

## No action required

### Does this solve the problem?

- 1] Yes
- 2] No
- 3] I don't know

- **Explanation**

If the turbine is just starting up and the ambient temperature is low, it is possible that due to the increased viscosity of the oil the pump will require more amperage to run. If the oil is thick enough the amperage will be high enough to trip the breaker.

Check gear oil temperature. If it is below 10C make sure that the gear oil heaters are energised. If they are not, then investigate why they are not.

If they are then allow the turbine to heat the gear oil. Once temperature comes back up the tripped breakers should not reoccur.

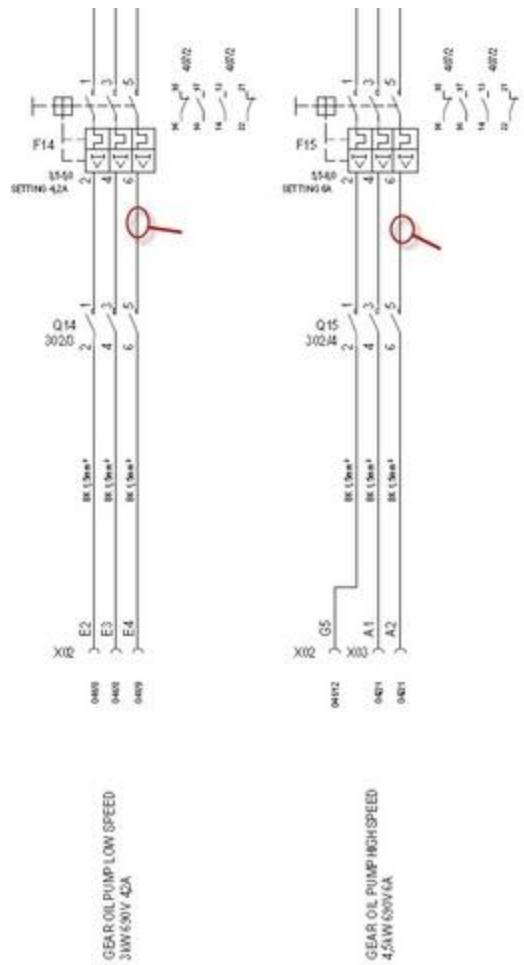
## Check and replace the defective Motor or Breaker

### Does this solve the problem?

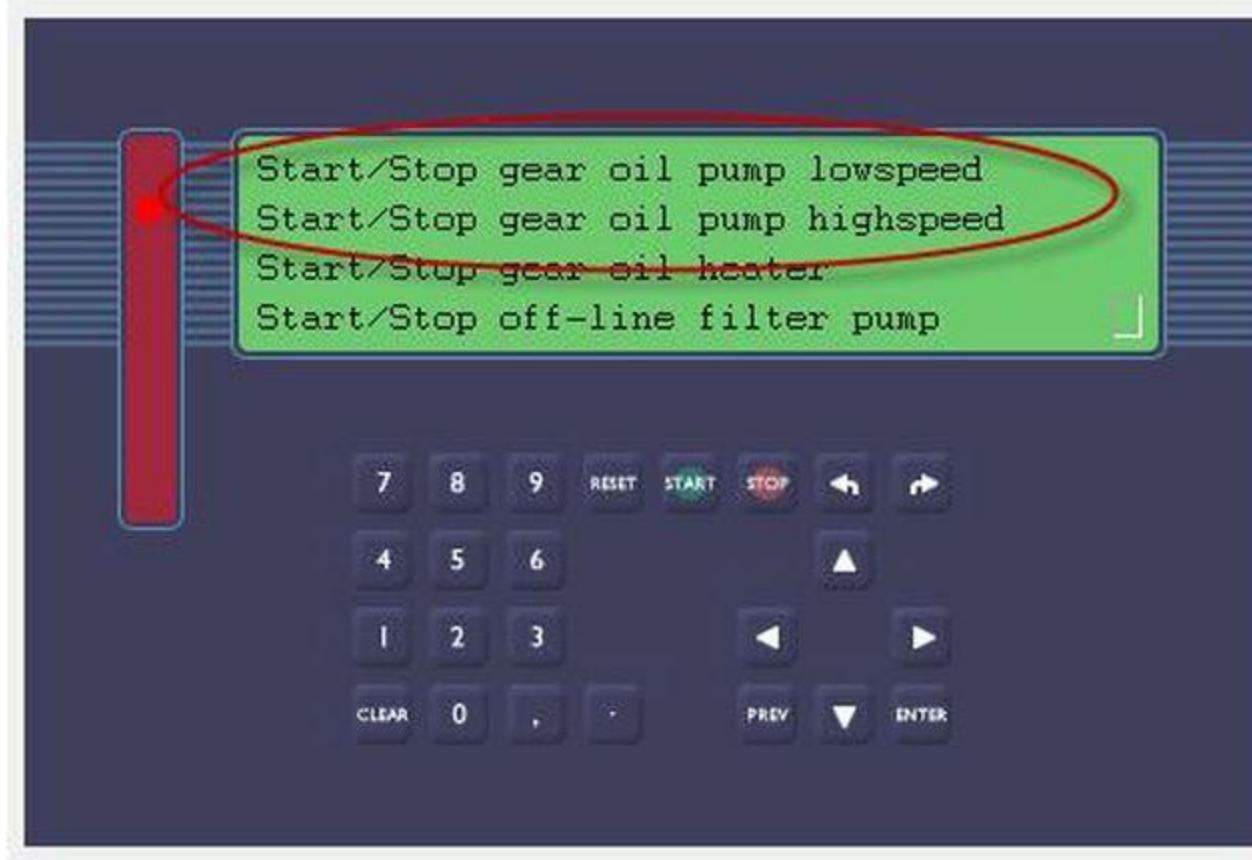
- 1] Yes
- 2] No
- 3] I don't know

- **Explanation**

Using an amp clamp, measure the current consumed by the motor at both low and high speeds. At low speed the current consumed should be about 6.8 Amps. At high speed it should be about 9 Amps. Use one wire at a time from the +AT2 F14 breaker for low speed, and one wire from the +AT2 F15 breaker for high speed. Measure all three cables for each motor.



The pump can be stopped and started in the following menu: Service-Manual Test-Start/Stop Gear Oil Pump Low/High speed.



- If current is more than 10% higher than 6.8/9 Amps investigate the cause.

Check the three phase circuit from the F14/15 all the way to the motor for loose connections or poorly terminated wires. Pay special attention to the pins in the Amphenol connections, as these can back out and cause poor contact.

Using a Megohmmeter test each phase of the motor from phase to phase and phase to ground. If any of the measurements show connection from one point to another then the motor has failed.

| Relevant documentation |         |
|------------------------|---------|
| Description            | DMS No. |
|                        |         |

Replacement of Gear Oil Pump Motor V82 [0020-3843](#)

| Relevant spare parts |                          |
|----------------------|--------------------------|
| Description          | Item No.                 |
| Motor for Oil Pump   | <a href="#">60093993</a> |

- If current is as expected and only one of the two breakers are tripping then investigate the breaker +AT2 F14 or +AT2 F15. Replace the +AT2 F14 or +AT2 F15 breaker with a new one and set it to the correct amperage.

| Relevant spare parts             |                          |
|----------------------------------|--------------------------|
| Description                      | Item No.                 |
| CB 3RV1121-1HA10 5.5-8.0A (F14)  | <a href="#">60004753</a> |
| CB 3RV1121-1KA10 9.0-12.5A (F15) | <a href="#">60004755</a> |

## Remove source of clog

### Does this solve the problem?

- 1] Yes
- 2] No
- 3] I don't know

- **Explanation**

Check gear oil filter and piping to see if there is something clogging the system and remove it. A full filter will likely also cause a gear oil filter clogged alarm.

If contamination is found in the filter, perform an inspection of the gearbox.

| Relevant documentation      |                         |
|-----------------------------|-------------------------|
| Description                 | DMS No.                 |
| Service Instruction Gearbox | <a href="#">1001058</a> |

## Replace Motor, Pump or Coupling

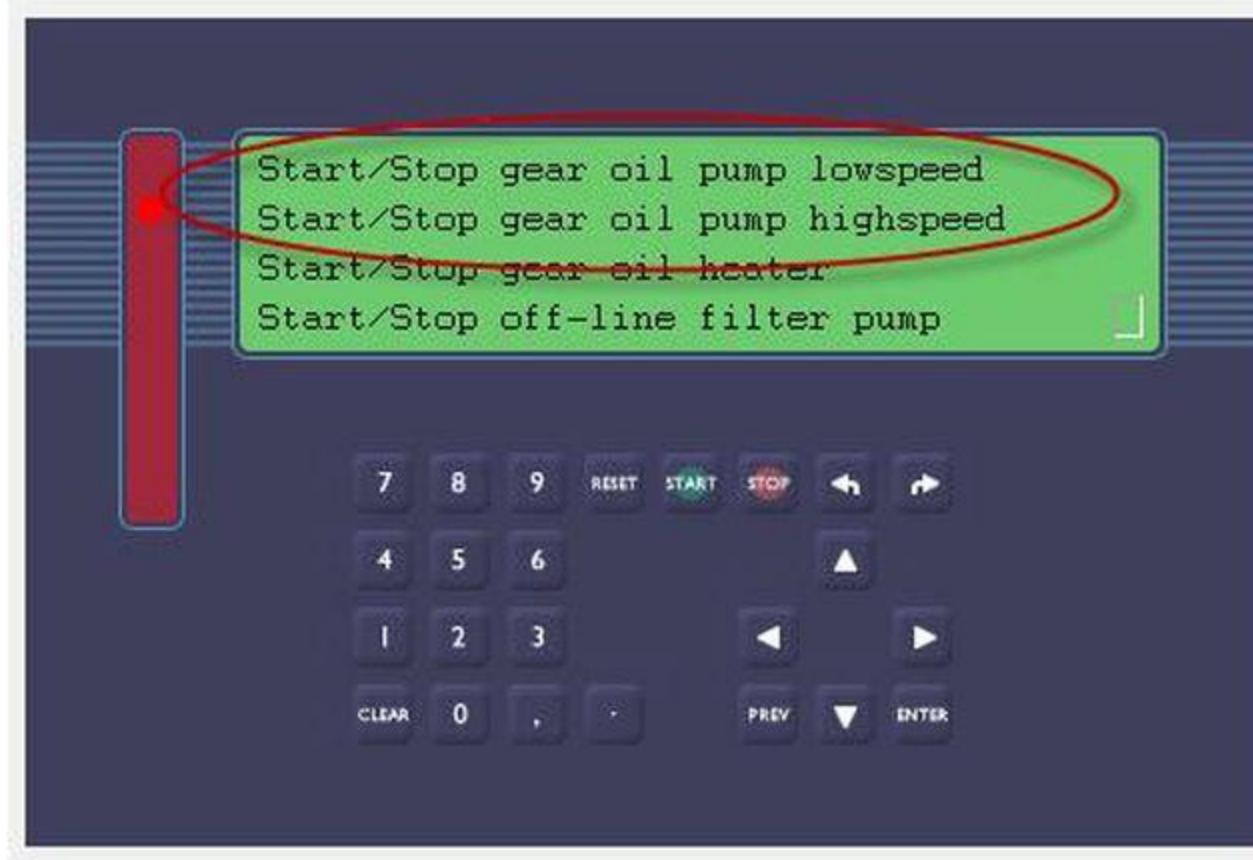
### Does this solve the problem?

- 1] Yes
- 2] No
- 3] I don't know

- **Explanation**

Attempt to start the pump in either low or high speed.

The pump can be stopped and started in the following menu: Service-Manual Test-Start/Stop Gear Oil Pump Low/High speed.



If the pump does not move, investigate the cause.

Preform LOTO on the +AT2 F14 and F15 breakers.

Remove the gear oil motor from the pump.

Try to manually turn the drive shaft of the motor to see if it spins. If it does not, the motor is seized and must be replaced.

If it does spin, investigate the pump or the coupling to see if they are seized.

#### Relevant documentation

| Description | DMS No. |
|-------------|---------|
|             |         |

Replacement of Gear Oil Pump Motor V82 [0020-3843](#)

| Relevant spare parts                |                          |
|-------------------------------------|--------------------------|
| Description                         | Item No.                 |
| Motor for Oil Pump                  | <a href="#">60093993</a> |
| OIL PUMP KF50RF2-D15 14BAR (60Hz)   | <a href="#">60111058</a> |
| OIL PUMP KF63RF2-D15, 14 BAR (50Hz) | <a href="#">60103477</a> |
| COUPLING CPL. 28/38-38/24           | <a href="#">60097505</a> |

## Correct the fault

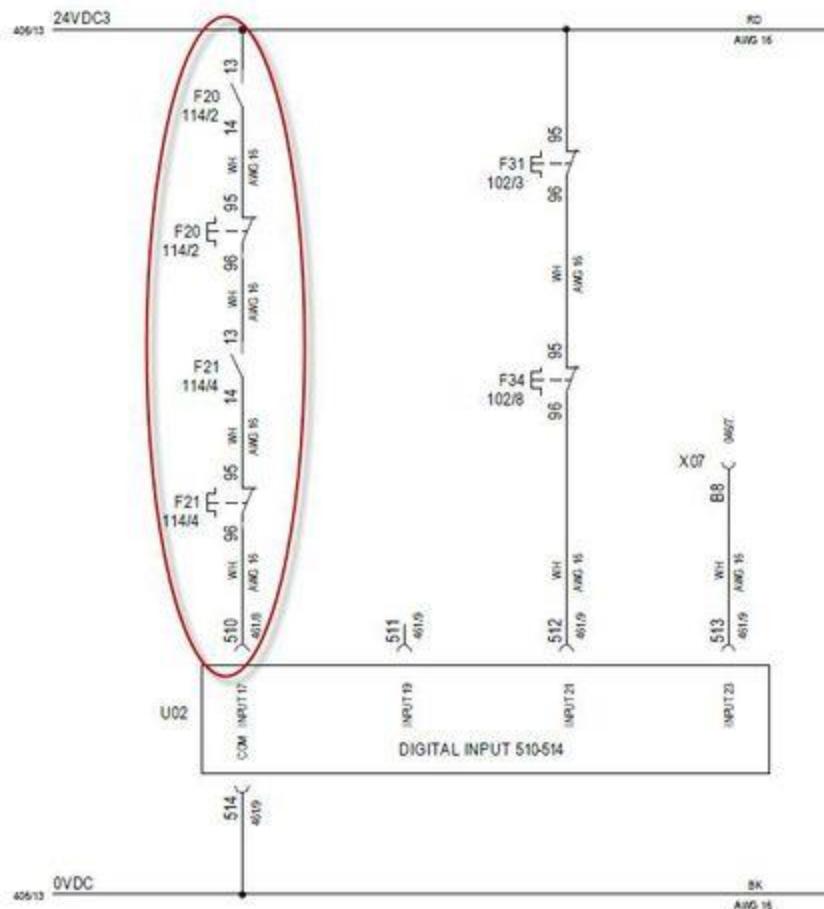
### Does this solve the problem?

- 1] Yes
- 2] No
- 3] I don't know

- **Explanation**

It is possible that overload feedback is missing, even if the motor is not defective.

With the breaker energised and the pump shut off check the 24VDC circuit below. There should be 24VDC at every point from top to bottom.



If there is not then replace the defective component.

If there is 24VDC all the way through the circuit but the AT2 TOI input 510 light is not on replace the AT2 TOI.

| Relevant spare parts            |                          |
|---------------------------------|--------------------------|
| Description                     | Item No.                 |
| CB 3RV1121-1HA10 5.5-8.0A (F14) | <a href="#">60004753</a> |

|                                  |                                 |
|----------------------------------|---------------------------------|
| CB 3RV1121-1KA10 9.0-12.5A (F15) | <a href="#"><u>60004755</u></a> |
| AUX CONTACT 3RV1901-1E           | <a href="#"><u>60004778</u></a> |
| TOI-II INTERF NM1500 TOWER       | <a href="#"><u>51701501</u></a> |