

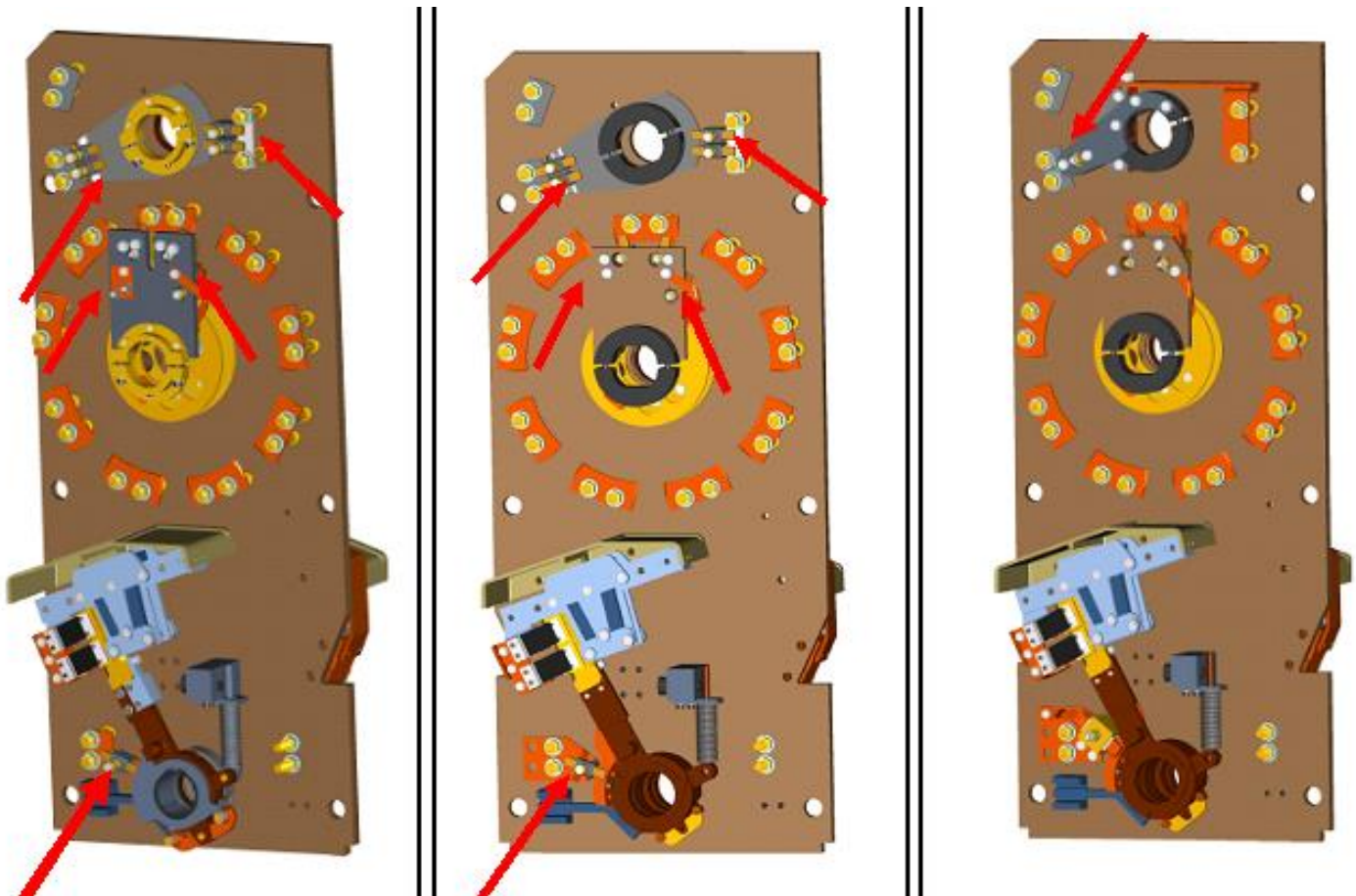
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WESTINGHOUSE UTT UPGRADE SERIES

Upgrading your UTT, UTT-A or UTT-A70 to the UTT-B Style Selector Switch

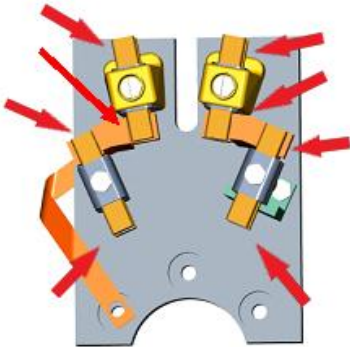
In this white paper, we will discuss possible upgrades for the selector switch assembly of your Westinghouse UTT Series load tap changer (LTC). These upgrades address areas of the selector switch that are prone to failure due to overheating and carbon buildup and are applicable to the UTT, UTT-A and UTT-A70 models.

Each phase of a 3-phase LTC contains a selector switch. Below are 3-D models of individual phase panels for each of the different UTT Series LTC models. Red arrows indicate areas where overheating and coking typically occur. These arrows also help visually identify areas where there are differences in the designs of the individual models.



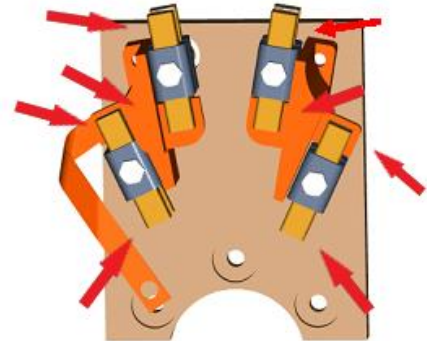
Figures 1 and 2 below depict the flip side of the moving contact arm assembly in which the contacts are clearly visible. Arrows indicate areas of the moving contact arm assembly where overheating and carbon buildup are most likely to occur. Figure 1 depicts the UTT model and Figure 2 depicts the UTT-A/UTT-A70 models.

Figure 1



UTT: 4 pairs of contact fingers with 4 non-wiping spring loaded points of contact

Figure 2



UTT-A / A70: 4 pairs of contact fingers with 4 non-wiping spring loaded points of contact

By upgrading the moving contact assembly of the UTT, UTT-A, UTT-A70 to the UTT-B design, the risk of overheating and carbon buildup in the contact areas is fundamentally reduced. Figure 3 below depicts the contact arm assembly of a UTT-B with the contacts exposed. The upgrade to the UTT-B design reduces the number of contact fingers from four (4) to two (2) and the number of non-wiping fingers from four (4) to zero (0).

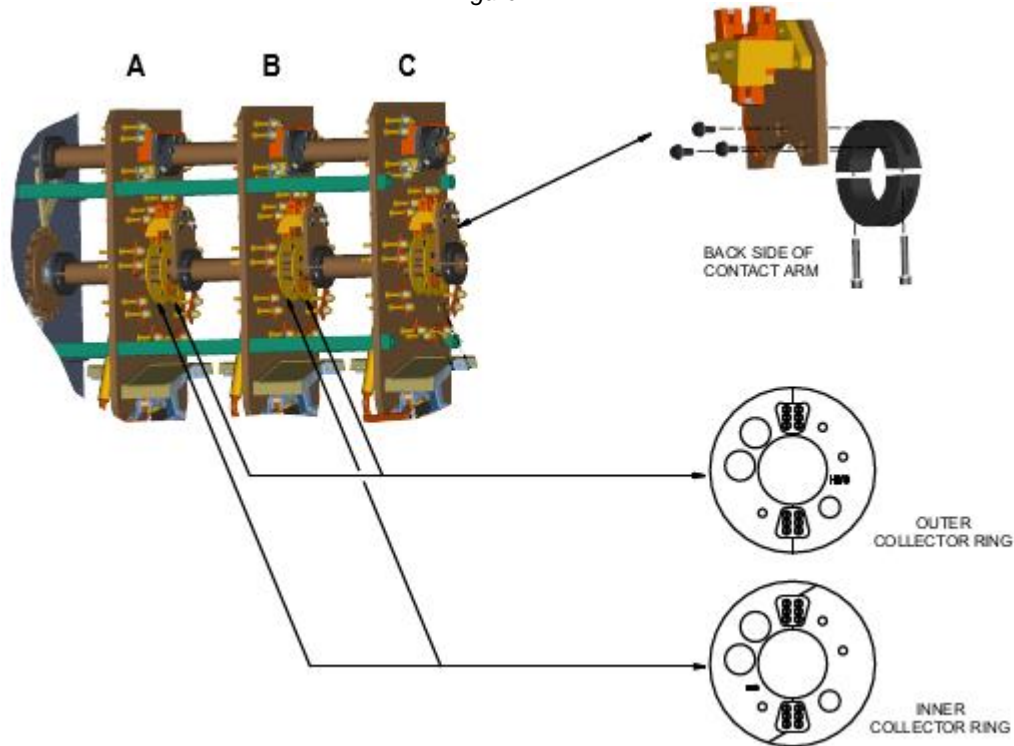
Figure 3



UTTB: 2 pairs of contact fingers with no non-wiping contacts

In addition to the upgraded contact configuration, the collector rings on the UTT-B design are offered in an improved "split" design for phases A and B. Figure 4 below indicates the position of the collector rings. The split design allows for worn collector rings on phases A and B to be replaced in the field without un tanking the LTC.

Figure 4



Form, fit and function are exactly the same between the different designs, but the selector switch upgrades presented above offer the following benefits:

- 50% reduction in spring-loaded contact fingers, reducing risk of overheating and coking
- Elimination of all non-wiping spring-loaded contacts, reducing risk of overheating and coking
- Significant reduction in time required for collector ring replacement without untanking the unit

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Damon Jones joined Prolec GE Waukesha in April 2017 as General Manager for the Components business in Dallas, Texas. Damon started his career with Siemens in 1999 and spent 15 years serving the domestic and international power generation/transmission/distribution markets. During that time, he held positions of increasing responsibility in sales, product development, project management and general management, both domestically and abroad. Damon holds a Bachelor of Science Degree in Mechanical Engineering from Clemson University and a Masters of International Business Studies from the University of South Carolina.

Each upgrade kit from Waukesha® Components comes with detailed instructions for installing the upgraded designs. We also offer standard and customized component kit cases. These cases offer the following unique set of benefits:

- Parts are easier to pull from inventory and issue to the maintenance jobs
- All key parts are included for easy and safe transport to the work location
- No need for field personnel to keep lists of components consumed during maintenance
- Cases provide a better means of protection and storage for the components
- Quick and easy to replenish after completion of field maintenance

To learn more about all upgrades available for the UTT Series LTC, visit our website at www.waukeshatransformers.com or contact a member of our sales team at 1-800-338-5526. Also, don't forget about our library of [easy-to-navigate, 3D catalogs](#) designed to help you quickly identify and locate hard-to-find components for LTCs and oil circuit breakers, while also including one for the Waukesha® Components' line of Transformer Health Products®.



Our 30-year history of providing replacement parts for the majority of OEM LTCs has allowed us to develop the capability to confidently engineer, manufacture and support a myriad of design-enhanced replacement parts. We welcome calls from customers seeking technical support on LTCs.