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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 3367.4-2018

**Glossary of terms for diesel locomotives - Part 4: Hydraulic
transmission system**

内燃机车词汇 第4部分：液力传动系统

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Foreword

GB/T 3367 "Dictionary of Diesel Locomotive" is divided into five parts.

--- Part 1. Basic vocabulary;

--- Part 2. Diesel engine;

--- Part 3. car body, bogie and brake device;

--- Part 4. Hydraulic drive system;

--- Part 5. Auxiliary devices. This part is the fourth part of GB/T 3367. This part is drafted in accordance with the rules given in GB/T 1.1-2009. This part replaces GB/T 3367.2-2000 "The name of hydraulic transmission system parts for railway locomotive" and GB/T 3367.8-2000 "The terminology of hydraulic transmission for railway locomotives" The main technical changes in this part compared with GB/T 3367.2-2000 and GB/T 3367.8-2000 are as follows:

--- Added terminology in vertical hydraulic transmission box, horizontal hydraulic transmission box, mechanical reversing hydraulic transmission box (see 2.3.3.1, 2.3.3.2, 2.3.3.4);

--- Increased terminology in terms of electronic control systems (see 2.4.4.40);

--- Removed generic terminology, only reserved terminology;

--- Removed the terminology of the fan coupler and its components (see Chapter 11 of GB/T 3367.2-2000);

--- Rearrange the order of the chapters according to their relationship. This part is proposed and managed by the National Railway Administration. This section drafted by: CRRC Dalian Locomotive Research Institute Co., Ltd., CRRC Beijing Erqi Locomotive Co., Ltd., CRRC

Ziyang Locomotive Co., Ltd. the company. The main drafters of this section. Li Wenying, Jin Renbo, Chen Hui, Qian Jifu, Yan Liguang. The previous versions of the standards replaced by this section are.

---GB/T 3367.2-1982, GB/T 3367.2-2000;

---GB/T 3367.8-1982, GB/T 3367.8-2000. Diesel locomotive Part 4. Hydraulic drive systems

1 Scope

Part 4 of China's national vocabulary for diesel locomotives, covering the hydraulic transmission system. Hydraulic transmission is the alternative to electric transmission, and the choice between them divides the diesel locomotive world in two. In an electric locomotive the engine turns a generator and the current drives traction motors on the axles; in a hydraulic one the engine drives a torque converter, and the power reaches the wheels through shafts and gearboxes. Hydraulic transmission is lighter, cheaper and simpler, and it dominates shunting locomotives and lighter main-line machines; electric transmission scales better to high power and has taken the heavy end of the market. Because the two are so different, they share almost no vocabulary below the level of the engine, which is why this part exists separately. It defines the torque converter and its circuits, the filling and emptying control that shifts between converter stages, the reversing and final drive gearing, and the cooling and oil supply the whole assembly depends on.

This part of GB/T 3367 defines the hydraulic drive, hydraulic components, hydraulic drive system, hydraulic transmission box and its main zero. Terms and definitions of parts. This section applies to the hydraulic drive system of diesel locomotives.

2.1 Hydraulic transmission

2.1.1 Hydraulic drive hydrodynamicdrive By means of changing the momentum moment of the liquid to transmit the torque.

2.1.2 Single cycle hydraulic drive single-circuithydrodynamicdrive A transmission mode in which power is transmitted through a single hydraulic component.

2.1.3 Multi-cycle hydraulic transmission multi-circuithydrodynamicdrive According to different speed ranges of the output shaft, the transmission mode of transmitting power through two or more hydraulic components is sequentially performed.

2.1.4 Hydraulic mechanical transmission hydromechanicaldrive Hydraulic transmission with mechanical transmission.

2.1.5 Single-flow hydraulic mechanical transmission
hydromechanicaldrivewithinnerramification The entire power of the input shaft is transmitted through the hydromechanical transmission of the hydraulic components.

2.1.6 Double flow hydraulic mechanical transmission

hydromechanicaldrivewithouterramification A part of the input shaft is powered by a hydraulic element, and another part of the power is mechanically transmitted to the output shaft at the same time. transfer method.

2.1.7 Hybrid hydraulic mechanical transmission hydromechanicaldrivewithdirectstep The output shaft transmits power at low speeds via hydraulic components and mechanical gearboxes, and at high speeds, only through the mechanical gearbox.

2.2.1 Classification of hydraulic components

2.2.1.1 Hydraulic element The power of the input shaft is transmitted to the transmission components of the output shaft through the circulating flow of liquid in its working chamber.

Note. Hydraulic components are the general term for torque converters, fluid couplings and hydraulic brakes.