

Size 74T SSS Clutch for Gas Turbine Starting Drives

Early GE Frame 7000E and Frame 7000EA gas turbines incorporated a Jaw Clutch to engage the gas turbine starting drive.

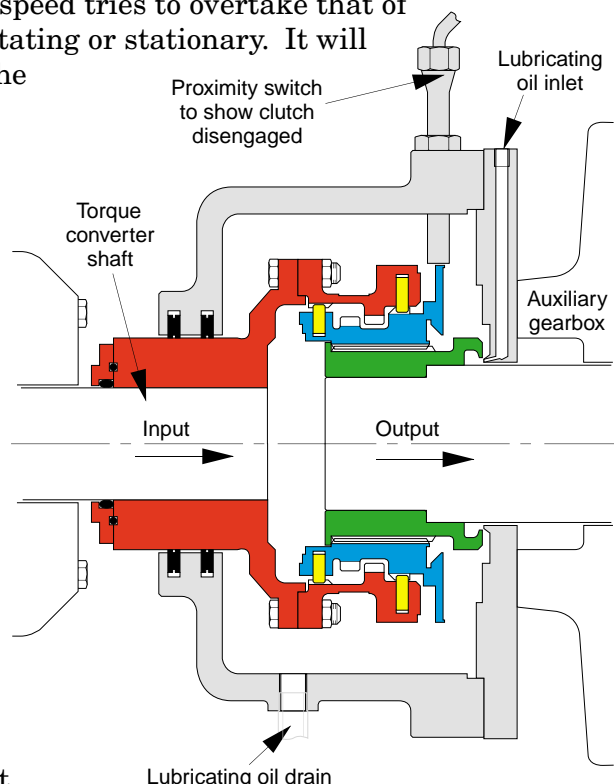
One problem with using a Jaw Clutch is that it can only be engaged when the gas turbine is at rest. This means that in the event of a failed gas turbine start, the operator must wait until the gas turbine is stationary before engaging the jaw clutch to re-start.

The SSS Clutch shown in the illustration is interchangeable with the Jaw Clutch. It engages at the instant the starter speed tries to overtake that of the gas turbine whether the gas turbine is rotating or stationary. It will also automatically disengage at the instant the gas turbine speeds up relative to the starter.

Incorporating an SSS Clutch between the starting motor torque converter and the auxiliary gearbox gives the following advantages:

- o **Reduced re-start time** - the starting drive can be engaged whilst the gas turbine is decelerating from speed. It is not necessary to wait for the gas turbine to come to rest for a re-start, thus saving considerable time before the unit can be generating power.
- o **Automatic operation** - does not require a servo control system with air or hydraulic cylinders as used by the existing Jaw Clutch.

The SSS Clutch input is manufactured to suit the torque converter output shaft and the clutch output is manufactured to suit the auxiliary gearbox input shaft. The clutch is surrounded by an aluminium casing which is overhung from an adaptor plate attached to the auxiliary gear casing.



The SSS Clutch requires the following services:

- o A low pressure oil supply on to the clutch casing from the auxiliary gearbox supply.
- o An oil drain pipe from the clutch casing to the oil drain system.
- o Wiring to a 'Clutch Disengaged' switch mounted on the clutch casing to indicate when the starting drive can be shut down.

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