

1. NASA's HLS will be positioned at a predetermined refueling area on the lunar surface

2. NeCTAR will recognize the refueling port on the HLS and begin to extend the coupler via 3 linear actuators attached to gear racks

3. The linear actuators will mate with the female (ship side) and lock into place via a spring mechanism

4. Once the linear actuators are locked, the gear racks will retract to create a pressure seal between flanges.

5. NeCTAR's computer will run a series of safety checks prior to allowing fuel flow and determine if the operation is inflow or outflow.

6. NeCTAR's computer opens the fuel supply, regulating the flow via butterfly valves. The computer continuously monitors the flow rate, pressure, and seal to ensure safe operation.

