



Logan Bell-Housing PTO Clutches for Pumping Stations in Taipei

The Jingmei River pumping station in Taipei, Taiwan uses Logan Bell-Housing Power Take-off (PTO) Clutches driven by CAT C27 diesel engines to supply power to the water pumps.

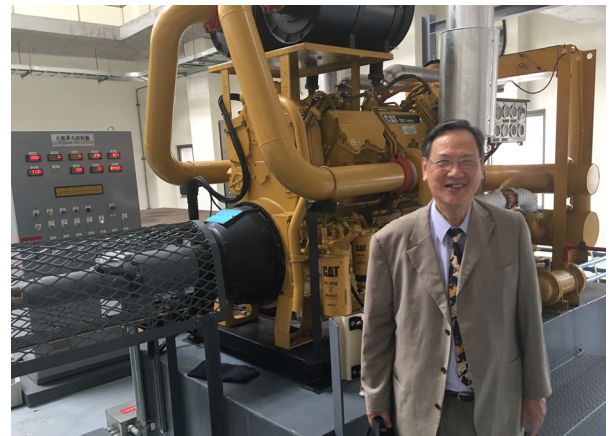
The City of Taipei lies at the center of the Taipei basin. With many streams and rivers passing through the basin and flowing out to sea, the region is prone to flooding during the rainy seasons of summer and autumn. Controlling the excess water is critical to maintaining the safety of citizens and infrastructure, so the city government builds pumping stations in low-lying areas and near main waterway outlets to accelerate the discharge of excess water during flooding. At the Jingmei River pumping station, Logan distributor Formosa Fluid Power has supplied a pumping system that utilizes Logan LC314 and LC318 Bell-Housing Power Take-off (PTO) clutches to reliably transmit power from CAT C27 diesel engines and other engines to the water pumps through Flender gear boxes.

The Challenge:

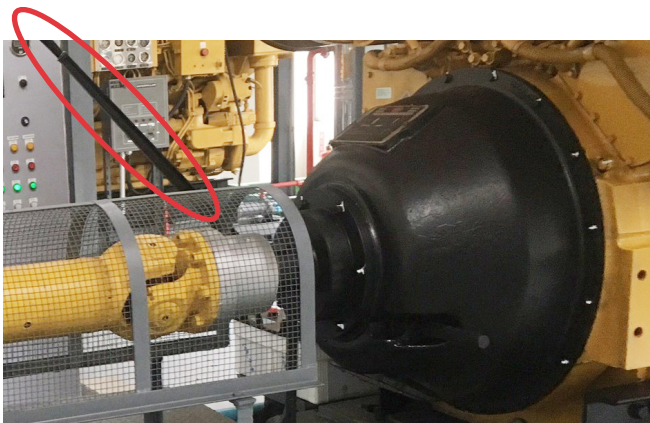
Many pumping stations use Twin Disc style mechanical clutches, a technology that has remained practically unchanged since the 1940s. Mechanical clutches require manual engagement via a lever arm that is usually in a position that is difficult to operate. Further, as the clutch plates wear, the pressure provided by the lever arm is no longer enough to engage properly, so operators must remove a cover plate and adjust the plates to ensure proper torque transfer during operation. In addition to the added labor of manual engagement and adjustment, failure to properly maintain the clutch can cause failure of the clutch, which could be devastating in an application like flood water pumping stations where reliability is so important.



The Logan LC318 Bell-Housing PTO clutches provide on-demand power to the Flender gear boxes that run the pumps



C.Y. Fung of Formosa Fluid Power proudly stands in front of the Logan Bell-Housing PTO clutch on the CAT C27 engine



Twin Disc mechanical clutches like this one require manual adjustment and engagement via a lever arm (circled), while Logan Bell-Housing PTO clutches are self-adjusting and engaged with the push of a button



The Logan LC318 Bell-Housing PTO clutch fits in the same size envelope as the mechanical clutches. Available in pneumatically or hydraulically actuated, the LC318 can be engaged with push-button controls.



Logan Clutch Corporation®
manufacturers of clutches and brake products

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The Logan Advantage

Logan Bell-Housing PTO clutches are self-adjusting and actuated via pneumatic or hydraulic pressure. The Logan Bell-Housing PTO clutches easily fit within the same envelope space of the mechanical clutches, while eliminating the need for manual adjustment and engagement. The pneumatic or hydraulic actuation allows the clutch to be engaged and disengaged with push-button controls or remotely through wireless controls. These improvements provide the pumping station with the reliability needed to meet the demands of pumping excess water in emergency situations, ensuring public safety. According to C.Y. Fung of Formosa Fluid Power, "The pumping station appreciates the simplified push-button engagement of the Logan clutches over the lever arm of the mechanical clutches."



The Jingmei pumping station uses a lineup of CAT engines with Logan Bell-Housing PTO clutches to power their pumps



Large pumps are required in order to reach a total output of 95,000 gallons / 360 cubic meters per min



Pumping stations are critical during the rainy summer and autumn months in Taipei to move huge amounts of water

Logan Vs. Mechanical

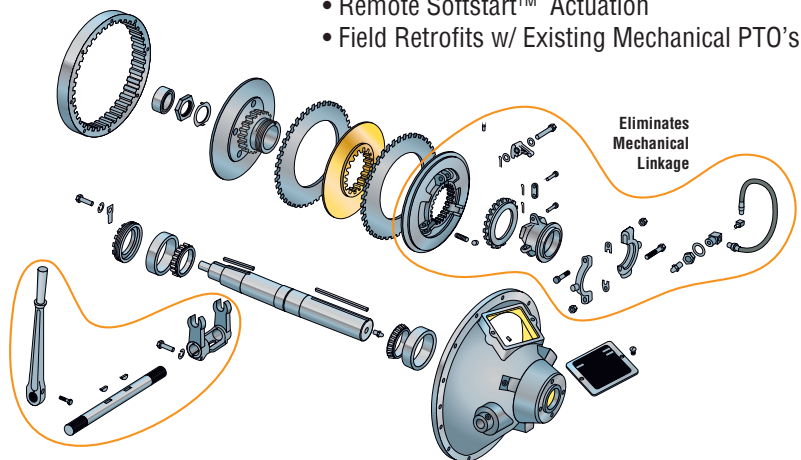


Logan LC318 Bell-Housing PTO clutch

Advantages: Logan clutch engagement is smooth and positive, and eliminates mechanical linkages, hand levers and yokes. Fewer moving parts increases productivity and reduces downtime.

Logan Features:

- Air or Fluid Actuated
- Self-Adjusting™ Disc Pack
- High Torque, Small Envelope
- Available with or Without Pilot Bearings
- Remote Softstart™ Actuation
- Field Retrofits w/ Existing Mechanical PTO's



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