

# **WORKSHOP MANUAL**

## **ADT 25**

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**ASTRA VEICOLI INDUSTRIALI**

Product Service

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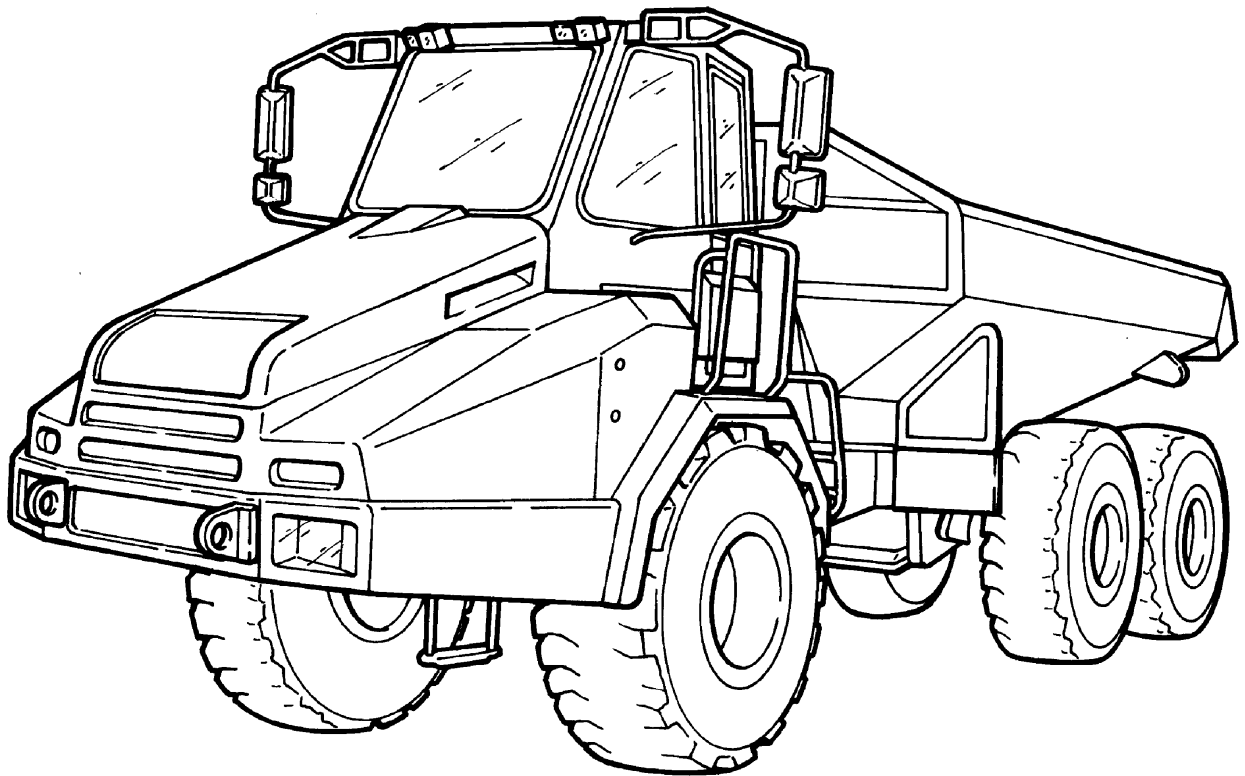
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Figure 1



174CU01

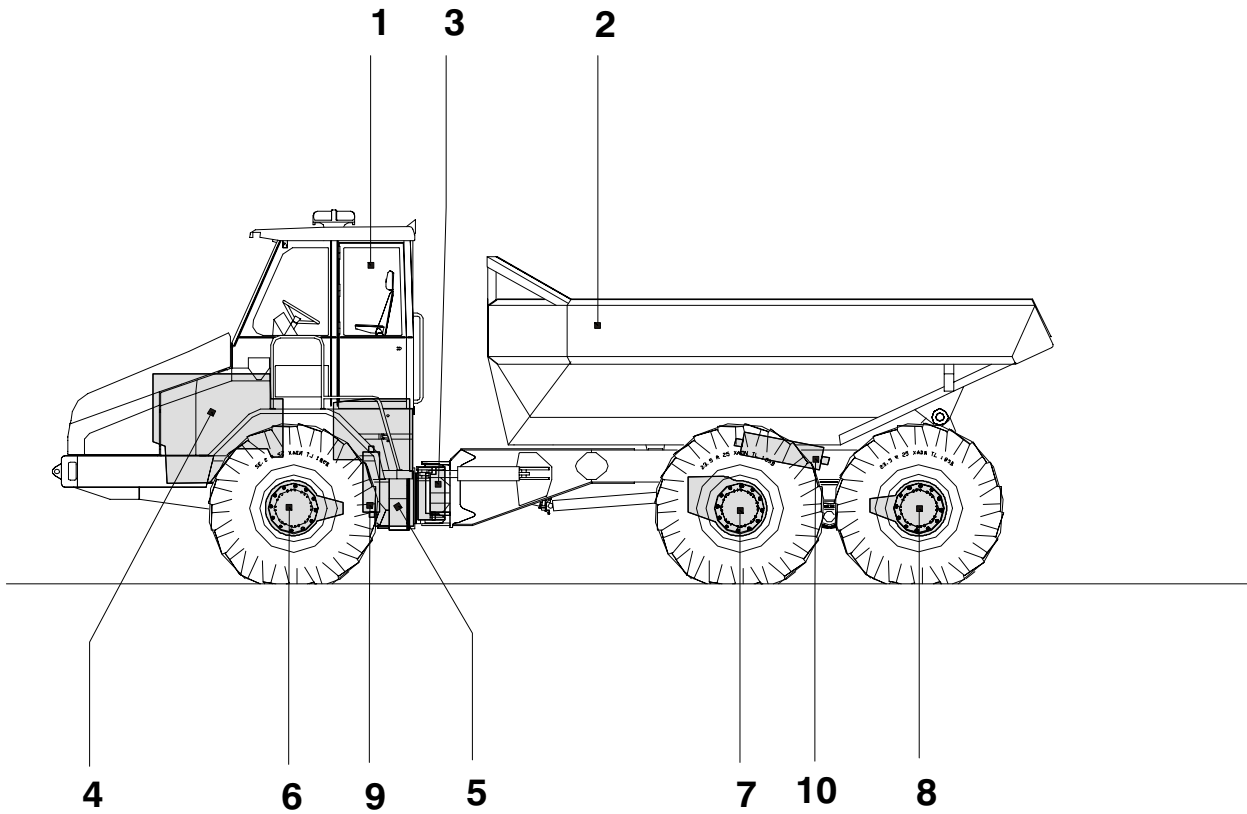
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**SECTIONS**

<b>TITLE</b>	<b>SECTION</b>	<b>PAGES</b>
<b>INTRODUCTION</b>		from I to VIII
<b>CONDITIONS OF USE</b>	1.1	from 1 to 16
<b>SAFETY INSTRUCTIONS</b>	1.2	from 1 to 18
<b>GENERAL SPECIFICATIONS</b>	2	from 1 to 28
<b>ENGINE</b>	3	from 1 to 52
<b>AUTOMATIC TRANSMISSION</b>	7	from 1 to 82
<b>PROPELLER SHAFT</b>	10	from 1 to 10
<b>FRONT AXLE</b>	12.1	from 1 to 50
<b>INTERMEDIATE AXLE</b>	12.2	from 1 to 58
<b>REAR AXLE</b>	12.3	from 1 to 48
<b>BRAKES</b>	13.1	from 1 to 20
<b>WHEELS AND TYRES</b>	13.2	from 1 to 8
<b>SUSPENSION</b>	14	from 1 to 10
<b>STEERING SYSTEM</b>	15	from 1 to 6
<b>HYDRAULIC SYSTEM</b>	16	from 1 to 44
<b>ELECTRICAL SYSTEM</b>	17	from 1 to 30
<b>CAB AND CHASSIS</b>	18	from 1 to 24
<b>BODY</b>	20	from 1 to 4

## PARTS

Figure 2



174CU02

1. Cab
2. Body
3. Central joint
4. Engine
5. Transmission
6. Front axle
7. Intermediate axle
8. Rear axle
9. Suspension cylinder
10. Tipper cylinder

**Main vehicle assemblies production numbers**

You are advised to make a note of the model and serial number (PN) and/or production code (PIN) of the main vehicle assemblies written on the respective plates applied to the assembly.

The plate location is shown in Section 2—GENERAL SPECIFICATIONS.

This will ensure faster identification of the parts required for partial or total replacement.

**engine**

---

**automatic transmission**

---

**front axle**

---

**intermediate axle**

---

**rear axle**

---

**suspension cylinder**

---

**tipper cylinder**

---



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**SECTION 1.1**  
**CONDITIONS OF USE**



## CONTENTS

	Page		Page
<b>INTRODUCTION</b> .....	3	<b>WARRANTY AND LIABILITY OF THE MANUFACTURER</b> .....	9
Copyright .....	3	Warranty conditions .....	9
<b>CONFORMITY MARKING</b> .....	4	Liability .....	9
<b>INFORMATION ON THIS HANDBOOK</b> .....	5	<b>SERVICE</b> .....	9
Definitions .....	5	Warranty coupons .....	9
Contents .....	5	Service .....	9
Symbols .....	5	Spare parts .....	9
Purpose of this handbook .....	6	<b>GENERAL OPERATION RULES</b> .....	10
To whom this handbook is addressed .....	6	Pre-disassembly preparation .....	10
Safekeeping of this handbook .....	6	During disassembly .....	10
Updates to this handbook .....	6	After disassembly .....	11
Units of measure .....	6	During assembly .....	11
<b>SCHEDULED USE</b> .....	7	Interchangeable parts .....	13
<b>VEHICLE REPAIR SERVICEMEN</b> .....	7	Welding on the chassis .....	15
<b>WASTE DISPOSAL</b> .....	8		
<b>SCRAPPING THE VEHICLE</b> .....	8		

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## **INTRODUCTION**

This technical handbook contains a series of repair procedures relating to the articulated dump trucks.

Read this handbook carefully before carrying out any repairs on the vehicle.

Scrupulous observance of the rules and instructions herein will ensure that repairs are carried out safely and efficiently.

### **Copyright**

The copyrights of this handbook belong to the vehicle manufacturer.

The text, drawings and illustrations contained in this handbook cannot be circulated or given to third parties, totally or partially, without the written consent of the vehicle manufacturer.

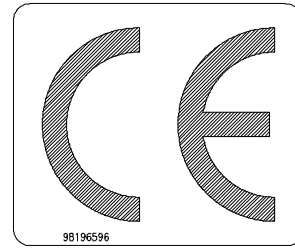
**CONFORMITY MARKING**

This vehicle was made in compliance with Community Directive 98/37/EEC and amendments (Machinery Directive).

All parts of the vehicle comply with the aforesaid directive, as shown by the CE marking.

The plate is located in the position shown in the figure and must be legible at all times.

Figure 1



LEVEL OF NOISE

Noise outside the vehicle:

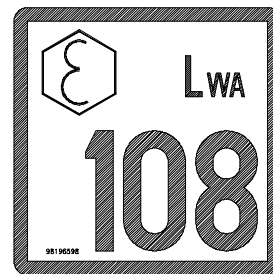
**L<sub>wa</sub> = 108 dB (A)**

Noise at driver's seat:

**L<sub>pa</sub> = 76 dB (A)**

measured on identical vehicle, in accordance with Directive 86/662/EEC.

Figure 2



VIBRATIONS TRANSMITTED TO OPERATOR

Acceleration transmitted to the operator's arms:

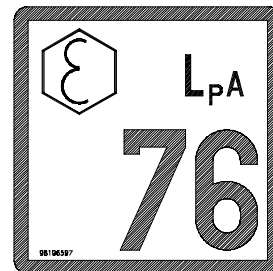
**weighed average quadratic level**

**< 2.5 m/s<sup>2</sup> (8.2 ft/s<sup>2</sup>)**

Acceleration transmitted to the operator's body:

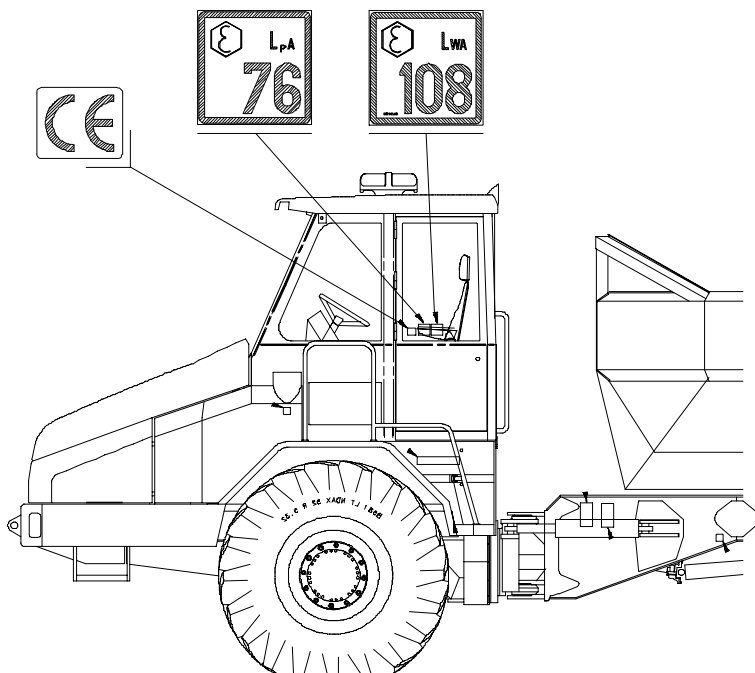
**weighed average quadratic level**

**< 0.5 m/s<sup>2</sup> (1.6 ft/s<sup>2</sup>)**



Measured by means of accelerometer on identical vehicle running on medium unsurfaced terrain.

Figure 3



174CU01A

174CU02

174CU03

## INFORMATION ON THIS HANDBOOK

### Definitions

Handbook *is this* WORKSHOP MANUAL.

*Vehicle* is the machinery described in this manual.

*Manufacturer* is the company manufacturing the vehicle.

*Dealership* is the company or organisation officially representing the Manufacturer.

*Supplier* is any company supplying components and/or consumable material used by the vehicle.

*User* is the person directly or indirectly involved in repairing the vehicle.

### Contents



***This manual contains the repair instructions for all the vehicle parts.***



***Some devices described in this handbook may not be fitted in your vehicle, according to the outfit and the market for which the vehicle was made.***

This handbook is organised in several sections, which are organised in chapters and, where required, paragraphs to ensure rapid and easy retrieval of information.

Refer to the general list of contents at the beginning of this Handbook for further information on how the various topics are set out.

### Symbols

You will find the following symbols highlighting parts of the handbook. Their meaning is:



***procedures, technical information and precautions which, if not respected and/or incorrectly carried out, could cause injury to users (safety symbol, also see SECTION 1.2–SAFETY INSTRUCTIONS).***



***procedures, technical information and precautions which, if not respected and/or incorrectly carried out, could damage the vehicle.***



***procedures, technical information and precautions which, if not respected and/or incorrectly carried out, could pollute the environment.***



***very important procedures, technical information and precautions.***



**Purpose of this handbook**

Purpose of this handbook is to allow users to get to know the vehicle and repair it as specified, in a safe and long-lasting fashion, taking the required actions and arranging human and material resources as needed.

**To whom this manual is addressed**

This manual is addressed to those persons who need to and/or have been delegated to carry out repairs on the vehicle and/or whose job it is to give instructions on how to carry out such repairs.

These persons are:

- operative units/site/department managers;
- users directly concerned in vehicle maintenance.

**Safekeeping of this handbook**

This handbook must be kept inside the vehicle, in a dry place, and must be readily available for consultation.

You are advised to file a copy.

Keep the handbook for the entire life of the vehicle, until it is scrapped. Users are required to purchase a new copy if the handbook is either lost or damaged. Copies must be exclusively ordered from the manufacturer.

**Updates to this handbook**

The information, descriptions and illustrations in this handbook reflect the state of the art at the time of marketing of the vehicle.

The manufacturer reserves the right to implement changes to vehicles, for technical or marketing reasons, at any time. The manufacturer will not be obliged either to implement such changes in the vehicles marketed before or to consider this handbook obsolete.

Any additional information which the manufacturer may deem suitable to provide at a later time will be kept with the handbook as an integral part of the publication.

**Units of measure**

International System (SI) units of measure as used in this handbook.

Imperial System values are expressed in brackets.

## SCHEDULED USE

The vehicle described in this handbook was designed and made for the following use:


- to haul excavation material in general;
- to haul material resulting from interventions on industrial or civilian artefacts in general;
- to haul material required to make infrastructures and/or industrial or civilian artefacts in general.

The vehicle must be used for such purposes.

The vehicle must be in proven and checked conditions of efficiency for said use, fully respecting the envisaged criteria and restrictions of use.

Specific care must be paid to the following aspects:

- do not exceed the payloads specified by the manufacturer;
- do not exceed the gradients specified by the manufacturer;
- do not drive the vehicle on loose terrain which can compromise stability;
- do not use the vehicle to remove objects or products;
- use the vehicle paying special care to the safety instructions and specifications;
- carry out the ordinary maintenance interventions specified by the manufacturer;
- carry out the extraordinary maintenance interventions which are required, specifically those related to safety of use.

 ***The manufacturer declines liability for injury to persons and for damage to the vehicle and/or to the transported goods in the event of other use or use in other conditions than those specified.***

## VEHICLE REPAIR SERVICEMEN

Any repairs to the vehicle must be carried out exclusively by qualified repair servicemen with the necessary ability and technical knowledge.

Vehicle servicemen must:

- have the operative skills required for construction site vehicle maintenance;
- be sensitised to respect and adopt safety instructions and precautions.

The servicemen must be put in the condition to be able to work in total safety by means of suitable training periods or courses, so that they are fully aware of the rules of professional demeanor that must be followed during repairs to the vehicle.

The direct reporting manager must ensure respect of general safety instructions, specifically those contained in this handbook.

The manager will also ascertain suitability of operating personnel, in terms of technical skills and psychological—physical conditions.

## WASTE DISPOSAL

Collect and properly dispose of replaced material (brake pads, filters, etc.) and waste material, resulting from maintenance operations and repairs (material soaked in fuel, oil, powder, etc.) according to the laws in force, separately from normal waste.

Collect and dispose of used lubricants and fluids, according to the laws in force.

Collect and dispose of used batteries according to the laws in force.

Drain and recharge the air conditioning system using the specific devices, according to the laws in force.

Furthermore, you are advised to separate ferrous materials, light alloys and waste plastic materials for separate recycling.

## SCRAPPING THE VEHICLE

The vehicle must be scrapped according to the laws in force, at the end of the vehicle's working life.

Recycle and demolish the vehicle according to the laws in force.

The vehicle must be demolished by expert personnel using suitable working tools to ensure the required safety conditions.

Demolish the vehicle by separating and collecting the various materials by type to allow recycling and disposal.

Please note that it is forbidden to abandon an obsolete vehicle at a quarry, building site, dump or in the environment.

Specific attention must be devoted to certain components and substances which can pollute the environment and/or cause injuries, i.e.:

- presence of fuels, coolant fluids, hydraulic oil and lubricating oils on board;
- presence of batteries and respective electrolyte;
- presence of pressurised gas (tyres, suspension components, air conditioner);
- presence of solid polluting materials (tyres, brake pads, plastic parts, filters) or hazardous materials (glass, windows).

Dispose of these materials according to the laws in force.

## WARRANTY AND LIABILITY OF THE MANUFACTURER

### Warranty conditions

The user must scrupulously observe the precautions illustrated in this handbook to ensure validity of the contractual warranty. Specifically, the user will:

- respect restrictions of use specified by the manufacturer;
- not implement changes or variants to the vehicle without the manufacturer's written approval;
- always carry out the maintenance interventions;
- always use genuine spare parts;
- ascertain that the personnel called to use the vehicle have the necessary requirements in terms of skills and training.

The contractual warranty will not be applicable if the aforesaid conditions are not respected, even in part.

### Liability

The manufacturer declines all direct or indirect liabilities deriving from:

- disrespect of the instructions contained in this handbook;
- use of the vehicle by untrained or unauthorised personnel;
- use non complying with the regulations in force in the country where the vehicle was marketed;
- unauthorised changes and/or repairs;
- use of other than genuine spare parts.

## SERVICE

### Warranty coupons

The manufacturer provides a warranty card to the user with each vehicle.

You are advised to use the coupon during the first hours of operation of the vehicle.

**Warranty coupon: after 250 hours of work.**



***Different warranty conditions are valid only if stated on the vehicle purchasing contract.***

### Service

Dealerships are available for all types of interventions. Equipment and expert personnel are available for overhauling and repairing operations.

Dealerships can provide information and advice to ensure the best use of the vehicle.

### Spare parts

Use genuine spare parts for replacements which can be ordered from dealers and authorised workshops. Please remember that the following information will be required to order spare parts:

- vehicle type;
- chassis number;
- reference and catalogue numbers shown in the Spare Parts Catalogue.

If the part belongs to a main assembly (engine, transmission, axles, motors, etc.), you will also need to specify the assembly model and serial number.