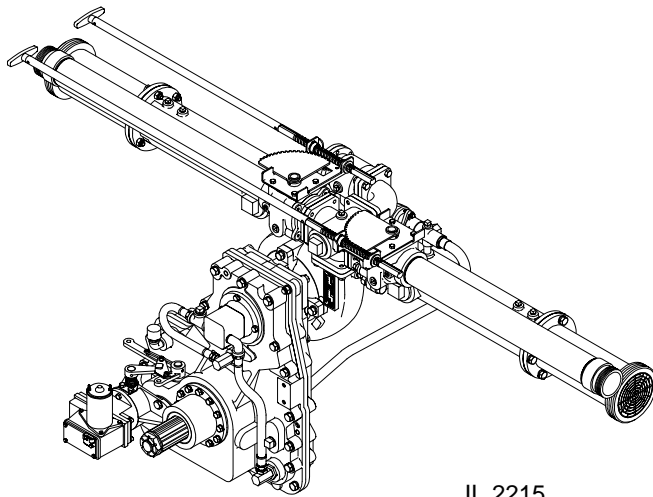


CLS Series Fire Pump

Form No.	Issue Date	Rev. Date
F-1089	07/92	09/27/05



IL 2215

The Waterous CLS pump provides compact, single stage simplicity, capacity up to 500 GPM (2000 L/min) and pressure to 350 psi (24 bar). This pump is designed specifically for small and medium sized chassis.

Three types of pump transmissions are offered for the CLS pump. The split-shaft "WB" series chain case, the "PA" series chain case and the "K" series gear case.

The "K" series is normally driven by a transmission mounted, heavy duty power take-off offering PUMP and ROLL in addition to STATIONARY pumping.

The "WB" and "PA" series incorporate a high-strength involute tooth form chain designed to operate at high speeds and provide smooth, quiet transfer of power.

This single stage pump is exceptionally simple in construction. It's low profile and compact design permit efficient use of limited space above the pump, while the simple construction makes it easy to service and maintain.

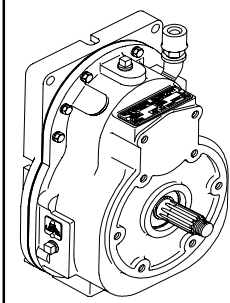
Waterous CLS pump construction features: replaceable wear rings; a mechanically and hydraulically-balanced, double-hubbed impeller; and oil-lubricated, anti-friction ball bearings throughout. Mechanical seal is standard.

Every Waterous pump is built to fit individual requirements. We can assist you in determining which combinations of transmission and pump, matched with truck chassis and engine, will deliver top performance to suit your needs.

Specifications subject to change without notice

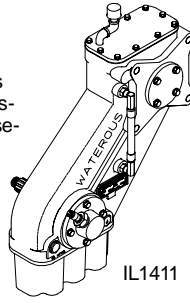


CLS Series Fire Pump



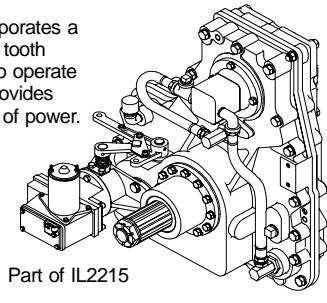
IL1526

The "K" and "P" series transmissions are normally used when a truck transmission mounted power take-off is selected as the pump driver.



IL1411

The "WB" series incorporates a high-strength involute tooth form chain designed to operate at high speeds and provides smooth, quiet transfer of power.



Part of IL2215

Pump Specifications

Casing

Three-piece, vertically-split, high-tensile, close-grained gray iron or bronze (optional).

Wear Rings

Replaceable bronze wear rings to increase pump life and keep maintenance costs at a minimum.

Impellers

Bronze, double-hubbed, hydraulically and mechanically balanced for long life and smooth vibration-free running.

Impeller Shaft

Stainless steel, heat treated and precisely ground to size.

Bearings

All bearings are deep-groove, oil-lubricated, ball-type and are located outside the pump casing to accurately align and support the impeller shaft.

Shaft Seal

Face-type, self-adjusting, corrosion and wear-resistant mechanical seal is standard.

Flinger Rings

Located on the impeller shaft between the pump body and transmission as added protection in keeping water and foreign matter out of bearings.

Pump Transmissions

K Series

Housings: Two-piece high-tensile gray iron.

Gears: Constant-mesh helical cut. All gears are crown shaved, carburized, hardened, have ground bores and are made of alloy steel.

Gear Ratios: 1.62, 1.97, 2.55, 3.40.

W Series

Housings: High-tensile gray iron, two-piece, vertically-split so transmission can be disassembled without cutting frame or body.

Drive Ratios: 1.19, 1.29, 1.39, 1.52, 1.61, 1.74, 1.87, 2.04.

Drive and Driven Sprockets

Made of alloy steel. All sprockets are carburized, hardened and have ground bores.

Drive Chain

Morse HV® high-strength involute tooth form chain.

Bearings

Deep-groove, anti-friction ball bearings, positive oil splash lubricated throughout.

Shafts

Drive-line shafts made from alloy steel forgings, hardened and accurately ground to size, SAE 10-spline. Available in 1-3/4 inch or 2 inch, depending on engine transmission torque output.

Pressure Lubrication System

An impeller shaft driven oil pump delivers oil to a two-piece spray header that completely pressure lubricates the drive chain. This unique transmission design eliminates the need for auxiliary cooling under all normal operating conditions.

Shift Mechanism

Constant mesh, two-position sliding collar that engages all teeth simultaneously. In-cab controlled manual shift or optional electric shift. An internal locking mechanism provides a positive lock in PUMP or ROAD position. Shift indicating light system standard.

P Series

Housings: Cast aluminum body

Drive Ratios: 1.71, 1.91, 2.05

Drive and Driven Sprockets

Made of steel. All sprockets are carburized and hardened, and have ground bores.

Drive Chain

Morse HV® high-strength involute tooth form chain.

Bearings

Anti-friction ball bearings

Optional Rear Facing Output Shaft

1-3/8-10 SAE spline for Spicer 1280 or 1310 series end yokes

* Registered trade name of Union Carbide Corporation

** Registered trade name of Emerson Power Transmission Corporation

Accessories & Optional Equipment

The following accessories are available for the Waterous CLS pumps. For detailed information about these optional features, request each specification sheet by number.

Electric Shift

Allows the operator to shift to ROAD or PUMP position by flipping a switch. Electric indicating lights signal completion of shift from ROAD to PUMP. (WB chain case only.) Specifications sheet F-1154.

Primer

Select an electric rotary vane primer for fast, reliable priming.

Pressure Control Systems

Choose the Waterous Automatic Relief Valve with simple ON-OFF control to permit placing the system in or out of operation in seconds. Relief valve includes open/closed indicating lights. Specification sheet F-897.

Corrosion Protection

Waterous offers replaceable zinc elements to provide corrosion protection. These items are designed to sacrifice the zinc element to

galvanic corrosion. Without this protection, galvanic corrosion may damage the iron pump body and fittings.

Zinc Intake Screens

These are installed directly in the intake fitting openings and also provide protection from debris in the water supply.

Zinc Anodes

These are installed directly on the pump intake piping and consist of two anodes that protrude into the pump waterway.

Discharge Valve

Waterous quick-opening ball-type discharge valves - 2-1/2 inch and 3-1/2 inch sizes. Chrome plated brass balls and hydraulically-balanced seal assembly standard. Specification sheet F-1161.

Drain Valve

Manifold drain valve simultaneously drains all points of the pump by operating a single control. Specification sheet F-1158.