

Quick Test Guide for Multi-plex



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Disclaimer

The quick guide is only to provide a swift reference for certain tests that can be performed on the Nova LFS, it is not to replace maintenance manuals, job aids or any other training material. If any problems or concerns occur please refer to the full manual.

Electric Fans Test Mode

Start test:

Master run switch **OFF**

Maintenance switch **ON**

Park brake **SET**

Start engine from rear

Fans will run in reverse for 10 seconds

1. **Hold** rear starter switch and engine compartments light switch for 3 sec
2. **Check** backup lights blinking every 4 sec
3. **Fans** have stopped (system in test mode)
4. **Hold** engine compartment lights for 1 sec
5. **Verify** fan rotation, reverse for 10 sec, forward 65%
6. **Hold** engine compartment light 1 sec, fans forward 100%
7. **Verify** current for fans, 155 Amps +/- 5A
8. **Hold** engine start to end

Coolant Fill

Master run switch **OFF**

Maintenance switch **ON**

Park brake **SET**

Set defroster to **HEAT**

Place HVAC switch **ON**

1. **Place** engine mode to center position
2. **Hold** engine start switch down for 5 seconds
3. **Hold** engine start switch for 1 second (all valves open, center brake & backup light flashing 2 second)
4. **Start** filling using quick connect fill (hold purge to release air)
5. **Hold** engine start switch for 1 second (circulating pump on, center brake & backup light flashing 1 second)
6. **Place** engine mode to rear position
7. **Fill** until rear tack reads "**FULL COLD LEVEL**"
8. **Remove coolant fill cap and run until engine reaches operating temperature**

Load Shed Test

Maintenance switch **ON**

1. **Place** master switch to run
2. **Hold** both left and right flash
3. **Turn** master switch off after 3 seconds
4. **Release** both flashers
5. **Maintenance** light will flash for 10 seconds
6. **Bus** will enter load shedding mode

Heating Component Test Bus (A/C)

Maintenance switch **ON**

Master run **OFF**

1. **Hold** mirror defroster switch on
2. **Release** switch
3. **Floor** fans will run at high speed
4. **Push** next stop button, fans will run at low speed
5. **Push** next stop button, floor heat valve (s) will cycle every 4 seconds

Heating Test (A/C)

Maintenance switch **ON**

1. **Start** bus
2. **Stop** heating system if starts automatic
3. **Using** parameters in speedometer wait till coolant reaches 65°C
4. **Hold** mirror defrost on for 3 seconds

The following valves and fans will be activated

1. Floor fans **HI**
2. Floor valve **OPEN**
3. Auxiliary heater **ON**

Wait 4 minutes or activate "Next stop"

1. Floor fans **HI**
2. Floor Valve **CLOSED**
3. Auxiliary heater **OFF**

Quick Test Auxiliary Heater

1. **Start** bus
2. **Hold** starter switch for 5 seconds

Heating Component Test Bus (Heat Only)

Component will run in sequence to 60 seconds or till the "Next stop" is activated.

Start test:

Master run switch **OFF**

Maintenance switch **ON**

Mirror defrost switch **ON** for 3 seconds

1. Floor fans "Hi"
2. Floor fans "Low"
3. Floor heat valve +BL4, cycle 4 seconds
4. Roof unit fans "Hi"
5. Roof unit fans "Low"
6. Roof unit valve, cycle 4 seconds

Activate the "Rear engine start switch"

1. Engine compartment "By-pass valve"
2. Circulating pump
3. Haldex air condenser "Optional"

Heating Component Test Bus (Heat Only)

Test 1 "Heat mode", Test 2 "Vent mode". Test 1 will end after 4 minutes or after "Next stop" is activated.

Start test 1: Heat Mode

Maintenance switch **ON**

Master switch **ON** engine running

Heating system **OFF**

Coolant temperature above 55°C (check using Actia)

Mirror defrost switch **ON** for 3 seconds

The following will be active:

- Floor fans "Hi"
- Floor valve "Open"
- Roof unit fans "Hi"
- Roof unit valve "Open"
- Auxiliary heat "On"
- Fresh air "Recirculated"

Start test 2: Vent Mode

Wait 4 minutes or activate "Next stop"

The follow will be active:

- Floor fans "Hi"
- Floor valve "Closed"
- Roof unit "Hi"
- Roof unit valve "Closed"
- Auxiliary heat "Off"
- Fresh air "100% fresh air"

Output Light Test

1. **Hold** left and right flasher for 3 seconds
2. **Release** switches
3. **Progress** illumination of all lights
4. **Press** either flasher to stop test

Input Continuity Test

Maintenance switch **ON**

Master run **OFF**

1. **Enter** input test mode on speedometer
2. **Put** chime switch on upper switch panel
3. **Press** T to start test
4. **Use** any input into V-BEA
5. **Chime** will sound if continuity is good

Actia Instrumentation

Master run **ON**

Park brake **SET**

Hold M button for 5 seconds

Use M or **T** to scroll up or down (must move in less than 5 seconds)

Highlight the selected item

Hold M & T for 1 second

For input or output test

Master run **OFF**

Park brake **SET**

Maintenance switch **ON**

1. **Hold M** button for 5 seconds
2. **Use M** or **T** to scroll to Input or output test
3. **Hold M & T** for 1 second
4. **Press T** to start test
5. **Press M** to stop

Actia Menu

Item	Description
1	Set Units
2	Contrast
3	Instrument Diag
4	Engine Faults
5	Eng. Hist. Faults
6	Clear Eng. Faults
7	Trans. Faults
8	Trans. Hist. Faults
9	Clear Trans. Faults
10	ABS Faults
11	ABS Hist. Faults
12	Clear ABS Faults
13	Read Parameters
14	Ramp Counter
15	Brake Lining State
16	Bus Output Test
17	Bus Inputs Test
18	BEA Mux. State

