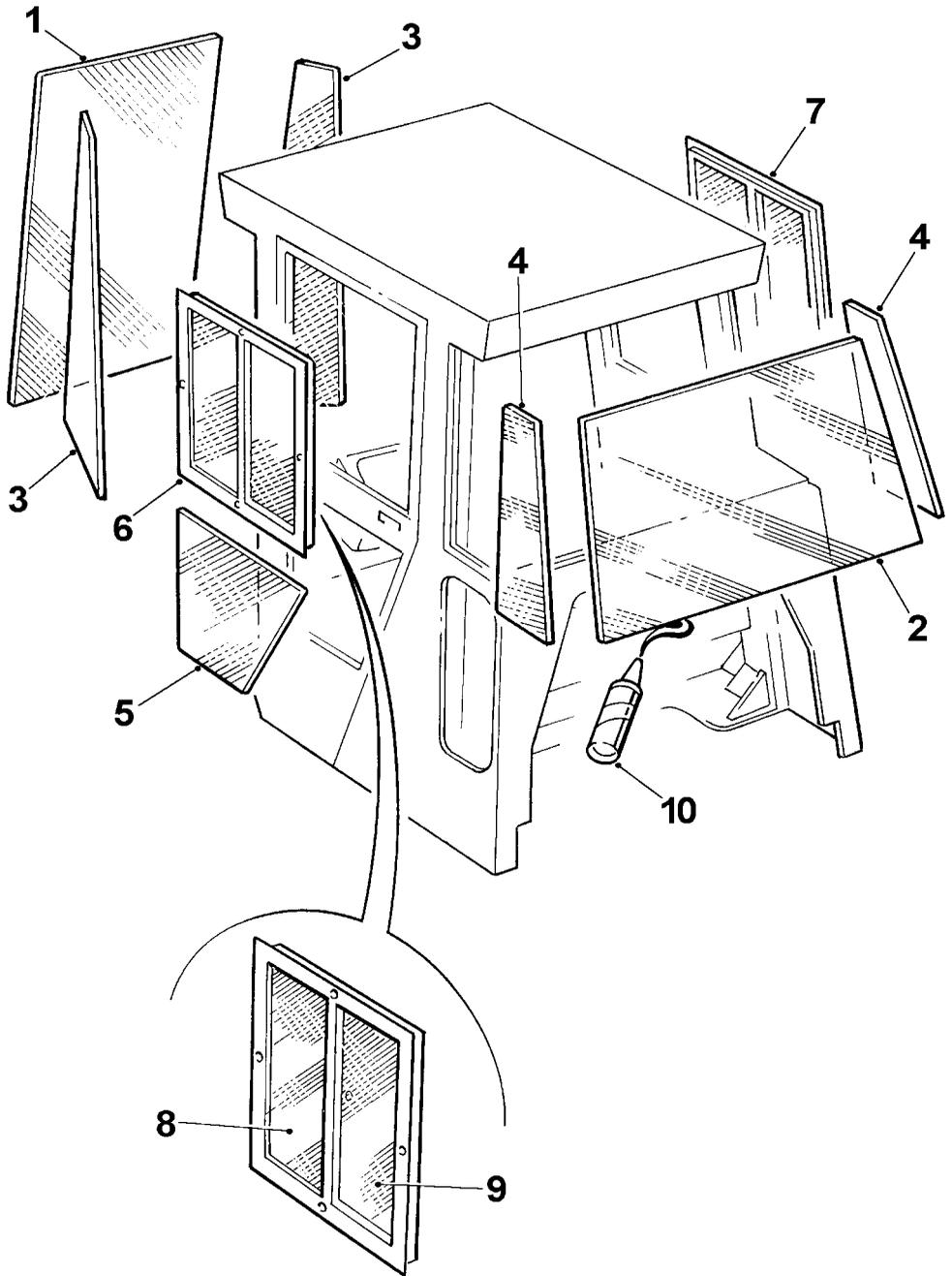
Item	Part no	Serial no	Description	Qty
50	7000409		ARM, L. H., mirror <i>illustrated</i>	1
.....	7000291		ARM, R. H., mirror <i>not illustrated</i>	1
51	7000314		MIRROR, rear view	2
52	7000292		BRACKET, mirror arm	4
53	7000491		KNOB, bracket retaining	4
55	11S03A		SCREW, set	4
56	17S04		WASHER, spring	4
60	V601392		MIRROR, internal	1
61	178SPR05E		SCREW, self tapping	2
65	7000437		SUN VISOR	1
66	178SPR05E		SCREW, self tapping	3
67	7000502		HOLDER, cup	1
68	11S01B		SCREW, set	2
69	267S03		WASHER, flat	2
70	59S13		NUT, nyloc	2
71	7000503		HOOK, coat	1
72	11S01B		SCREW, set	1
73	59S13		NUT, nyloc	1
74	7000453		NET, stowage medium	2
75	178SPS03F		SCREW, self tapping	8
76	7000454		NET, stowage large	1
77	14S02E		SCREW, c/sunk slotted	5
78	59S02		NUT, nyloc	5



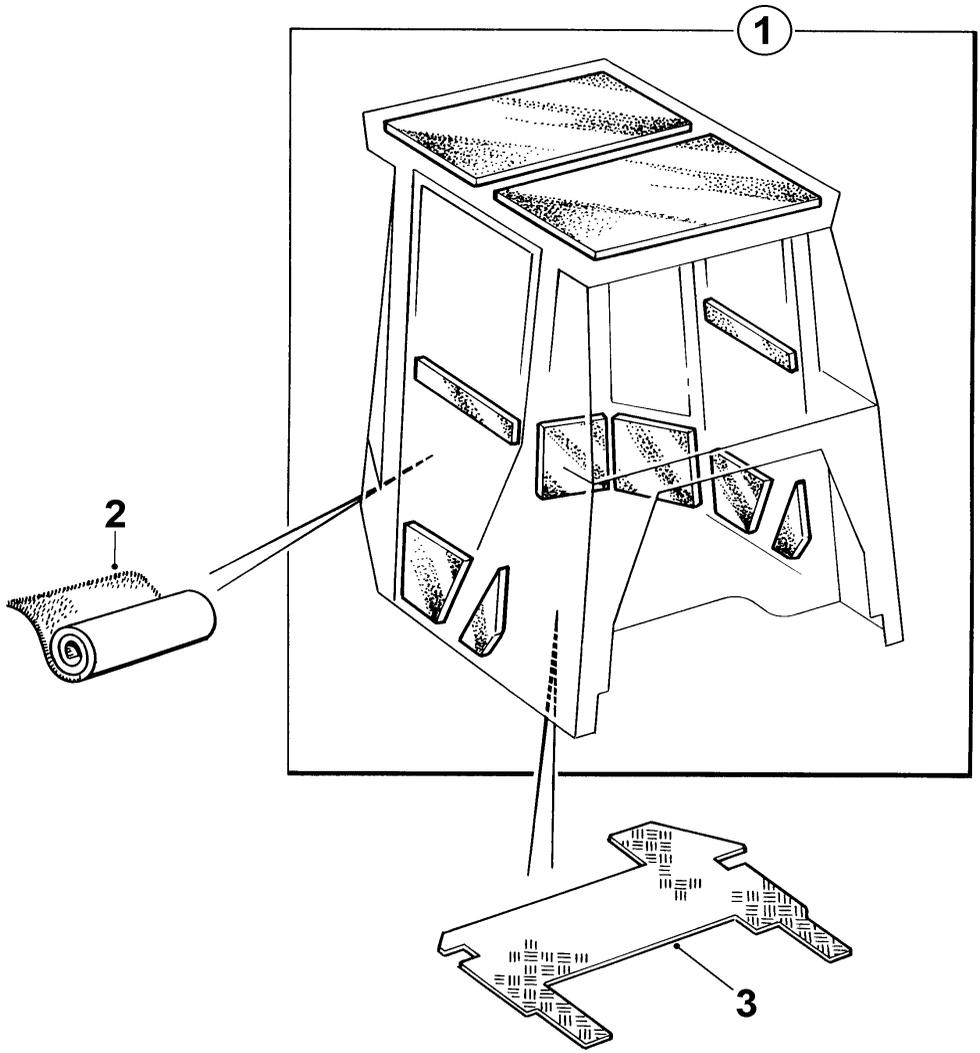
Item	Part no	Serial no	Description	Qty
<b>CONSOLE</b>				
6	7000381		PANEL, gauges	1
7	219S05E		SCREW, posidrive	4
8	17S03		WASHER, spring	4
10	7000272		BUSH, steering column	1
11	7000271		PLATE, steering column support	1
12	219S05E		SCREW, posidrive	4
13	17S03		WASHER, spring	4
14	267S04		WASHER, flat	4
20	V602958		COVER, console	1
21	219S05E		SCREW, posidrive	4
22	17S03		WASHER, spring	4

**SEAT BOX**

30	V602954		PANEL, back	1
31	219S05E		SCREW, posidrive	8
32	267S05		WASHER, flat	8
33	V602959		PANEL, L.H.	1
34	V602960		PANEL, heater vent	1
35	V602961		PANEL, R.H.	1
36	219S04C		SCREW, posidrive	14
40	V2003568		BOX, document	1
41	101S07E		RIVET, pop	2

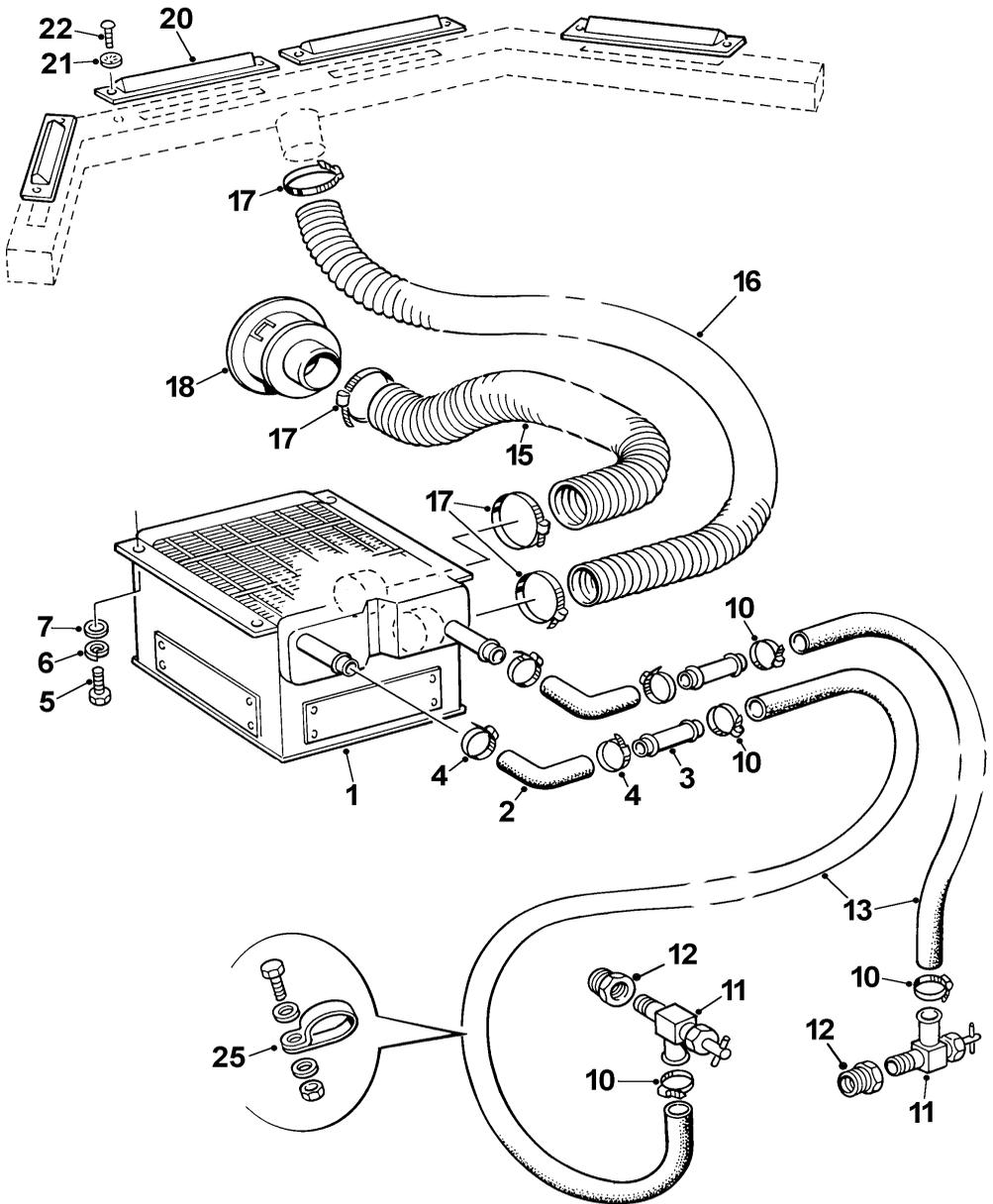


Item	Part no	Serial no	Description	Qty
1	V602790		WINDSCREEN, front	1
2	V602797		WINDSCREEN, rear	1
3	V602798		GLASS, front side, L.H./R.H.	2
4	V602799		GLASS, rear side, L.H./R.H.	2
5	V602800		GLASS, lower door	1
6	.....		WINDOW assembly, L.H. door	
7	.....		WINDOW assembly, R.H. door	
8	V602801		GLASS, window, fixed, L.H./R.H.	2
9	V602796		GLASS, window, sliding, L.H./R.H.	2
10	V2003235		ADHESIVE, black (Bond & Sealant) <i>Four kits are required for each complete cab</i>	KIT



**INSULATION****8 - D - 3**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1			KIT, cladding	
2			CARPET, cab lining	
3			MAT, floor	



**HEATER****8 - E - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
.....	7000363		HEATER, assembly	1
1	.....		HEATER ( <i>order assembly</i> )	1
2	.....		ELBOW, rubber	2
3	.....		CONNECTOR, hose	2
4	97S05		CLIP, hose	4
5	11S02A		SCREW set	3
6	17S03		WASHER, spring	3
7	267S04		WASHER, flat	3
10	97S05		CLIP, hose	4
11	V602432		TAP, water	2
12	V2004374		FITTING, bush	2
13	V602433		HOSE, water (5 metres)	AR
15	V602786		DUCTING, de-mist, 44mm dia.	AR
16	V602418		DUCTING, de-mist, 38mm dia.	AR
17	97S11		CLIP, hose	4
18	V602785		EYEBALL, heater outlet	1
20	.....		VENT, demist	4
21	.....		WASHER, shake-proof	8
22	.....		SCREW, self-tapping	8
25	V2003560		CLIP, "P"	1

**ADT 10 Dump Truck**

# **Section 9**

# **Miscellaneous**

**Contents**

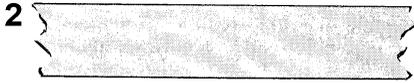
**Page**

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**DECALS**

**9 - A - 1to3**

1 **WINGET**



3 **WINGET** WINGET LIMITED  
 P.O. Box 22, Stoneham Lane, Boston, Lincs, LE14 4JW  
 Tel: 01204 655160 Fax: 01204 652200

Model			
Serial No.			
Engine No.			
Capacity	Mass (kg)		
SRO No.	Power (kW)		
Year Of Manuf.	Eng. (rpm)	Drum (rpm)	

A Sinker Group Company



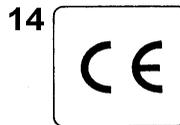
4 **WARNING**  
DO NOT WORK UNDER  
UNPROPPED SKIP

11 **WINGET ADT 10**

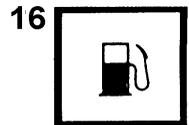
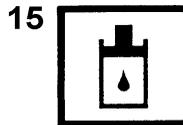
5 **SAFETY WARNING**

- 1 Before starting this machine, the operator should be familiar with the operating instructions issued by the manufacturer.
- 2 The manufacturer's rated capacity must never be exceeded.
- 3 Before carrying out any maintenance, servicing, or greasing, always ensure that the engine has been switched off. Never work on a machine while it is running.

W504694600



7 **WARNING!**  
TIGHTEN WHEEL  
NUTS DAILY

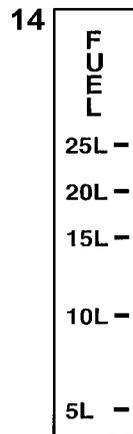
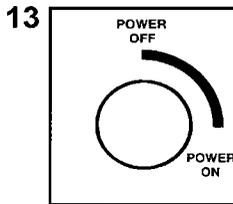
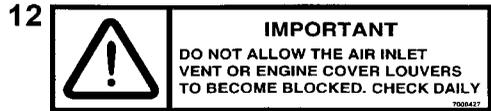
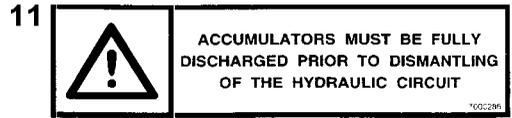
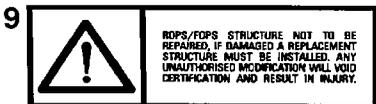
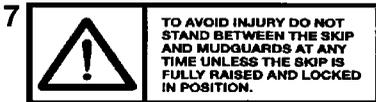
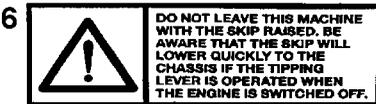
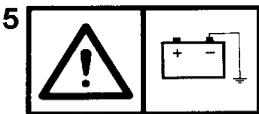
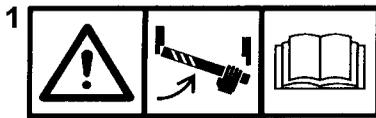


8 **ADT 10**



**DECALS****9 - A - 1**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	7000342		DECAL, 'WINGET' 450mm long	3
1	V2003039		DECAL, 'WINGET' 335mm long	1
2	7000359		DECAL, 'stripe, grey'	1
3	V2003037		PLATE, 'machine serial number'	1
4	DM157		DECAL, 'Unpropped skip'	4
5	504694600		DECAL, 'Safety Warning'	4
6	V2003598		DECAL, 'British Made'	1
7	V2003142		DECAL, 'Wheel nut'	1
8	7000265		DECAL, 'ADT10'	3
9	V2003574		DECAL, 'LPA 83'	2
10	V2003575		DECAL, 'LWA 105'	2
11	7000264		DECAL, 'WINGET ADT10'	2
12	V2004282		DECAL, 'Hot surfaces'	1
13	V2004307		DECAL, 'Electrical hazard'	1
14	V2004223		DECAL, 'CE' mark	1
15	V2003100		DECAL, 'Hydraulic oil'	1
16	V2003101		DECAL, 'Diesel fuel'	1
17	V2004191		DECAL, 'Crush zone'	2



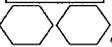
**DECALS****9 - A - 2**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	V2004224		DECAL, 'Artic lock'	1
2	V2004225		DECAL, 'ISO skip support'	1
3	V2004227		DECAL, 'Battery isolator'	1
4	V2004229		DECAL, 'Operators handbook'	2
5	V2004235		DECAL, 'Negative earth'	1
6	V2004798		DECAL, 'Do not leave skip raised'	2
7	V2004799		DECAL, 'To avoid injury'	2
8	V2004281		DECAL, 'Hands clear'	1
9	V2004754		DECAL, 'Damage to ROPS/FOPS	1
10	V2004748		DECAL, 'Transmission damage'	1
11	7000286		DECAL, 'Warning accumulator'	2
12	7000427		DECALS, 'Check louvres & vents'	3
13	7000374		DECAL, 'Battery isolator key'	1
14	7000380		DECAL, fuel level	1

**1**

<b>TYPE CERTIFICATION FOR ROLL OVER AND FALLING OBJECT PROTECTIVE STRUCTURE</b>		TESTED TO STANDARDS:
MANUFACTURED BY: <b>WINGET LTD, PO BOX 41 BOLTON, BL4 0LS.</b> TEL: 01204 855155 FAX: 01204 855205	FOR APPLICATION ON: <b>WINGET LTD, PO BOX 41 BOLTON, BL4 0LS.</b> VEHICLE MODEL:	POPS: ISO 3449/1992 SAE J2251/1991 CAR FRAME SERIAL No: <input type="text"/> 
MAXIMUM VEHICLE MASS: KGS		

**2**

<b>TYPE CERTIFICATION FOR ROLL OVER AND FALLING OBJECT PROTECTIVE STRUCTURE</b>		TESTED TO STANDARDS:
MANUFACTURED BY: <b>WINGET LTD, PO BOX 41 BOLTON, BL4 0LS.</b> TEL: 01204 855155 FAX: 01204 855205	FOR APPLICATION ON: <b>WINGET LTD, PO BOX 41 BOLTON, BL4 0LS.</b> VEHICLE MODEL:	ROPS: ISO 3471/1994 SAE J1061/1995 CAR FRAME SERIAL No: <input type="text"/> 
MAXIMUM VEHICLE MASS: KGS		

**3**

	<b>DO NOT DISCONNECT THE BATTERY OR ALTERNATOR WHEN ENGINE IS RUNNING.</b>
---	--

**4**

<b>50p.s.i.</b>
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**DECALS****9 - A - 3**

<b>Item</b>	<b>Part no</b>	<b>Serial no</b>	<b>Description</b>	<b>Qty</b>
1	V2005278		PLATE, 'FOPS identification'	1
2	V2005030		PLATE, 'ROPS identification'	1
3	V2004796		DECAL, 'Battery warning'	1
4	10166A02		DECAL, 'tyre pressure'	4

# CALIFORNIA

## **Proposition 65 Warning**

**Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm**