



**SANY**

Quality Changes the World

# Motor Grader

**STG170C-8**



**Safety, Operation & Maintenance Manual**



# **SANY**

## **STG170C-8 Motor Grader**

### **Safety, Operation & Maintenance Manual**



## **WARNING**

Read and follow the safety precautions and instructions in this manual and on the machine decals. Failure to do so can cause serious injury, death or property damage. Keep this manual with the machine for reading and future reference.

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## DELINEATION OF RESPONSIBILITY

### SPECIFIC DECLARATION

A grader is an engineering vehicle with a blade used to finish soil and create a flat surface. Graders are commonly used in the construction and maintenance of gravel road and subgrade. Graders are also used to strip topsoil or greensward, produce ditches, finish side slope. Graders can mix up, backfill, bulldoze and pave materials. If equipped with a front dozer blade, it can pave, stack and backfill loose materials. If equipped with a rear scarifier, it can loosen hard and dense soil. Any other use or any operation beyond the specified working range is not authorized use. Sany expressly bears no liability for any consequence due to any unauthorized use.

Information in this manual is used to guide qualified operators to operate and maintain graders correctly. Sany expressly bears no liability for any consequence due to any use not observing the information in this manual.

It is forbidden to convert the grader without authorization. Sany expressly bears no liability for any consequence. When crack or electrical malfunction on the grader occurs, please contact the supplier, and don't conduct welding or make changes without permission, or else, for any consequence due to such contravention, Sany shall not bear any liability.

Use genuine spare parts from Sany. Sany expressly bears no liability for any machine damage or accident due to the use of untested or unauthorized spare parts or tools.

Operate and maintain parts (such as engine, a/c) on the grader, and observe related regulations on Users' guide supplied from their manufacturer.

Sany expressly bears no liability for any machine failure or damage due to force majeure of natural disasters (earthquake, typhoon) and wars.

Sany cannot predict every circumstance that might involve a potential hazard in operation or maintenance. Operators and owners should highly attach importance to safety. Local specific safety rules of the countries may be stricter. If they differ from the regulations in this manual, observe the stricter one.

#### Duty of Sany

- Be responsible for providing qualified products and correct documents
- Fulfill their promises on after-sales service, and document all maintenance and repair work done by after-sales service personnel.
- Train the operation and maintenance personnel based on their needs.

#### Duty of owners or other authorized personnel

- Only after each person involved in the product's operation, maintenance and repair is trained and fully understands the Parts Book and Operation and Maintenance Manual, can they operate and maintain the grader.

- Ensure the operation and maintenance personnel are qualified and know their related responsibilities.
- Periodically check related personnel's safety consciousness during working.
- If any fault which will lead to unsafety occurs, stop the grader immediately.
- If necessary Sany service personnel have the right to check the grader for safety.
- Besides check items regulated by Sany, observe local laws and regulations to check the grader.
- Ensure timely maintenance and repair on the grader.
- Carefully plan the use of the grader.

### Duty of all working personnel

- If there is any abnormal symptom which may cause abnormal working of the grader or potential hazard, report to your leader. If possible, correct fault in time.
- All personnel working around the grader must observe all warning signals and take care of their own and others' safety.
- All personnel should know their working tasks and procedures.
- Watch something like high voltage wire, unrelated personnel and poor ground for potential danger, and report to the operators and signalmen.

### Duty of managers

- Ensure the operators are trained and fully understand the Operation and Maintenance Manual supplied by Sany. Ensure they are in physical fitness and have the certification of operation. Otherwise, it is forbidden to operate the grader.
- Ensure the operators have good judgement ability, teamwork consciousness and psychological quality. Otherwise, it is forbidden to operate or repair the grader.
- Ensure the signalmen have good vision and acoustic judgement, master standard command signals. At the same time, they should have enough experience in recognizing danger factors correctly, and inform the operators of danger factors to avoid them in time.
- Ensure assistant workers can identify the model and working condition to choose a proper grader.
- Publicize safety consciousness to working personnel, and make them aware of safety precautions and their related responsibilities.

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# SANY

## Introduction

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 **WARNING**

**Read and understand all safety precautions and instructions in this manual before reading any other manuals provided with this machine and before operating or servicing the machine. Failure to do this can cause property damage, personal injury or death.**

---

# 1 INTRODUCTION

## 1.1 Overview

- Sany-built machine offers high-quality performance and excellent aftersales service support.
- Sany-built machine is widely used throughout the industry for various types of applications.
- Sany is a leading manufacturer of heavy construction machine worldwide.

This operator's manual provides safety, operation, maintenance, troubleshooting and technical specifications. In order to properly use your machine, it is important to read this manual carefully before beginning any operations.

Items addressed in this manual are designed to help you:

- Understand the structure and performance of your motor grader.
- Reduce improper operation and point out possible hazardous situations when using the machine.
- Increase machine efficiency during operation.
  - Prolong the service life of your machine.
  - Reduce maintenance costs.

Always keep this manual nearby and have all personnel involved with any operations read it periodically.

If you sell the machine, be sure to give this manual to the new owner.

Continuing improvements in the design can lead to changes in detail which may not be reflected in this manual. Always consult your Sany dealer for the latest available information on your machine or if you have questions regarding information in this manual.



Fig.1-1

## 1.2 Your Documentation Package

The attached data includes:

- Safety, Operation and Maintenance Manual;
- Parts Book: including the Parts List and the drawings needed when ordering parts. If the Parts Book is not attached with the machine contact Sany.

### 1.2.1 Recommendations on the use of data

- The documents only apply to the equipment herein.
- Ensure the documents are complete and are the latest editions.
- Put all data in a folder (if including leaflets), and print and replace the lost, damaged and blotted documents.
- Add the latest Sany data in time and destroy the inapplicable old documents.

### 1.2.2 Storage of data

- Put this User's Guide and the Load Table in the machine operation room;
- You'd better put the Spare Parts Drawing Volume in the maintenance area or office to enable the maintenance personnel to find it at any time.

### 1.2.3 Structure of this Manual

This Manual covers use and maintenance of your machine. Get familiar with it before performing any operations. Put this manual within easy reach for your reference. Replace it if it is lost or damaged. Due to improvement and updating of products, some information may differ from your machine. If you have any question on your machine, contact your Sany distributor before operating or maintaining the machine.

**1.2.3.1 Introduction**

This section provides an overview of what is covered in the rest of this manual, including machine label information and Sany contact information.

**1.2.3.2 Safety**

This section covers basic safety information relating to this machine. Make sure you fully understand all the precautions described in this manual and the safety labels on the machine before operating or maintaining this machine. Failure to do so may result in serious injury or death.

**1.2.3.3 System functions**

This section provides an overview of all the controls and prompt & operating systems on your machine. Only when you are familiar with all systems, can you operate and maintain the machine safely.

**1.2.3.4 Operation**

This section provides the basic operating procedures for the job. It is important to study and become familiar with all procedures before performing any operations with the machine.

**1.2.3.5 Maintenance**

This section provides all general maintenance and repair procedures. It is important to study and become familiar with all the maintenance and repair procedures before performing any maintenance or repair operations on the machine.

**1.2.3.6 Troubleshooting**

This section outlines common malfunctions and fault diagnostic procedures for the operating system. Basic mechanical, hydraulic and electrical system troubleshooting is included.

### 1.2.3.7 Technical specifications

This section provides the basic performance parameters of this machine.

Some information may change as design modification

## 1.3 Your Sany Machine

### 1.3.1 Machine directions

- (A) Front
- (B) Back
- (C) Left
- (D) Right

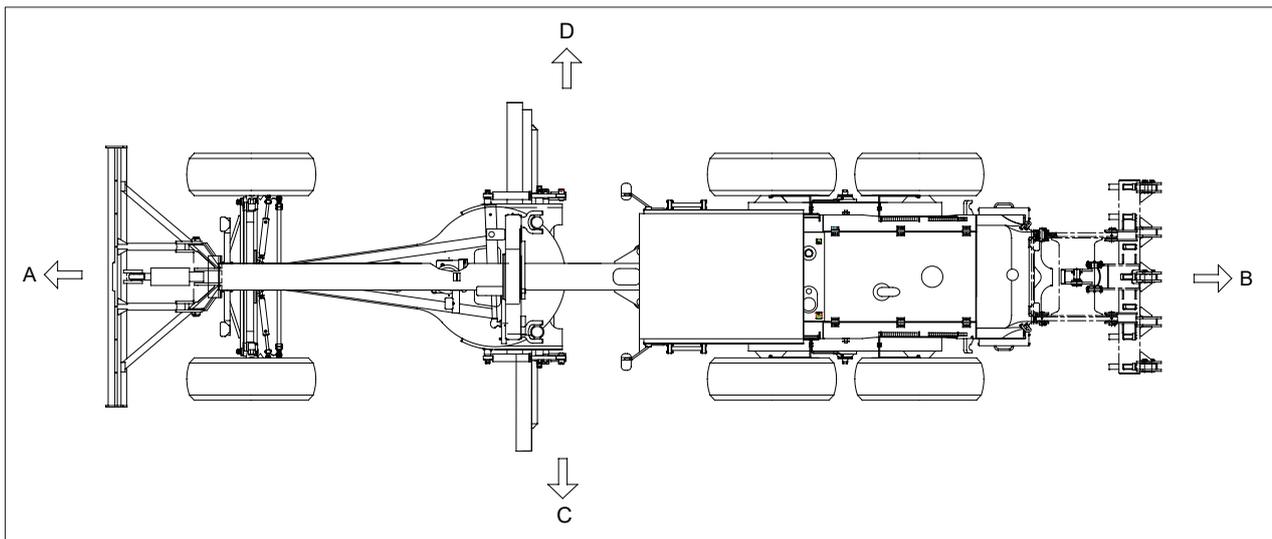


Fig.1-2

### 1.3.2 Breaking in a new machine

Your machine has been well adjusted and tested before delivery, but the initial operation on the machine in severe conditions will seriously affect the performance or reduce the service life of the machine. Thus Sany recommends you to perform 100-hour test run before putting the machine into production use.

During the test run:

- Preheat the machine before performing any operations.

- Avoid operating or running the machine at a high speed in overload working conditions.
- Avoid sudden starting, rapid movement or abrupt stop of the machine.
- Cool down the machine system at the end of every working day.

### 1.3.3 Machine Information

The factory numbers (serial numbers) and models on the nameplate are important information required for ordering replacement parts or requiring assistance for your machine. So please write down the related information in this manual for further use (**see: section 1.3.4 “Serial number and distributor information” on Page 1-6** ).

The nameplate is riveted on the left side of the front frame, **see Fig.1-3**.

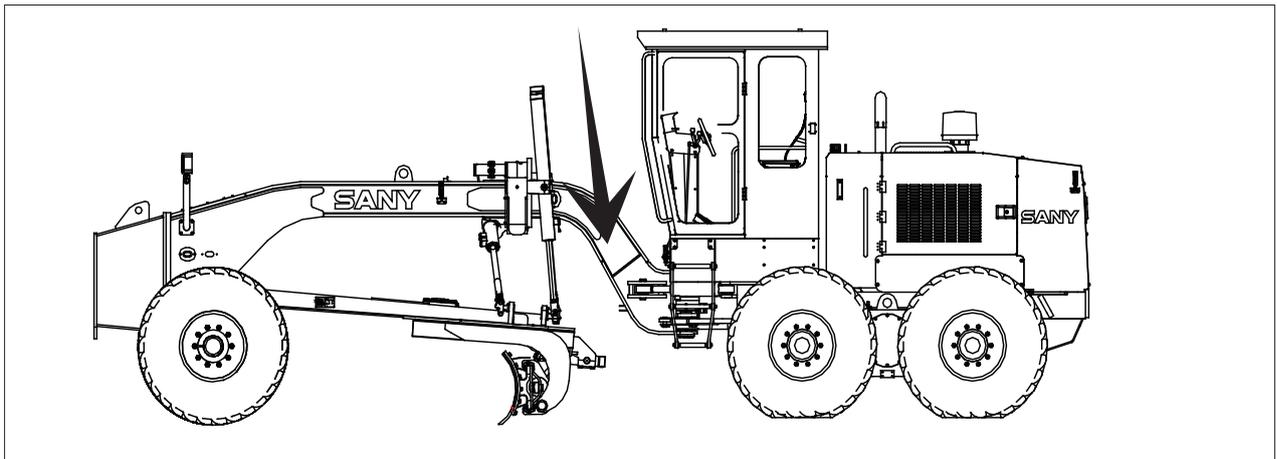


Fig.1-3



## 1.4 Contact Information

Thank you for purchasing a Sany product. In the event that you should need to contact us for any reason, you can reach us as follows:

Address: SANY Industry Town, Economic and Technological Development Zone, Changsha, Hunan, China

Post code: 410100

Tel: 0086-731-84031888

Fax: 0086-731-84031999

E-mail: [crd@sany.com.cn](mailto:crd@sany.com.cn)

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# SANY

## Safety

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 **WARNING**

**Read and understand all safety precautions and instructions in this manual before reading any other manuals provided with this machine and before operating or servicing the machine. Failure to do this can cause property damage, personal injury or death.**

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