

CHCK 系列通用齿轮箱

使用维护说明书

Operating and Maintenance Instructions

for CHCK Type Gearbox

**CSSC**


**重庆齿轮箱有限责任公司**





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# 第一章 前言

## Chapter I Foreword

### 1.1 一般说明

### 1.1 General Description


《CHCK 系列通用齿轮箱使用维护说明书》（下称“说明书”）是重庆齿轮箱有限责任公司（下称“重齿公司”）的 CHCK 系列通用齿轮箱产品的操作说明，它提供了该系列产品出厂后从安装到维护的一系列相关信息。本系列产品可以作为减速齿轮或加速齿轮使用的产品,在以下称之为“齿轮箱”。

This manual, titled “Operating and Maintenance Instructions for CHCK Type Gearbox” (hereinafter referred to as the “the Manual”), published by Chongqing Gearbox Co., Ltd. (“CGC”), is the operational guide for the CHCK type gearbox products manufactured by CGC.

It provides all information required for installation, operation and maintenance of the gearbox after delivery. Products in this series that can be used as either reduction or increase gearbox.

请妥善保管本说明书，以便日后使用。在齿轮箱上开展任何作业前请务必阅读本说明书，并遵守其中的规定。

Please keep the Manual properly for future reference. Read the Manual carefully and follow all instructions before carrying out any work on the gearbox.

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请确保每个相关的作业人员（现场安装运行调试人员、使用维护人员和其他相关设备操作人员，以下统称使用方）在操作齿轮箱前都阅读和理解了本说明书，并在所有作业中加以注意。

Ensure that every person who will install, operate, maintain or otherwise work on the gearbox (collectively “the User”) reads and understands the Manual before work commences and observes it during all operations.

未遵循本说明书可导致设备损坏、财产损失、更为严重的情况下甚至会造成人员伤亡。

Failure to comply may result in damage to the equipment, loss of property or, in serious cases, personal injury or death.

为了更好地理解本说明书，相关的作业人员需要具备一定的基础知识。

Users must have basic technical knowledge to understand the Manual.

★ 对于因没有遵守本说明书规定而导致的损坏及运行故障，重齿公司概不负责！


★ **CGC accepts no liability for damage or malfunctions resulting from non-compliance with the Manual.**

## 1.2 著作权

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No part of the Manual may be used or transferred to third parties without written permission.

所有技术性问题请与重齿公司工厂联系。

For all technical questions please contact our factory.

联系电话：023-47211468

Tel: +86-23-47211468

传真号码：023-47211128


Fax: +86-23-47211128

公司网址：[www.chongchi.com](http://www.chongchi.com) | [www.cnpower.cn](http://www.cnpower.cn)

Websites: [www.chongchi.com](http://www.chongchi.com) | [www.cnpower.cn](http://www.cnpower.cn)

电子邮件：[cngpower@chongchi.com](mailto:cngpower@chongchi.com)

E-mail: [cngpower@chongchi.com](mailto:cngpower@chongchi.com)

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## 第二章 安全说明

### Chapter II Safety Instructions

#### 2.1 一般说明

#### 2.1 General Information

通常而言，重齿公司的齿轮箱产品是某一特定工厂、系统、机器和组件中的一个组成部分。


Generally speaking, the gearboxes are integrated into a component of a plant, system, machine or equipment.

因此本说明书本部分内容主要用于指导使用方作业人员安全注意事项，尤其是针对作业人员和齿轮箱产品相关的机械、电气、设备等安全说明。

Therefore, the content of this section is mainly used to guide the safety precautions for the operators, especially regarding mechanical, electrical, and equipment safety related to the operators and the gearbox product.

对整体机械系统、电气系统、控制系统等其他相关联的注意事项和安全警告应由其他相关方进行指导。

Safety notes and warnings relating to the overall mechanical system, electrical system, control system, etc. must be provided by the other parties involved.

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## 2.2 基本责任

### 2.2 Basic Responsibilities

使用方必须让指定的安装、操作、保养和维护人员阅读并且理解本说明书，并且让他们随时注意。

The User must ensure that the personnel appointed for installation, operation, servicing and maintenance read and understand the Manual and and remind them to always pay attention to the following:

防止对使用者和第三者的人身造成伤害和危险。

Preventing personal injury and hazards to the User and third parties.

确保齿轮箱运转安全性，并且采取措施防止由于错误操作所导致的停机故障和环境污染。


Ensuring operational safety of the gearbox and taking measures to prevent stoppages and environmental pollution caused by incorrect operation.

当进行运输、安装和拆卸、操作以及保养和维修时，必须遵守劳动保护和环境保护的有关规定。

When performing transportation, installation and disassembly, operation, as well as maintenance and repair, the relevant regulations on labor protection and environmental protection must be observed.

齿轮箱只能由经过授权、培训和指定的人员进行操作、维修或者维护。

The gearbox may only be operated, maintained, or serviced by authorized, trained, and designated personnel.

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所有工作必须在"安全第一"的原则下谨慎进行。

All work must be carried out carefully in accordance with the principle "Safety first".

只允许在停机状态下对齿轮箱进行维护和修理。

Maintenance and repair work is permitted only when the gearbox is at a standstill.

针对带有强制润滑系统的齿轮箱，在正常启动齿轮箱时，均需执行"串油"步骤。

For gearboxes with forced lubrication, the "oil circulation" procedure must be carried out each time the gearbox is started up normally.

即：在齿轮箱启动前，先启动供油系统串油，时间为3~5分钟，齿轮箱停车后，供油系统需延续运行3~5分钟。


That is: before starting the gearbox, start the oil-supply system for oil circulation for 3-5 minutes; after the gearbox is shut down the oil-supply system must continue to run for a further 3-5 min.

如果运行过程中发现齿轮箱有异常变化，例如工作温度升高或者齿轮箱噪声异常，必须立即停止运转工作，排除异常并确认齿轮箱状态正常后才能继续运行。

If during operation any abnormal changes are noticed, e.g. rising temperature or unusual noise, operation must be stopped immediately. Operation can only continue after the abnormality is eliminated and the gearbox status is confirmed normal.

必须通过相应的防护装置防止触碰旋转传动件，例如联轴器。

Rotating drive components such as couplings must be guarded by suitable protective devices to prevent contact.

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如果要将齿轮箱安装到设备中，设备制造商必须将说明书中的规定、说明和描述一并纳入其说明书中。

If the gearbox is to be installed in a plant, the plant manufacturer must incorporate the requirements, instructions and descriptions given in the Manual into his own documentation.

齿轮箱上的指示标志，例如铭牌、转向标牌、警示牌等必须加以注意，不得被油漆和灰尘覆盖，缺少的铭牌需要更换。

All information labels on the gearbox, e.g. nameplate, direction-of-rotation arrow, warning plates, etc., must be kept legible and must not be covered with paint or dirt; missing plates must be replaced.

因进行安装和拆卸而报废的螺栓必须使用同等强度等级和规格的螺栓替换。

Bolts that are scrapped during installation or dismantling must be replaced by bolts of the same strength grade and specification.


## 2.3 环境保护

## 2.3 Environmental Protection

设备运行、维护期间更换下来的废润滑油，应根据国家标准和润滑油厂家所提供建议，将废油放置在适合的容器中，如果有溢出，必须立即清理。

Used oil removed during operation or maintenance must be collected in suitable containers in accordance with national standards and the lubricant supplier's instructions; any spillage must be cleaned up immediately.

防锈剂必须和废油分开保管。

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Rust inhibitors must be stored separately from used oil.

必须根据相应的环保规定清除和回收废油、防锈剂、机油结合剂以及浸了机油的擦布。

Disposal and recycling of used oil, rust inhibitors, oil-binding agents and oil-soaked rags must be carried out in compliance with the applicable environmental regulations.


## 2.4 警告标志

### 2.4 Warning Signs

- ★ 对于因没有遵守本说明书规定而导致的损坏及运行故障，重齿公司概不负责！
- ★ **CGC accepts no liability for damage or malfunctions resulting from non-compliance with the Manual.**

**★ 警告! WARNING!**

- ★ 本设备有危及生命的高速旋转裸露部件，疏忽下列内容将有生命危险
- ★ **This equipment has exposed high-speed rotating parts that can be fatal. Failure to observe the following will put life at risk. |**

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当心机械伤人

risk of mechanical injury



当心卷入

risk of being drawn in



当心吊物

suspended load



必须戴安全帽

Protective cap must be worn



必须戴防护帽

Safety goggles must be worn



必须戴防护眼镜



必须穿工作服

Work clothing must on



必须穿防护鞋

Safety shoes must on




必须戴防护手套

Protective gloves must on

进入设备工作区必须穿戴相应的防滑、防碰撞保护用具。

Personnel entering the equipment work area must wear corresponding anti-slip and anti-impact protective gear.

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严禁触摸旋转部件，裸露运转部位（如联轴器等）必须加装防护罩。

Touching rotating parts is strictly prohibited; exposed moving parts (e.g. couplings) must be equipped with protective covers.

齿轮箱上的观察孔仅供观察用，严禁人员通过观察孔进入齿轮箱内。

Inspection covers on the gearbox are for viewing only—personnel must never enter the gearbox through observation holes.


只能具有相应资格的专业人员才能进行安装、检修。

Installation and repair must be carried out only by qualified specialist personnel.

在齿轮箱周围作业时应佩戴/穿着以下规定的个人防护装备：

When working around the gearbox, the following personal protective equipment (PPE) must be worn:

- 安全鞋 → Safety shoes
- 工作服 → Work clothing
- 安全帽 → Safety helmet
- 防护手套 → Protective gloves
- 防护眼镜 → Safety goggles

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## 2.5 特殊危险

## 2.5 Special Hazards



hot surface

risk of burns

risk of fire

No open flames

根据运行条件的不同, 齿轮箱局部可能会有相对高的表面温度, 有烫伤危险。

Depending on operating conditions, parts of the gearbox surface may become very hot—there is a risk of burns.


更换润滑油时, 流出的高温润滑油, 有烫伤危险。

When draining oil, the hot lubricant presents a burn hazard.

小型异物例如砂子、灰尘等可能会进入旋转部件的防护盖中, 这些异物可能会被旋转部件抛出, 因此, 操作者操作时应戴上防护目镜。

Small foreign bodies such as sand or dust can enter the guards of rotating parts and be thrown out—operators must therefore wear safety goggles.

设备边缘 3 米内严禁有明火出现, 设备附近应有干粉灭火器用于紧急灭火。  
Open flames are prohibited within 3 m of the equipment; a dry-powder fire extinguisher must be kept nearby for emergencies.

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## 2.6 标志说明

## 2.6 Symbol Description

齿轮箱上可能会有以下符号标志,使用方应对齿轮箱的符号标志进行识别和注意。

The following symbols may be found on the gearbox—users must identify and observe them.

标记	符号	symbols
接地点		Earthing point
排气口		Vent
加油口		Oil fill
排油口		Oil drain
进油口		Oil inlet
回油口		Oil return
注水口		Water fill
排水口		Water drain
油位指示器		Oil-level indicator
油位测量		Oil-level measurement

 <b>重庆齿轮箱有限责任公司</b>	重庆齿轮箱有限责任公司		
	CN GPOWER GEARBOX CO.,TD		
	TEL: 02347211101 47211231	http: www.cngpower.com	Version: 001
FAX: 02347211011 47211230	E-mail:cngpower@chongchi.com		





重庆齿轮箱有限责任公司

