



A Program of ASTM International

Test Monitoring Center

<http://astmtmc.cmu.edu>

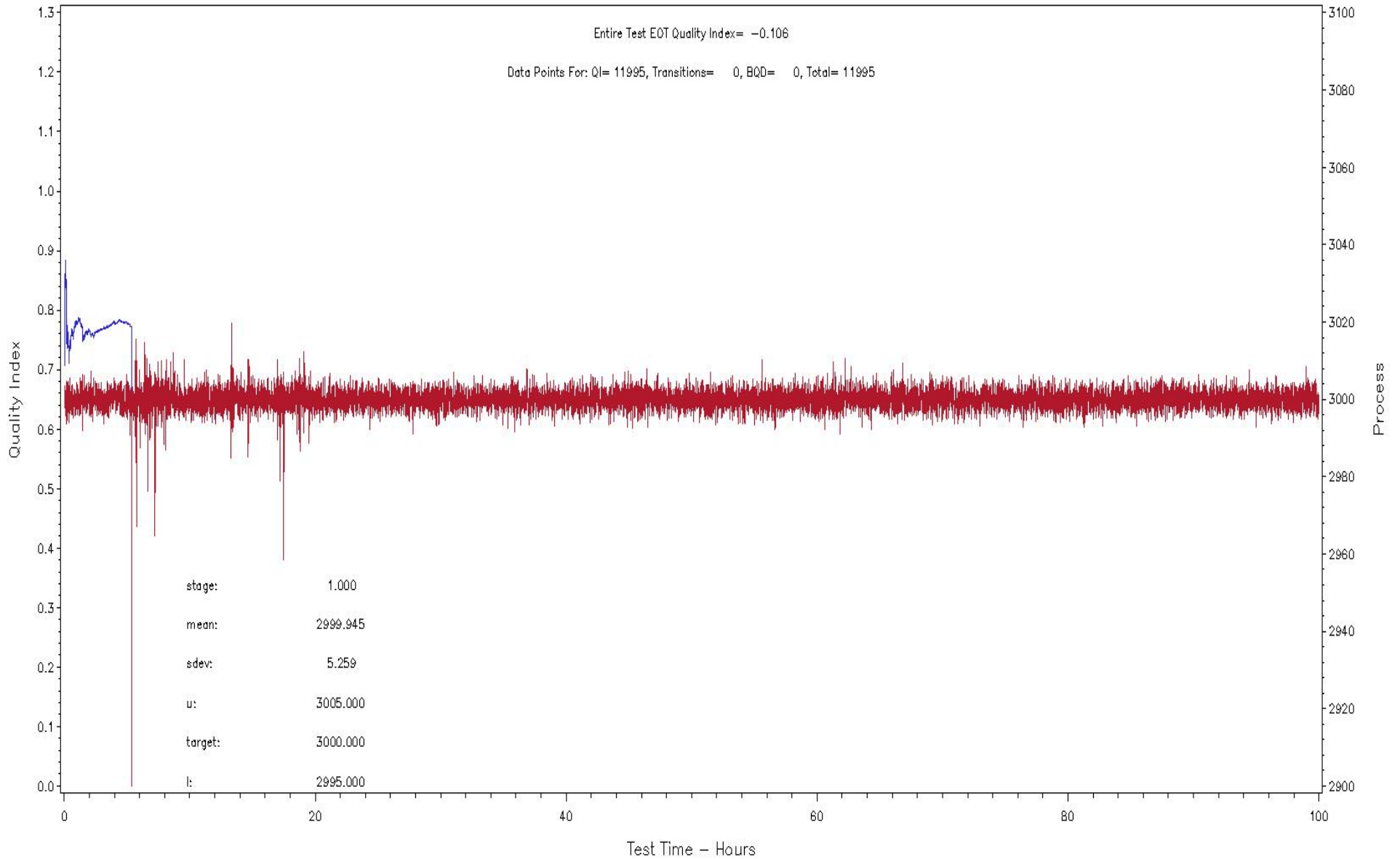
QI Plots of 1st Row of Matrix

Test keys 112934, 112909,
112909, 107864, 112941, 112939
and 108822

Speed

- EG108822, Negative QI (-0.106) for speed.
- Other tests were positive

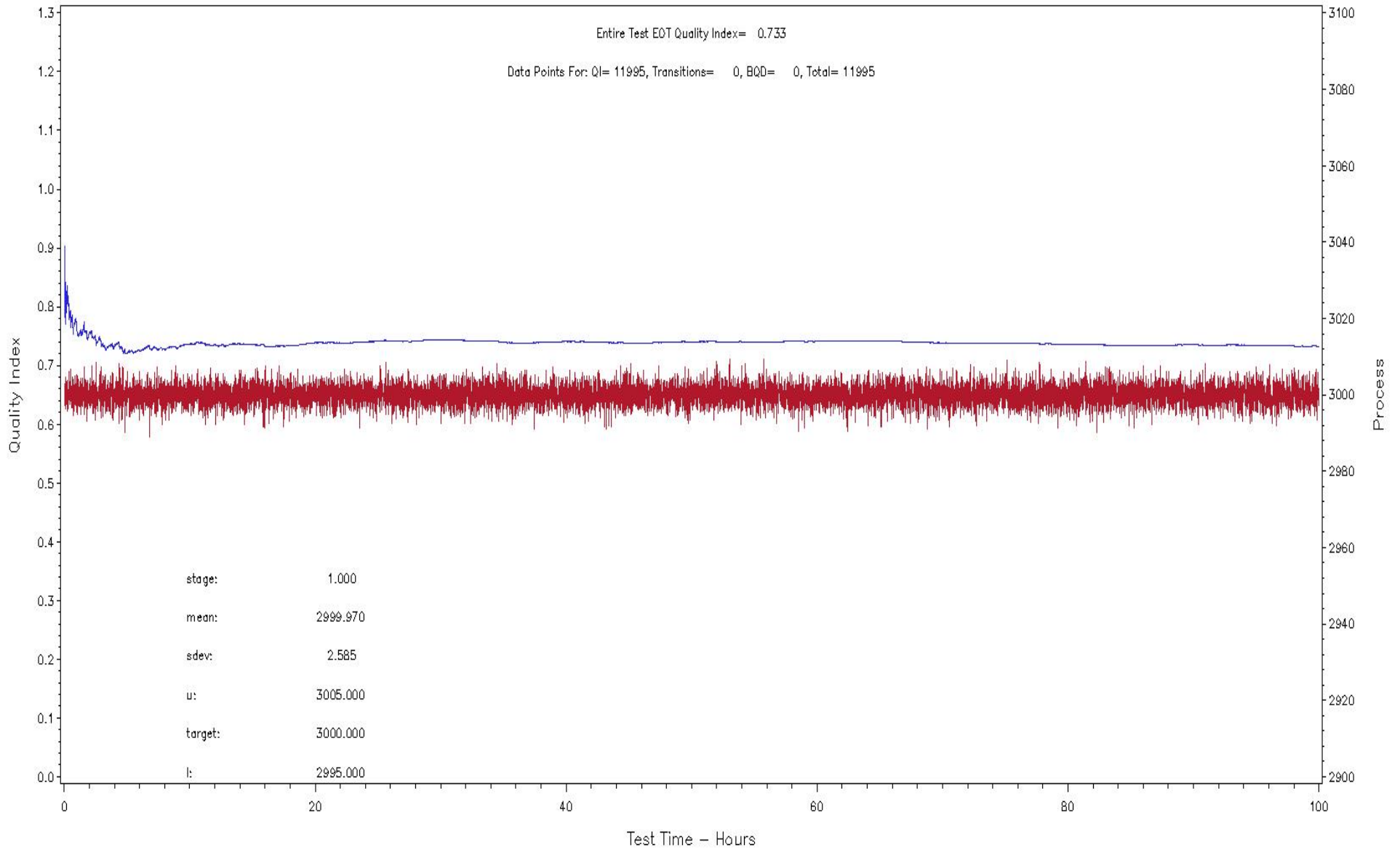
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Speed - r/min (CONTROL)
LAB= GStand= 180 CMR= 108822



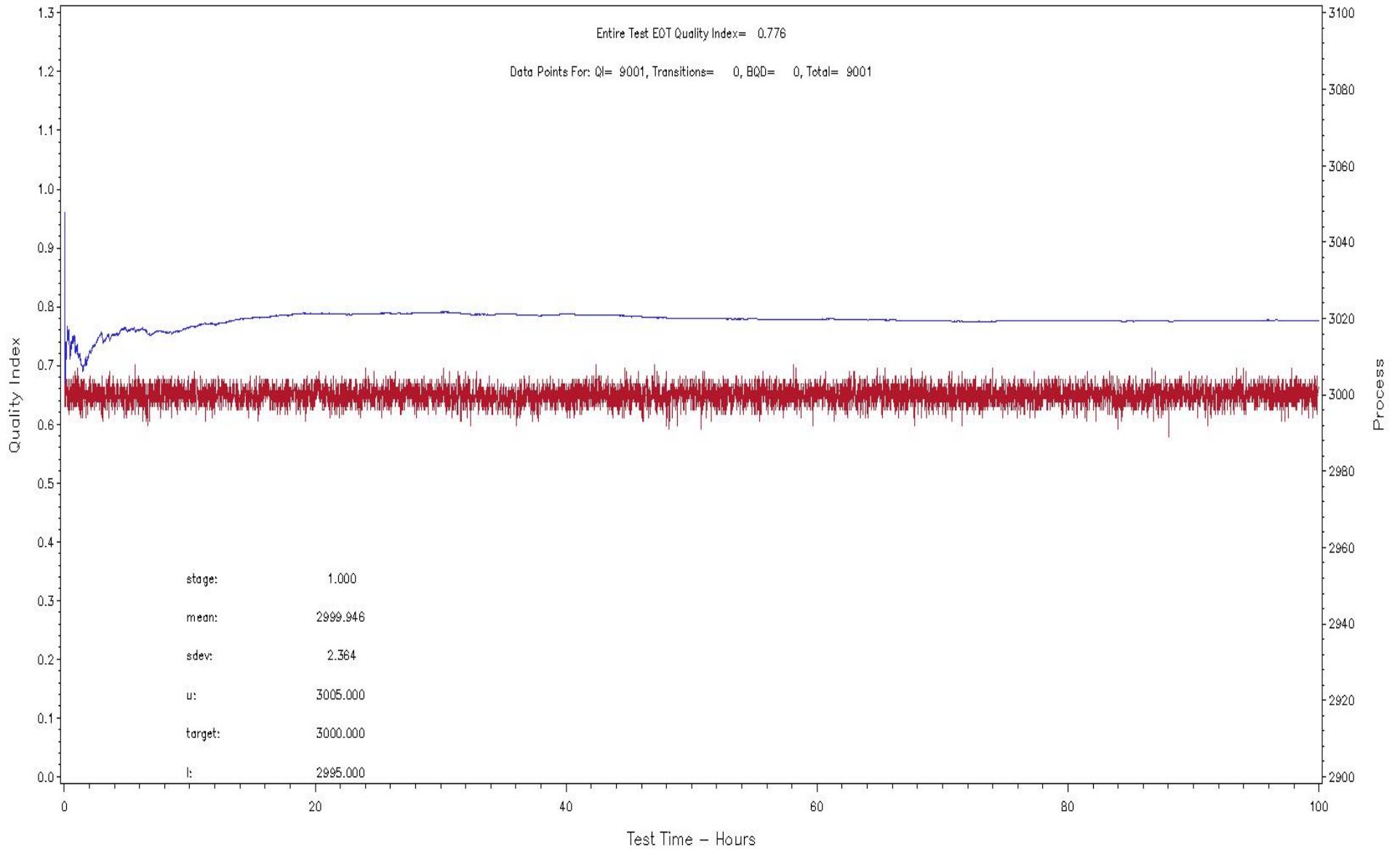
11/16/2015

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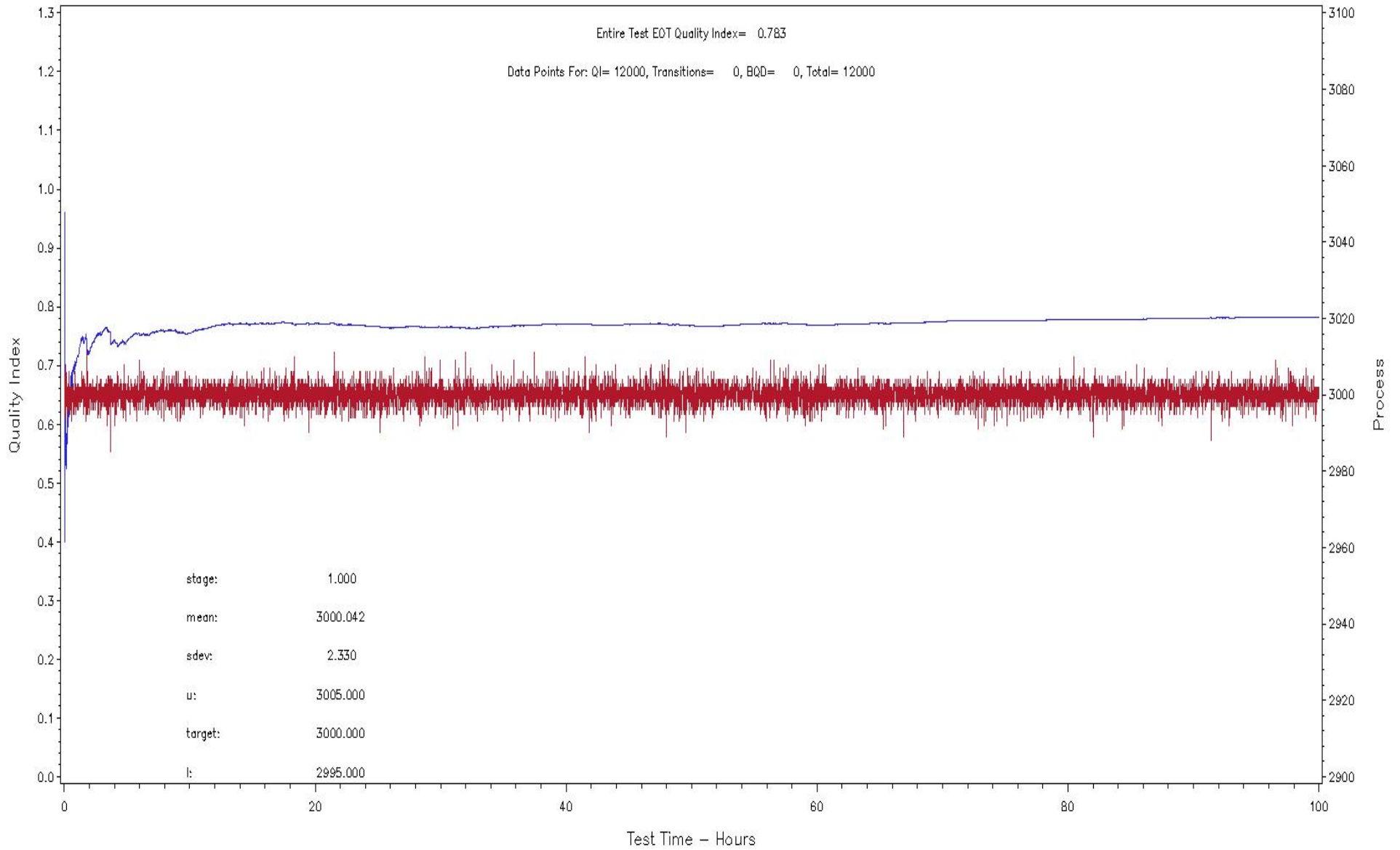
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Speed - r/min (CONTROL)
LAB= GStand= 126 CMIR= 112909



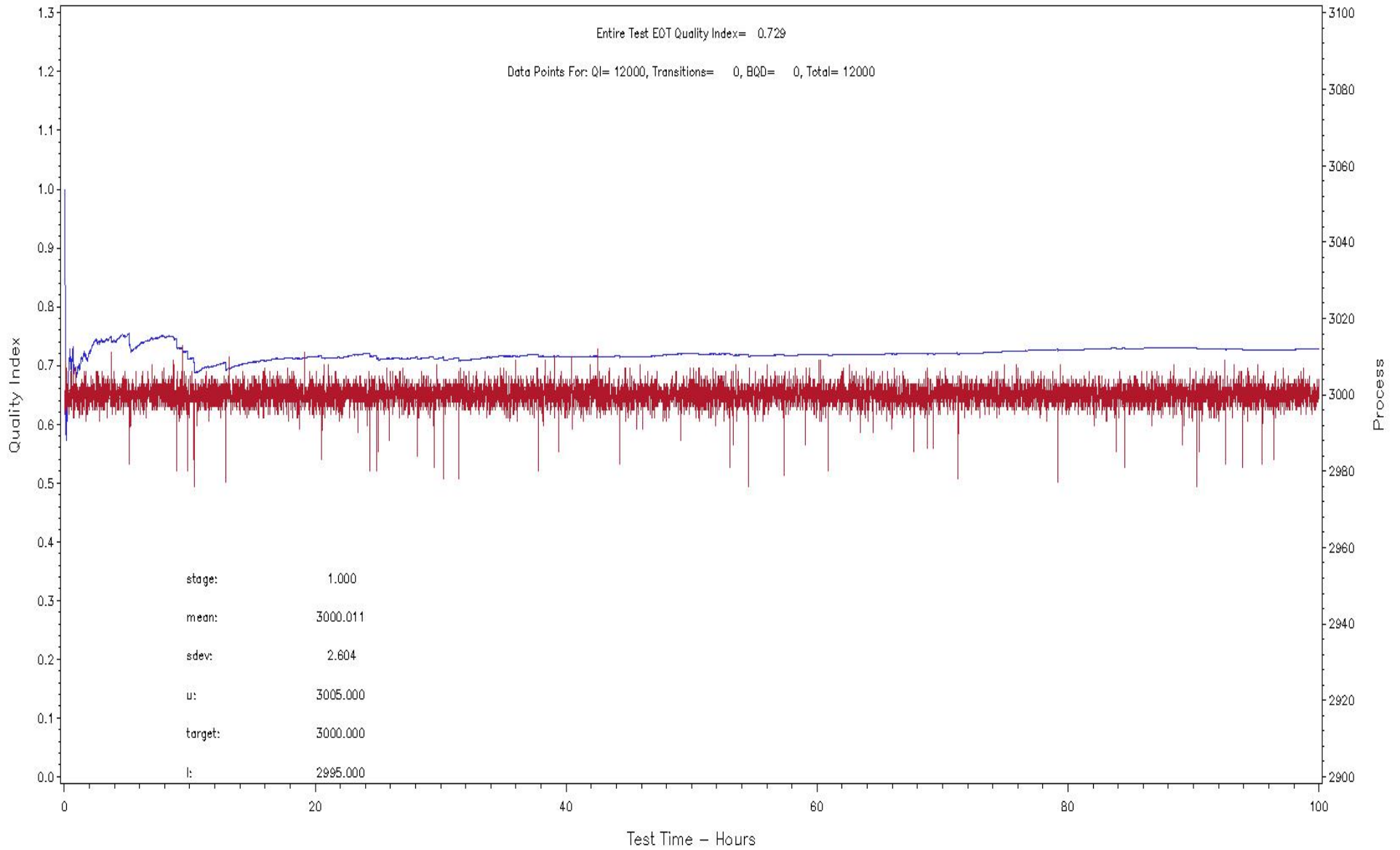
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Speed - r/min (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



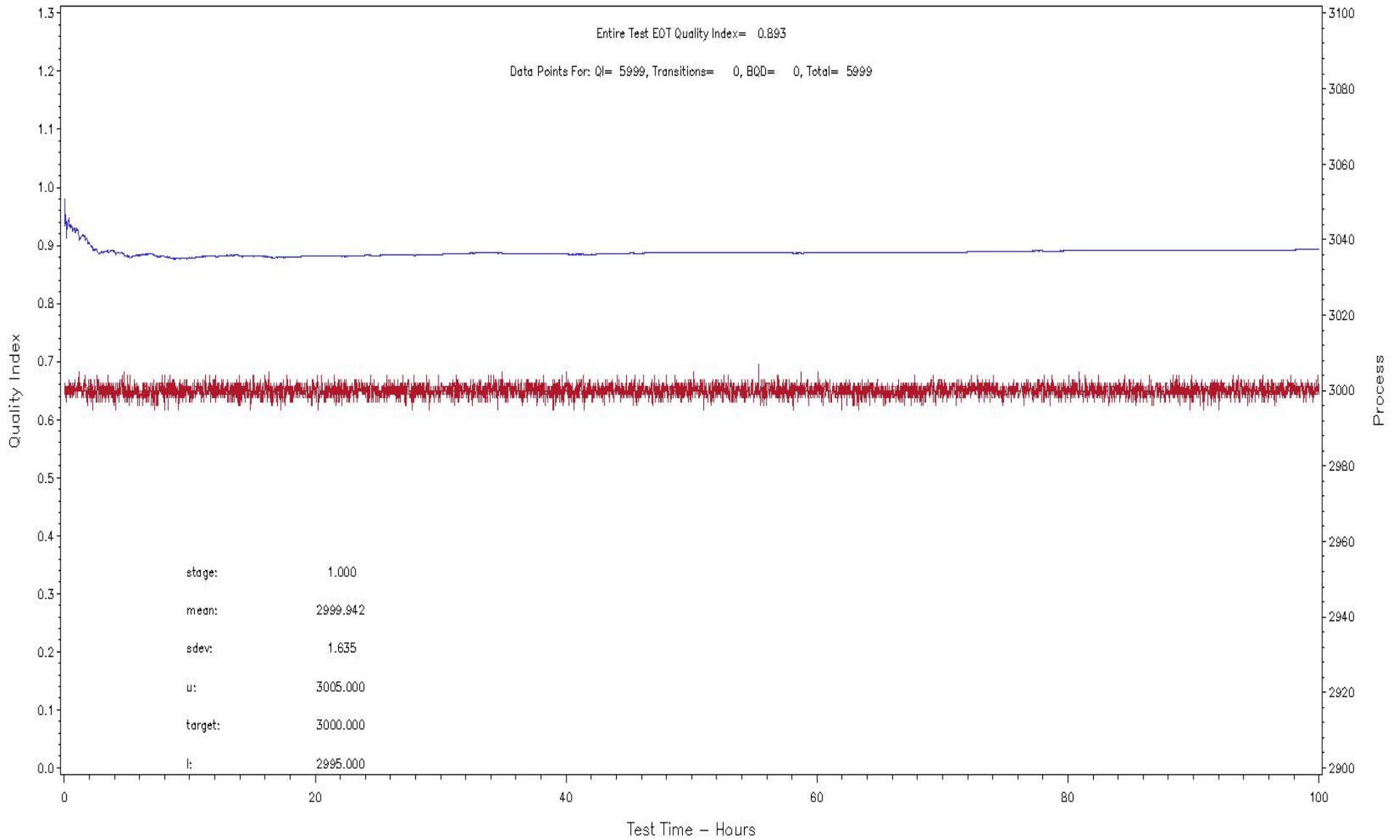
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Speed - r/min (CONTROL)
LAB= A Stand= 69 CMIR= 112925



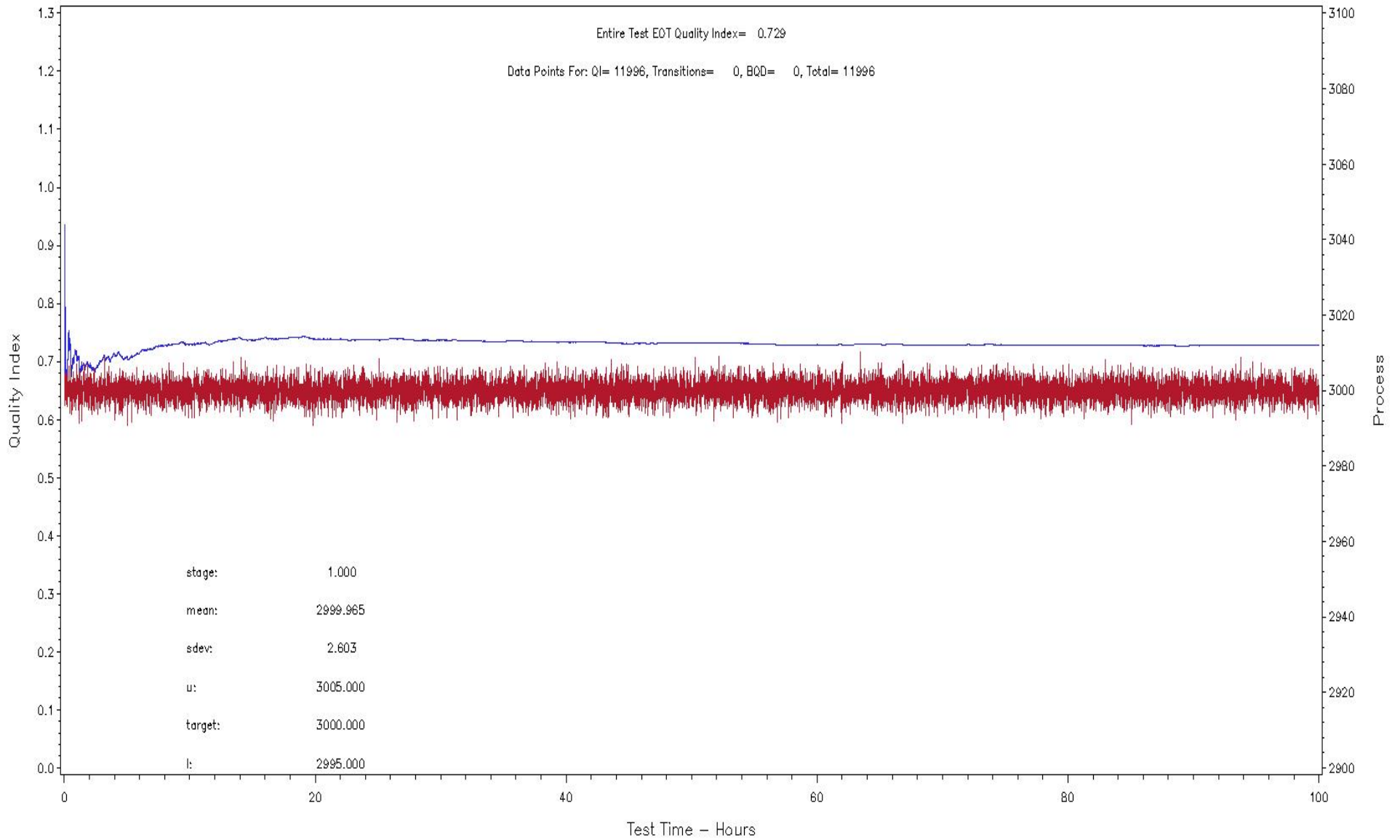
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Speed - r/min (CONTROL)
LAB= A Stand= 71 CMIR= 107864



GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Speed - r/min (CONTROL)
LAB= F Stand= 3111 CMIR= 112941



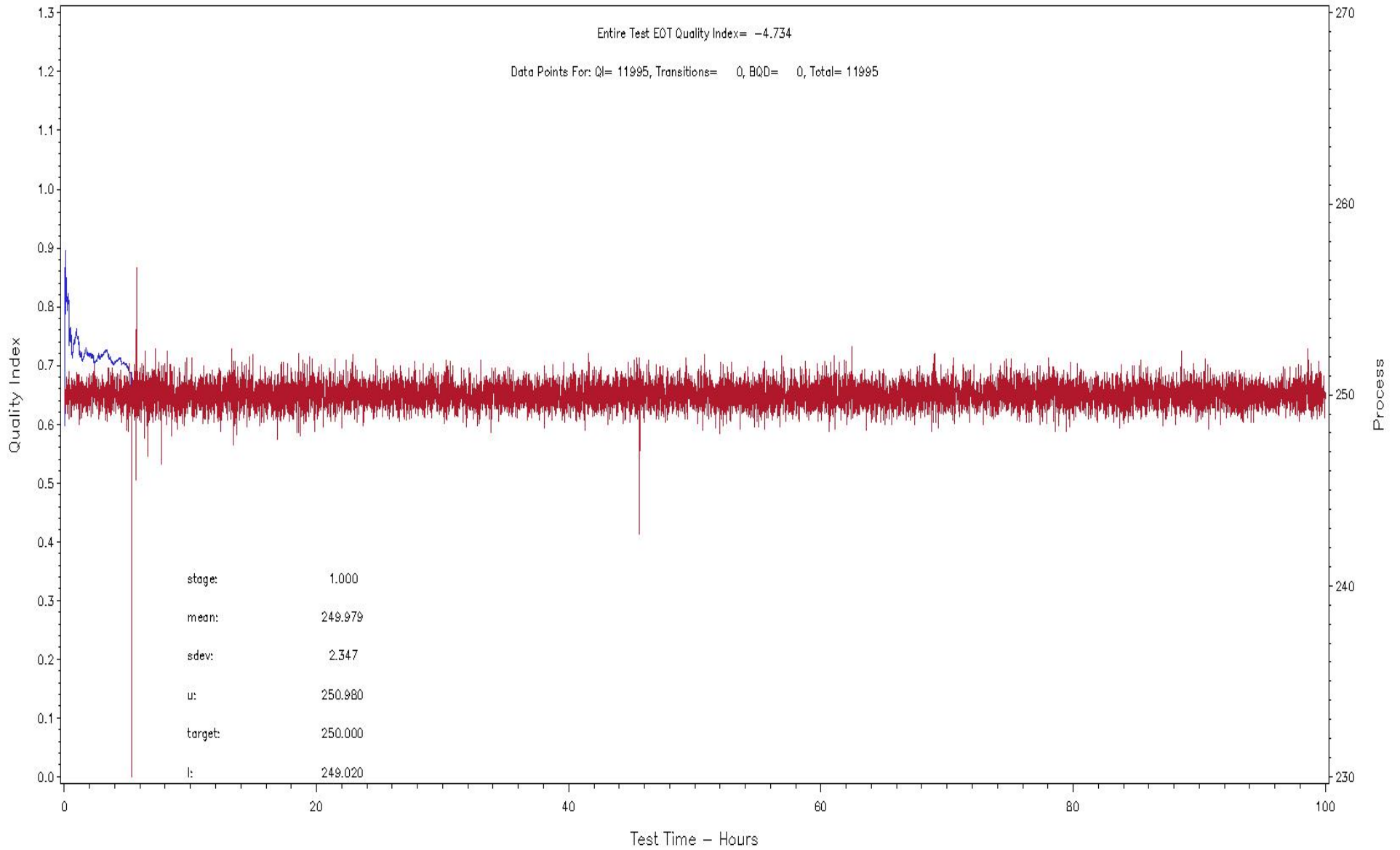
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Speed - r/min (CONTROL)
LAB= BStand= 333 CMIR= 112939



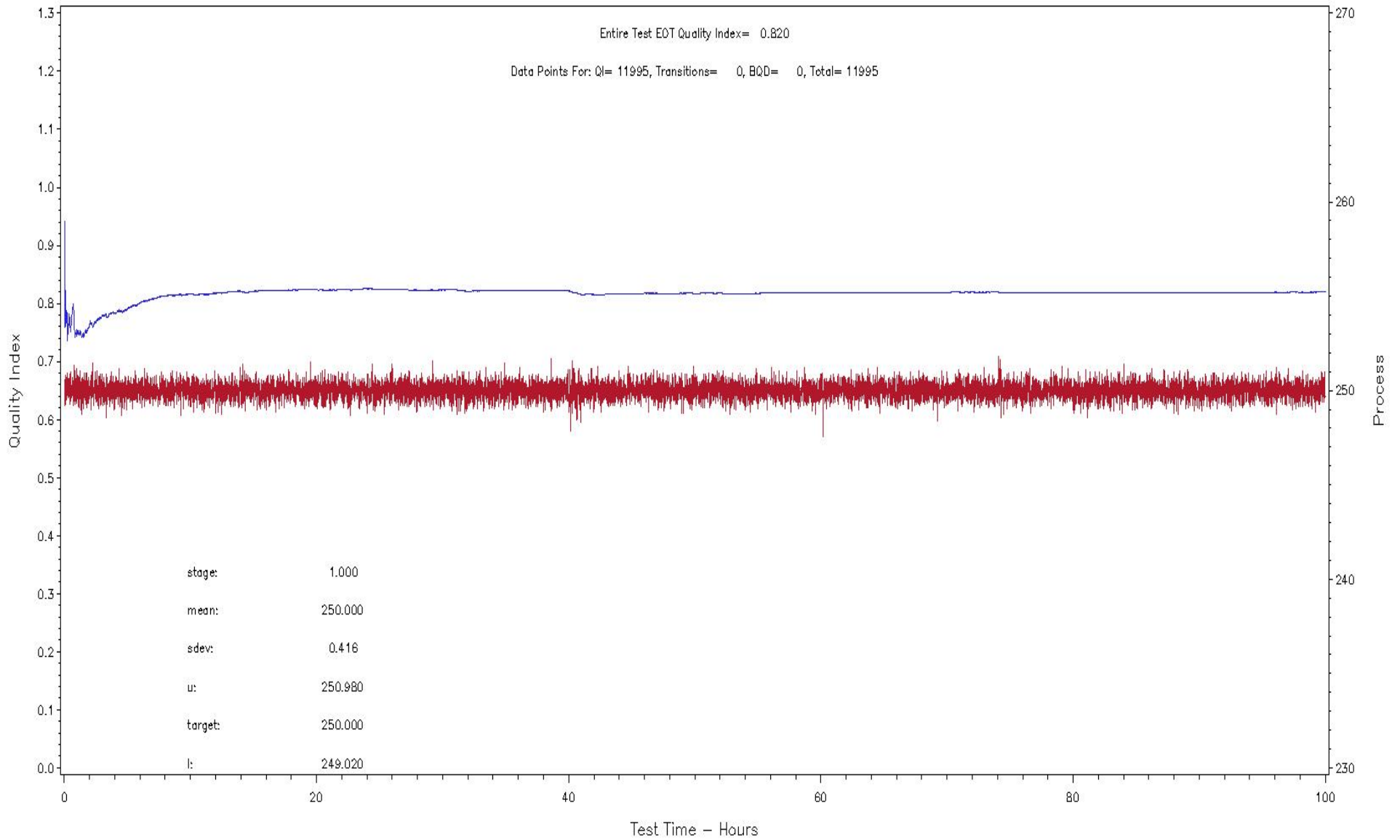
Load

- EG108822 had negative QI for load (-4.734)
- The remaining tests were all acceptable.

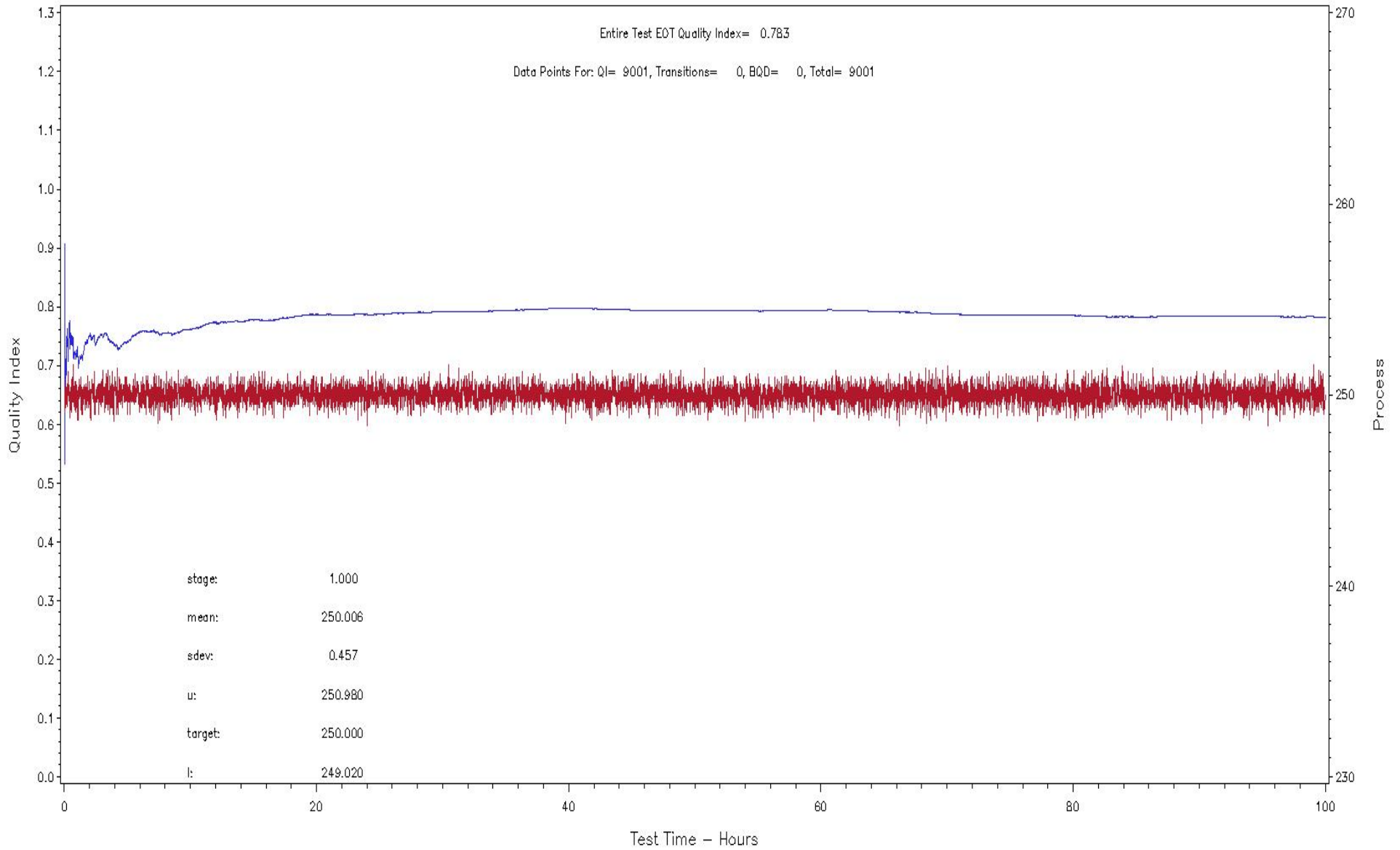
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Torque - Nm (CONTROL)
LAB= GStand= 180 CMIR= 108822



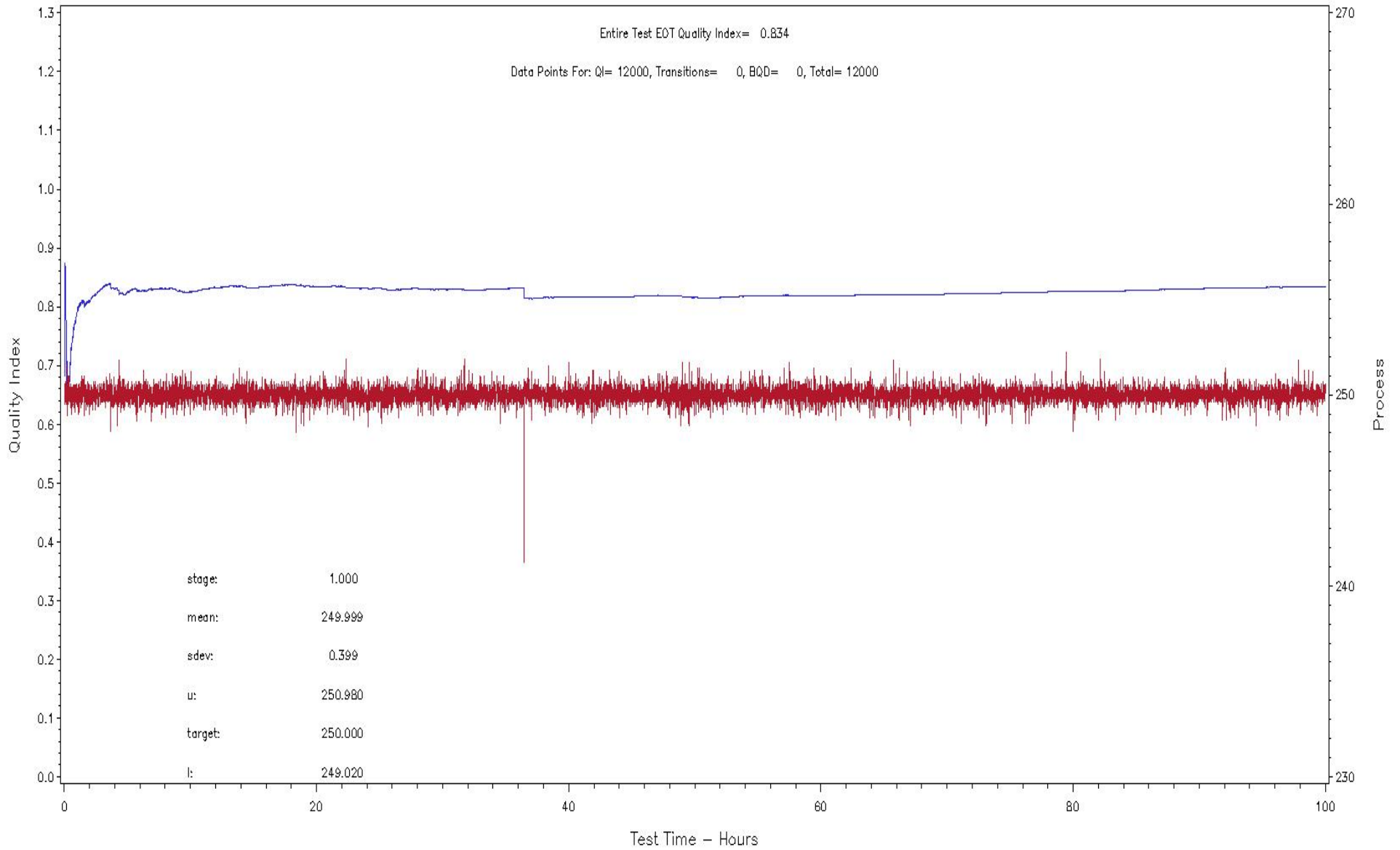
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Torque - Nm (CONTROL)
LAB= GStand= 126 CMIR= 112909



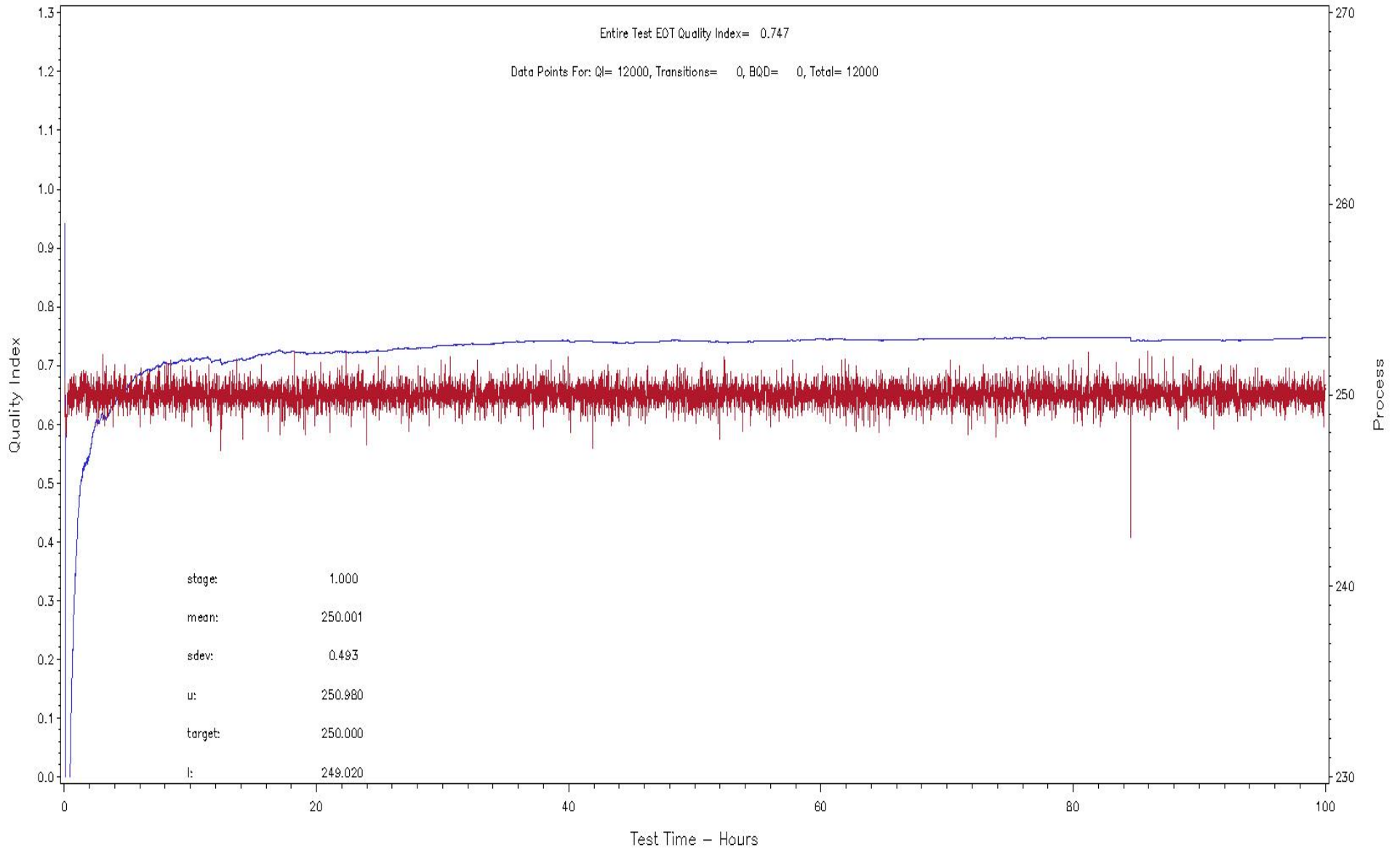
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Torque - Nm (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



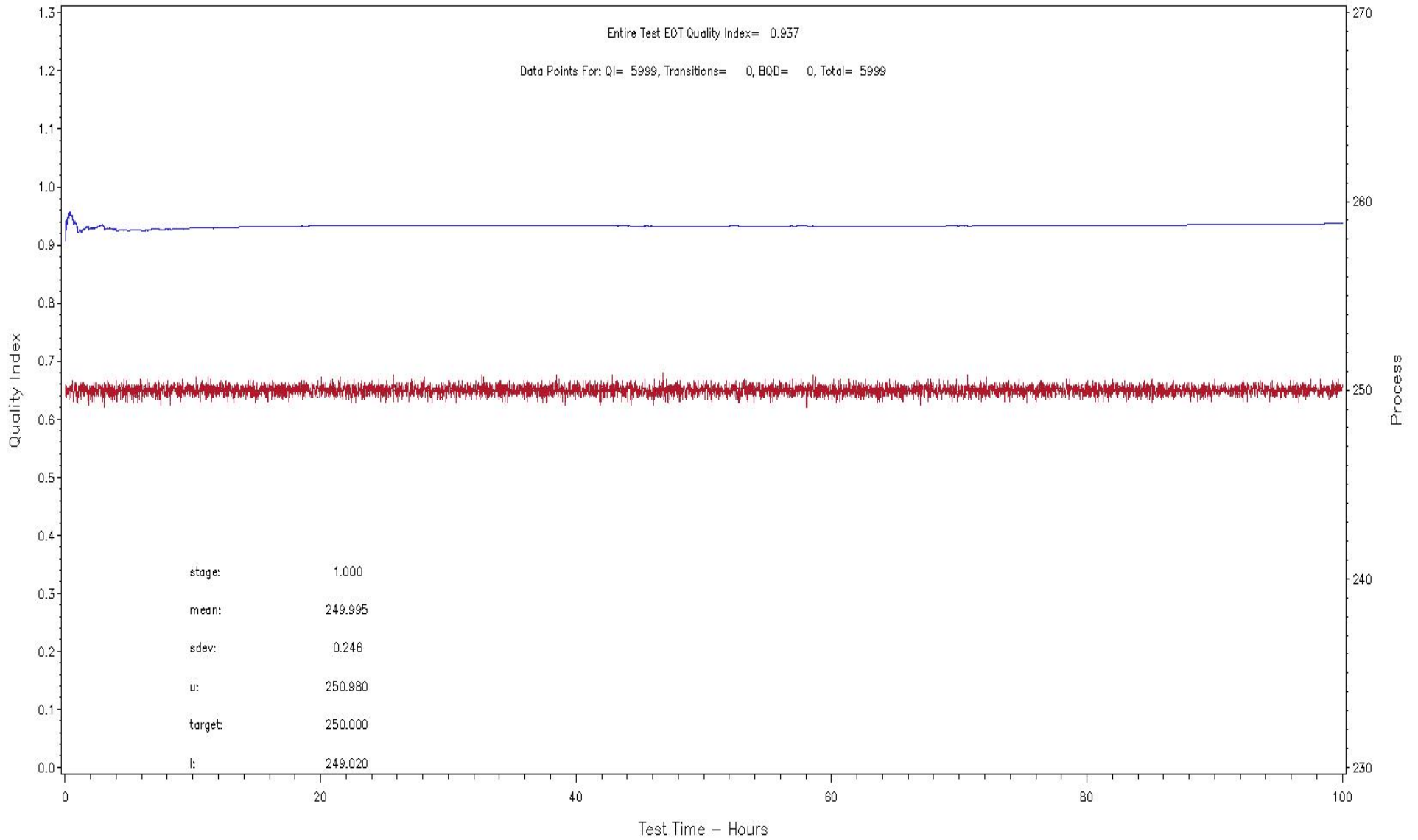
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Torque - Nm (CONTROL)
LAB= A Stand= 69 CMIR= 112925



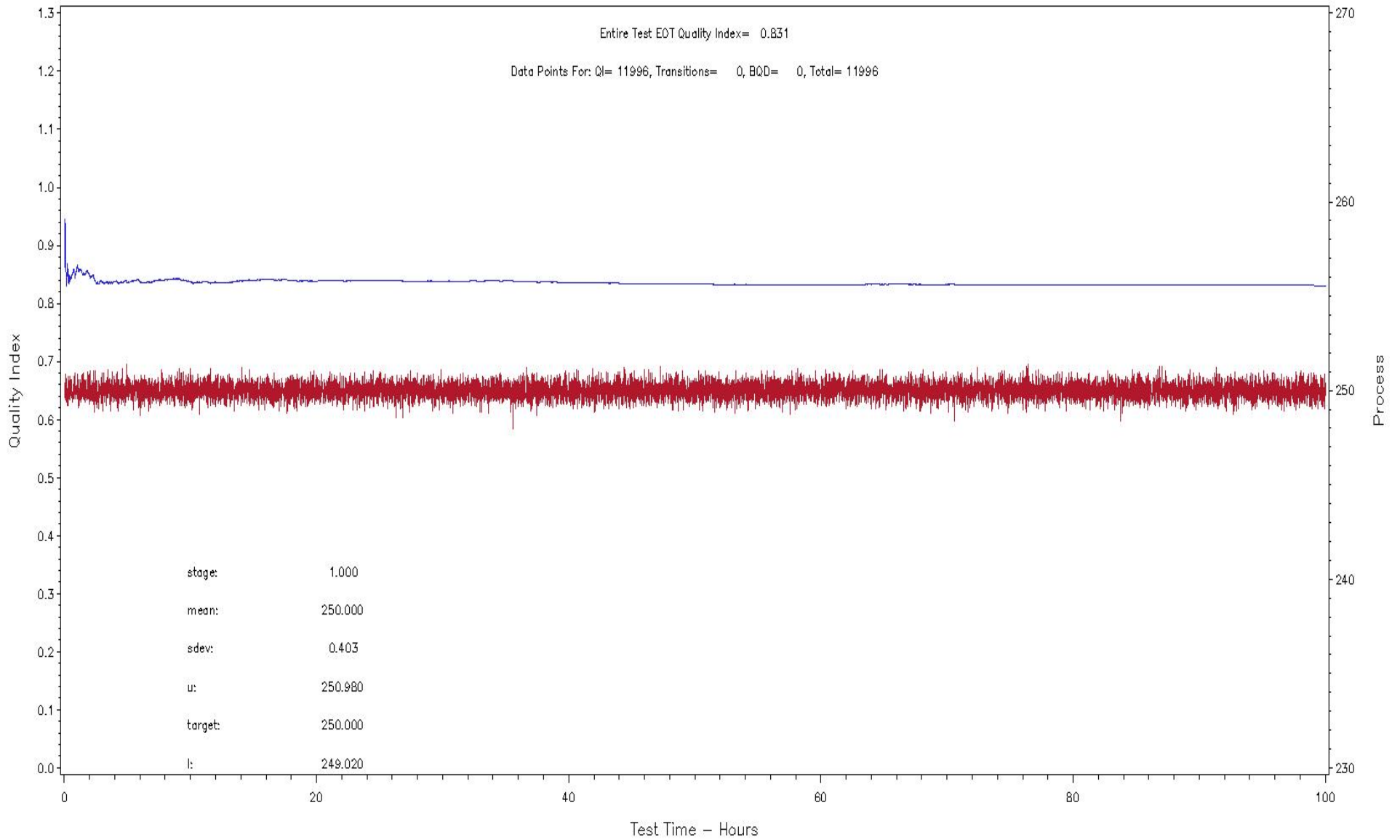
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Torque - Nm (CONTROL)
LAB= A Stand= 71 CMIR= 107864



GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Torque - Nm (CONTROL)
LAB= F Stand= 3111 CMIR= 112941



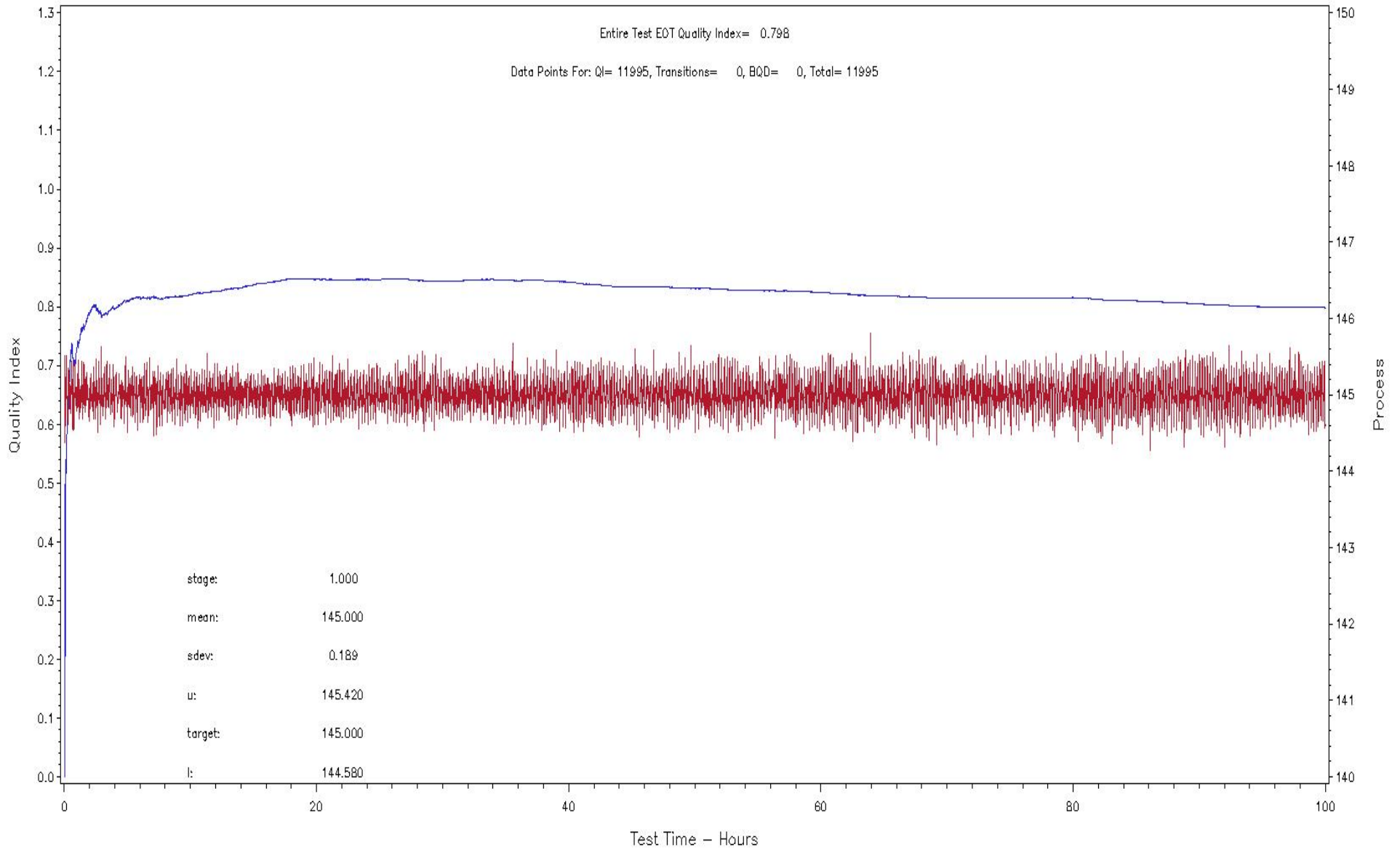
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Torque - Nm (CONTROL)
LAB= BStand= 333 CMIR= 112939



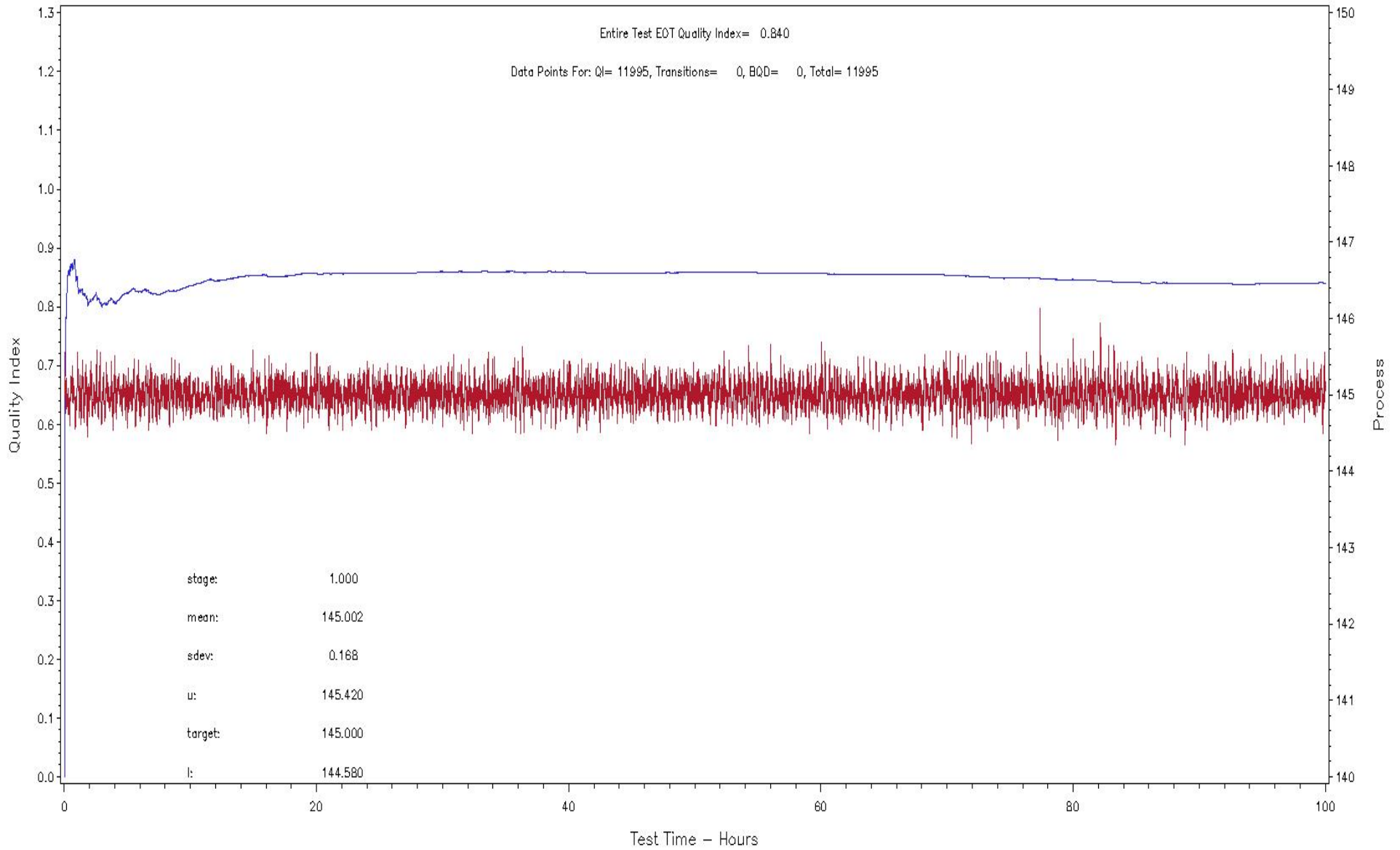
Oil Filter Return

- No Tests with negative QI

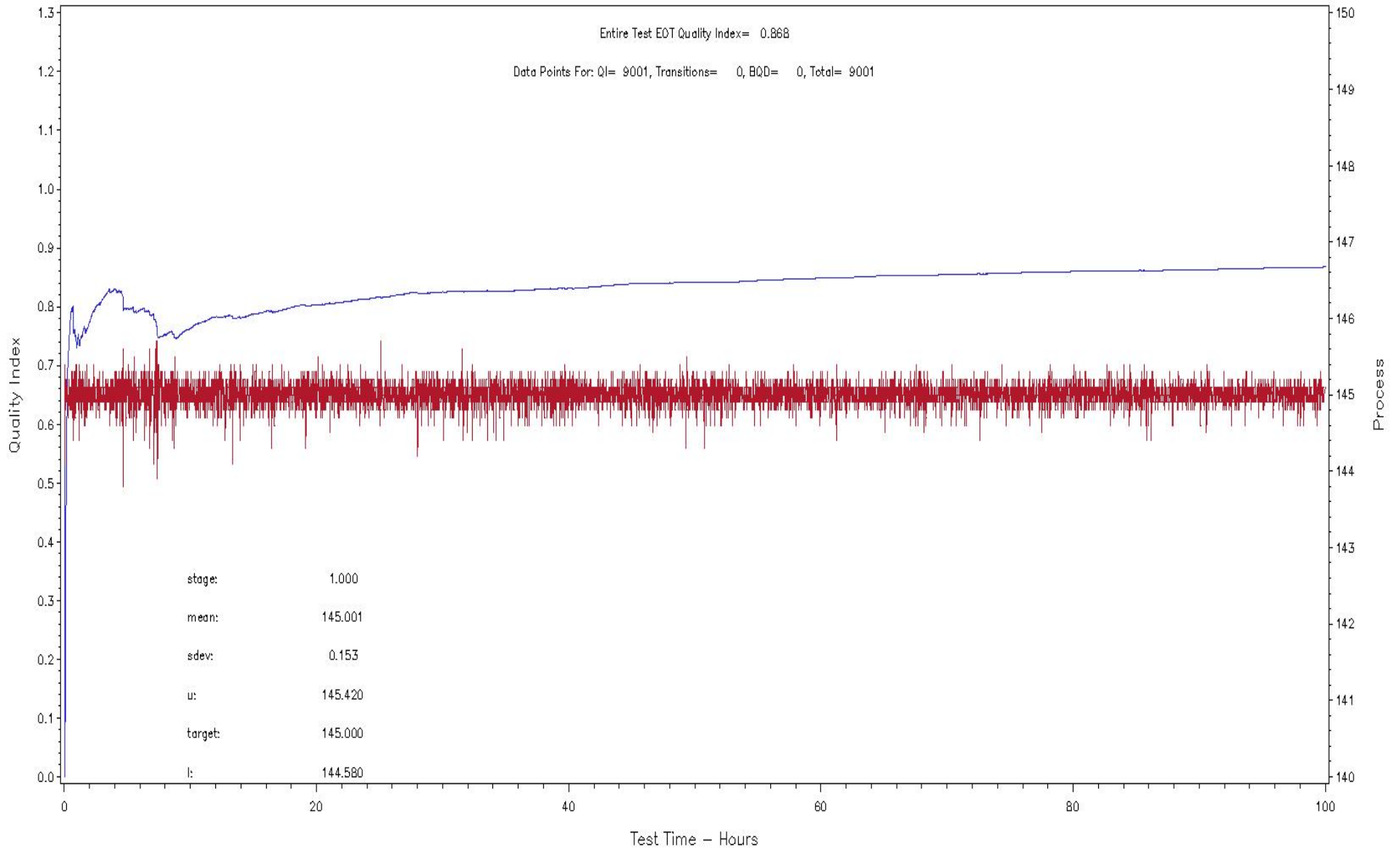
GMOD QUALITY INDEX OPERATIONAL REVIEW
Oil Filter Block Temperature – Degrees C (CONTROL)
LAB= GStand= 180 CMIR= 108822



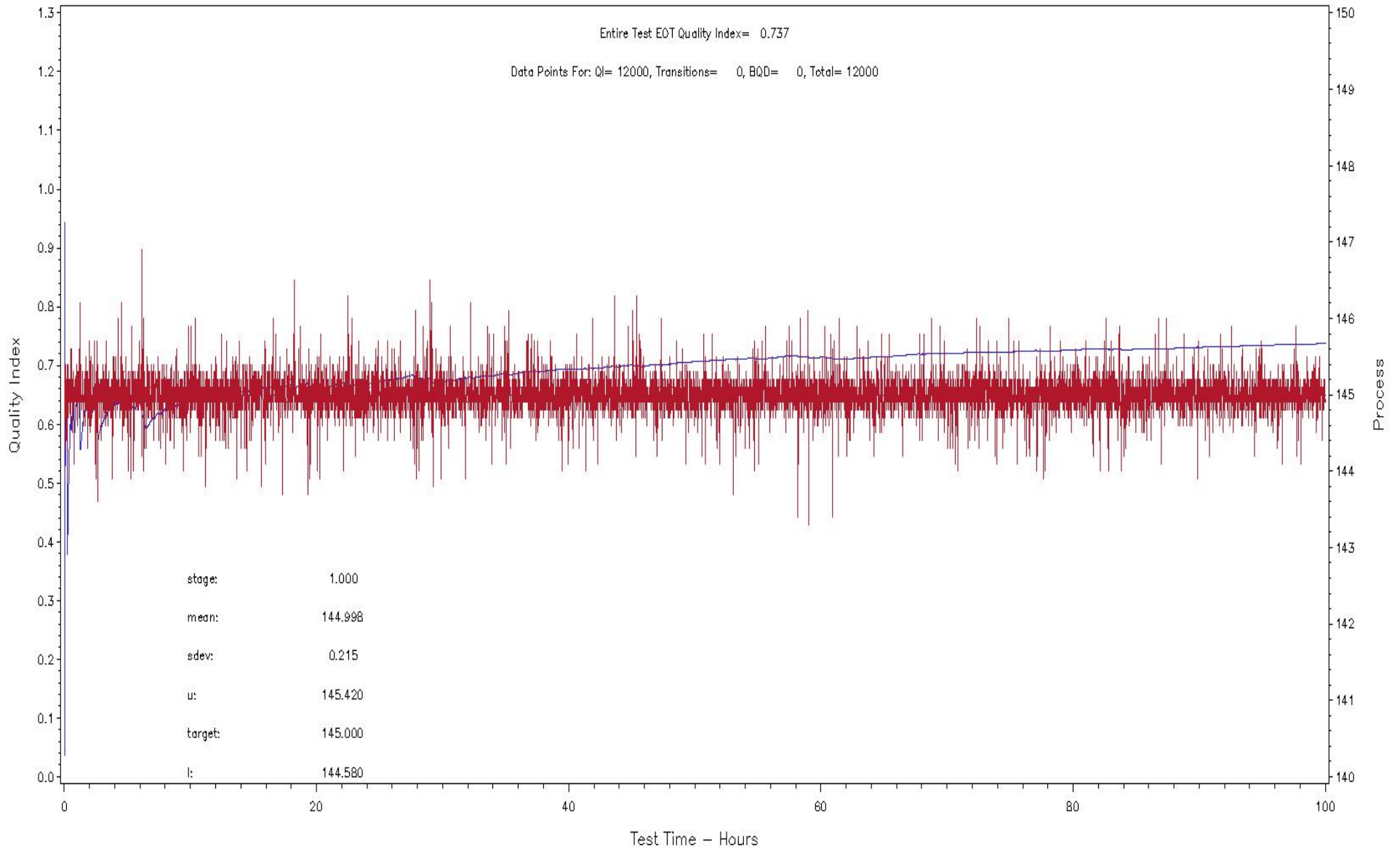
GMOD QUALITY INDEX OPERATIONAL REVIEW
Oil Filter Block Temperature – Degrees C (CONTROL)
LAB= GStand= 126 CMIR= 112909



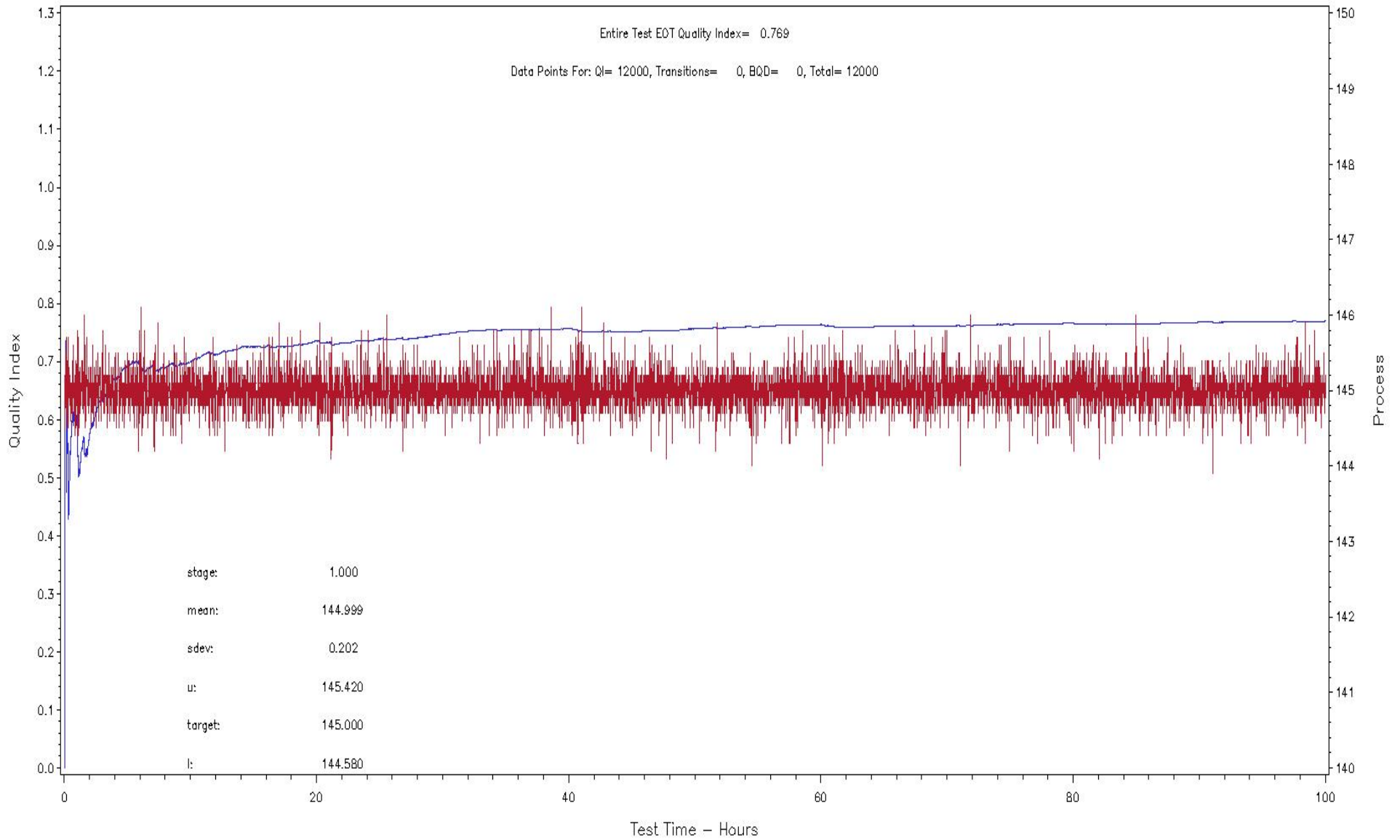
GMOD QUALITY INDEX OPERATIONAL REVIEW
Oil Filter Block Temperature – Degrees C (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



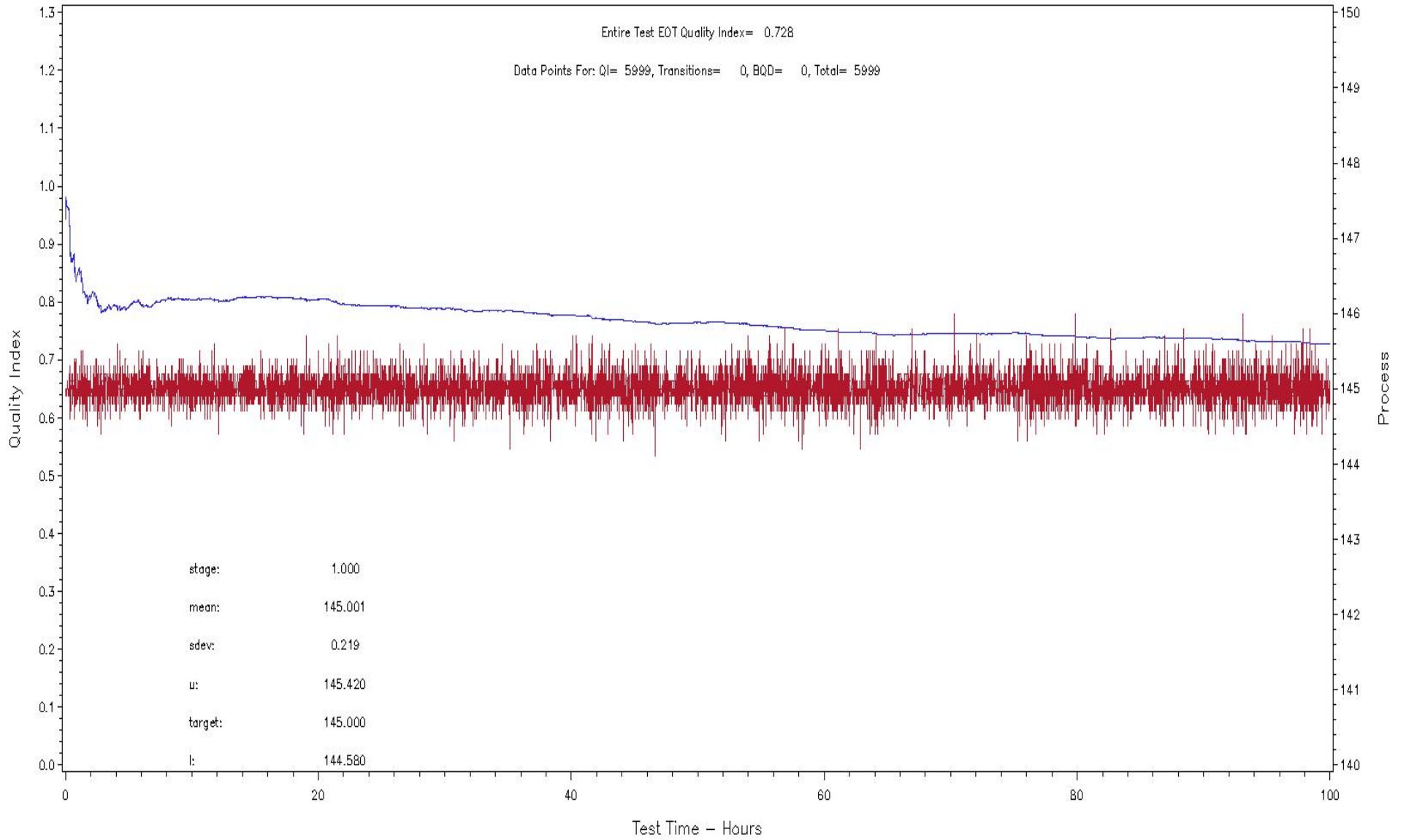
GMOD QUALITY INDEX OPERATIONAL REVIEW
Oil Filter Block Temperature – Degrees C (CONTROL)
LAB= A Stand= 69 CMIR= 112925



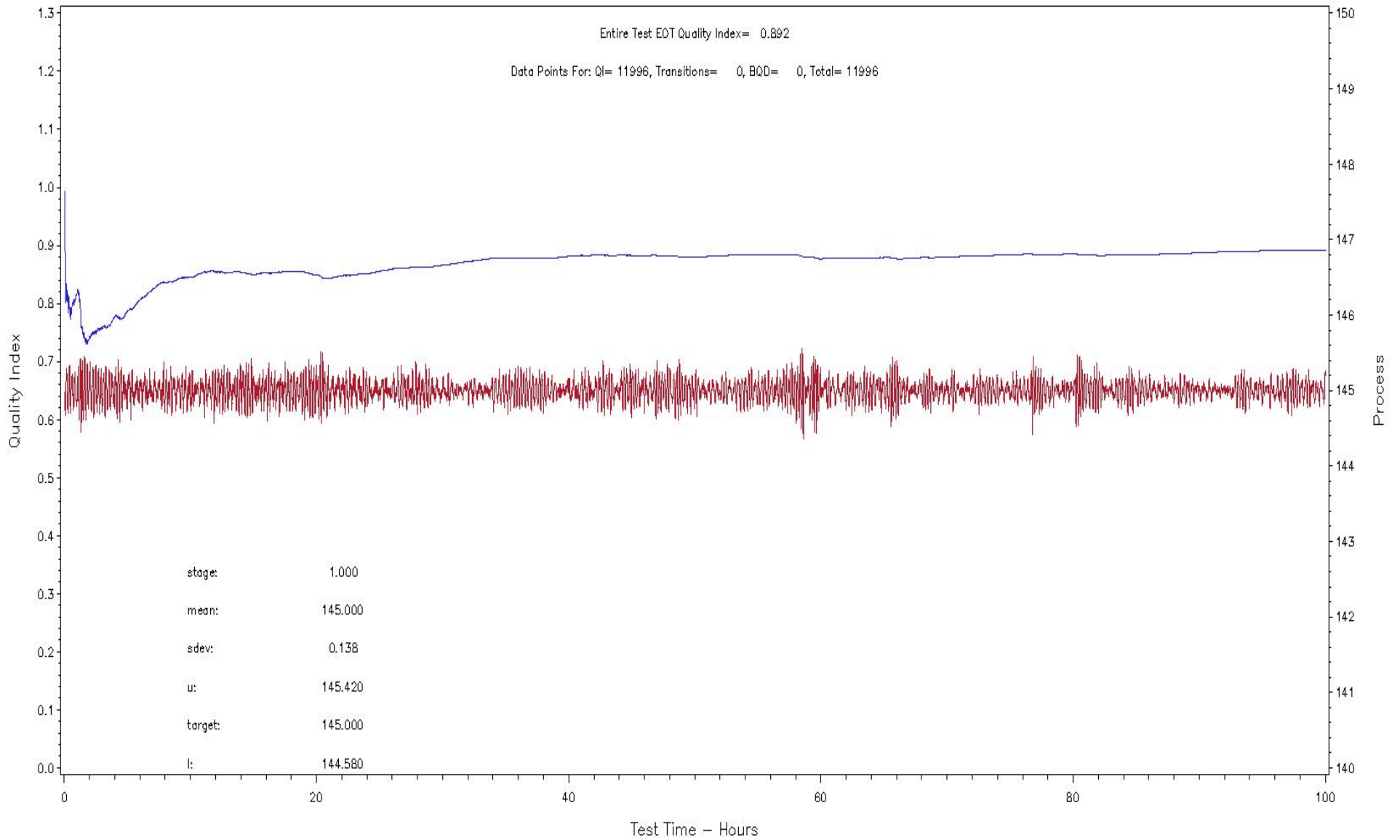
GMOD QUALITY INDEX OPERATIONAL REVIEW
Oil Filter Block Temperature – Degrees C (CONTROL)
LAB= A Stand= 71 CMIR= 107864



GMOD QUALITY INDEX OPERATIONAL REVIEW
Oil Filter Block Temperature – Degrees C (CONTROL)
LAB= F Stand= 3111 CMIR= 112941



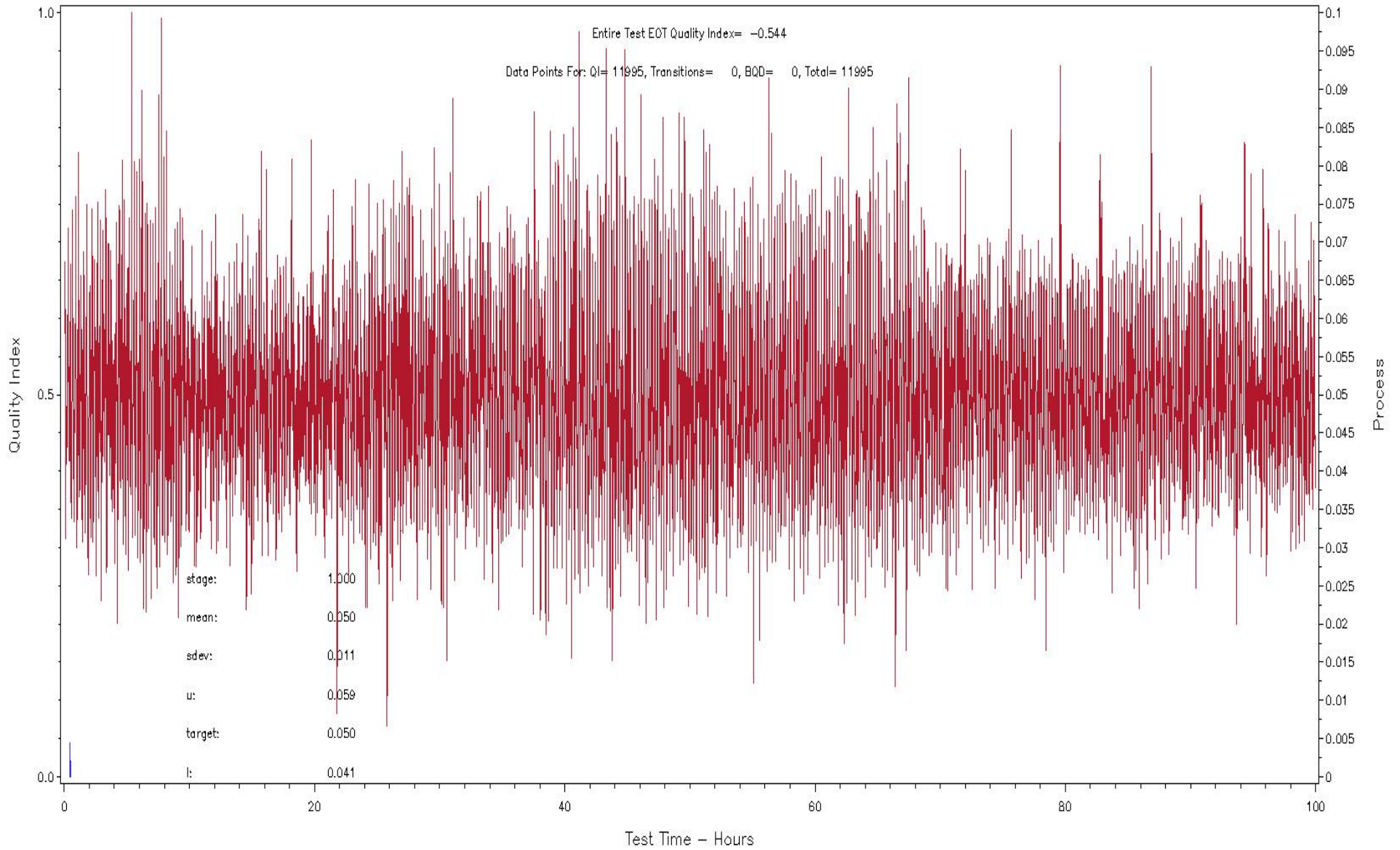
GMOD QUALITY INDEX OPERATIONAL REVIEW
Oil Filter Block Temperature – Degrees C (CONTROL)
LAB= BStand= 333 CMIR= 112939



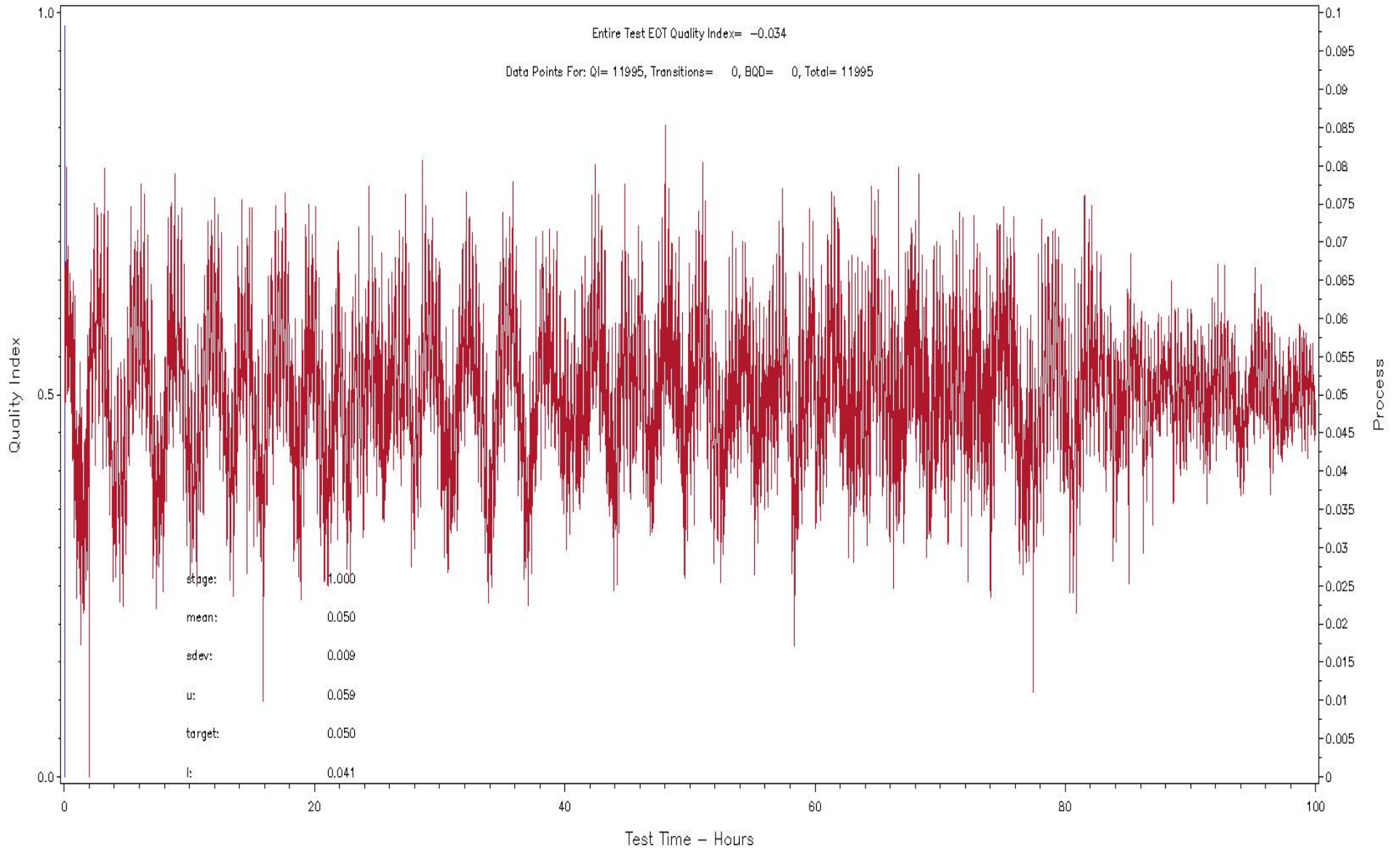
Intake Air Pressure

- Both testkeys 112909 and 108822 were negative for Intake Air Pressure.
- 112925 was just barely positive (0.035)
- No other tests with negative QI values

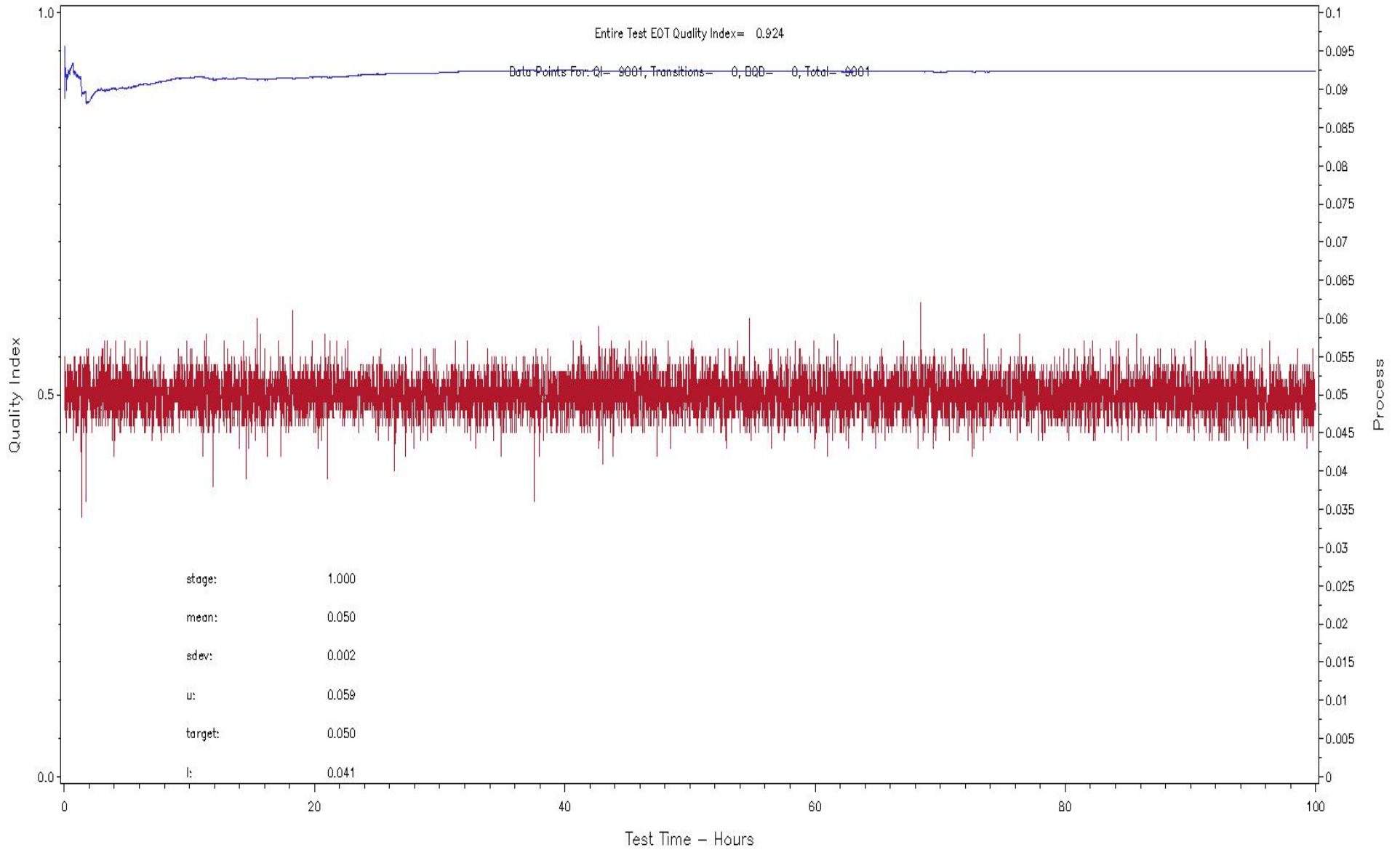
GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Pressure - kPa (CONTROL)
LAB= GStand= 180 CMIR= 108822



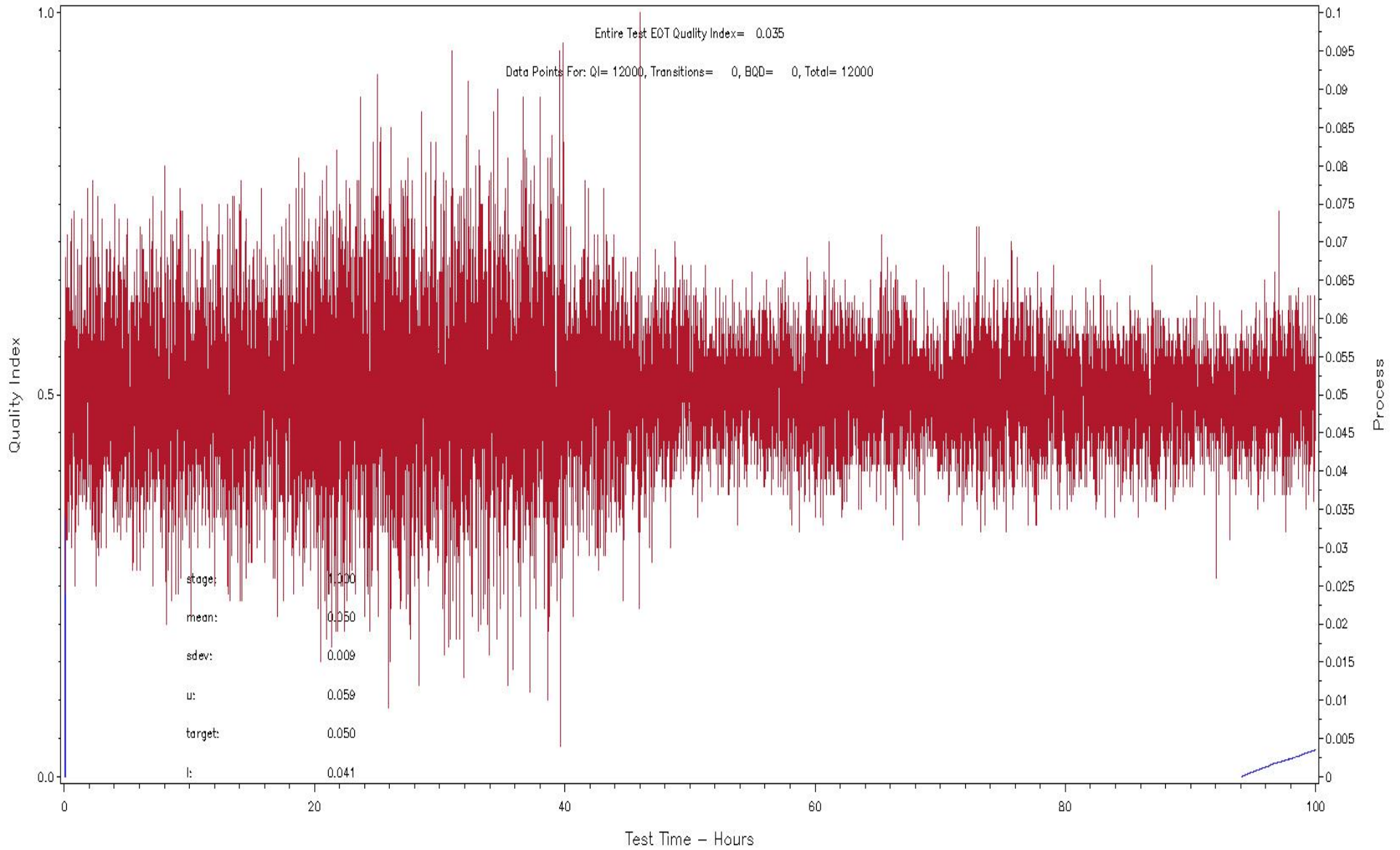
GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Pressure - kPa (CONTROL)
LAB= GStand= 126 CMIR= 112909



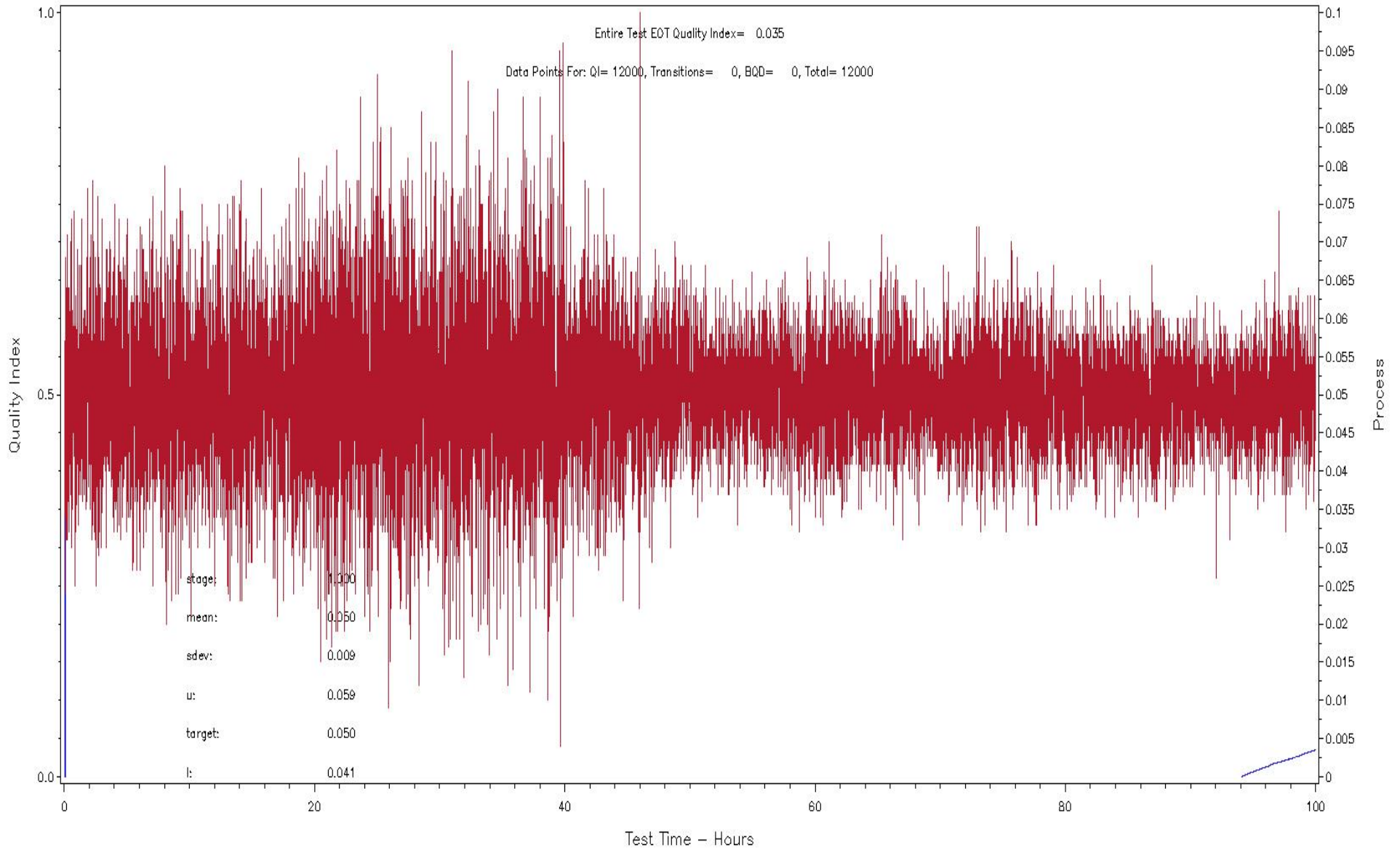
GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Pressure - kPa (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



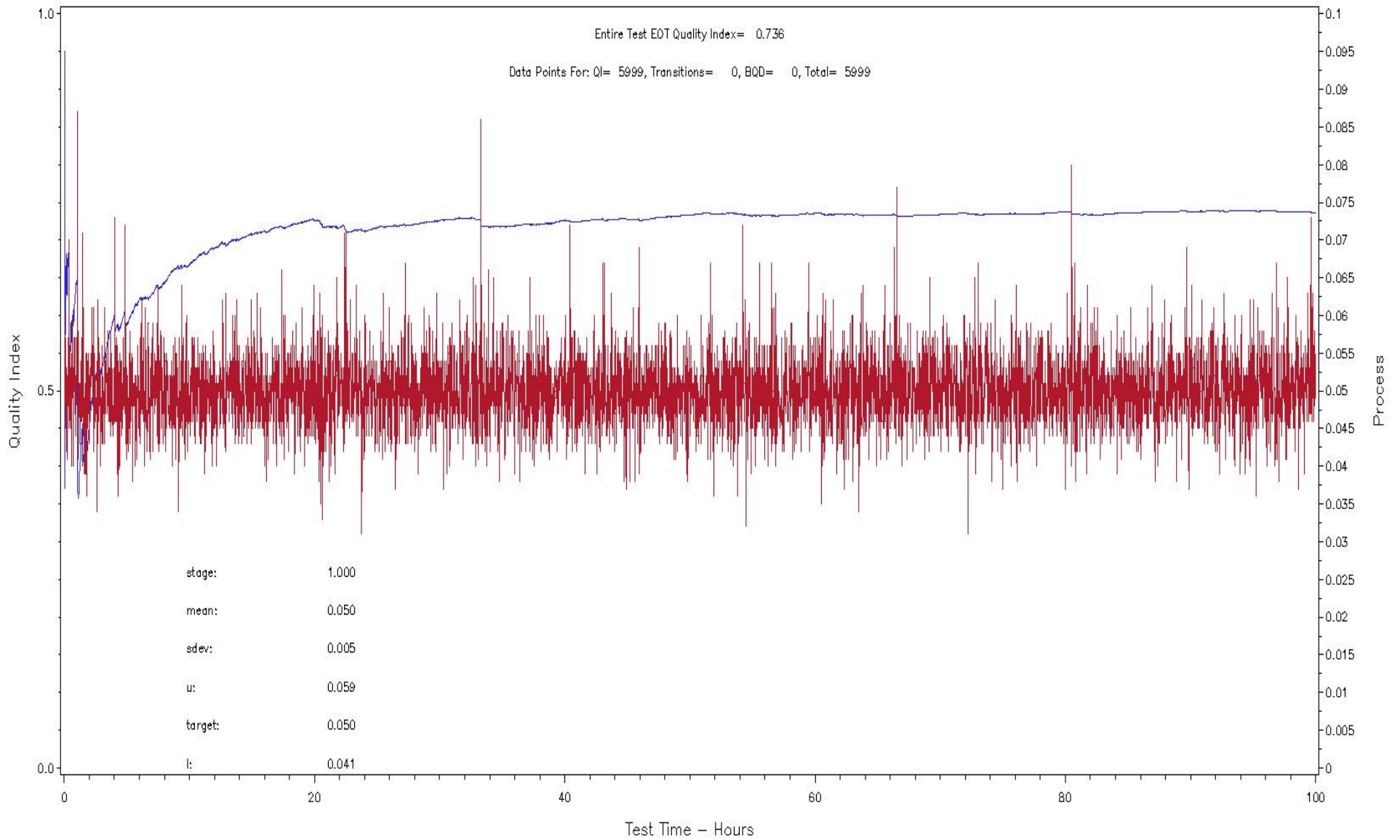
GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Pressure - kPa (CONTROL)
LAB= A Stand= 69 CMIR= 112925



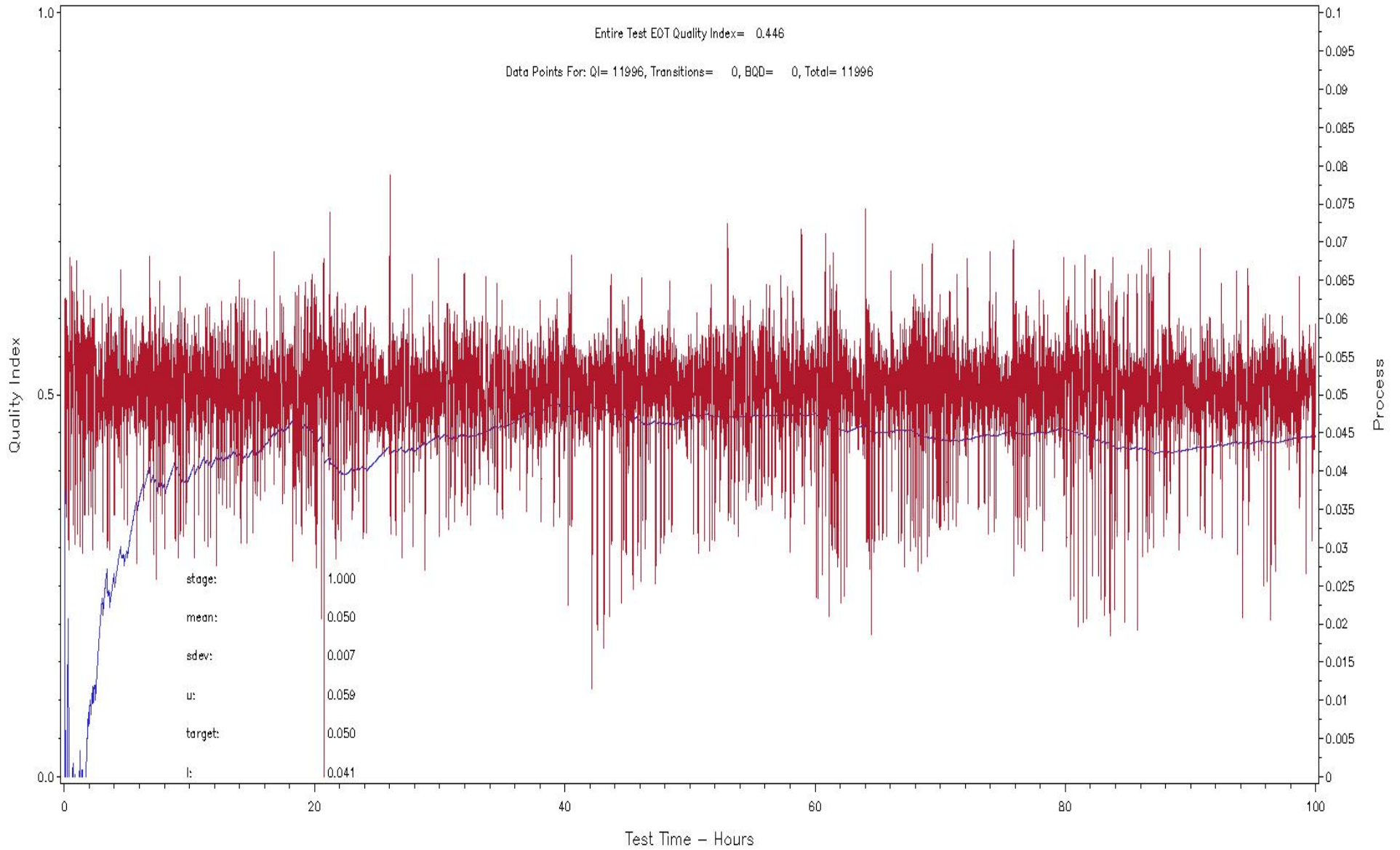
GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Pressure - kPa (CONTROL)
LAB= A Stand= 69 CMIR= 112925



GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Pressure - kPa (CONTROL)
LAB= F Stand= 3111 CMIR= 112941



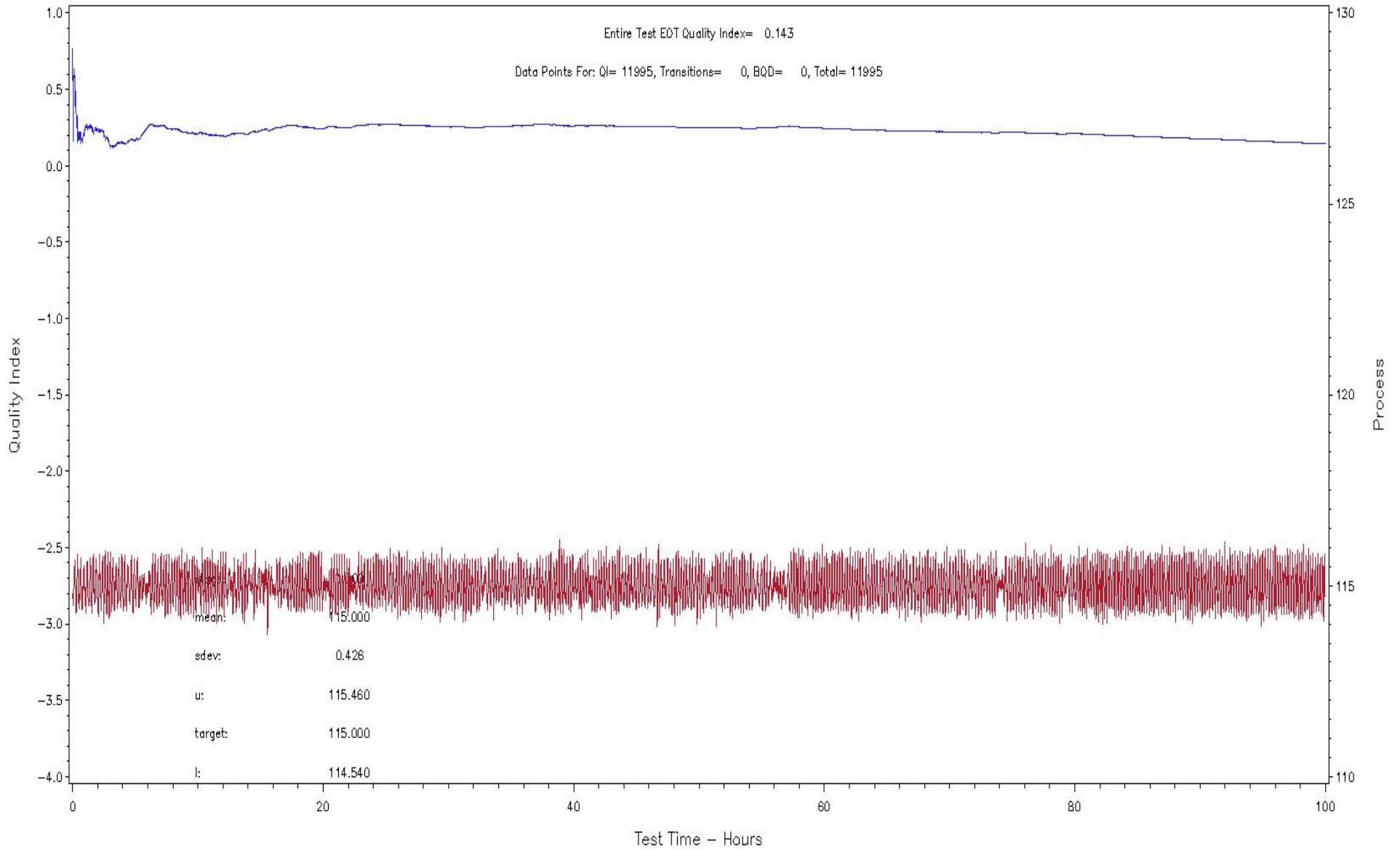
GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Pressure - kPa (CONTROL)
LAB= BStand= 333 CMIR= 112939



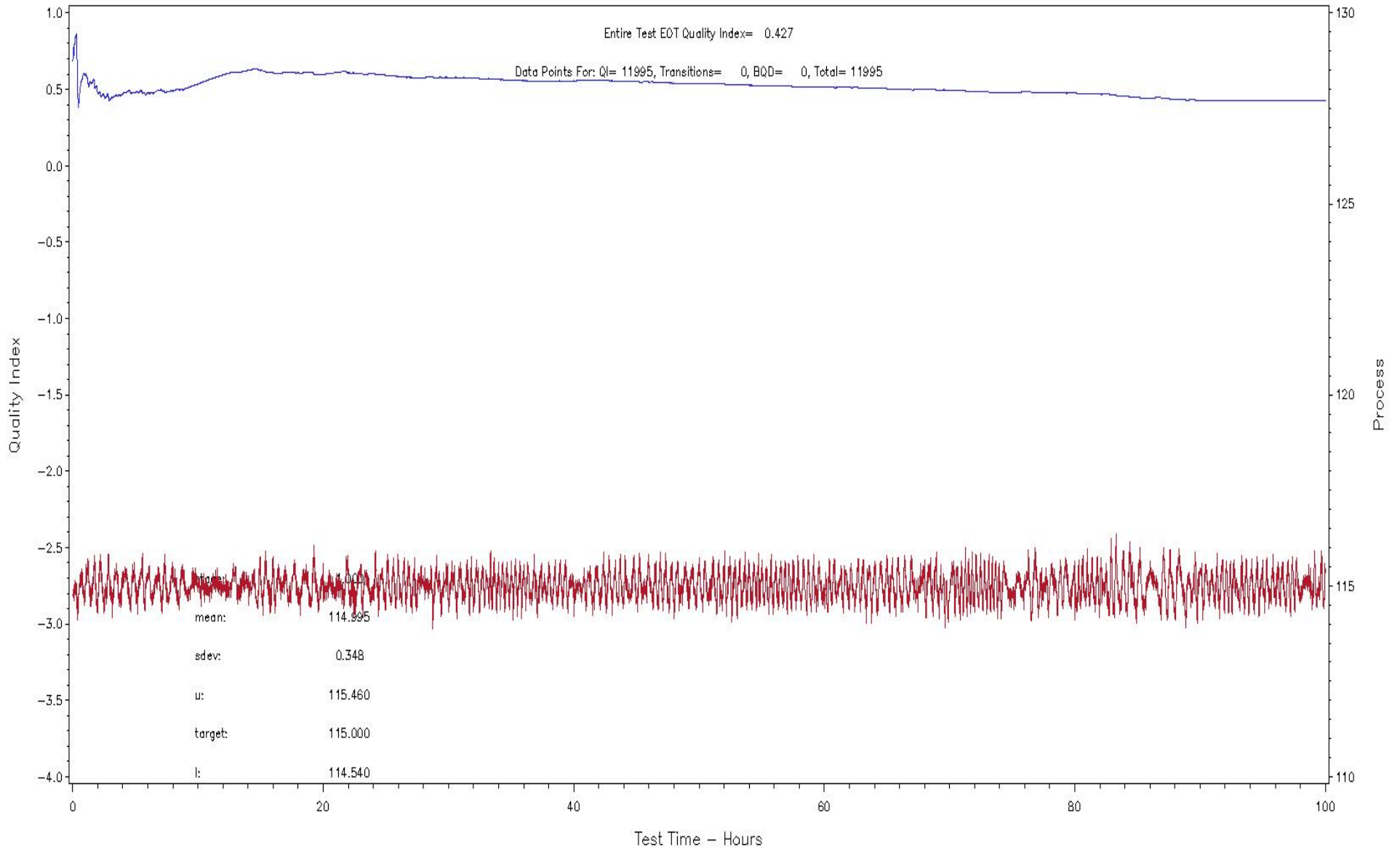
Coolant Out Temperature

- All tests had positive QI values

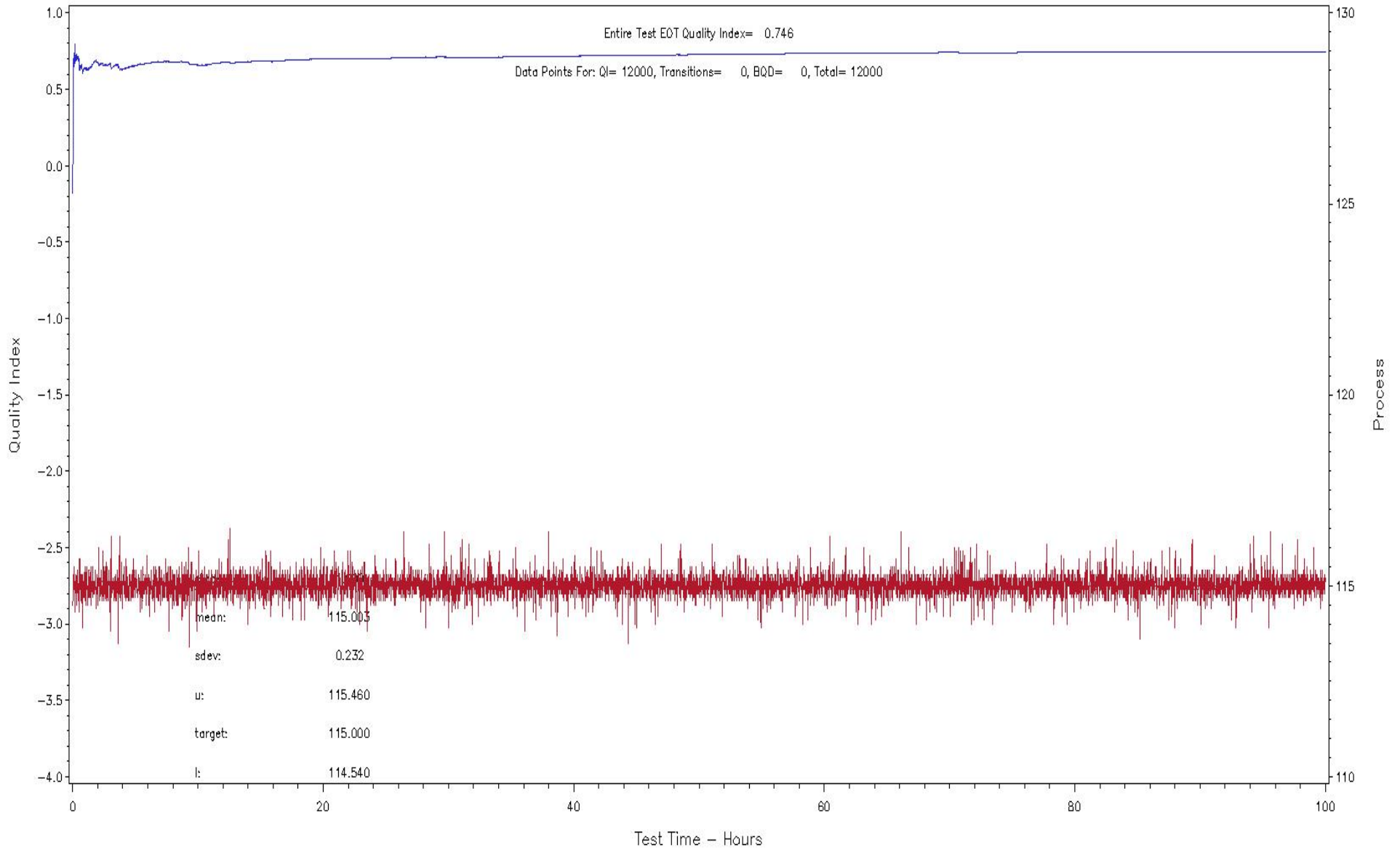
GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Out Temperature – Degrees C (CONTROL)
LAB= GStand= 180 CMIR= 108822



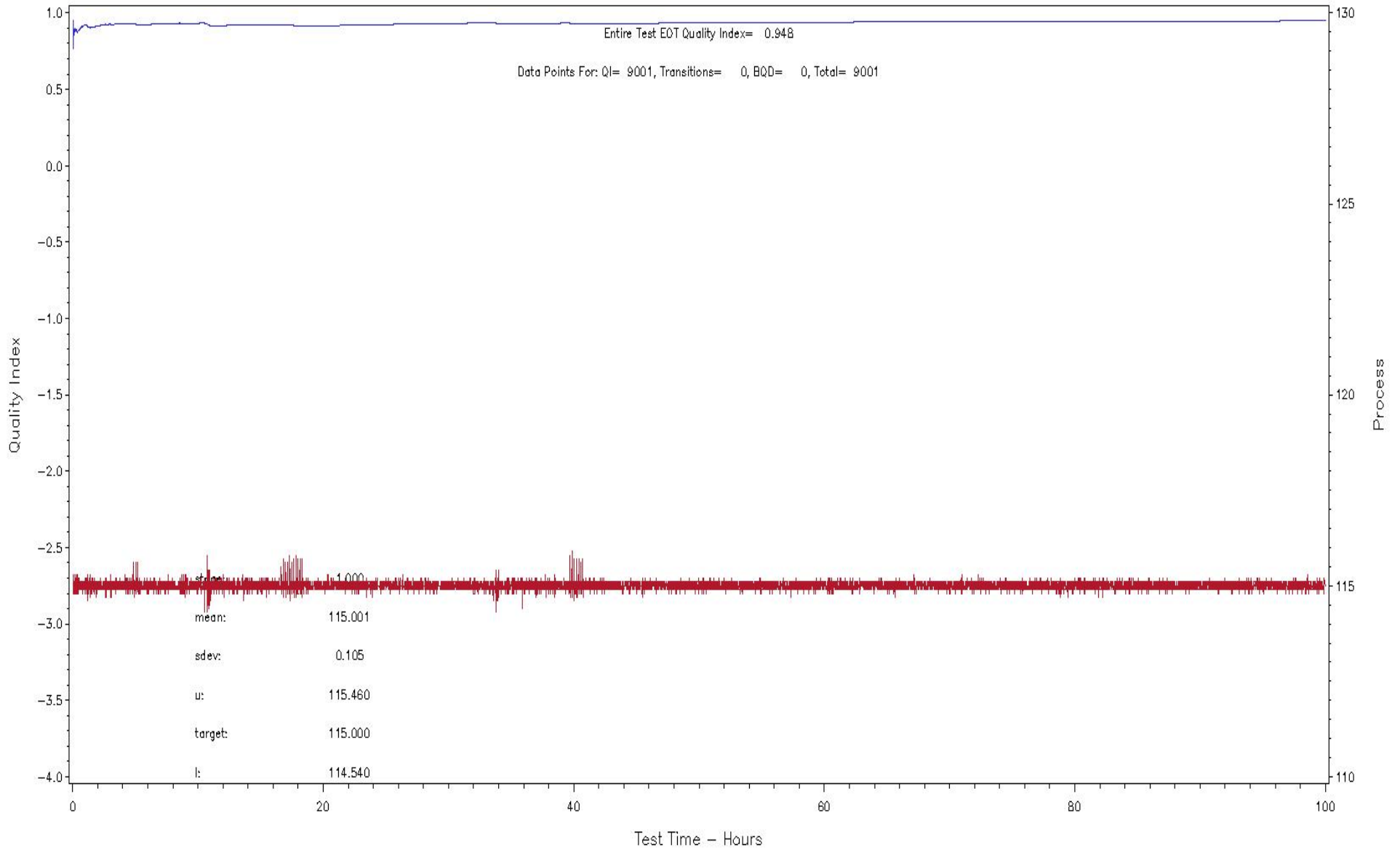
GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Out Temperature – Degrees C (CONTROL)
LAB= GStand= 126 CMIR= 112909



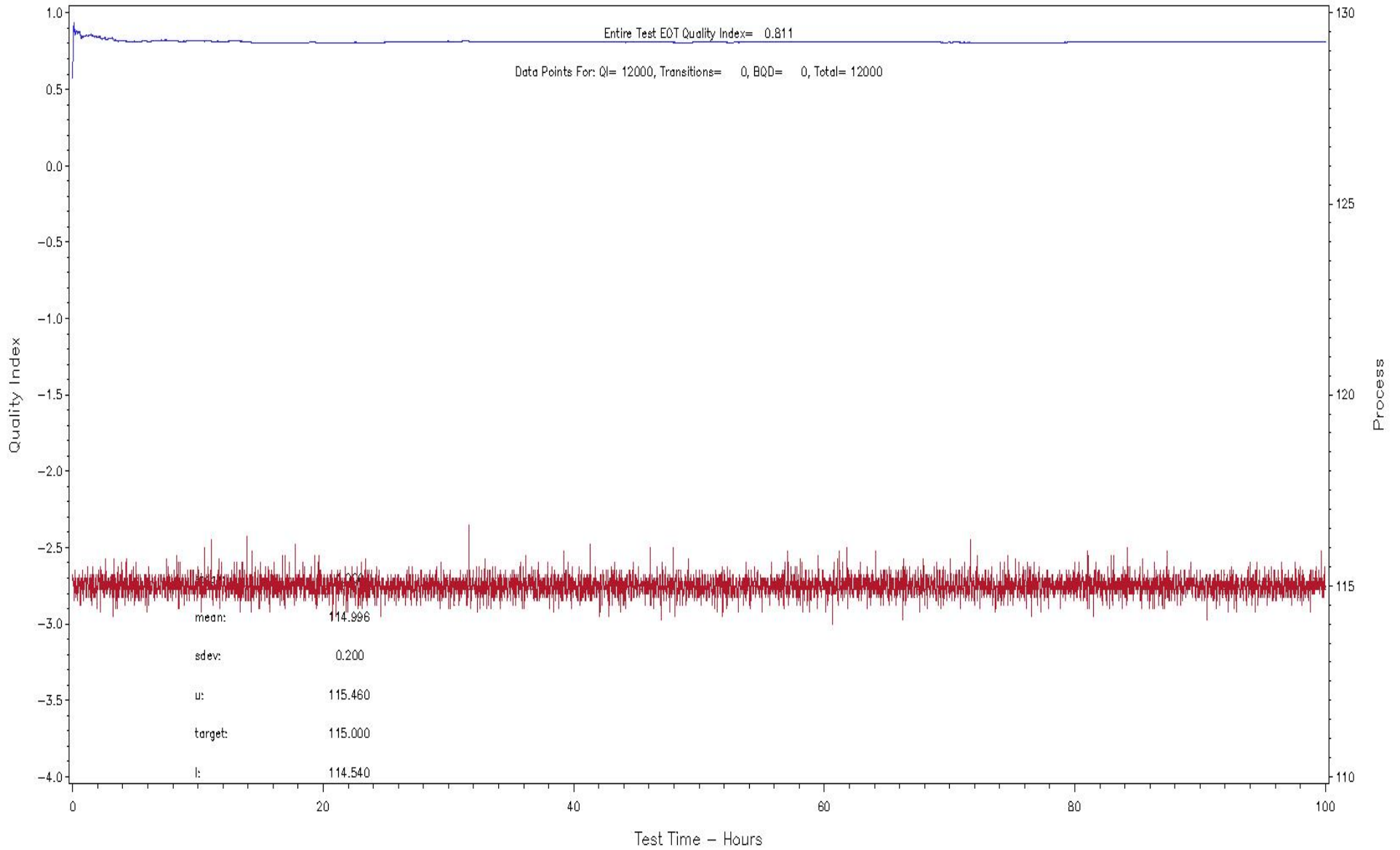
GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Out Temperature – Degrees C (CONTROL)
LAB= A Stand= 69 CMIR= 112925



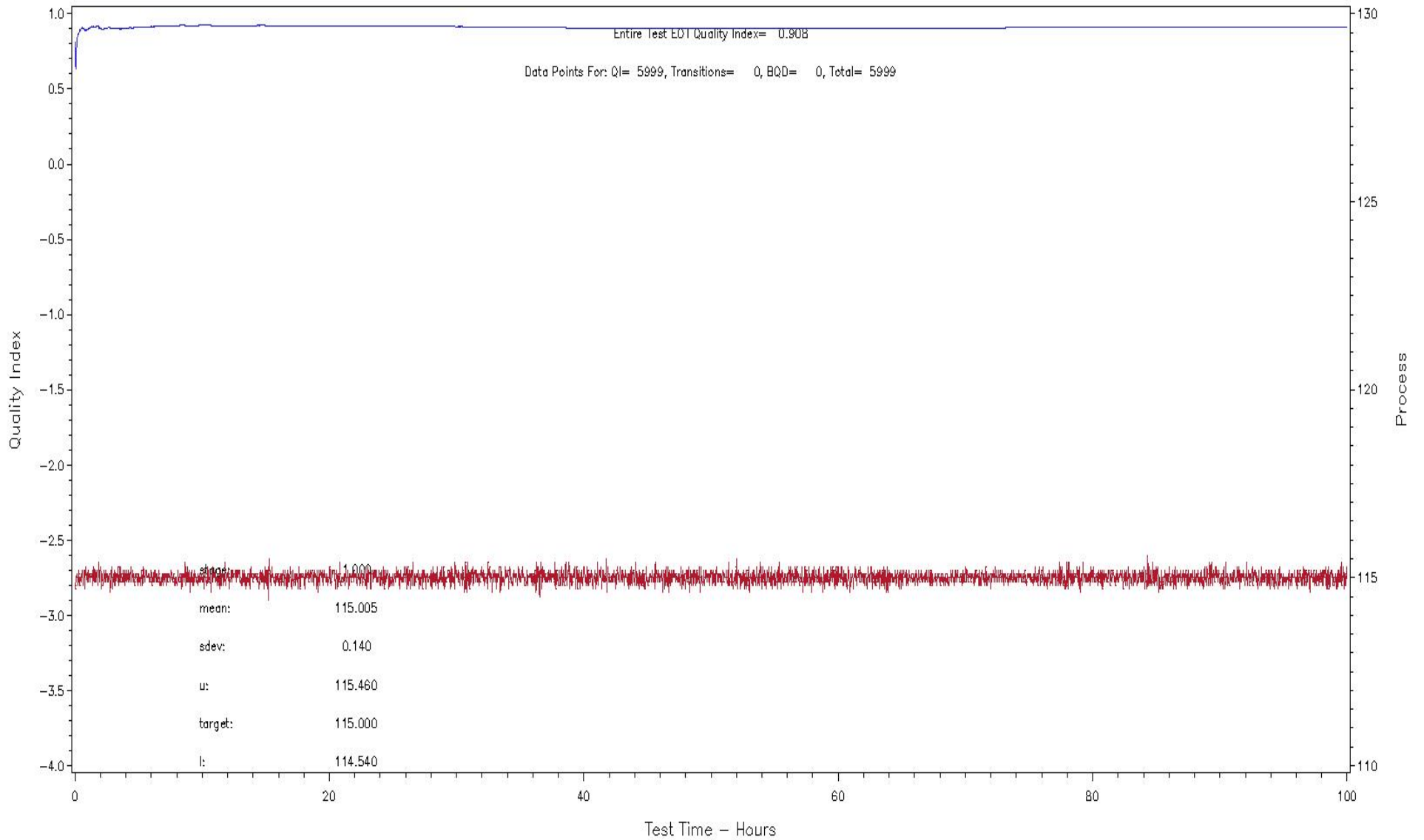
GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Out Temperature – Degrees C (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



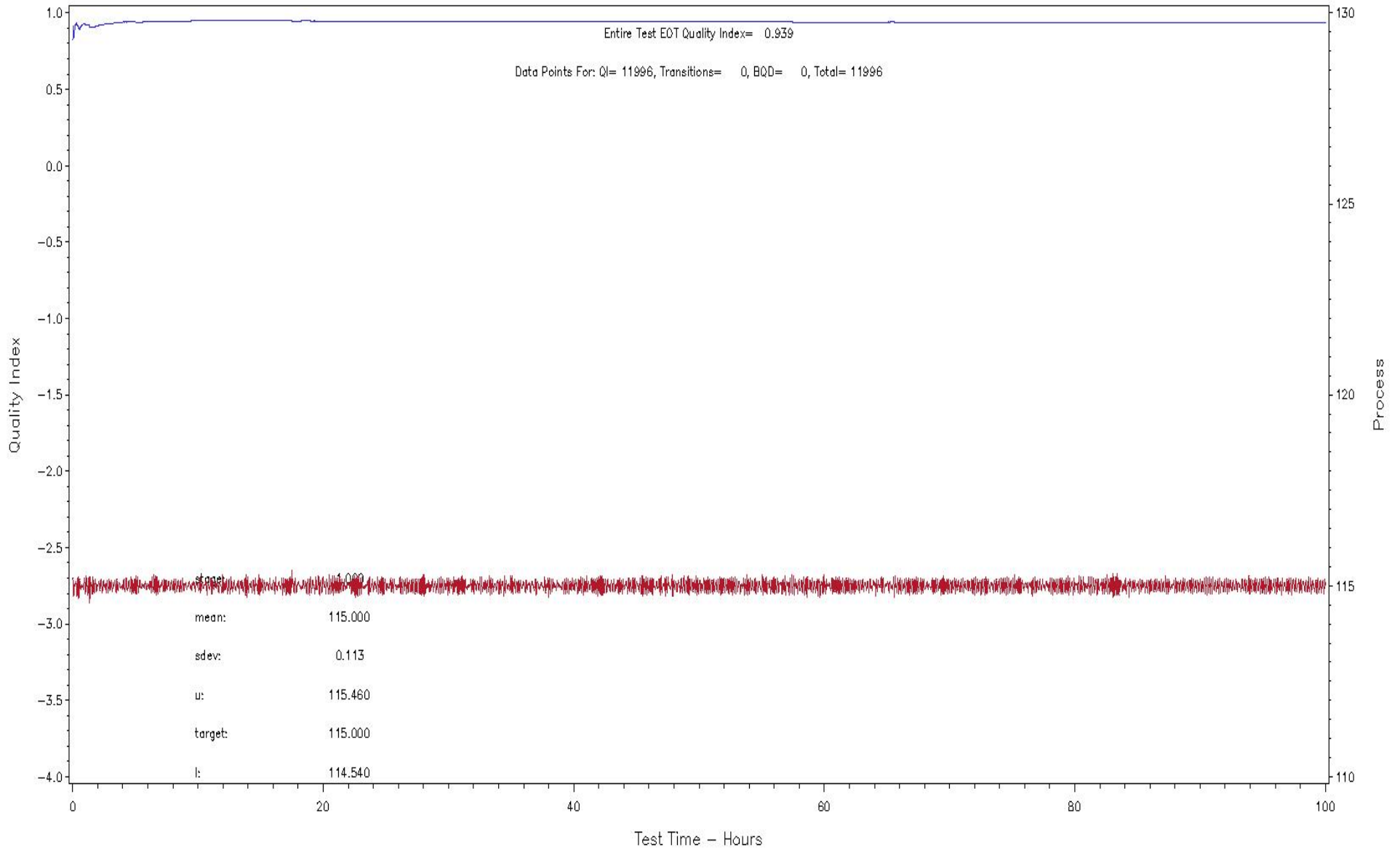
GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Out Temperature – Degrees C (CONTROL)
LAB= A Stand= 71 CMIR= 107864



GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Out Temperature – Degrees C (CONTROL)
LAB= F Stand= 3111 CMR= 112941



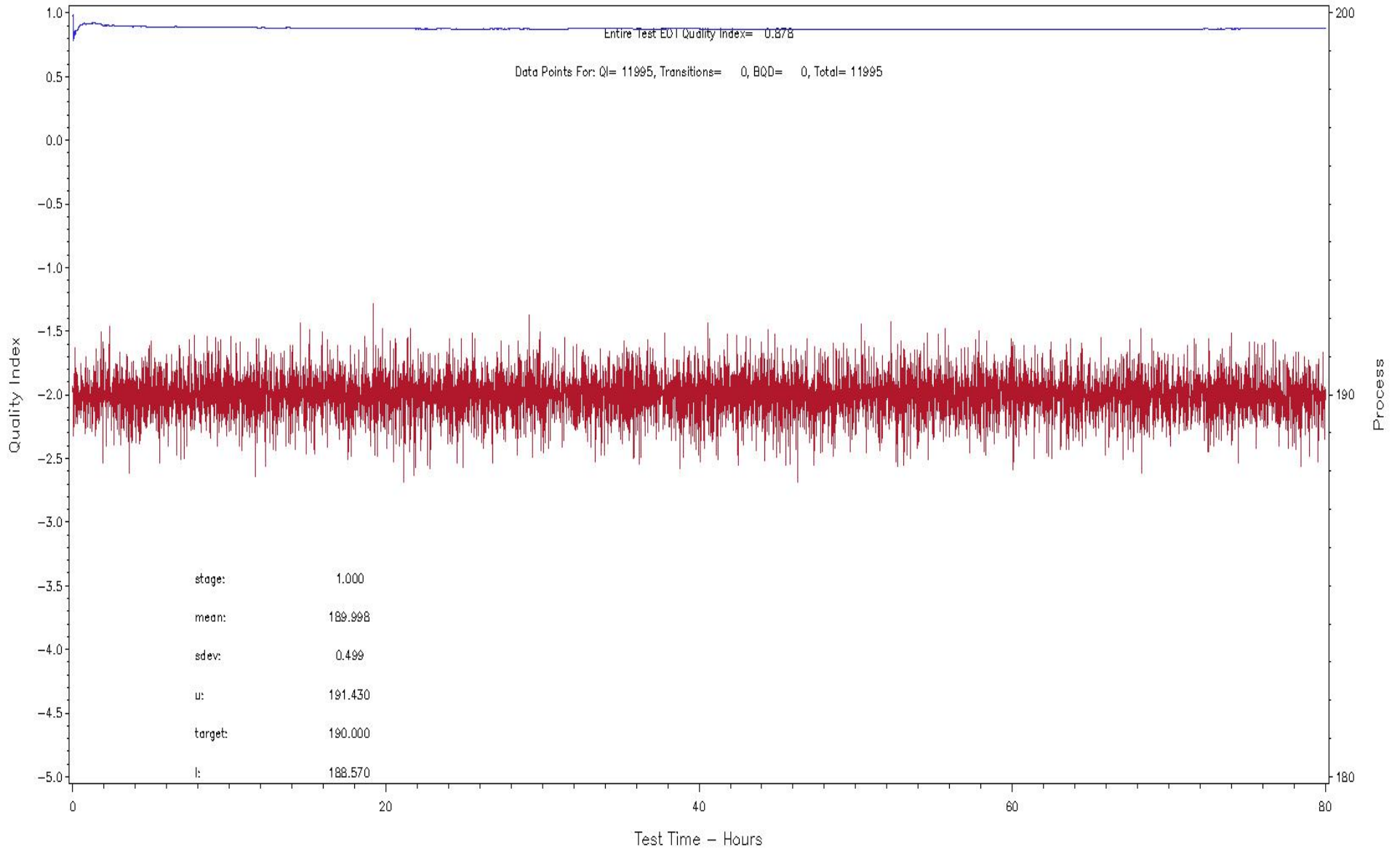
GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Out Temperature – Degrees C (CONTROL)
LAB= BStand= 333 CMIR= 112939



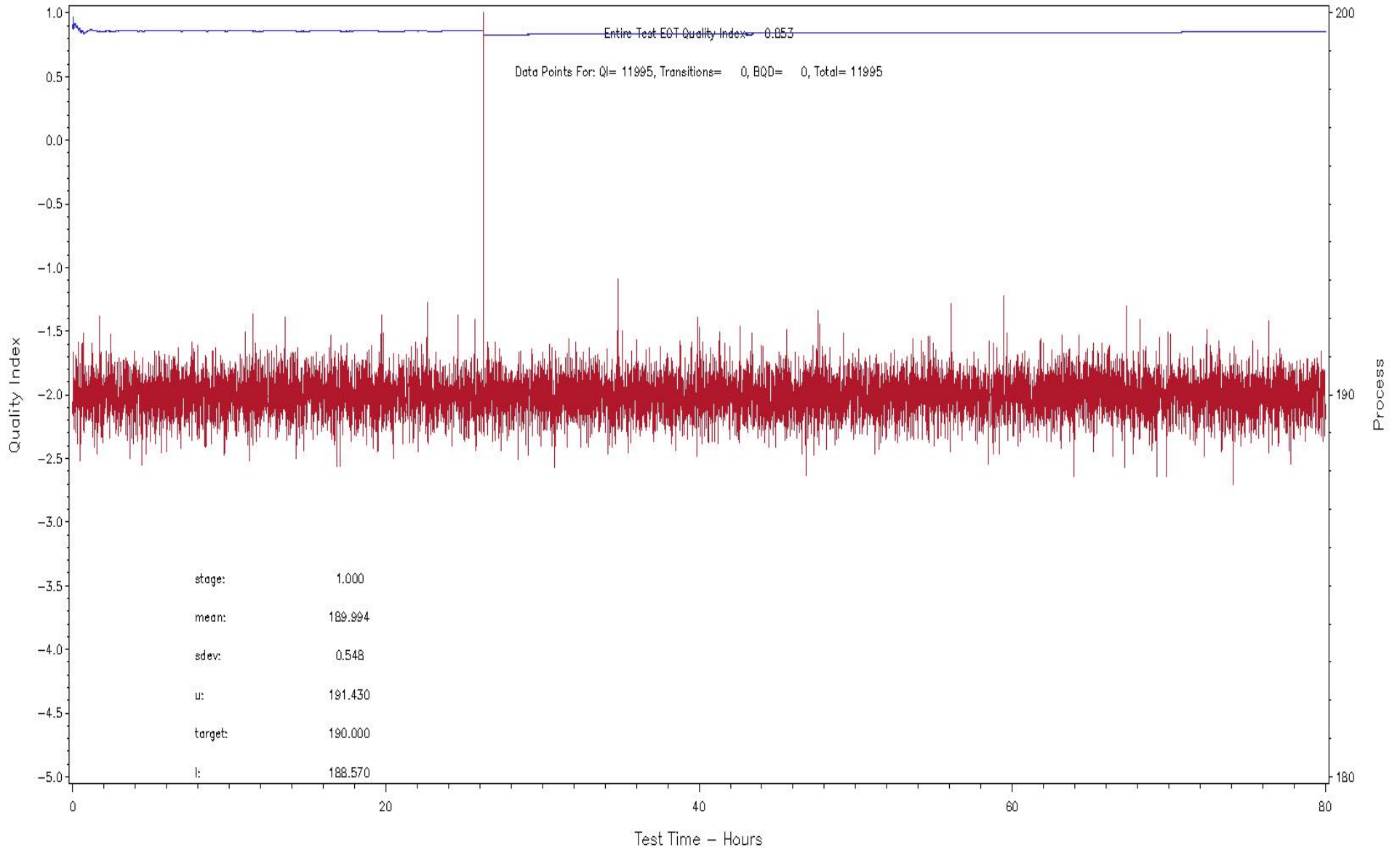
Engine Coolant Flow

- All QI values well above Zero.

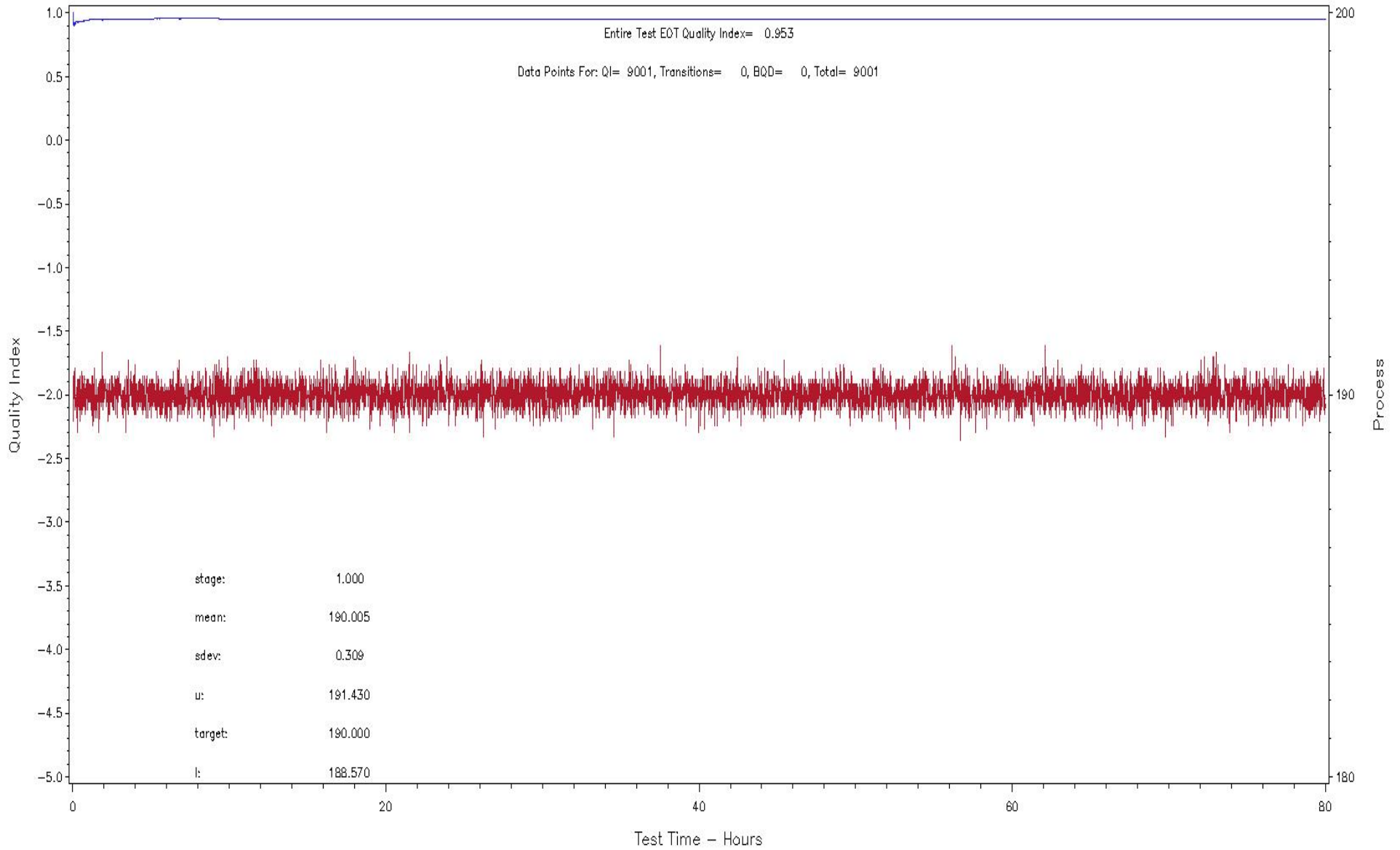
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Coolant Flow - L/min (CONTROL)
LAB= GStand= 180 CMIR= 108822



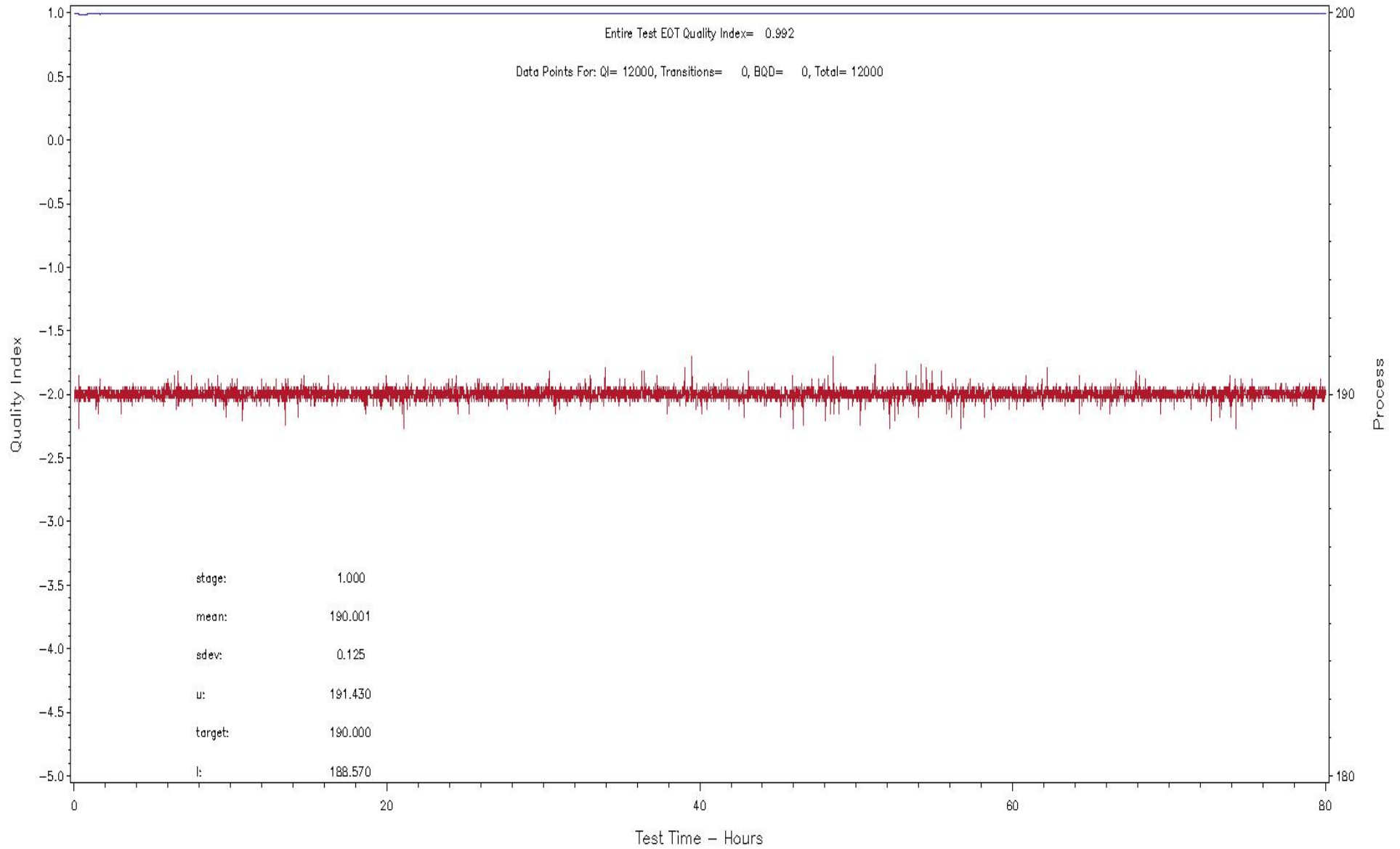
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Coolant Flow - L/min (CONTROL)
LAB= GStand= 126 CMIR= 112909



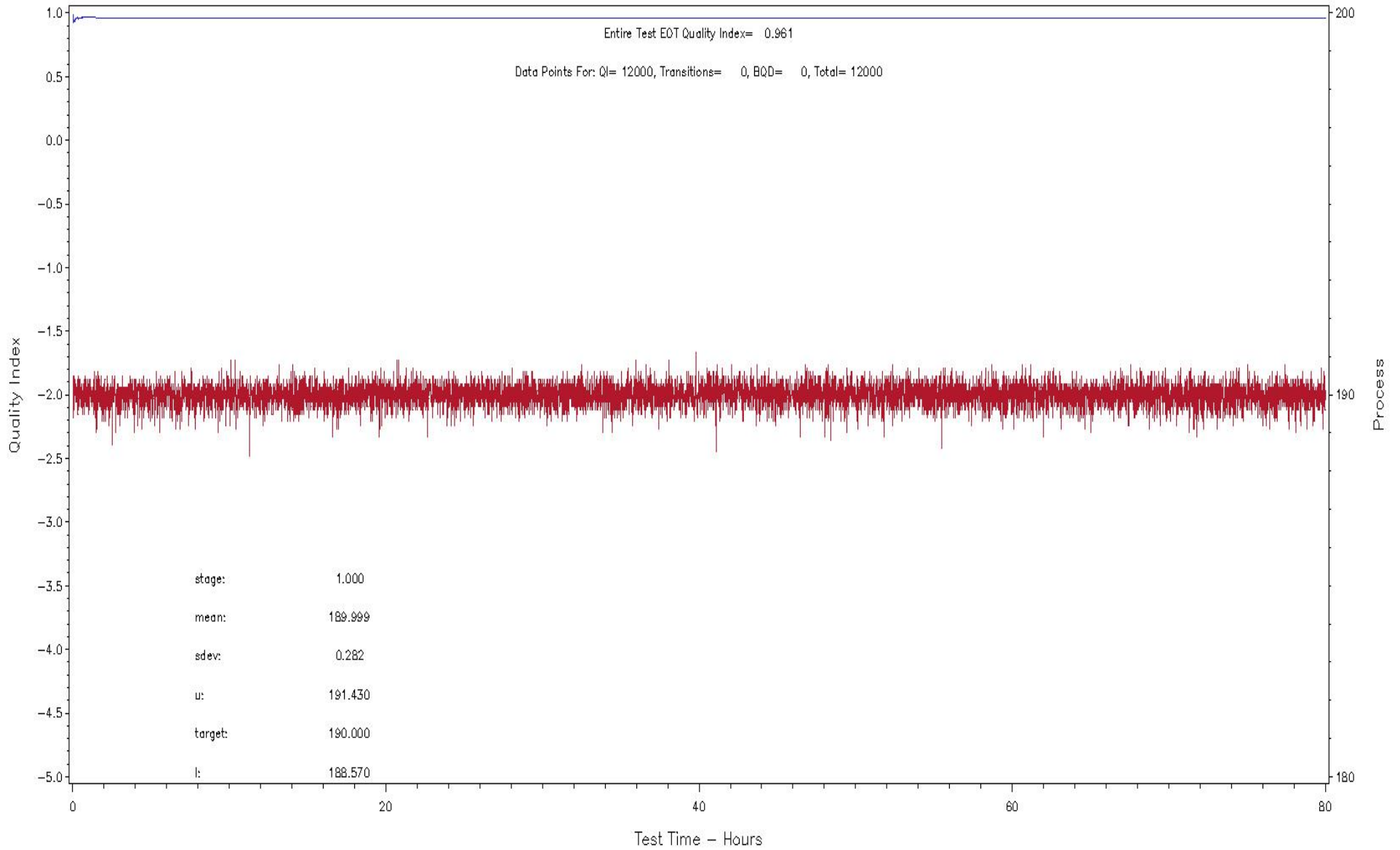
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Coolant Flow - L/min (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



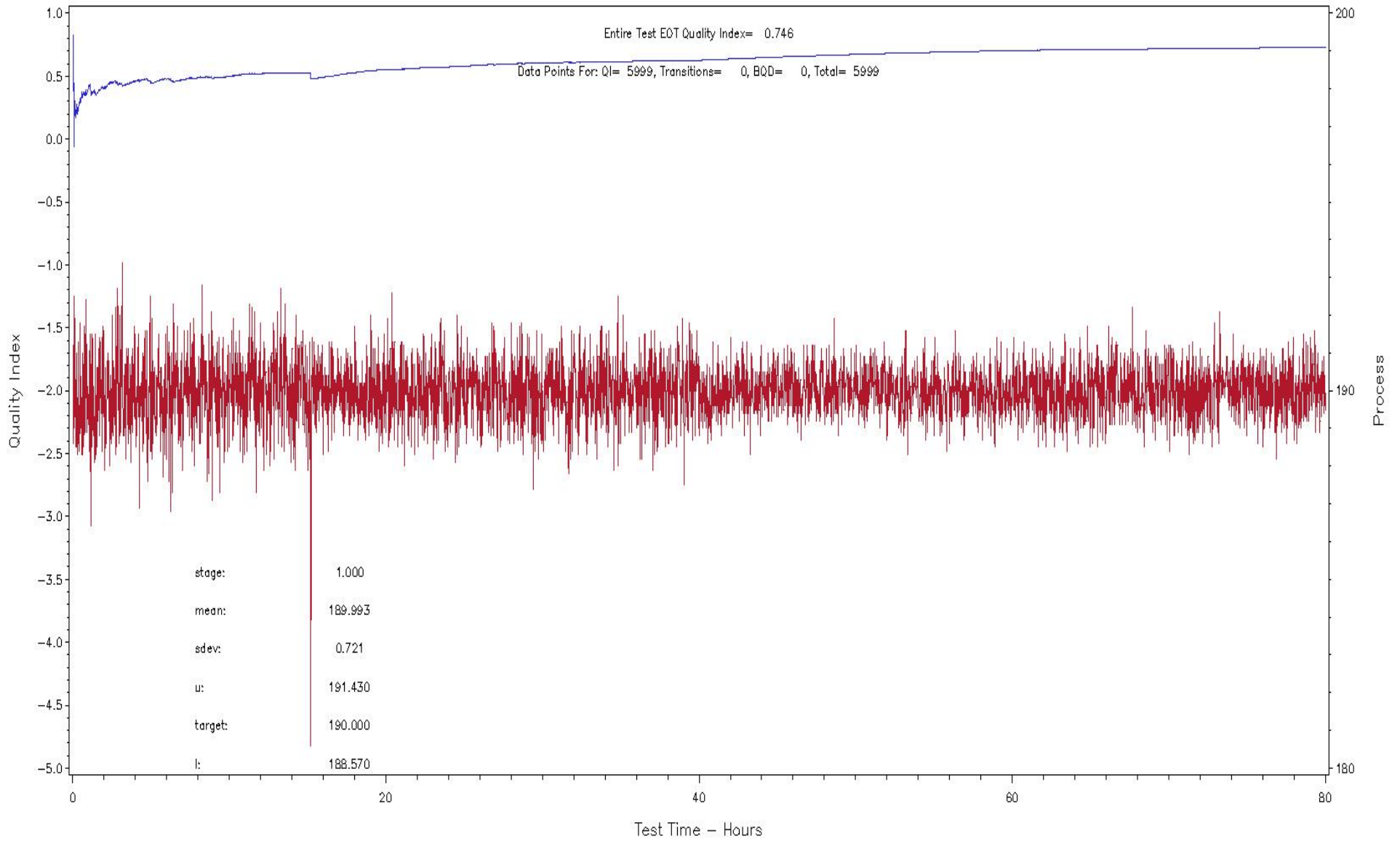
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Coolant Flow - L/min (CONTROL)
LAB= A Stand= 69 CMIR= 112925



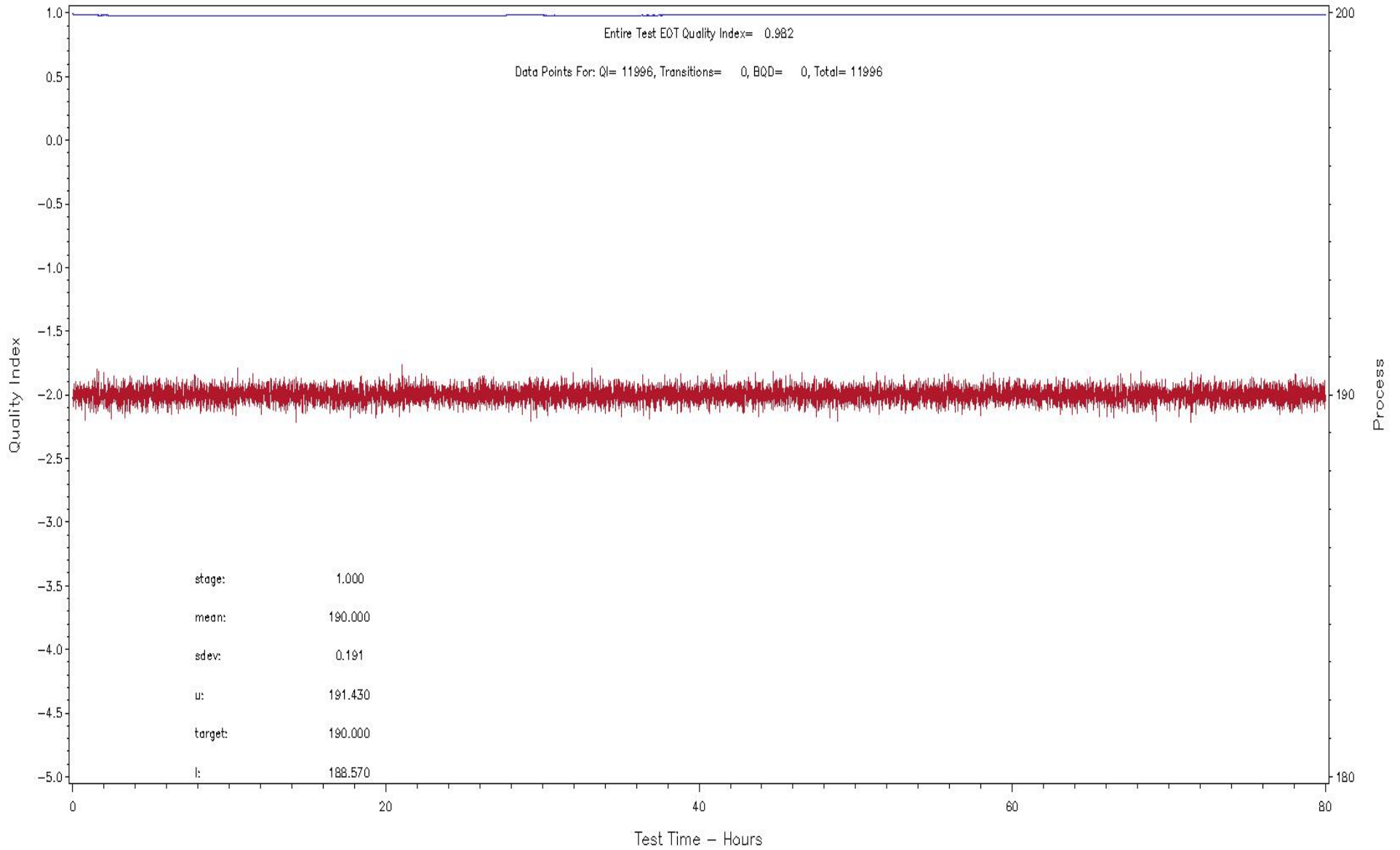
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Coolant Flow - L/min (CONTROL)
LAB= A Stand= 71 CMIR= 107864



GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Coolant Flow - L/min (CONTROL)
LAB= F Stand= 3111 CMIR= 112941



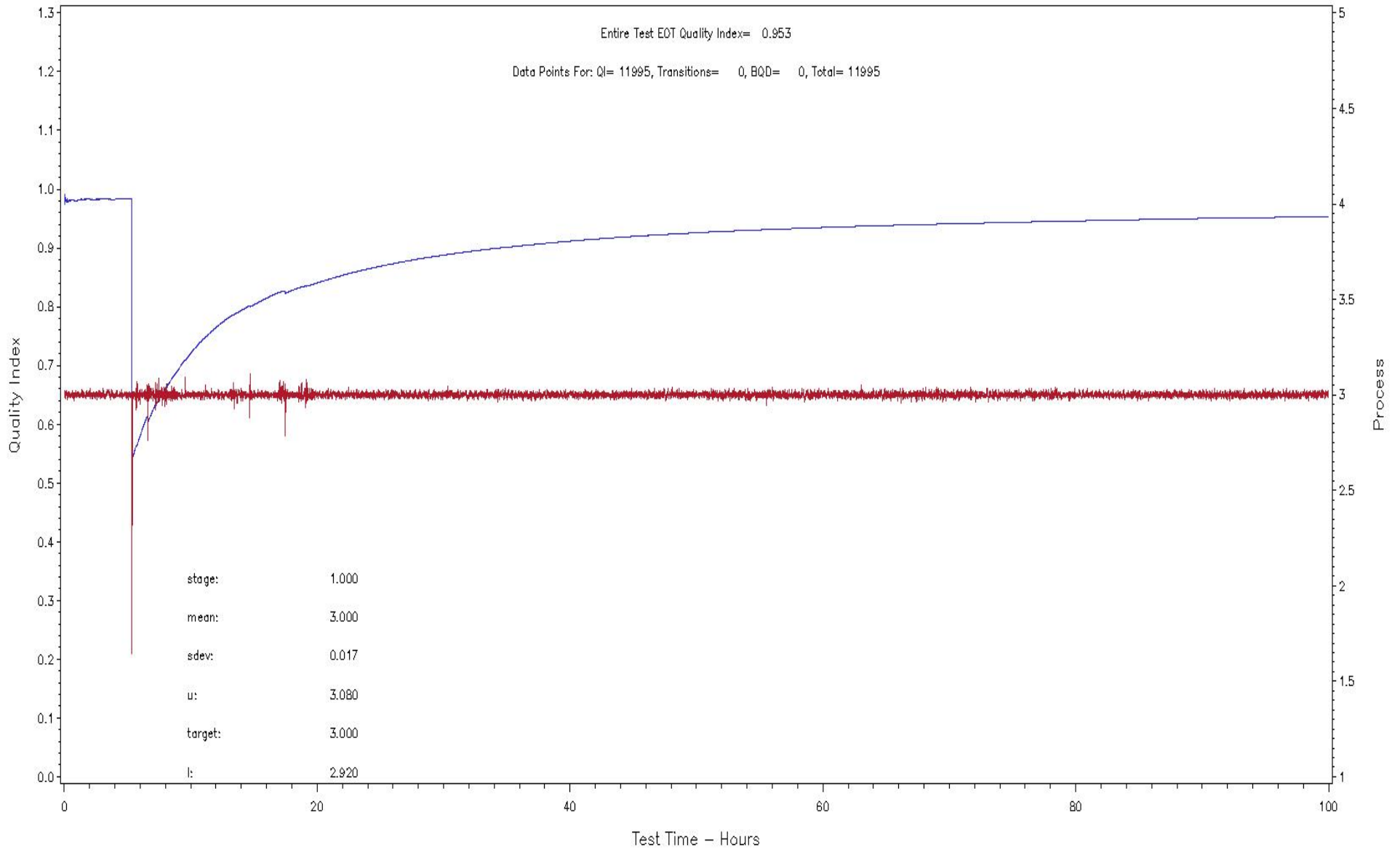
GMOD QUALITY INDEX OPERATIONAL REVIEW
Engine Coolant Flow - L/min (CONTROL)
LAB= BStand= 333 CMR= 112939



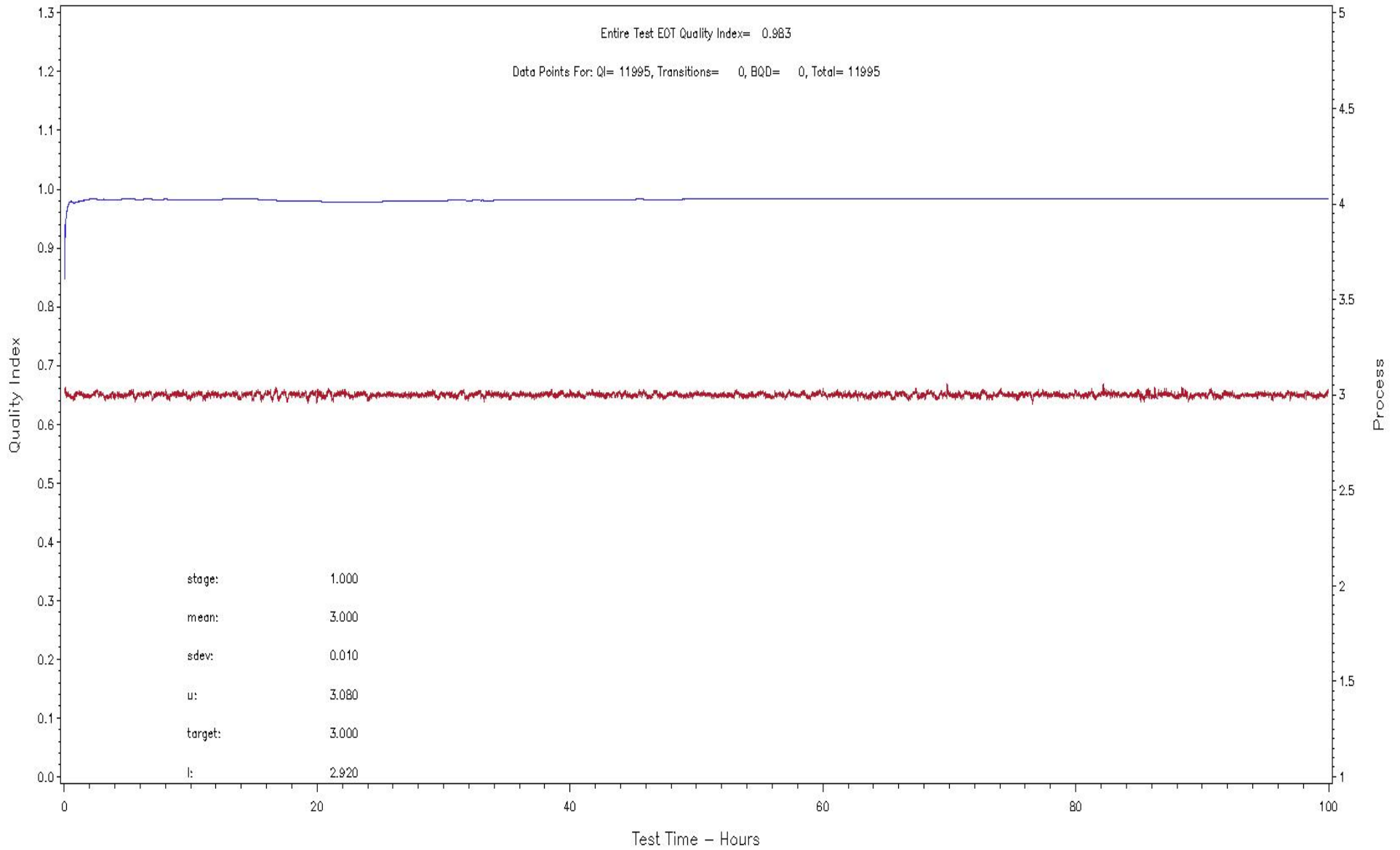
Left Exhaust Backpressure

- No negative QI values

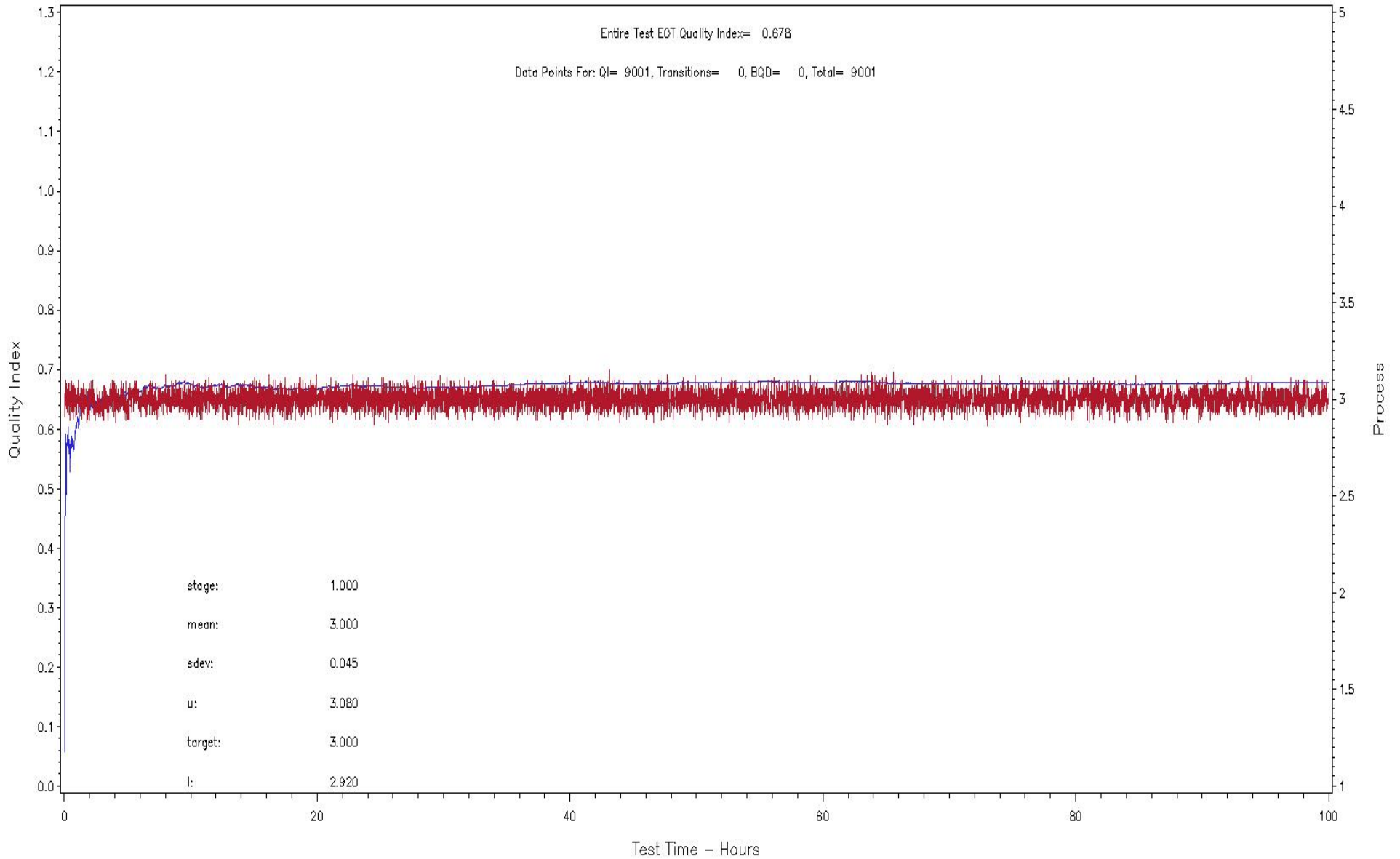
GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Left - kPa (CONTROL)
LAB= GStand= 180 CMIR= 108822



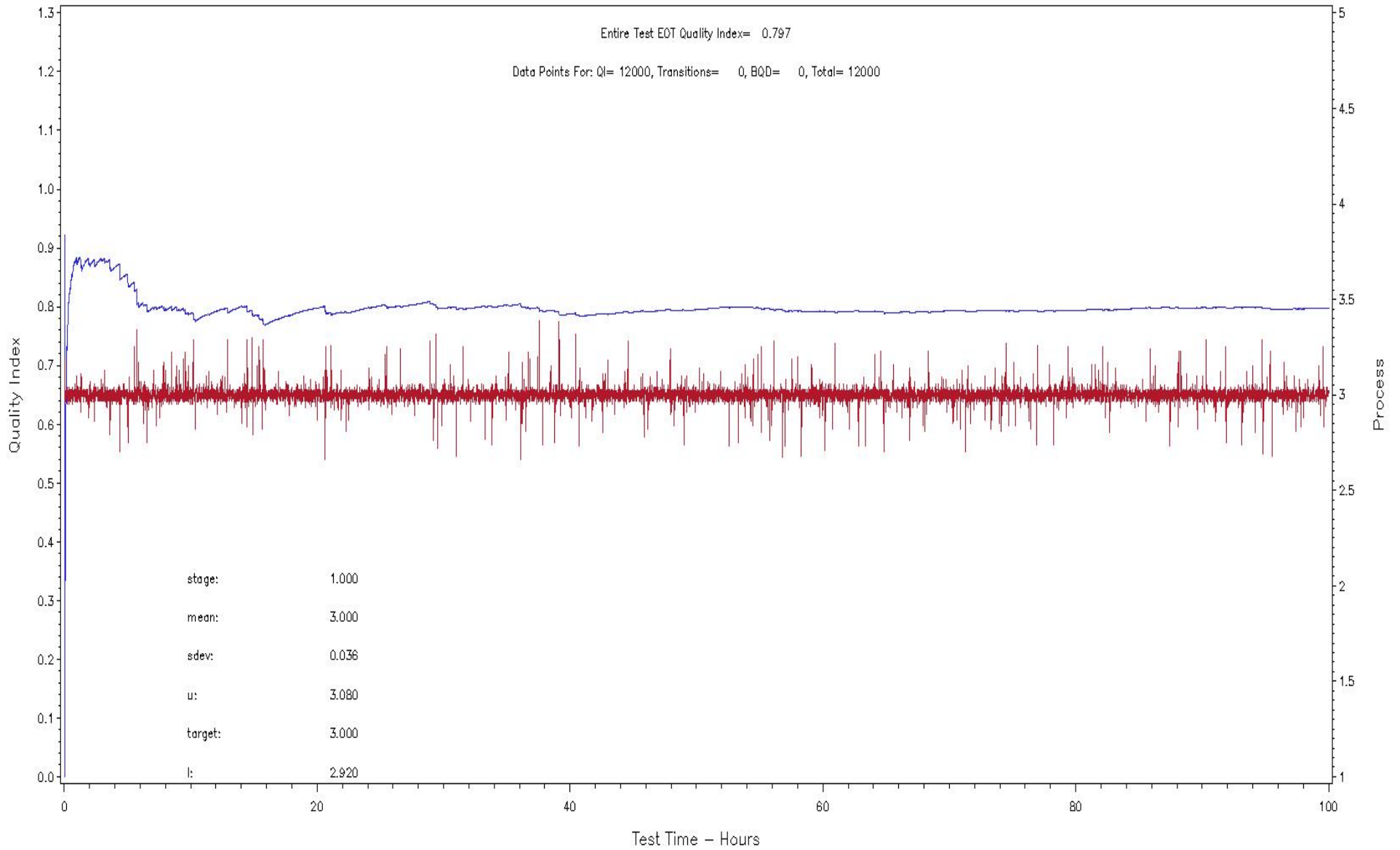
GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Left - kPa (CONTROL)
LAB= GStand= 126 CMIR= 112909



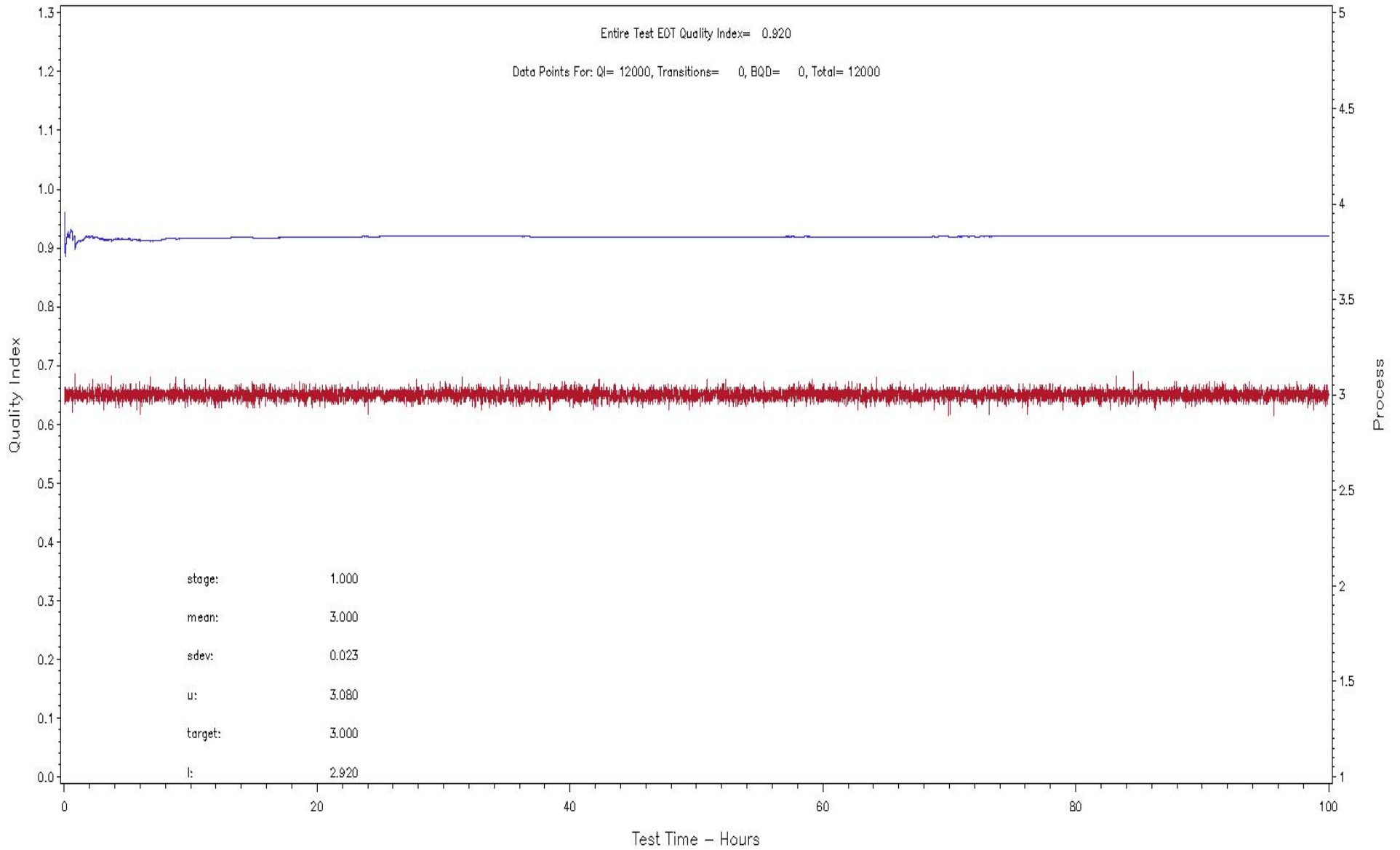
GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Left - kPa (CONTROL)
LAB= D Stand= DB114 CMR= 112934



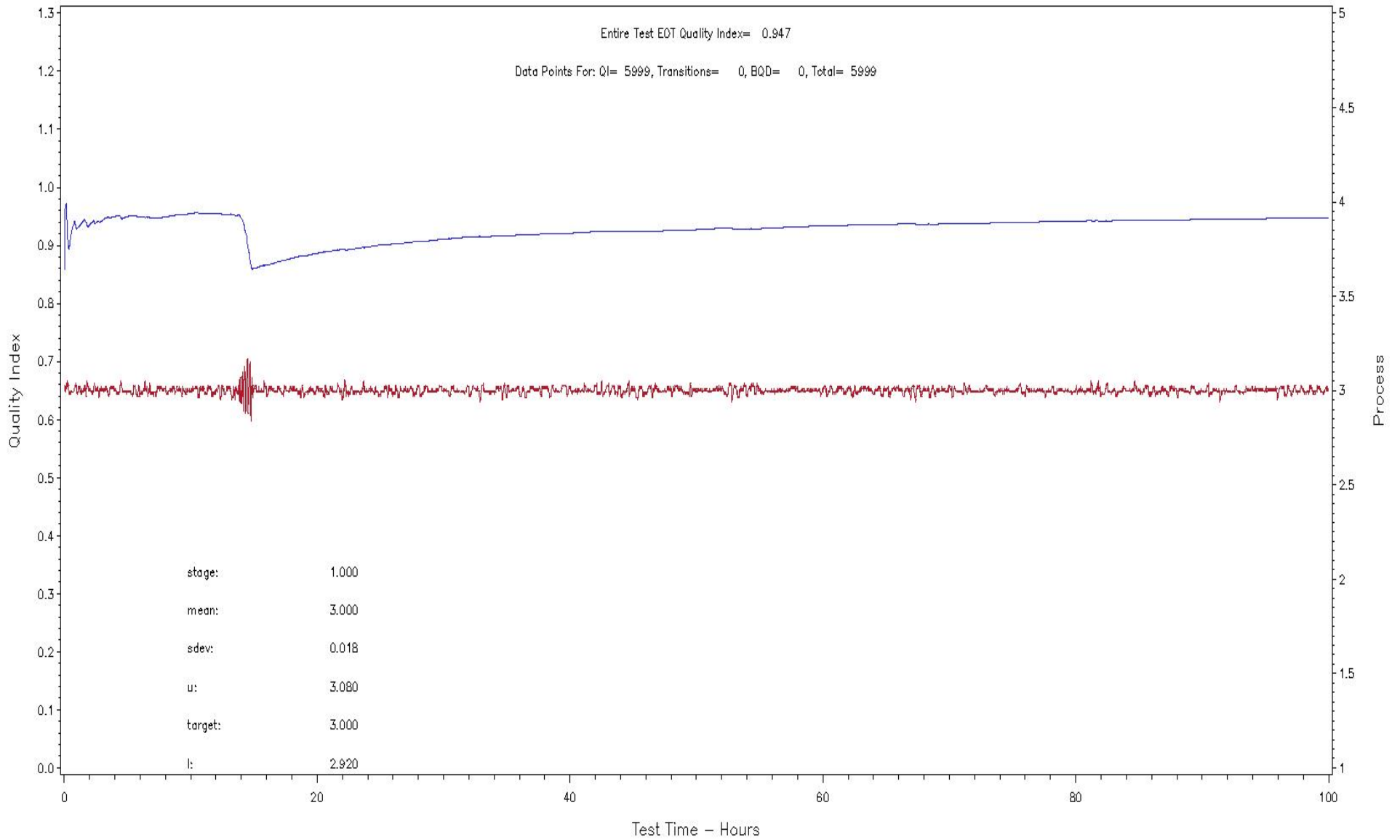
GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Left - kPa (CONTROL)
LAB= A Stand= 69 CMIR= 112925



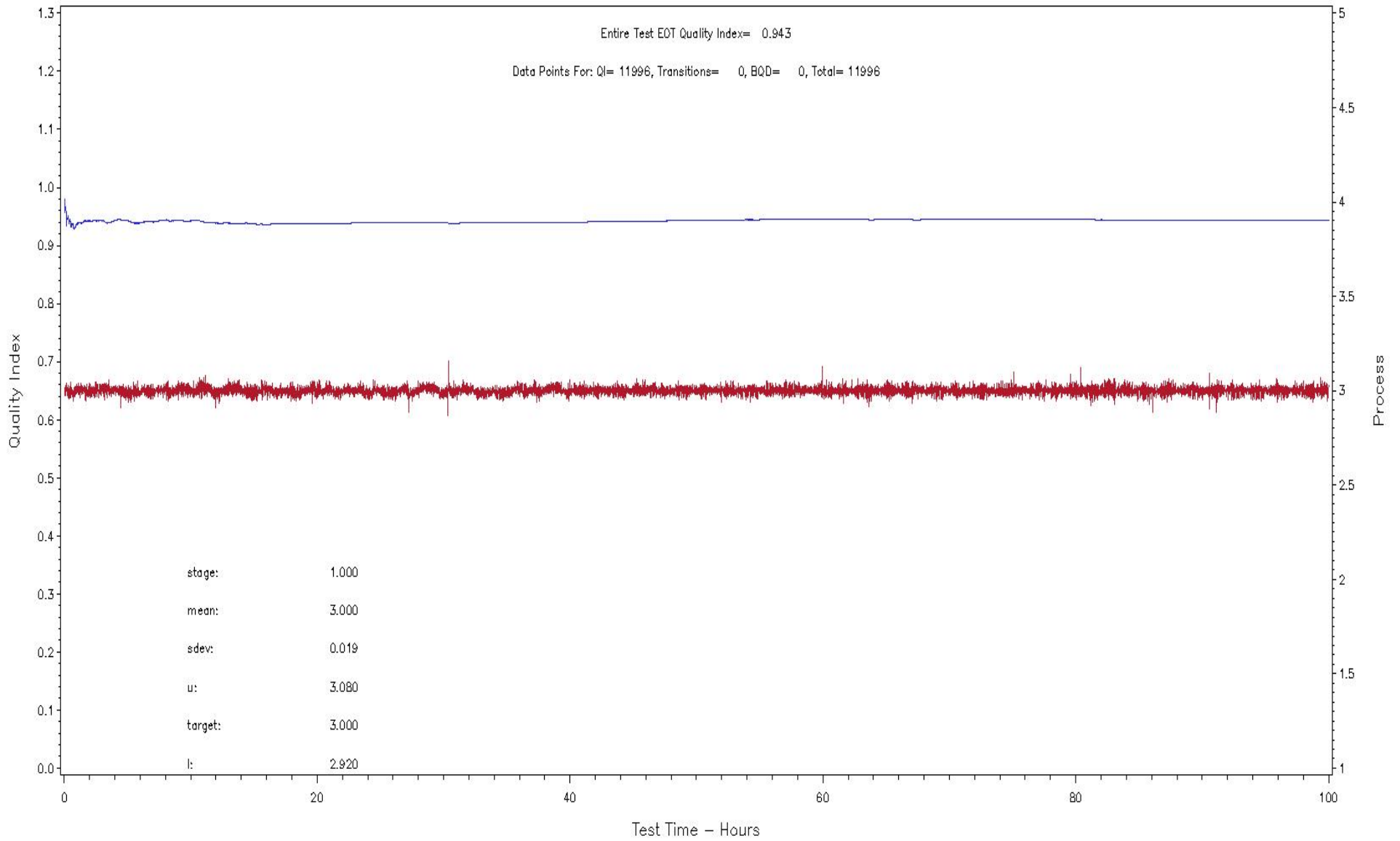
GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Left - kPa (CONTROL)
LAB= A Stand= 71 CMIR= 107864



GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Left - kPa (CONTROL)
LAB= F Stand= 3111 CMIR= 112941



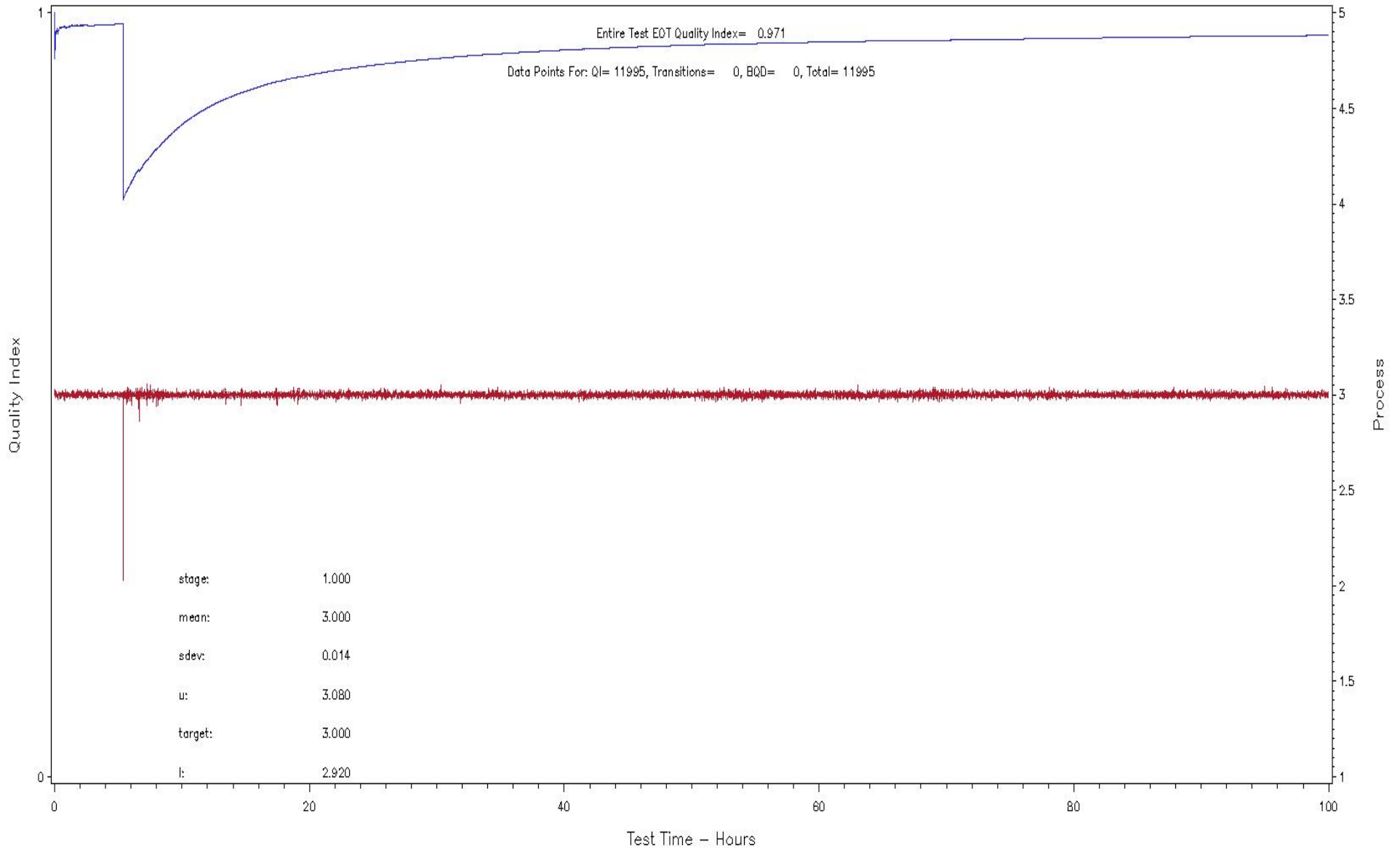
GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Left - kPa (CONTROL)
LAB= BStand= 333 CMIR= 112939



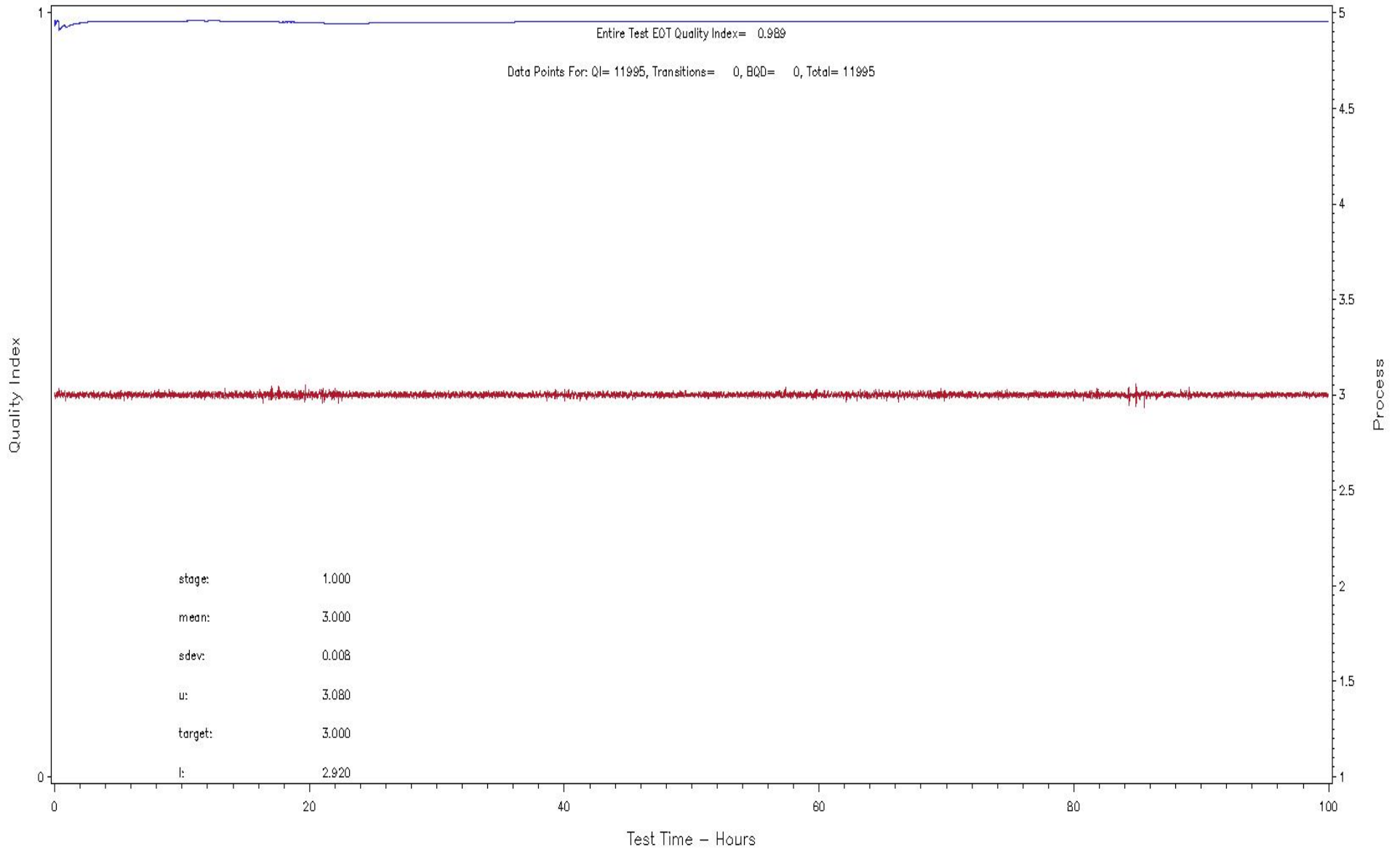
Right Exhaust Backpressure

- All Values above Zero

GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Right - kPa (CONTROL)
LAB= GStand= 180 CMIR= 108822



GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Right - kPa (CONTROL)
LAB= GStand= 126 CMIR= 112909



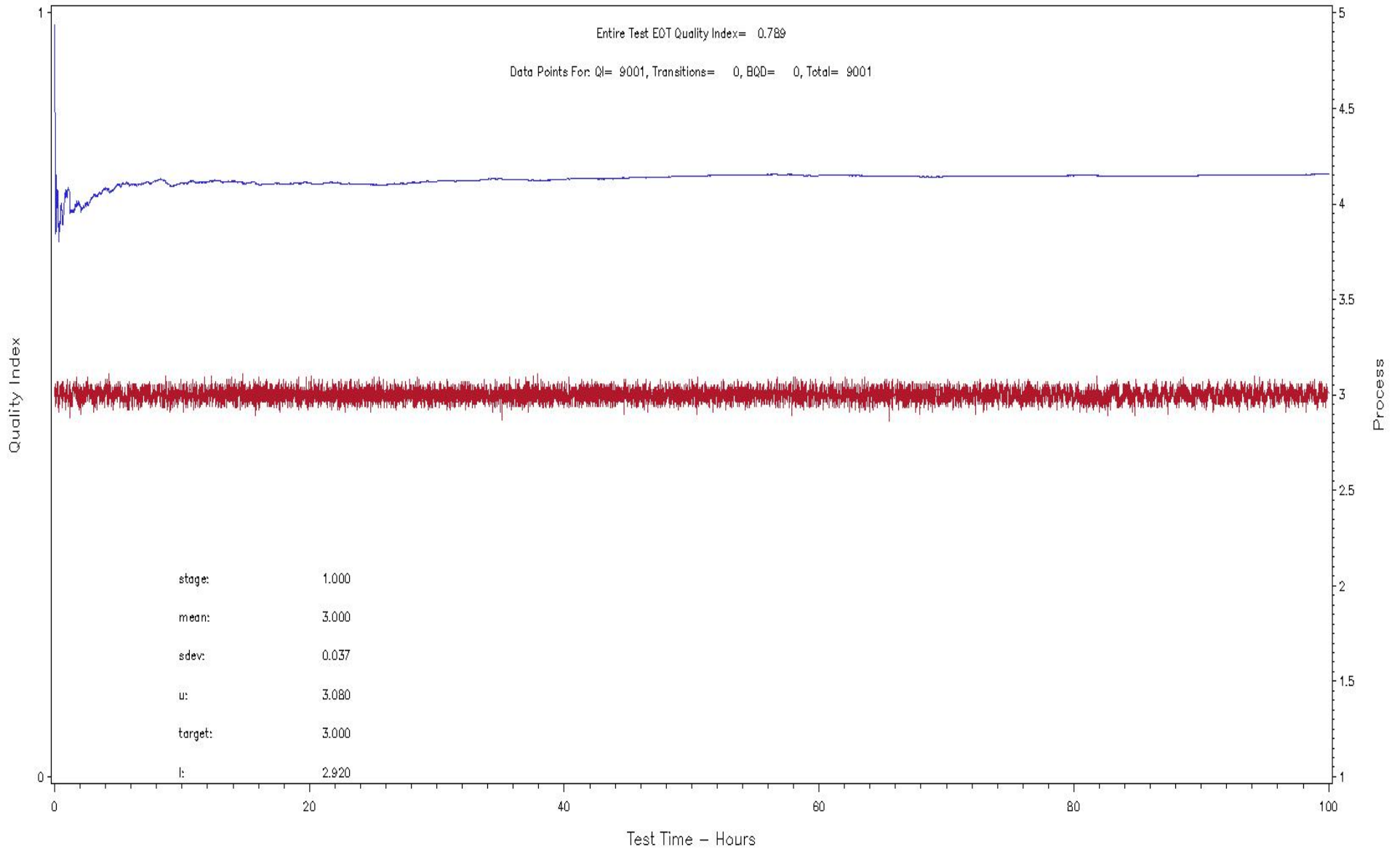
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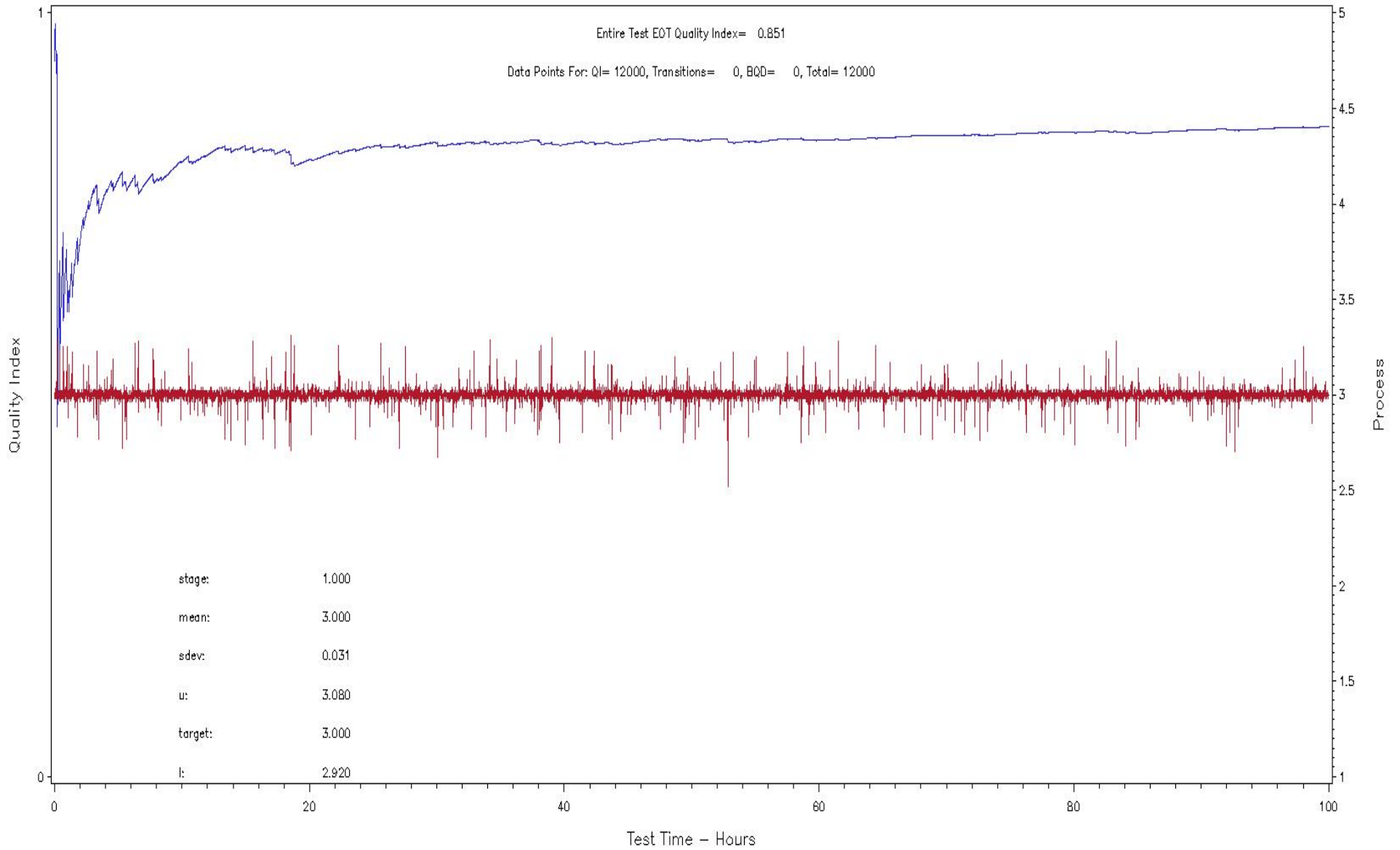
Test Monitoring Center
<http://astmtmc.cmu.edu>



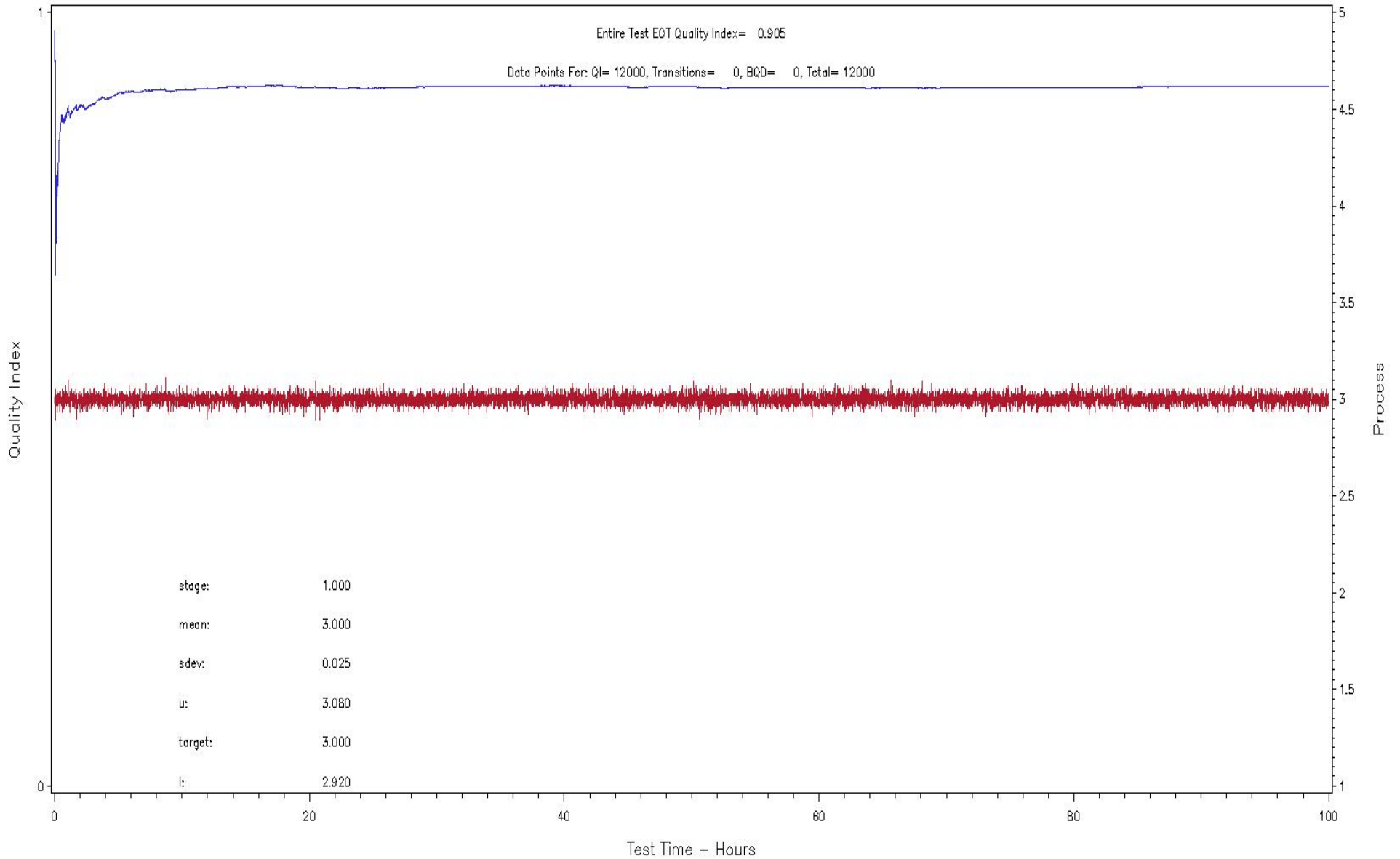
GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Right - kPa (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



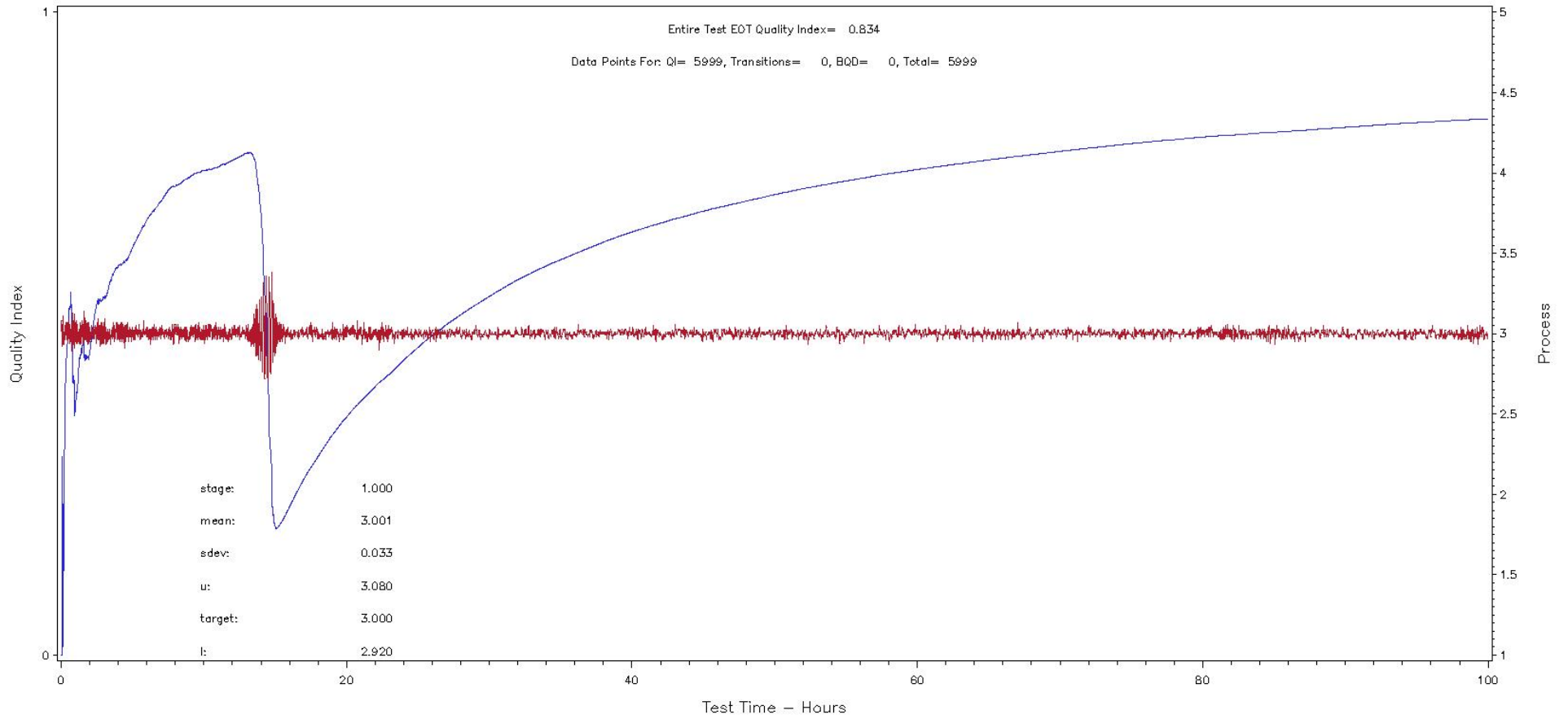
GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Right - kPa (CONTROL)
LAB= A Stand= 69 CMIR= 112925



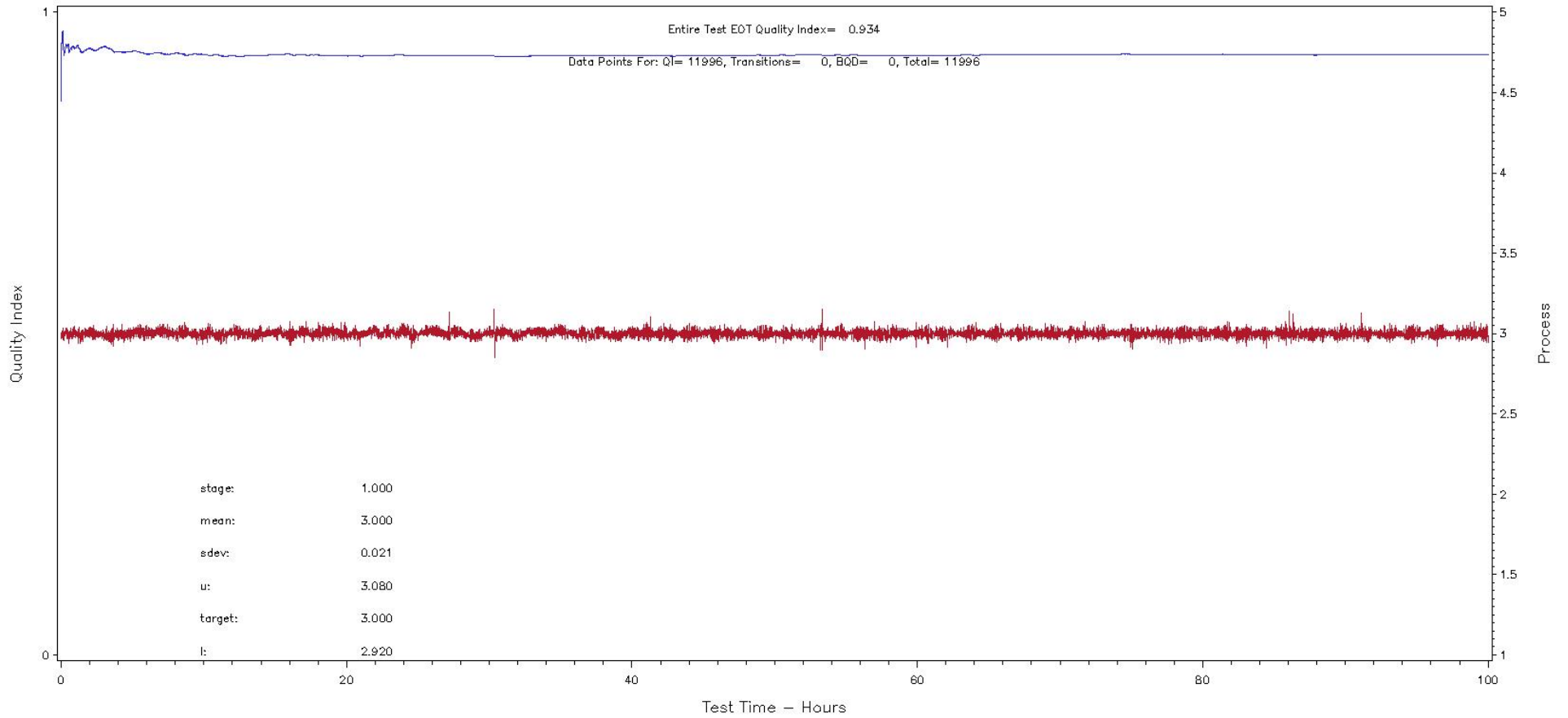
GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Right - kPa (CONTROL)
LAB= A Stand= 71 CMIR= 107864



GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Right - kPa (CONTROL)
LAB= F Stand= 3111 CMIR= 112941



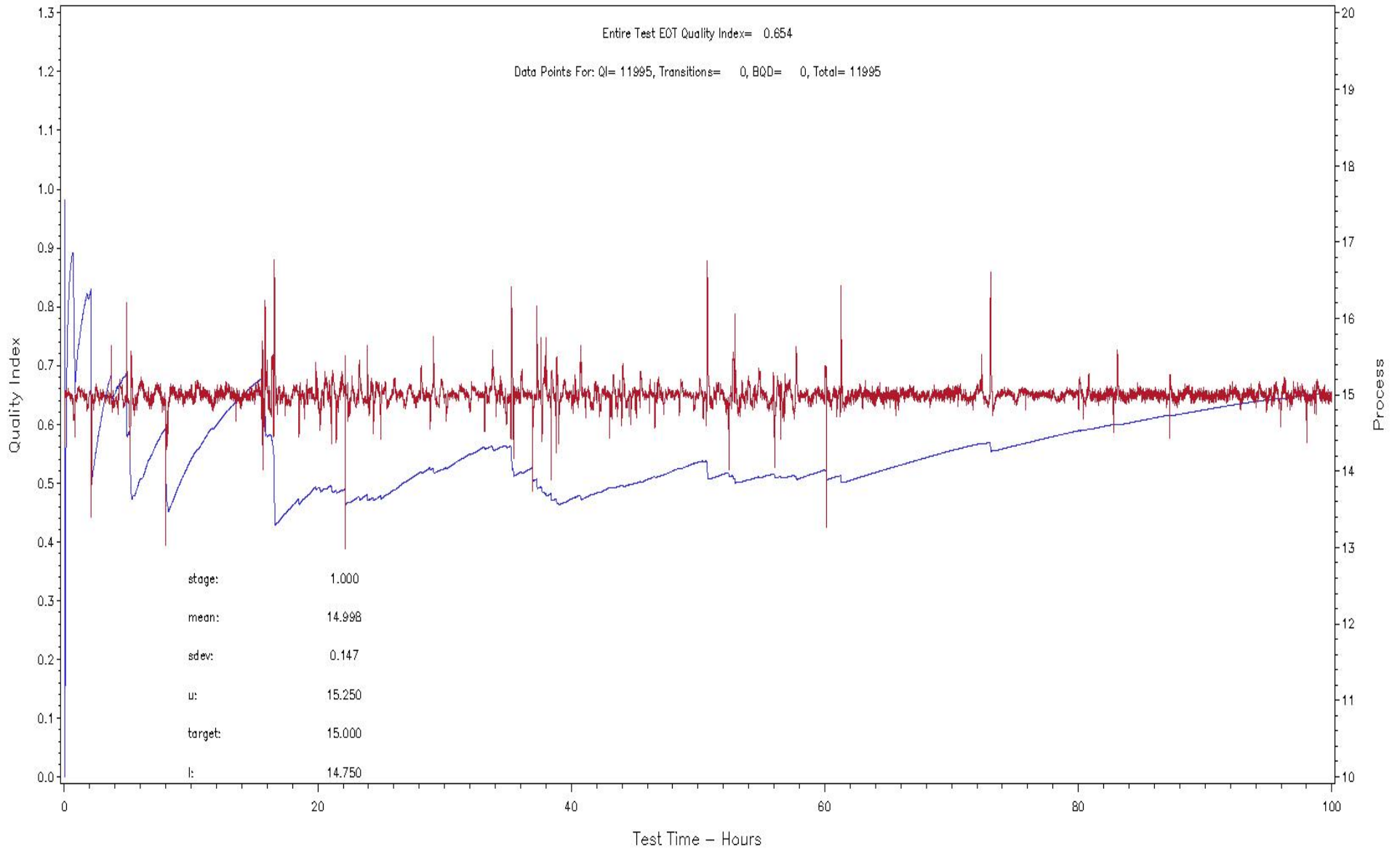
GMOD QUALITY INDEX OPERATIONAL REVIEW
Exhaust Back Pressure Right - kPa (CONTROL)
LAB= BStand= 333 CMR= 112939



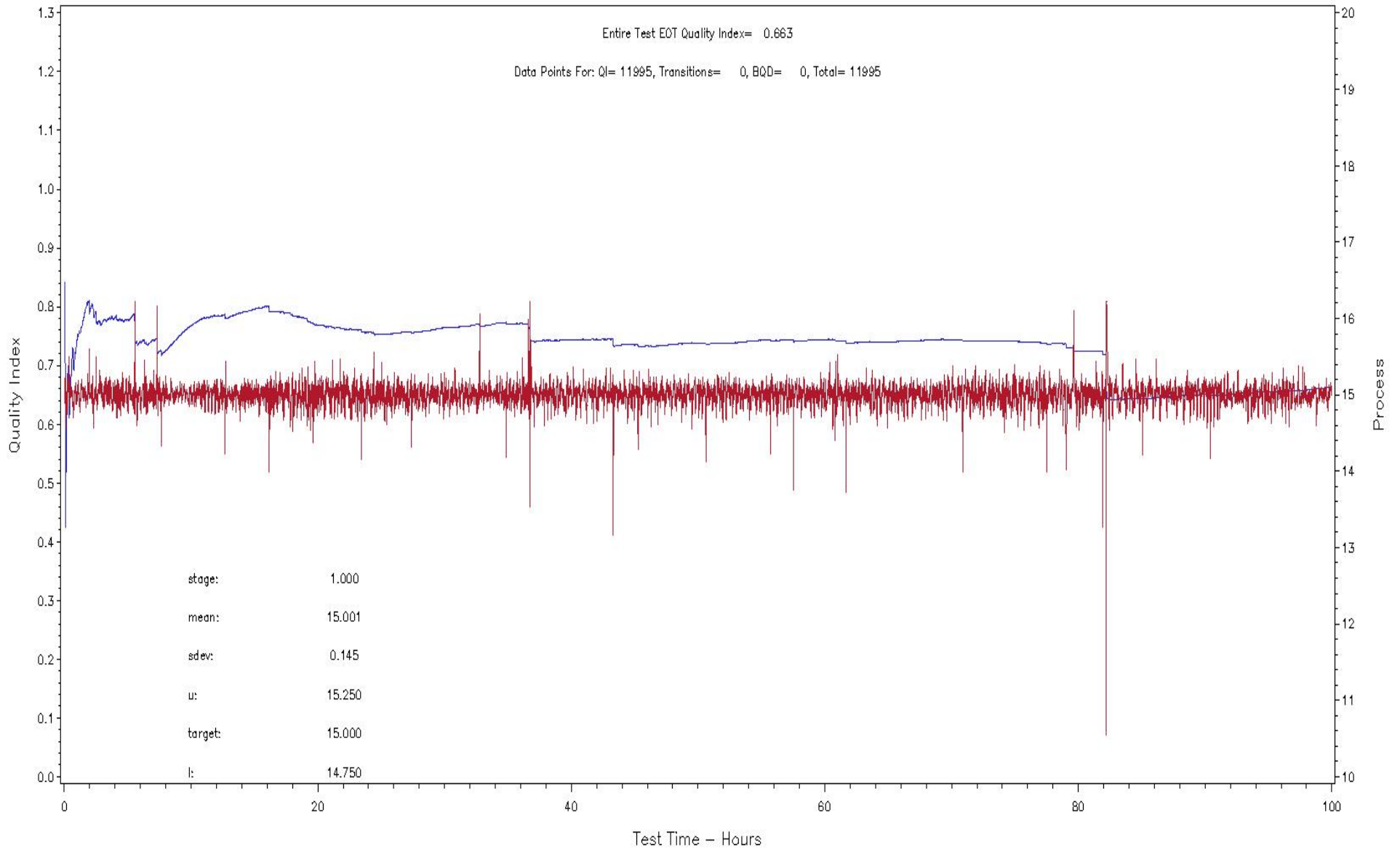
Right Exhaust Manifold Flow

- All Values above Zero

GMOD QUALITY INDEX OPERATIONAL REVIEW
Right Exhaust Manifold Flow – L/min (CONTROL)
LAB= GStand= 180 CMIR= 108822



GMOD QUALITY INDEX OPERATIONAL REVIEW
Right Exhaust Manifold Flow – L/min (CONTROL)
LAB= GStand= 126 CMIR= 112909



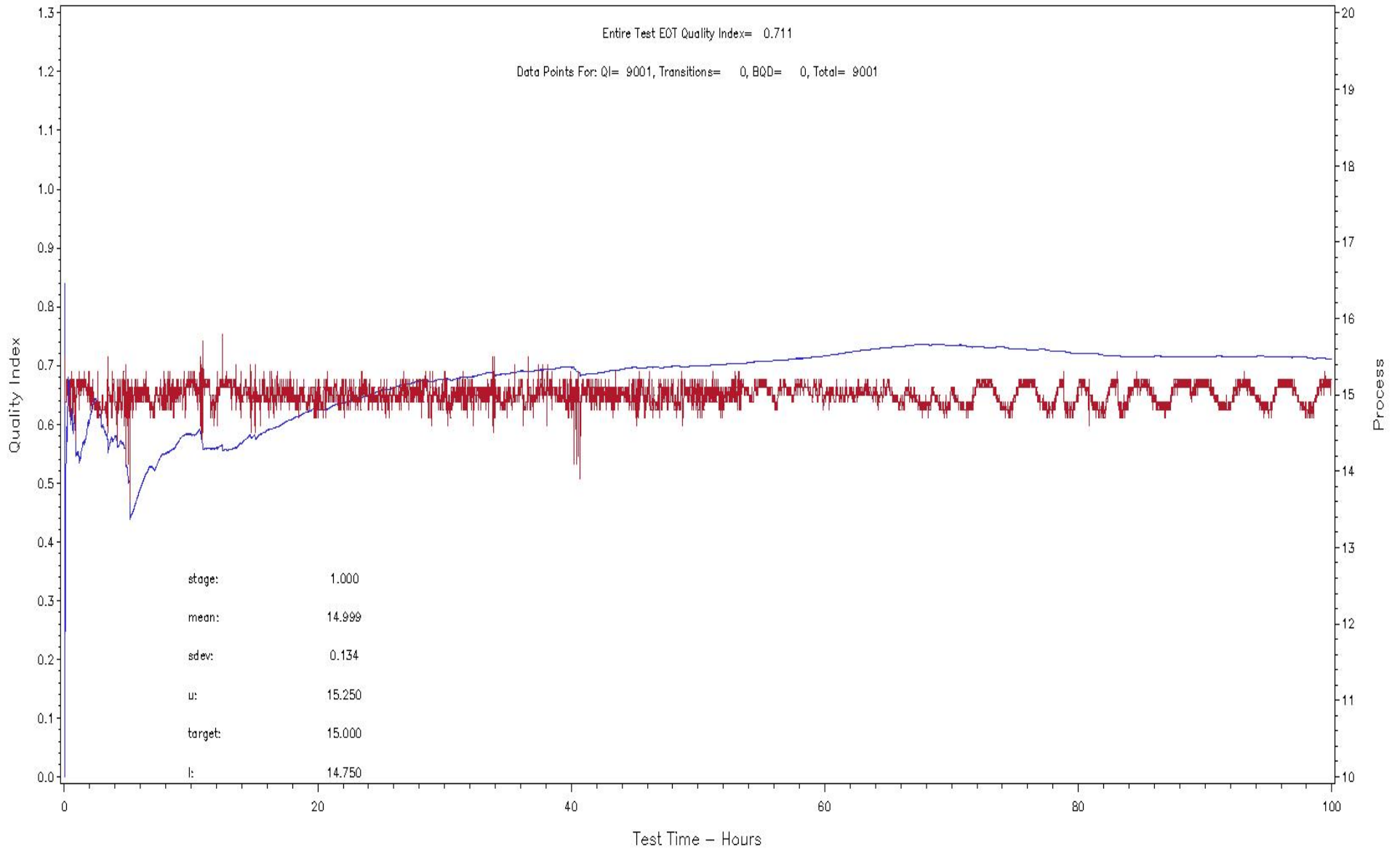
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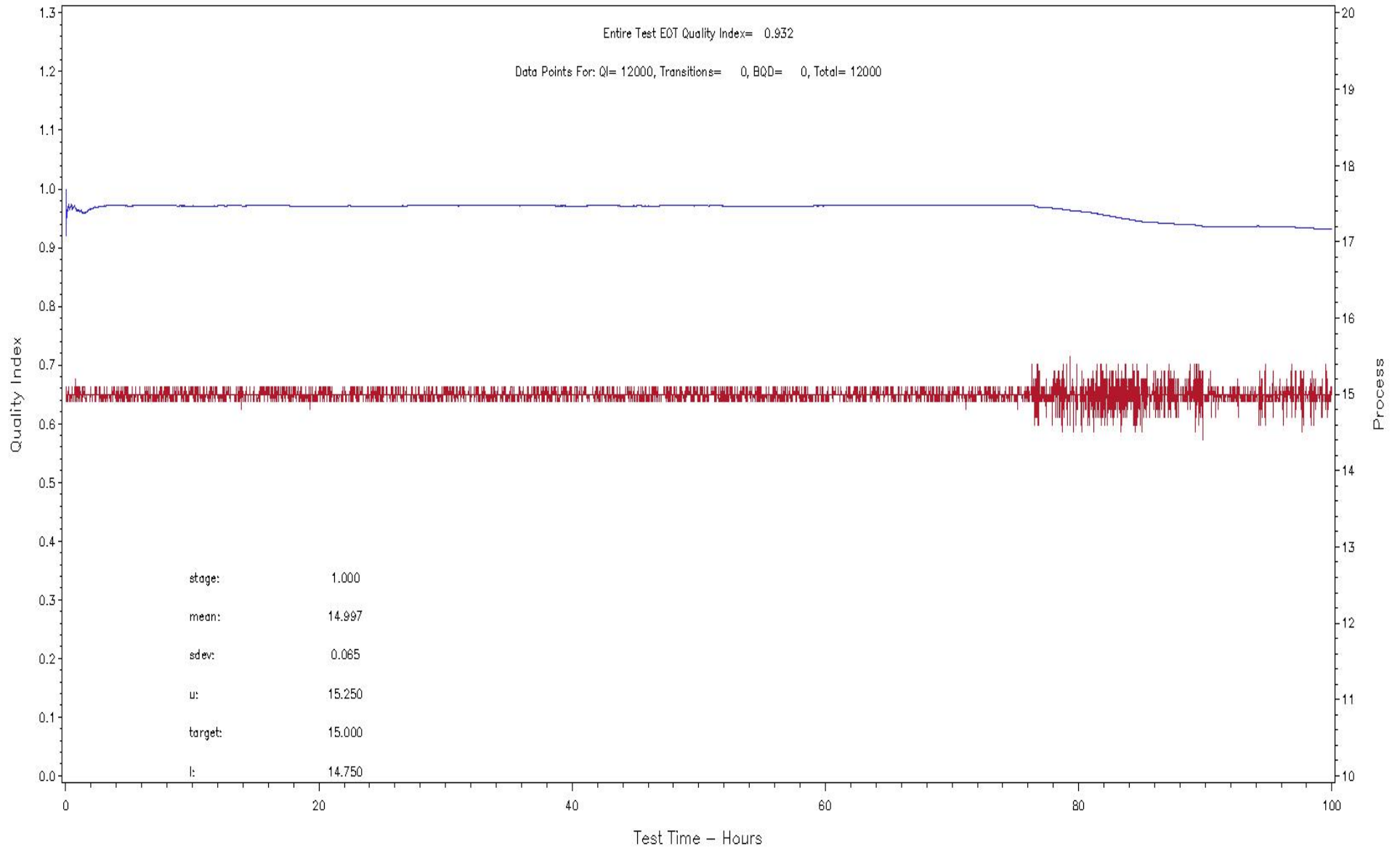
Test Monitoring Center
<http://astmtmc.cmu.edu>



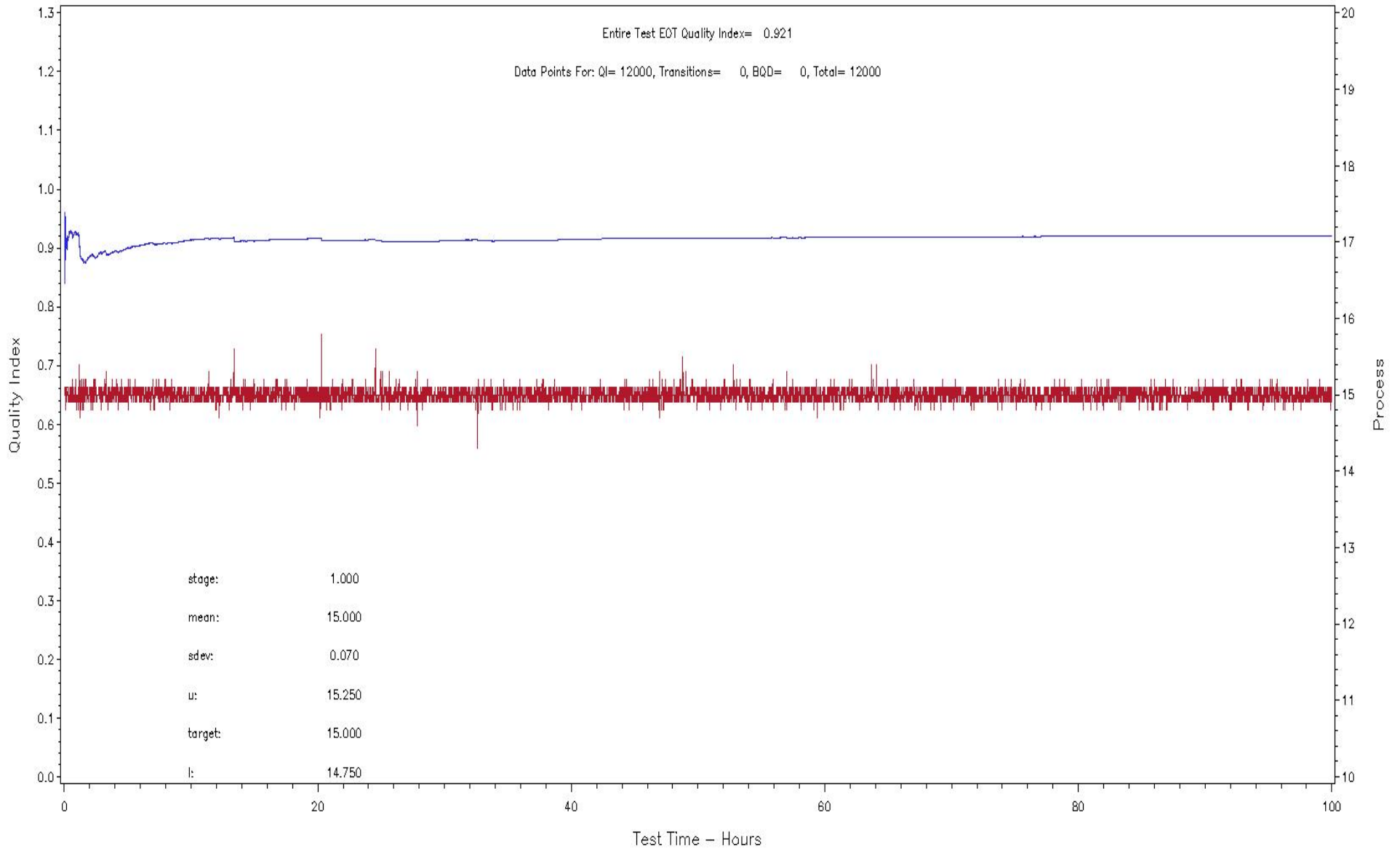
GMOD QUALITY INDEX OPERATIONAL REVIEW
Right Exhaust Manifold Flow – L/min (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



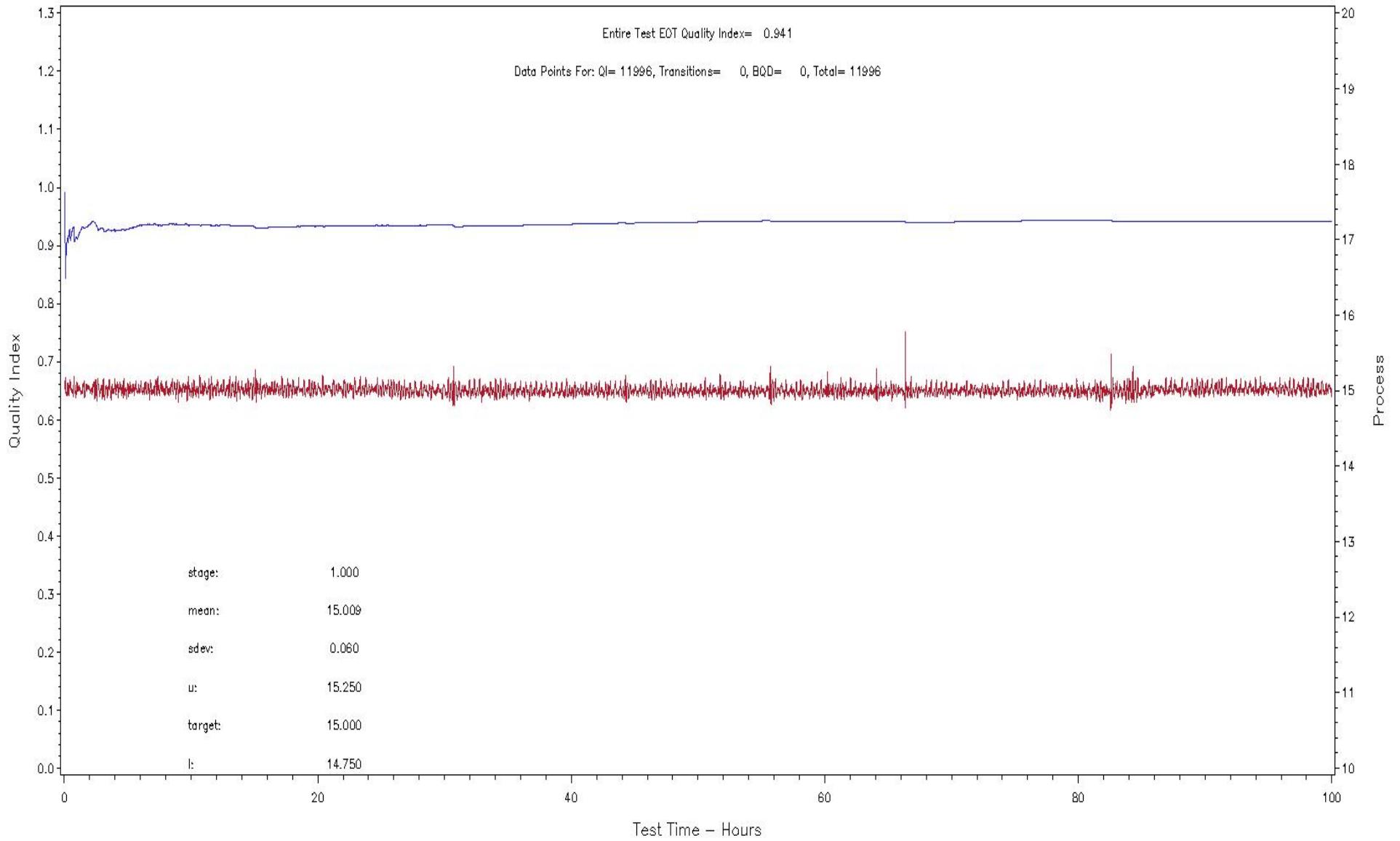
GMOD QUALITY INDEX OPERATIONAL REVIEW
Right Exhaust Manifold Flow – L/min (CONTROL)
LAB= A Stand= 69 CMIR= 112925



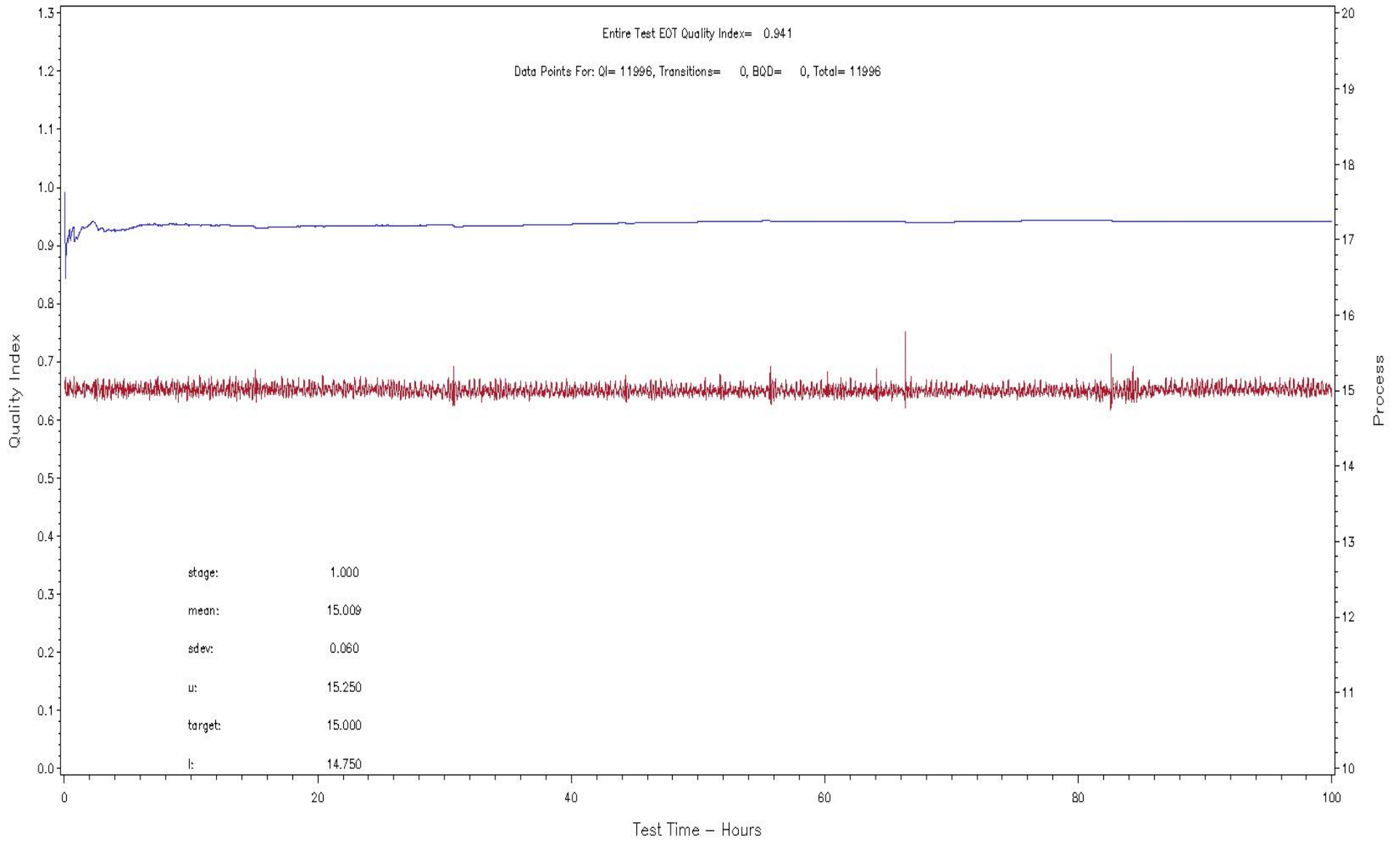
GMOD QUALITY INDEX OPERATIONAL REVIEW
Right Exhaust Manifold Flow – L/min (CONTROL)
LAB= A Stand= 71 CMIR= 107864



GMOD QUALITY INDEX OPERATIONAL REVIEW
Right Exhaust Manifold Flow – L/min (CONTROL)
LAB= BStand= 333 CMIR= 112939



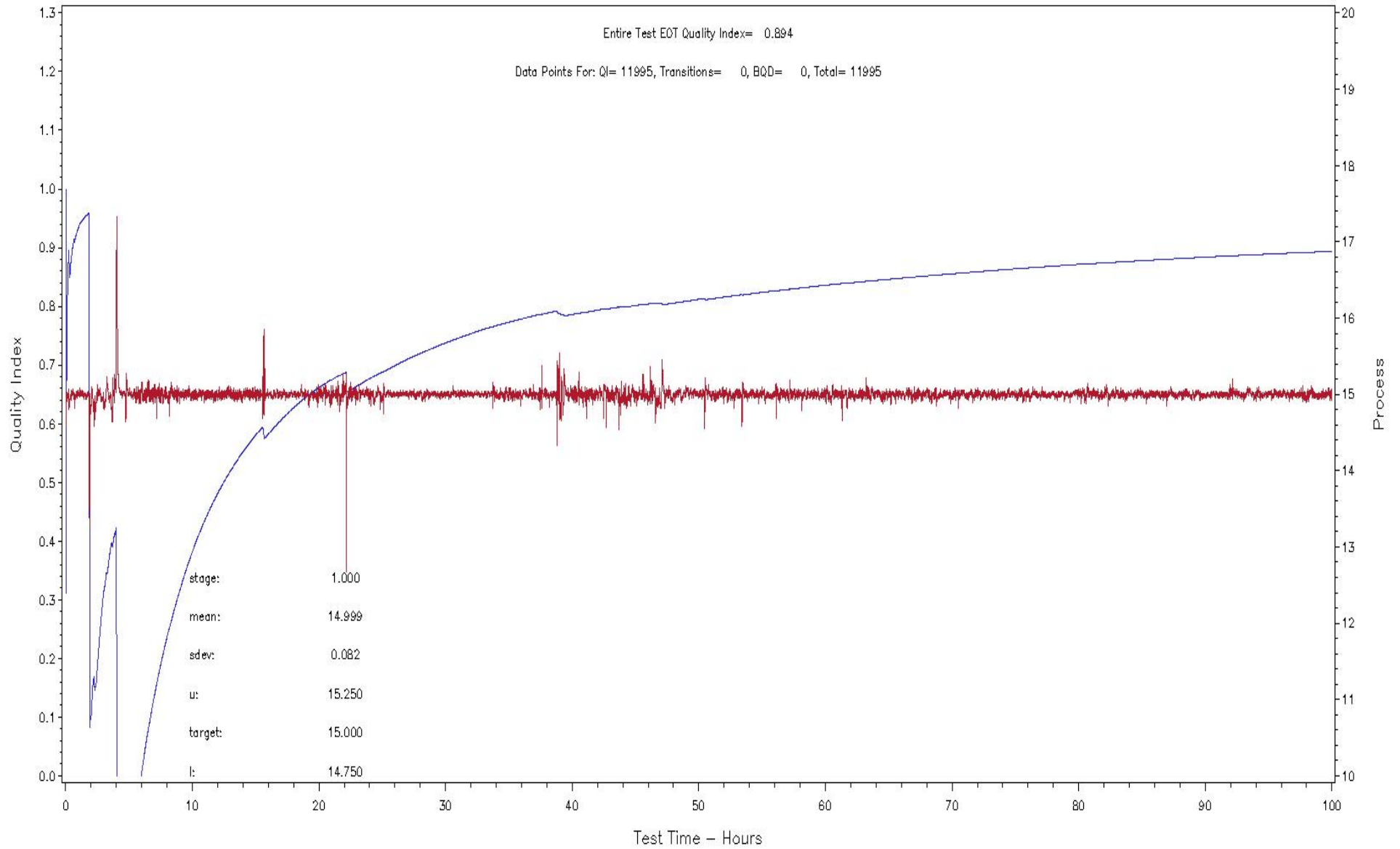
GMOD QUALITY INDEX OPERATIONAL REVIEW
Right Exhaust Manifold Flow – L/min (CONTROL)
LAB= BStand= 333 CMIR= 112939



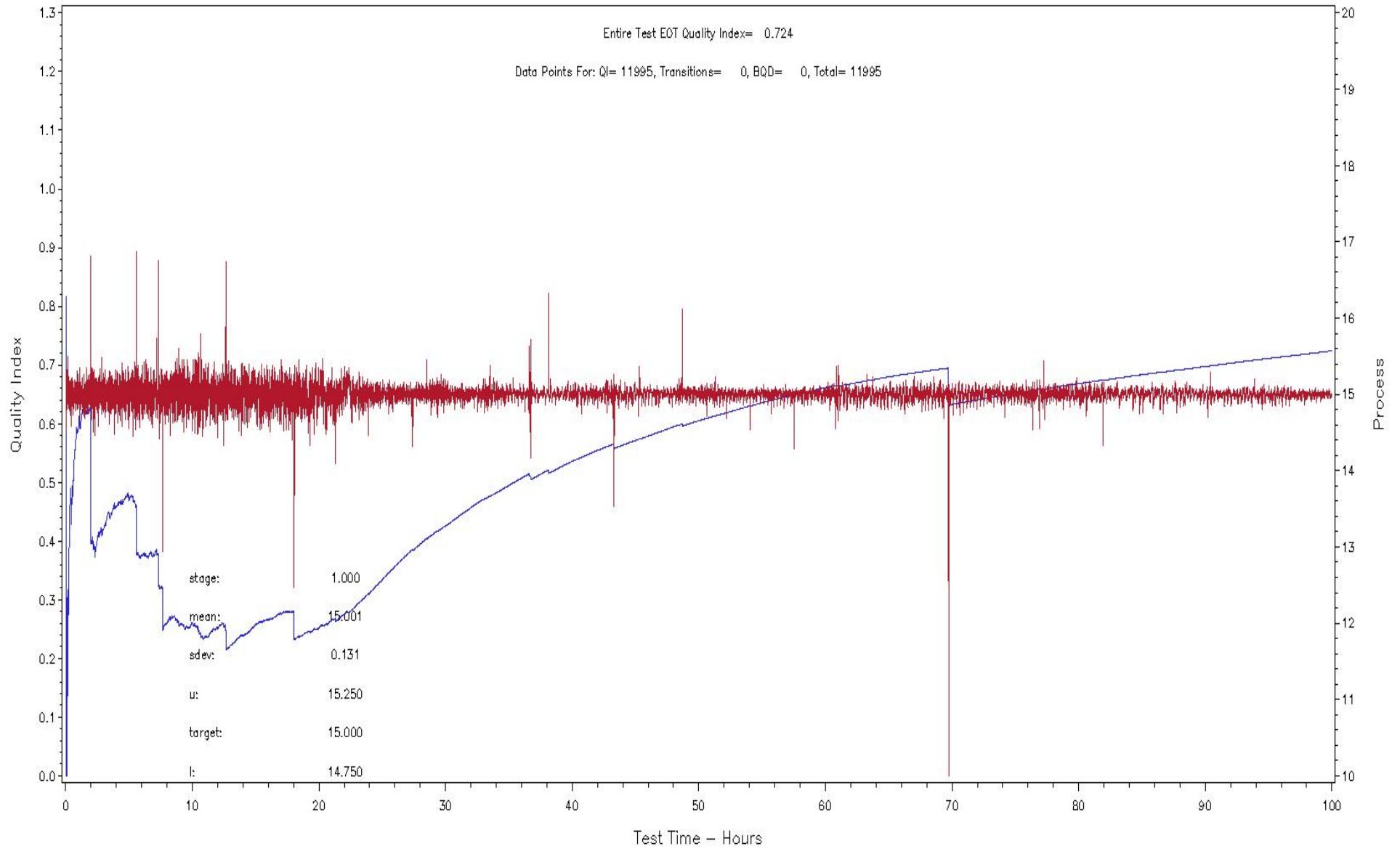
Left Exhaust Manifold Flow

- All Values above Zero

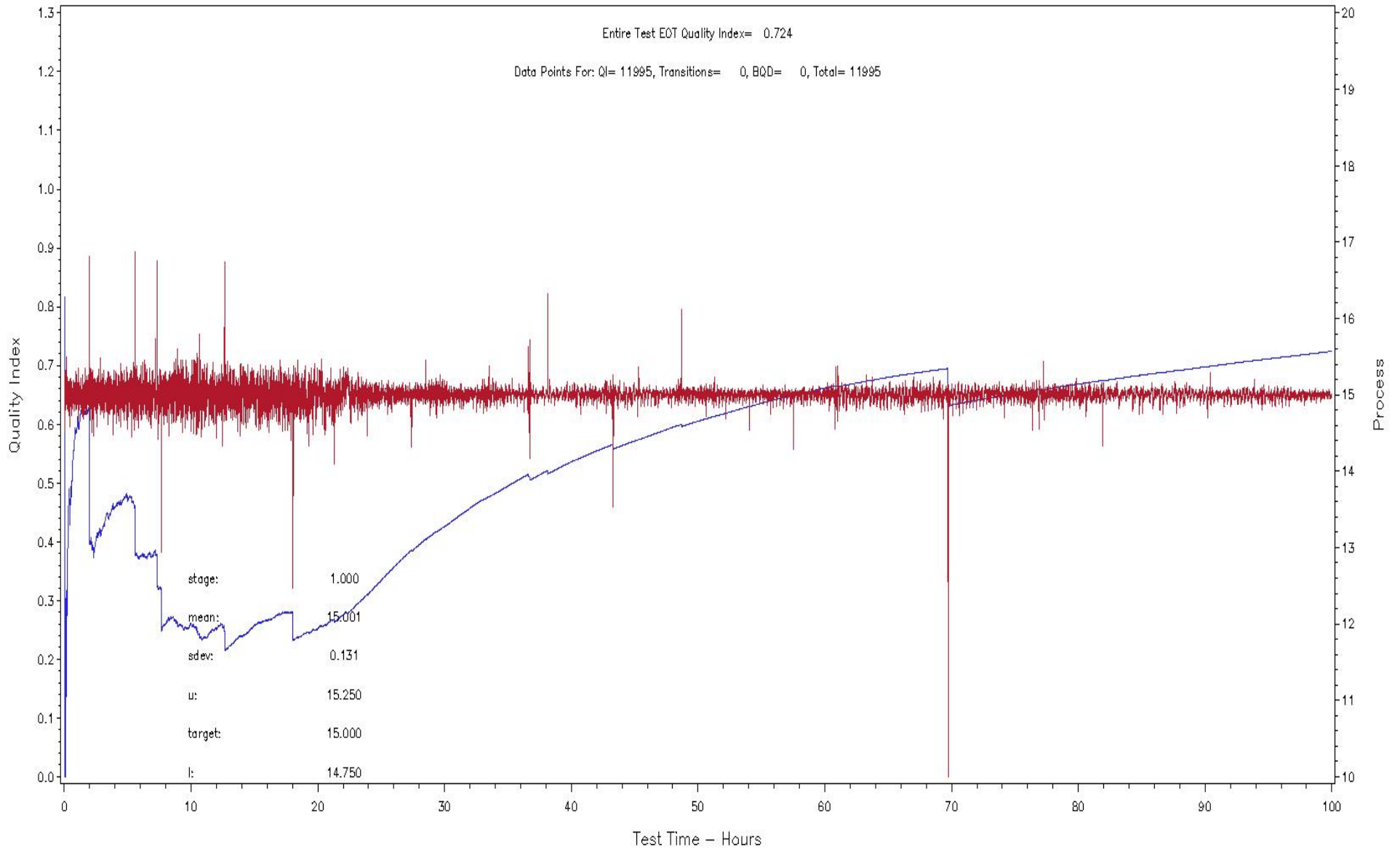
GMOD QUALITY INDEX OPERATIONAL REVIEW
Left Exhaust Manifold Flow (CONTROL)
LAB= GStand= 180 CMIR= 108822



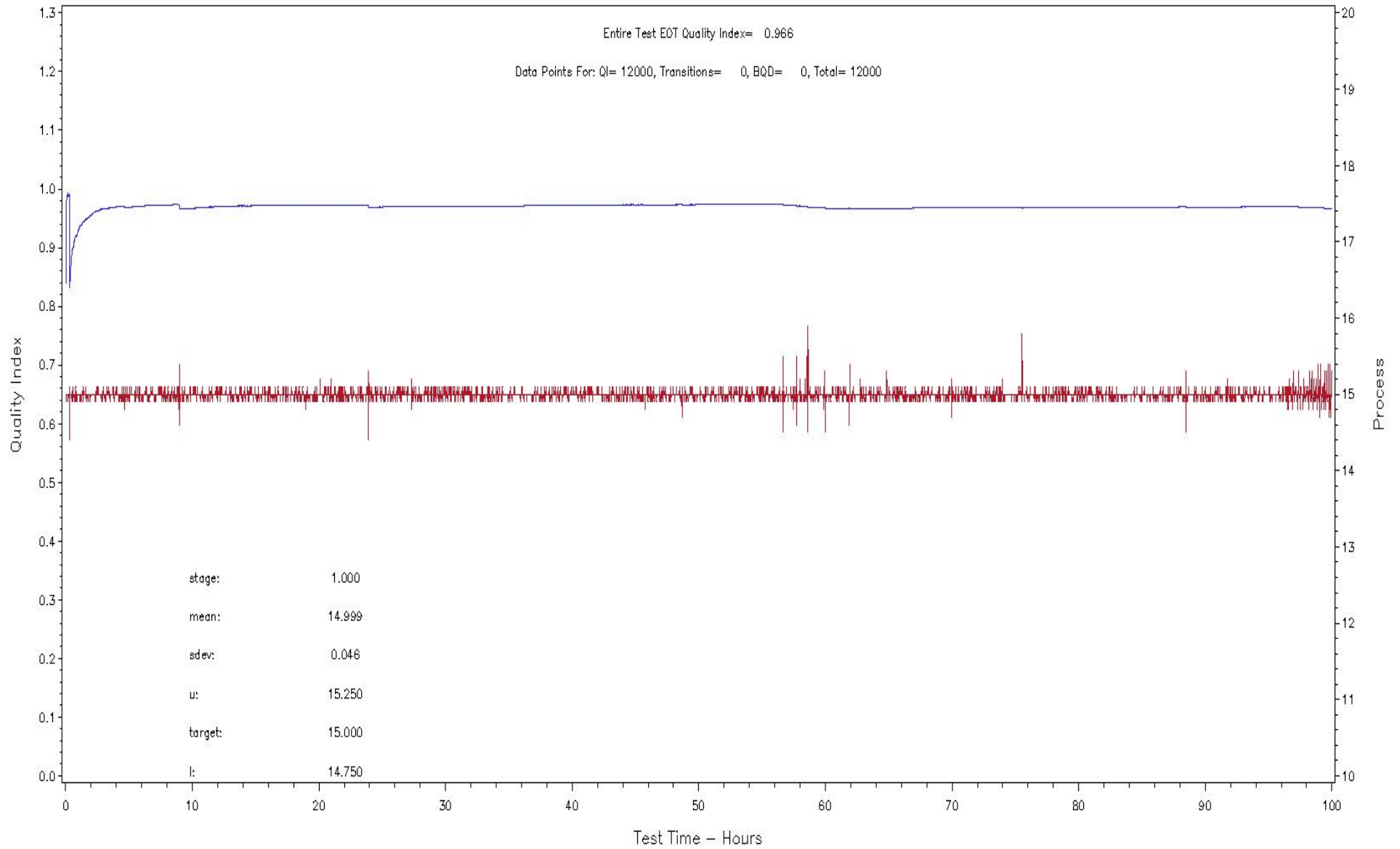
GMOD QUALITY INDEX OPERATIONAL REVIEW
Left Exhaust Manifold Flow (CONTROL)
LAB= GStand= 126 CMIR= 112909



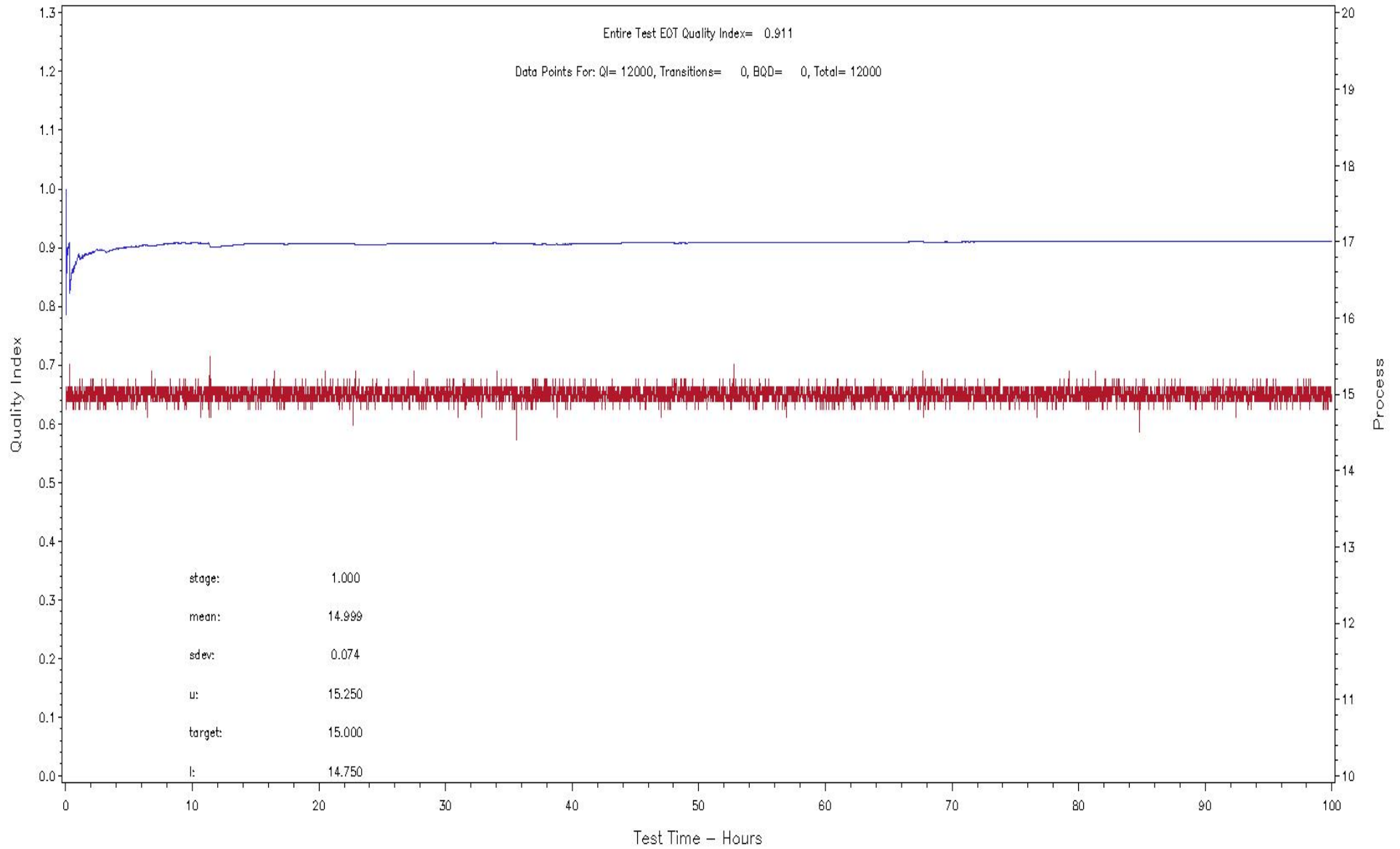
GMOD QUALITY INDEX OPERATIONAL REVIEW
Left Exhaust Manifold Flow (CONTROL)
LAB= GStand= 126 CMIR= 112909



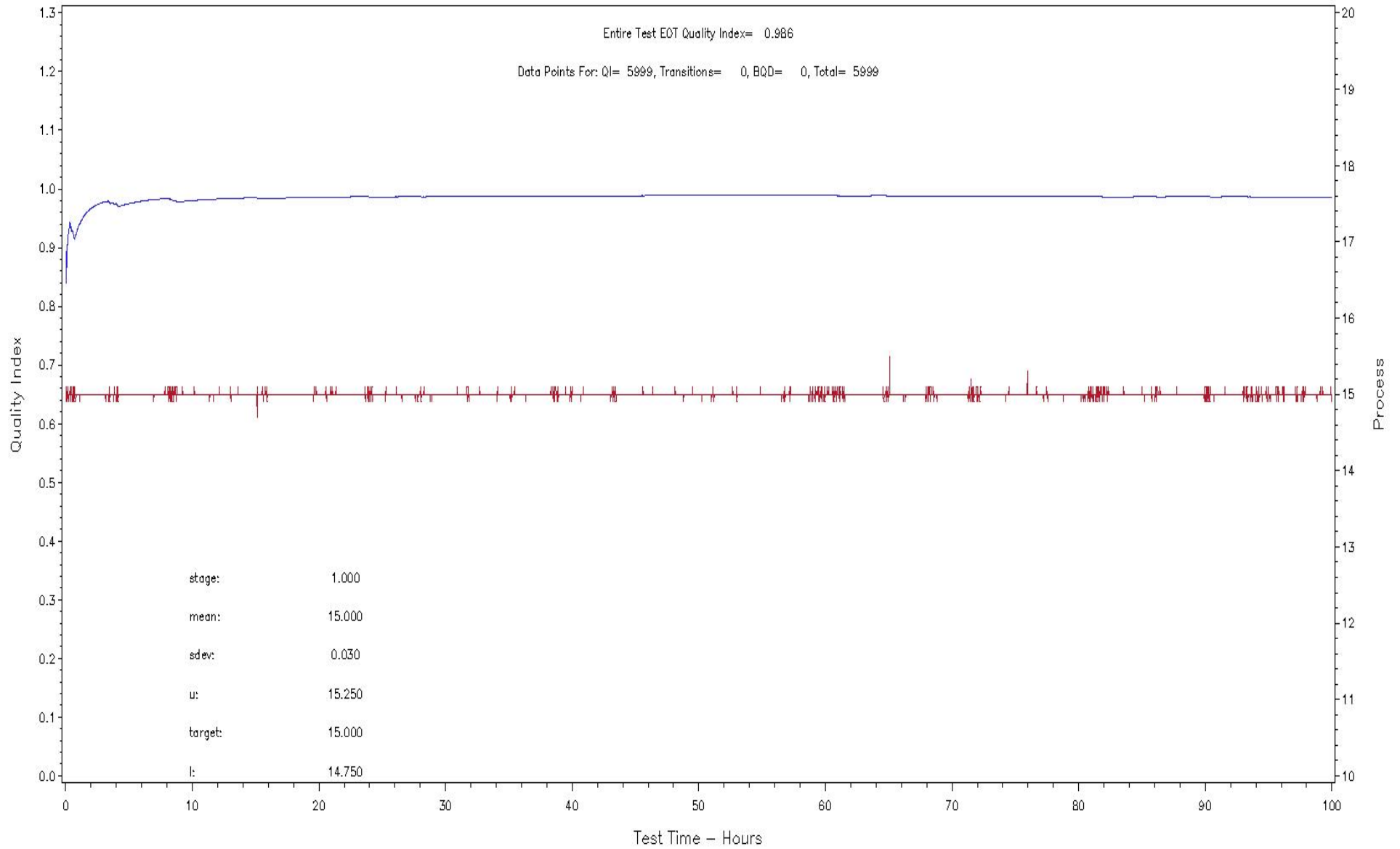
GMOD QUALITY INDEX OPERATIONAL REVIEW
Left Exhaust Manifold Flow (CONTROL)
LAB= A Stand= 69 CMIR= 112925



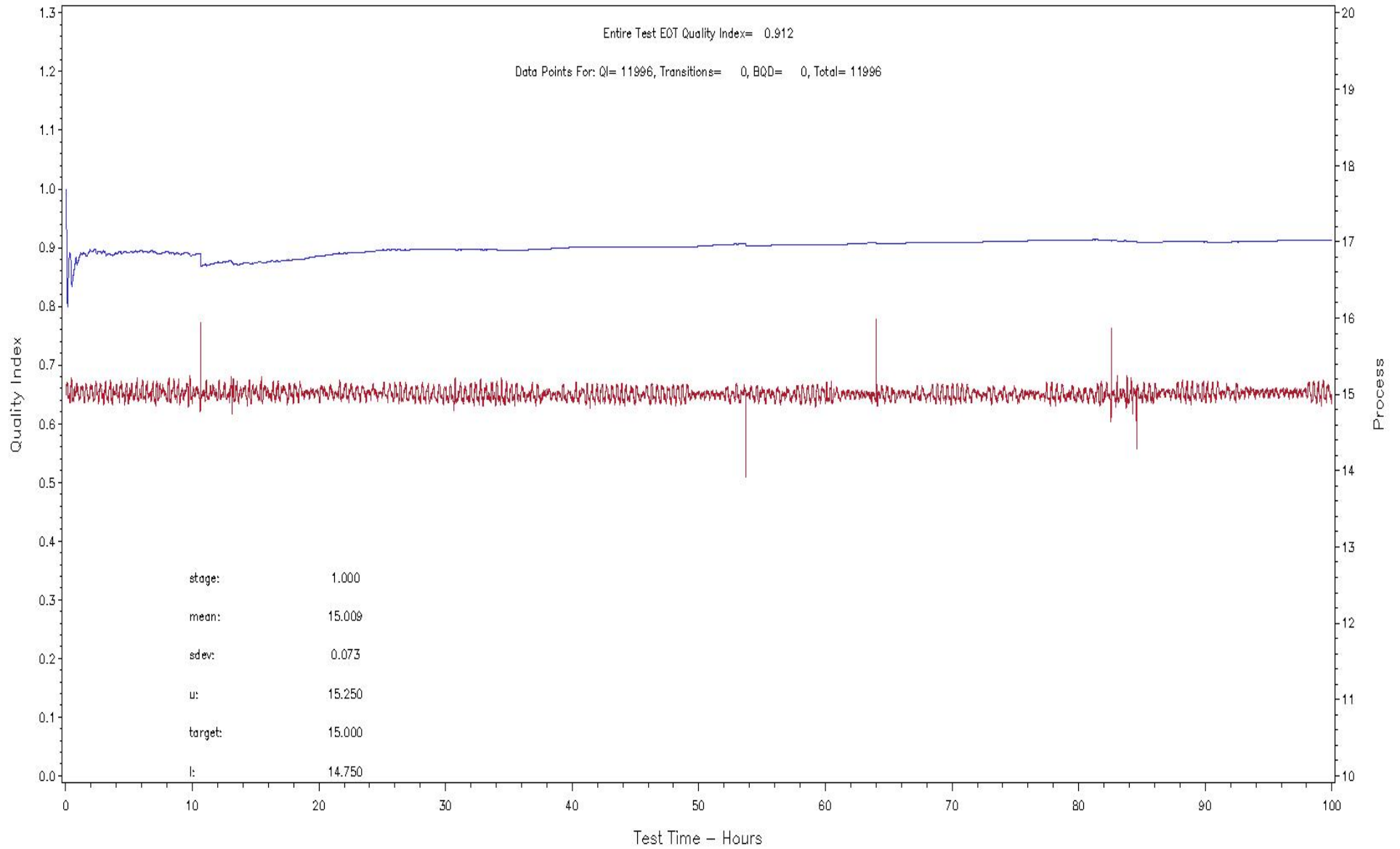
GMOD QUALITY INDEX OPERATIONAL REVIEW
Left Exhaust Manifold Flow (CONTROL)
LAB= A Stand= 71 CMIR= 107864



GMOD QUALITY INDEX OPERATIONAL REVIEW
Left Exhaust Manifold Flow (CONTROL)
LAB= F Stand= 3111 CMIR= 112941



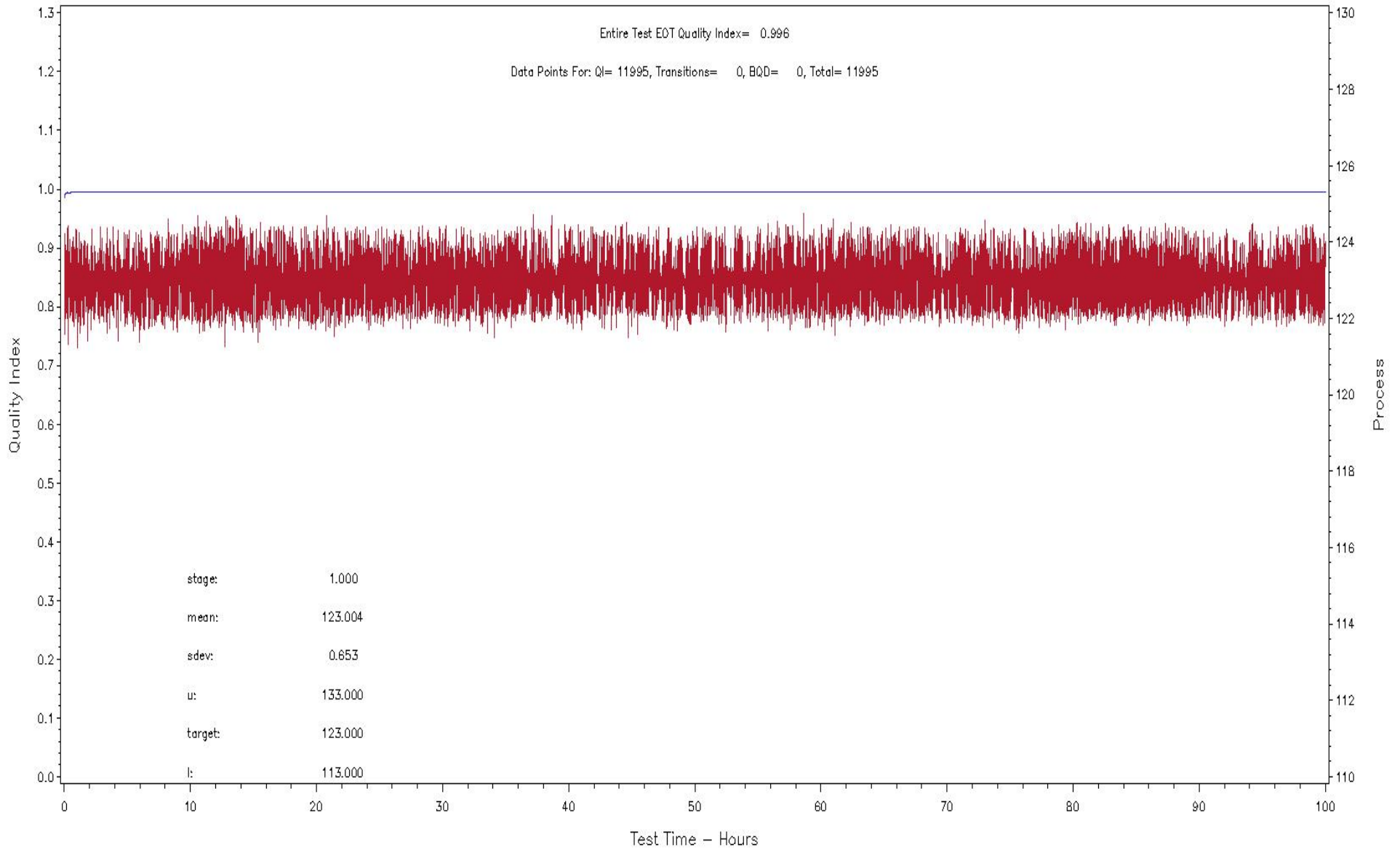
GMOD QUALITY INDEX OPERATIONAL REVIEW
Left Exhaust Manifold Flow (CONTROL)
LAB= BStand= 333 CMIR= 112939



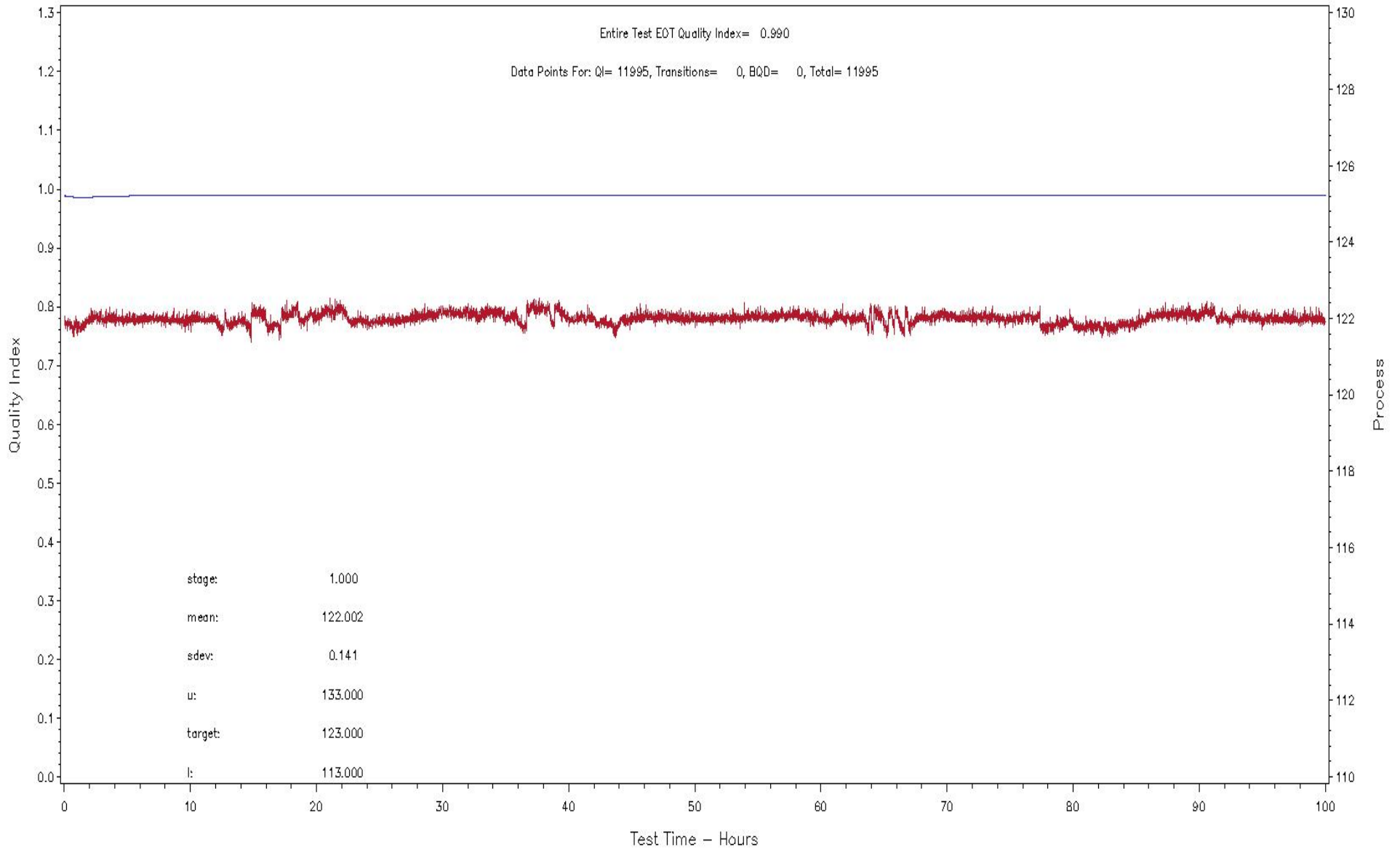
Coolant System Pressure

- All Values above Zero

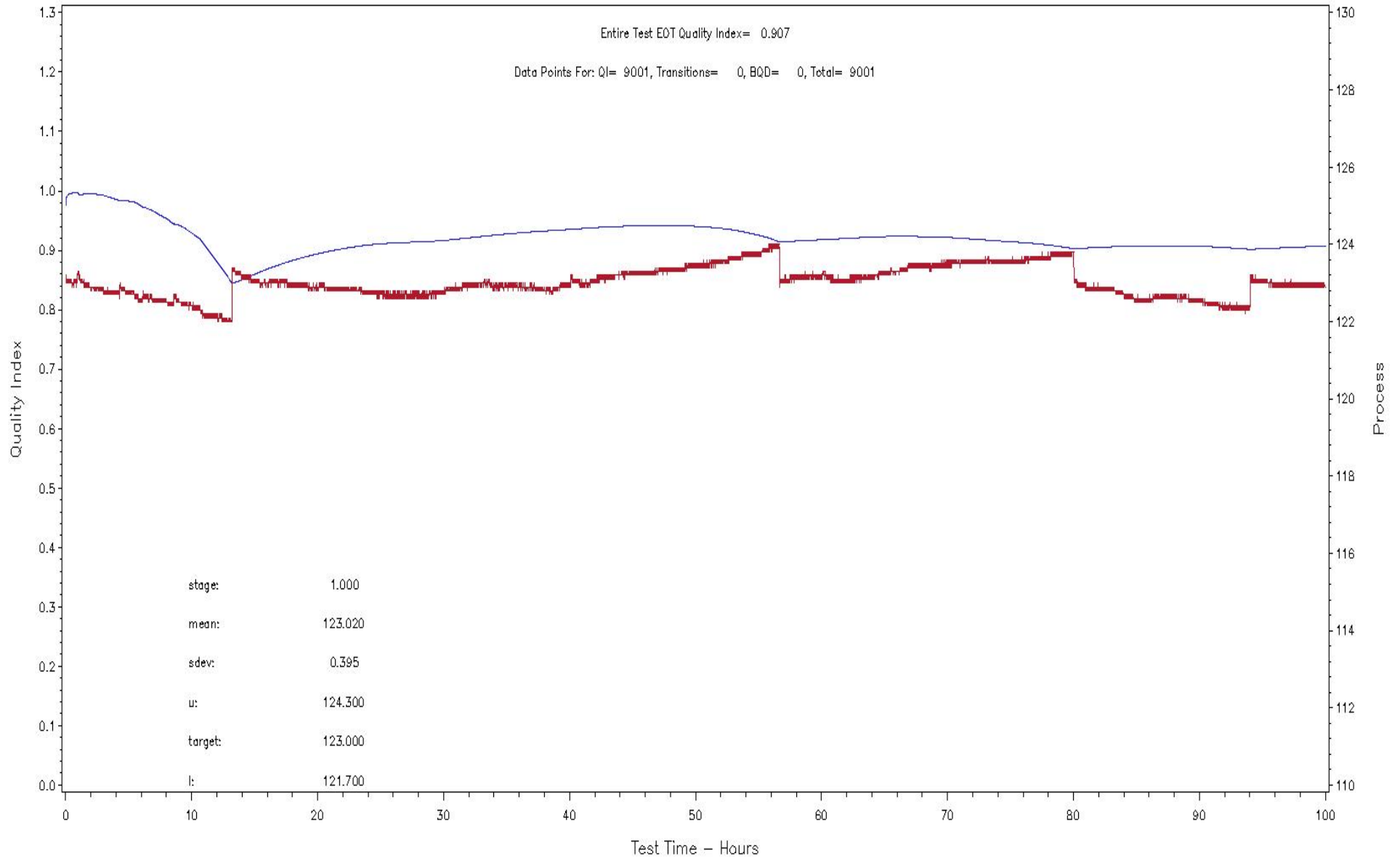
GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Pressure (CONTROL)
LAB= GStand= 180 CMIR= 108822



GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Pressure (CONTROL)
LAB= GStand= 126 CMIR= 112909



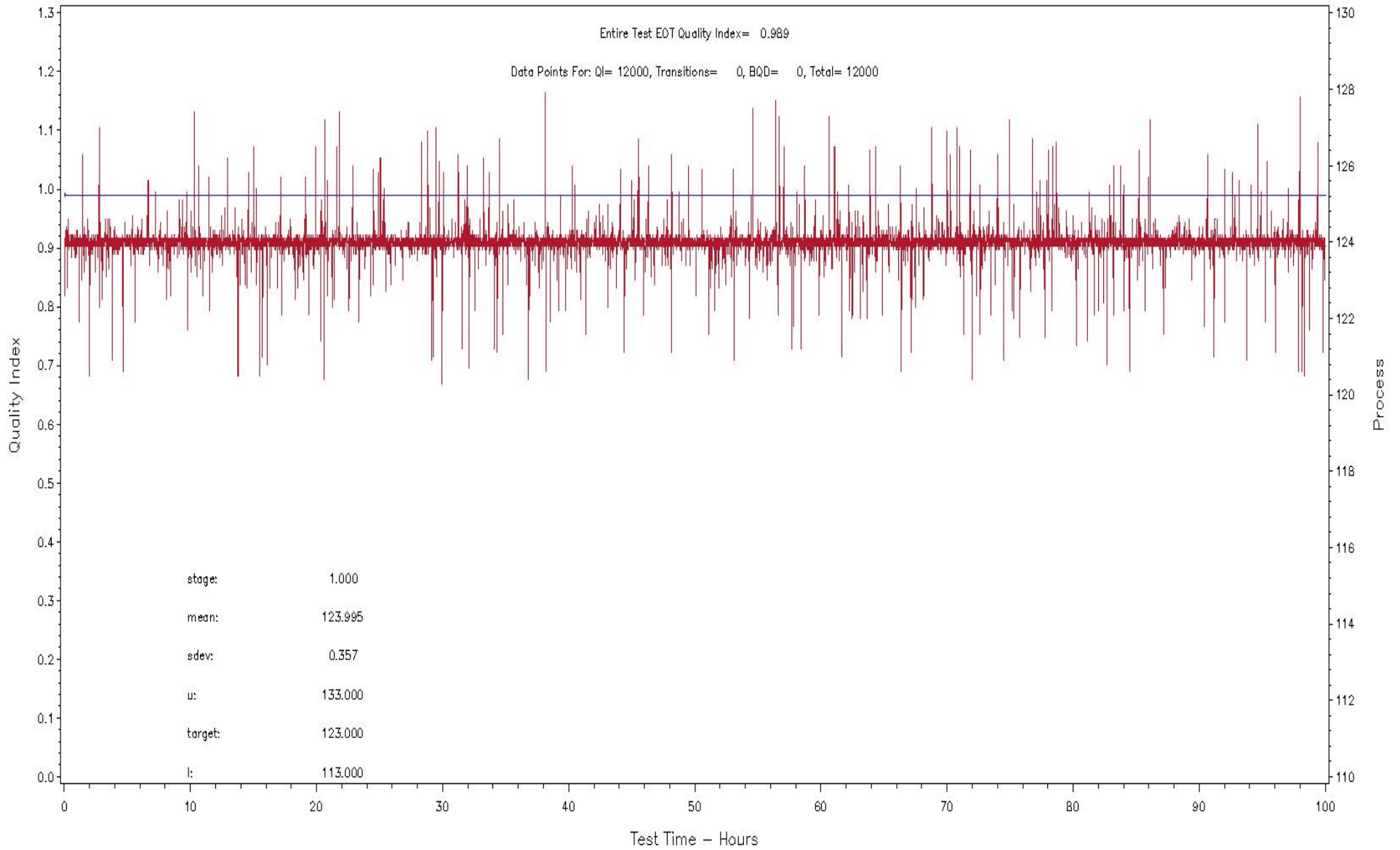
GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Pressure (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



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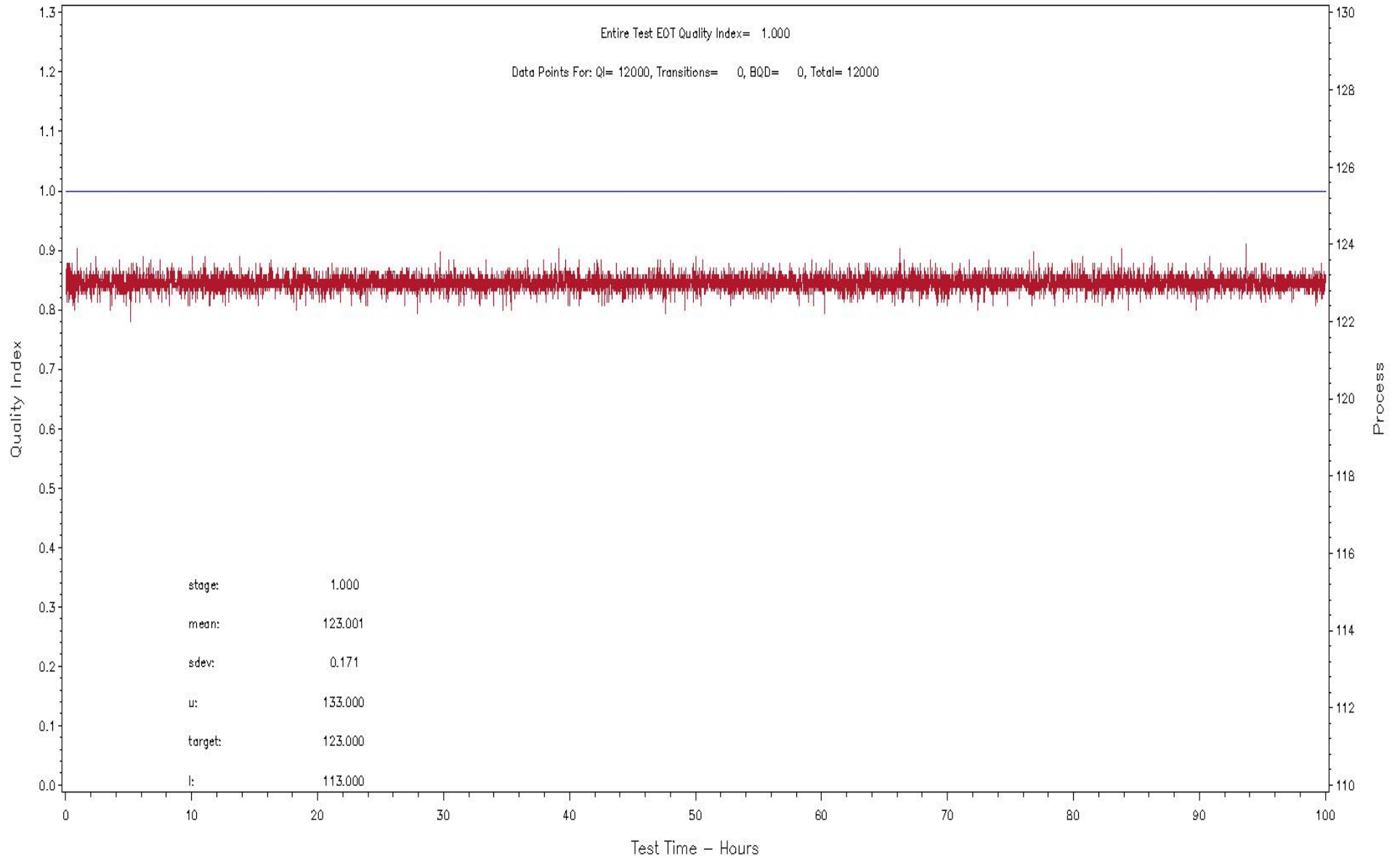
GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Pressure (CONTROL)
LAB= A Stand= 69 CMIR= 112925



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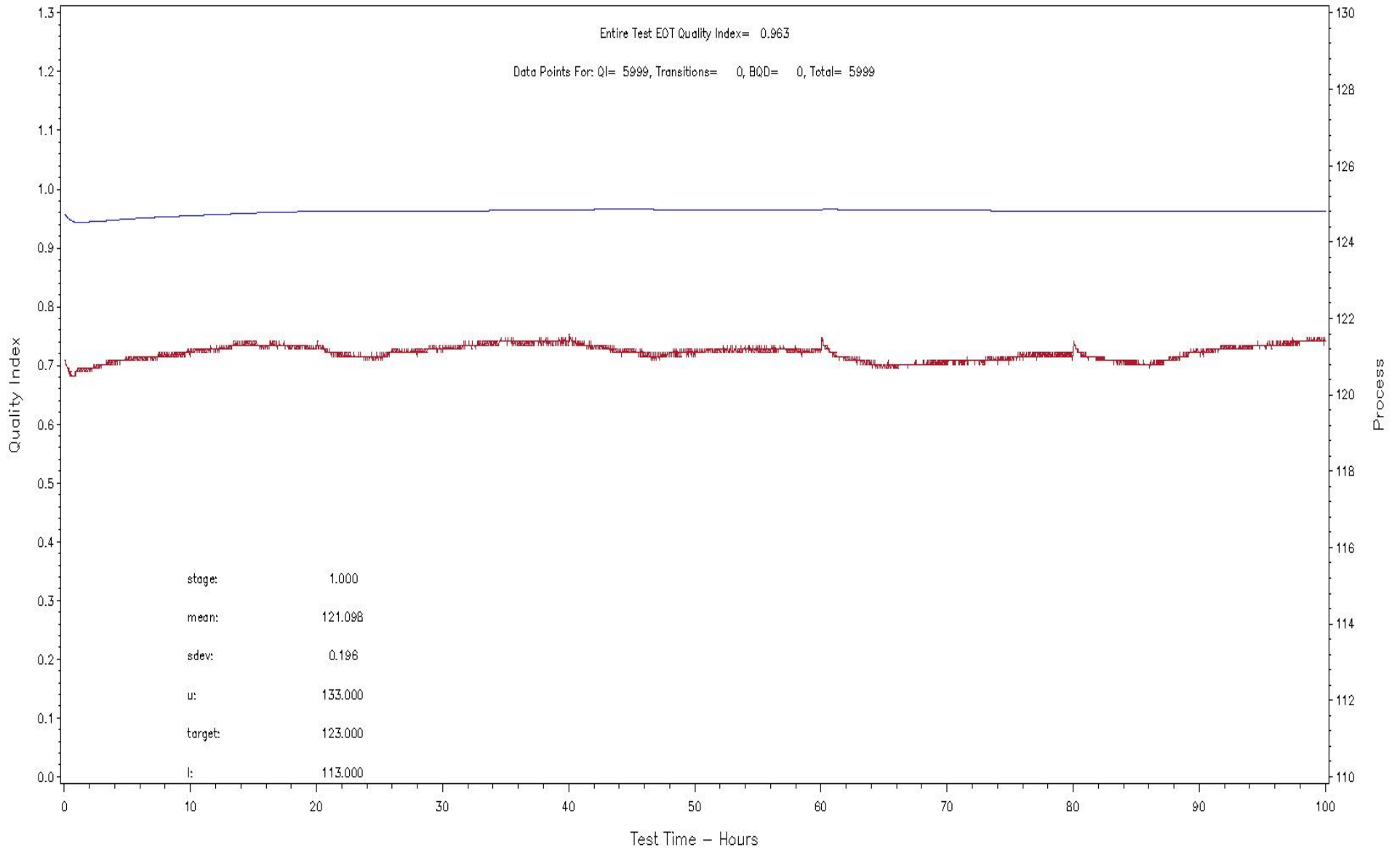
GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Pressure (CONTROL)
LAB= A Stand= 71 CMIR= 107864



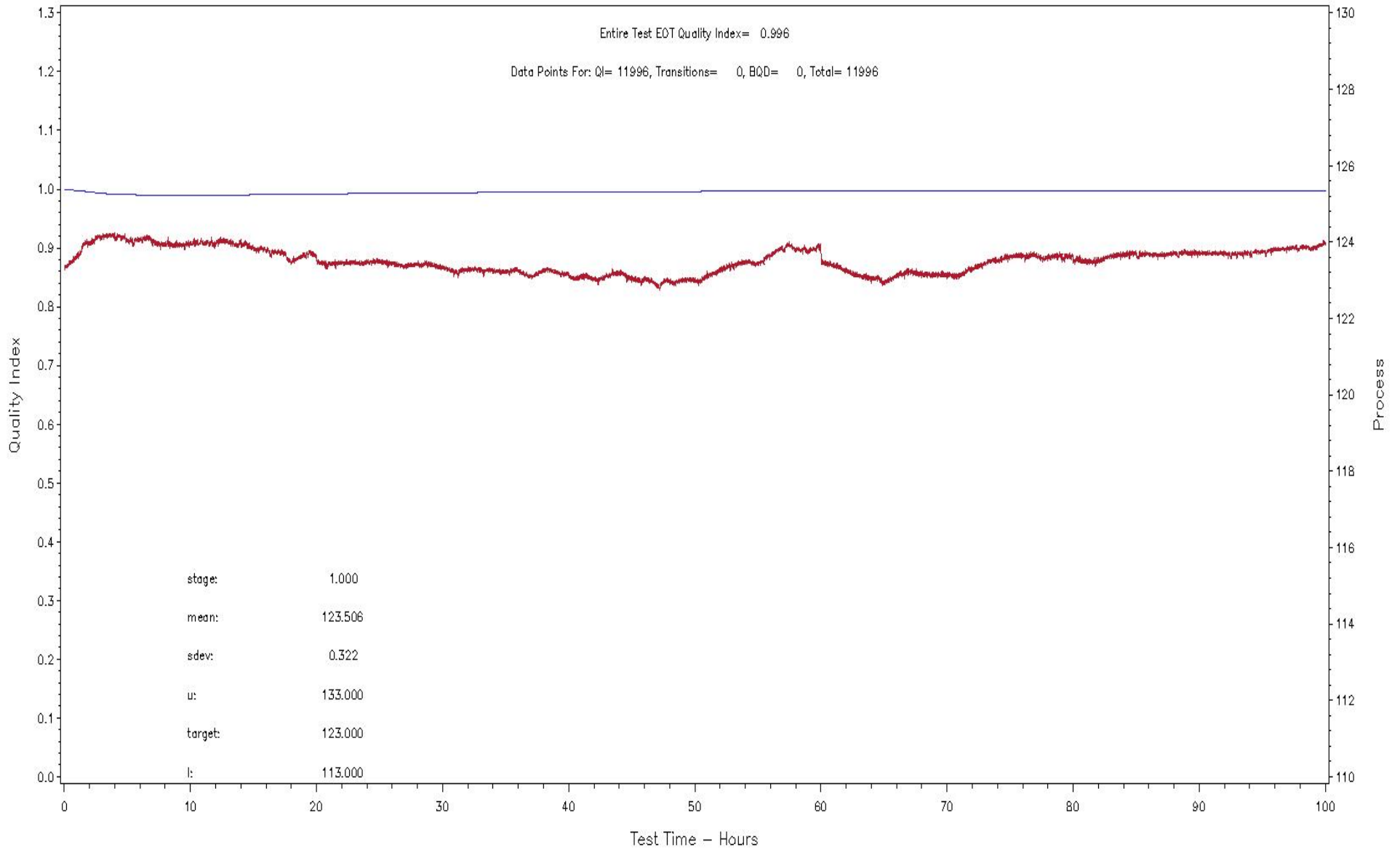
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GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Pressure (CONTROL)
LAB= F Stand= 3111 CMR= 112941



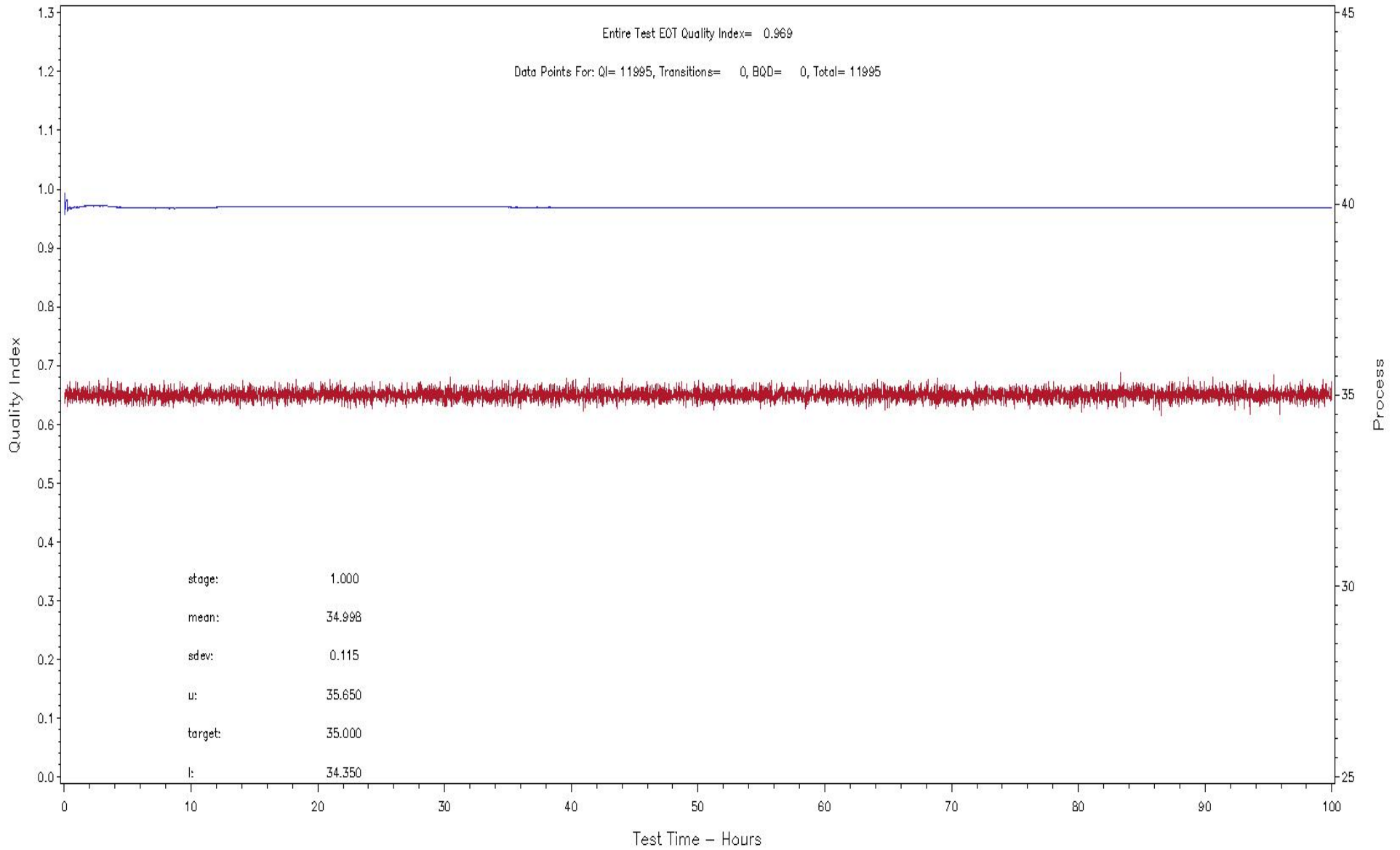
GMOD QUALITY INDEX OPERATIONAL REVIEW
Coolant Pressure (CONTROL)
LAB= BStand= 333 CMIR= 112939



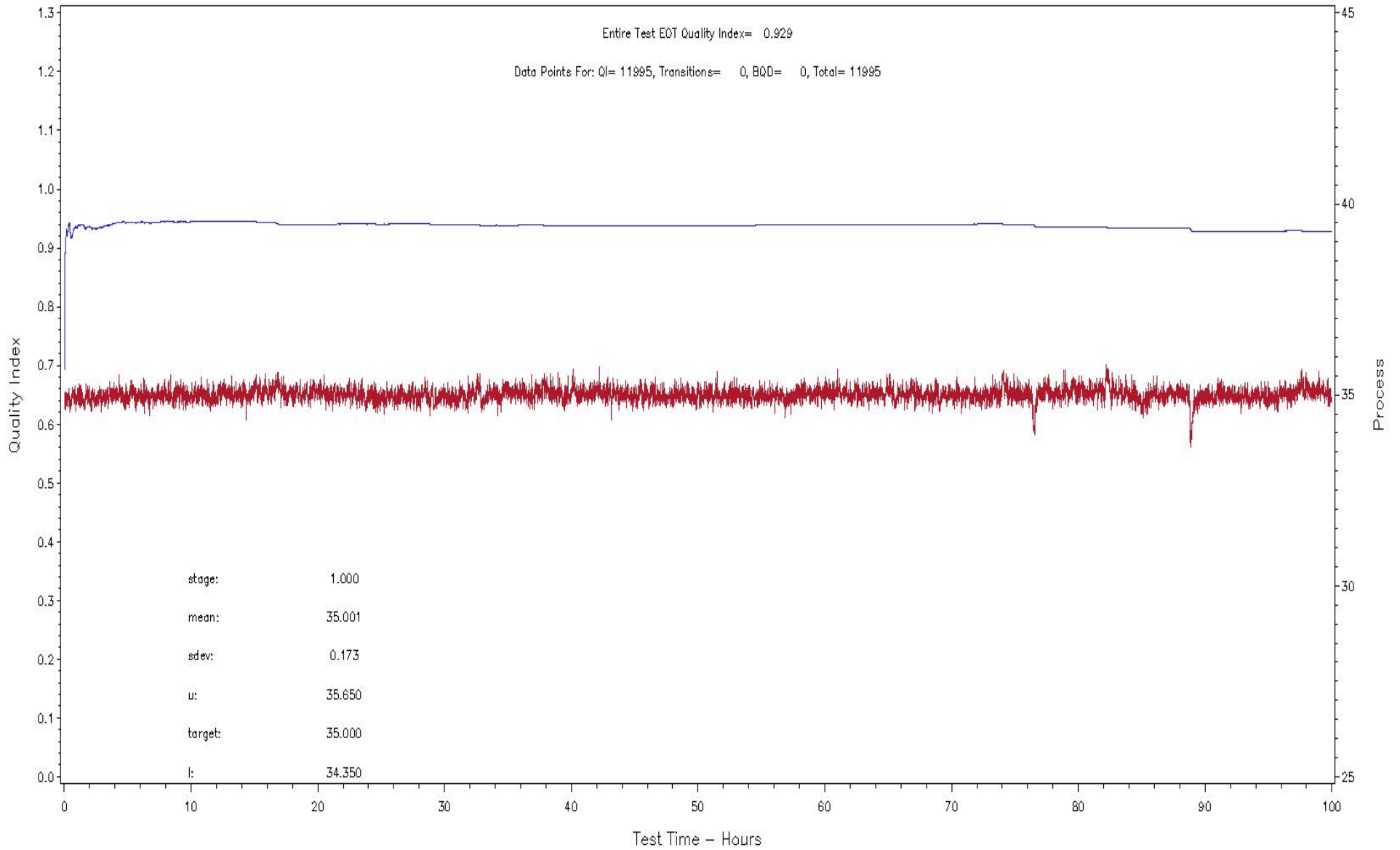
Intake Air Temperature

- All Values above Zero

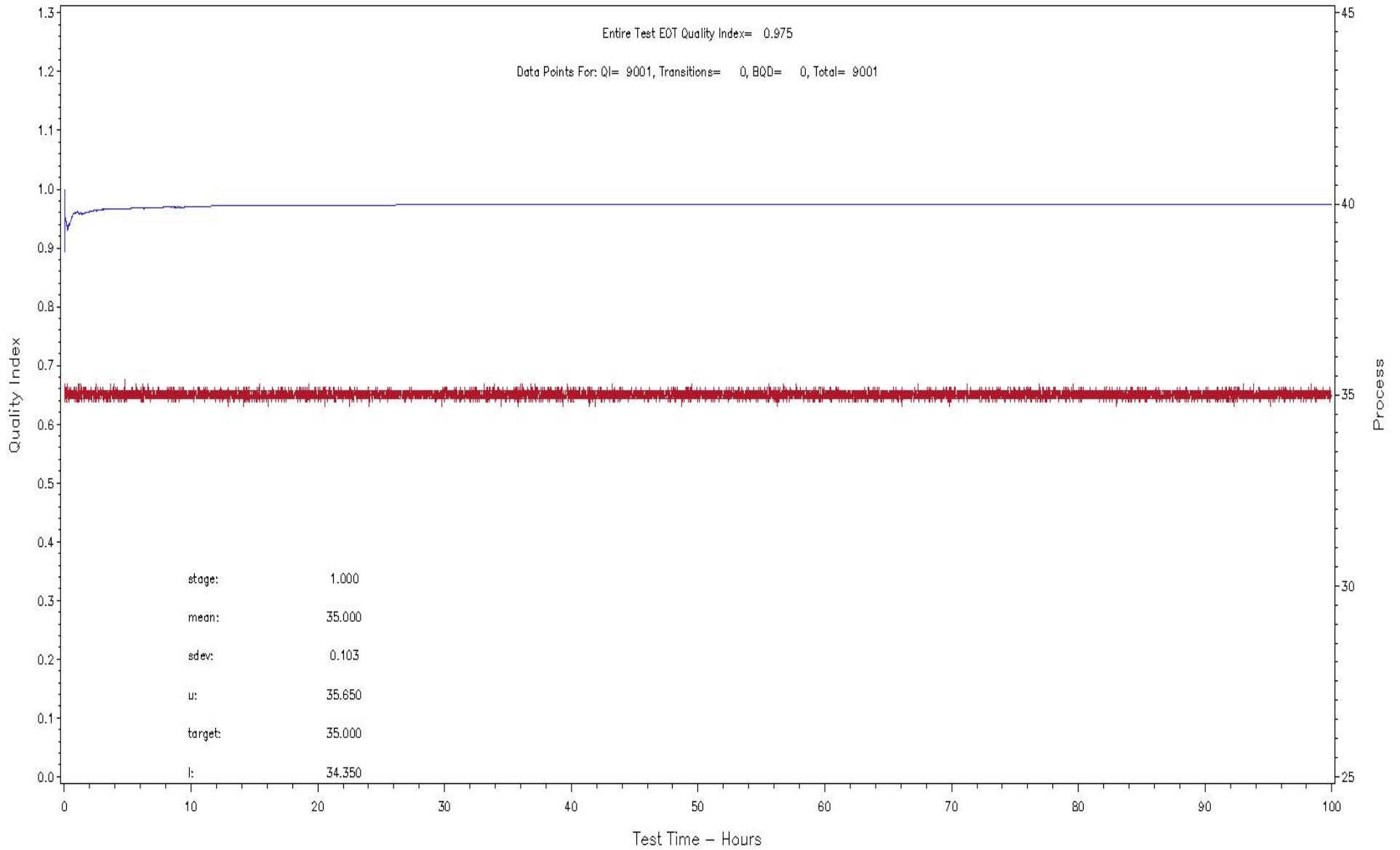
GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Temperature – Degrees C (CONTROL)
LAB= GStand= 180 CMIR= 108822



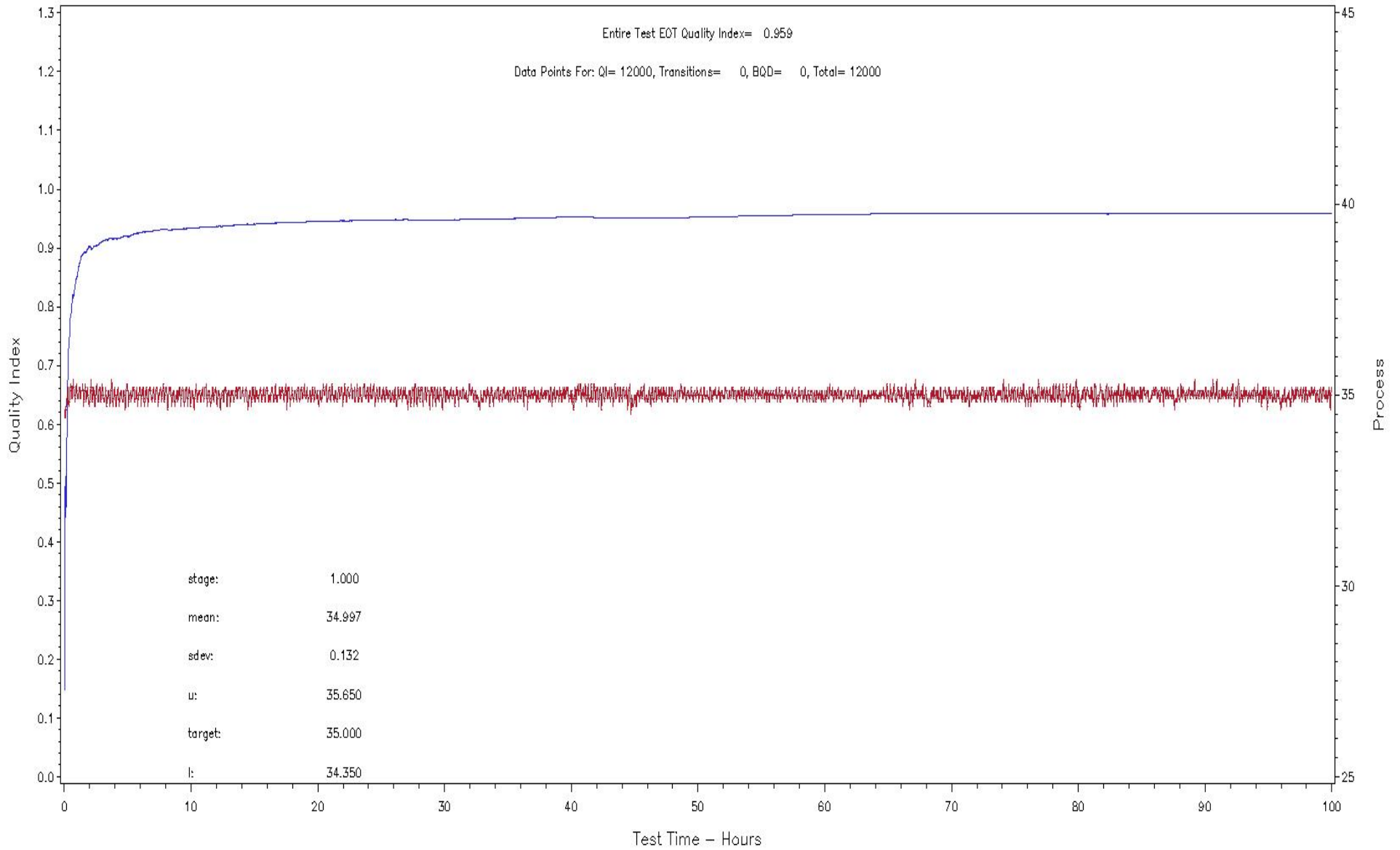
GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Temperature – Degrees C (CONTROL)
LAB= GStand= 126 CMIR= 112909



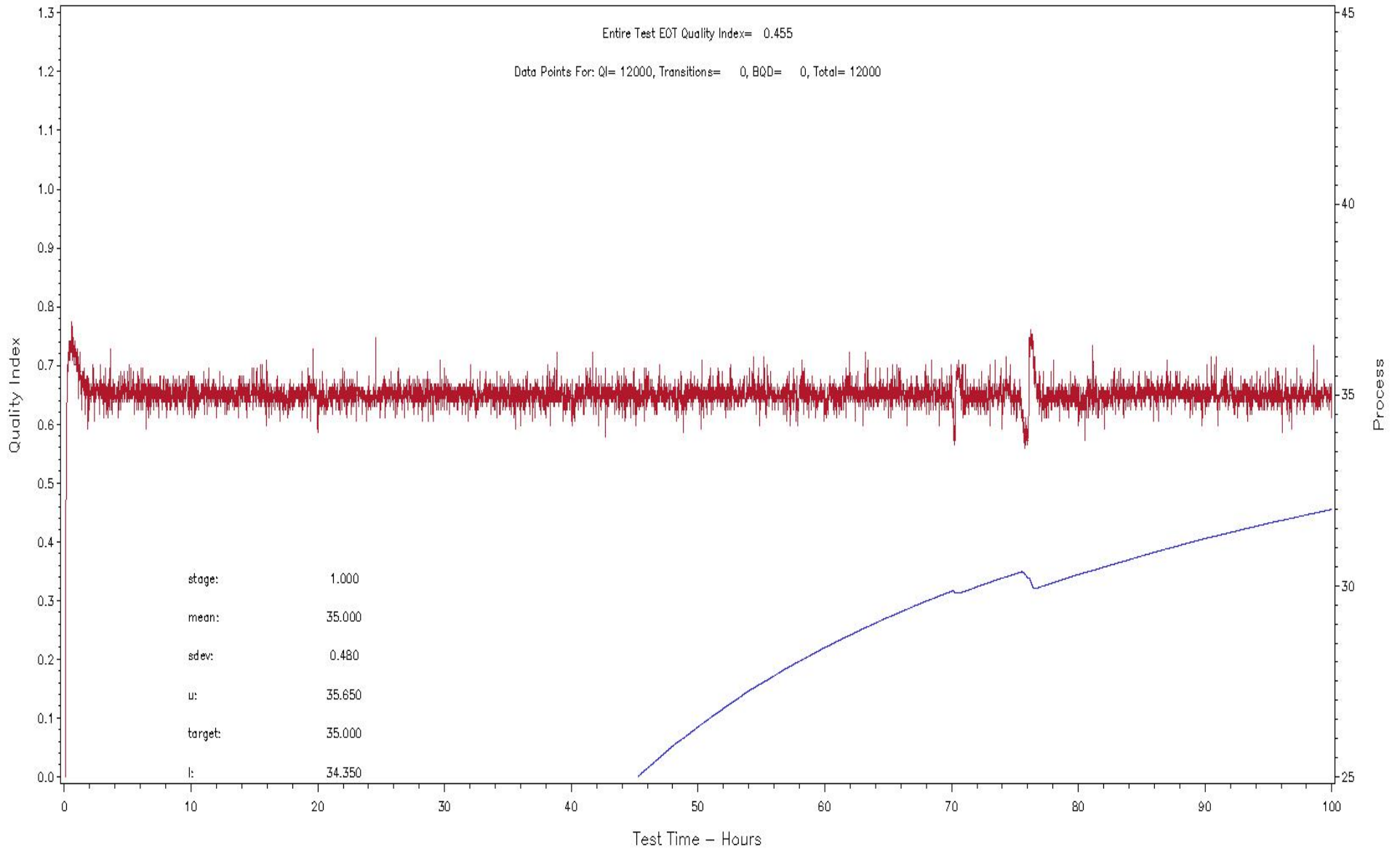
GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Temperature – Degrees C (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



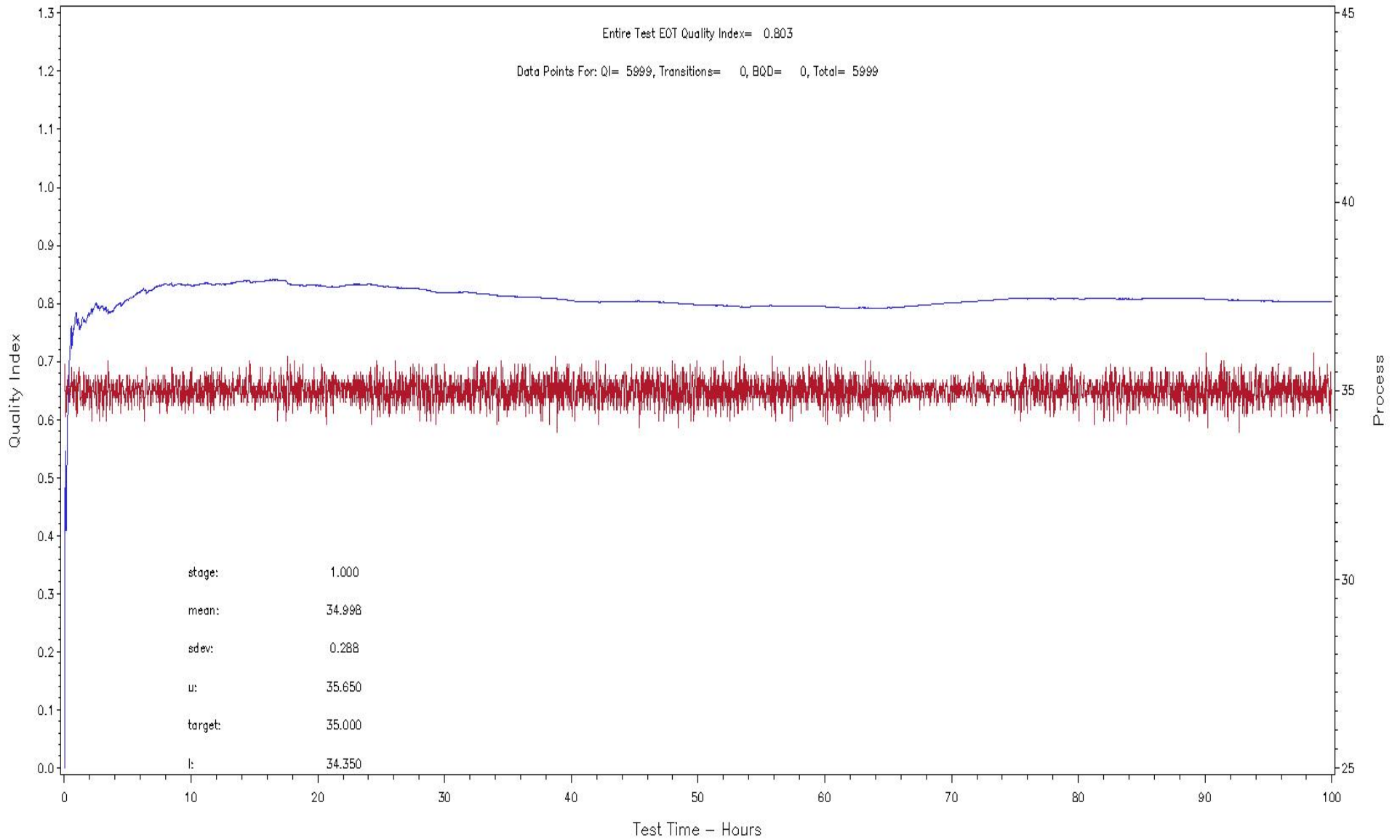
GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Temperature – Degrees C (CONTROL)
LAB= A Stand= 69 CMIR= 112925



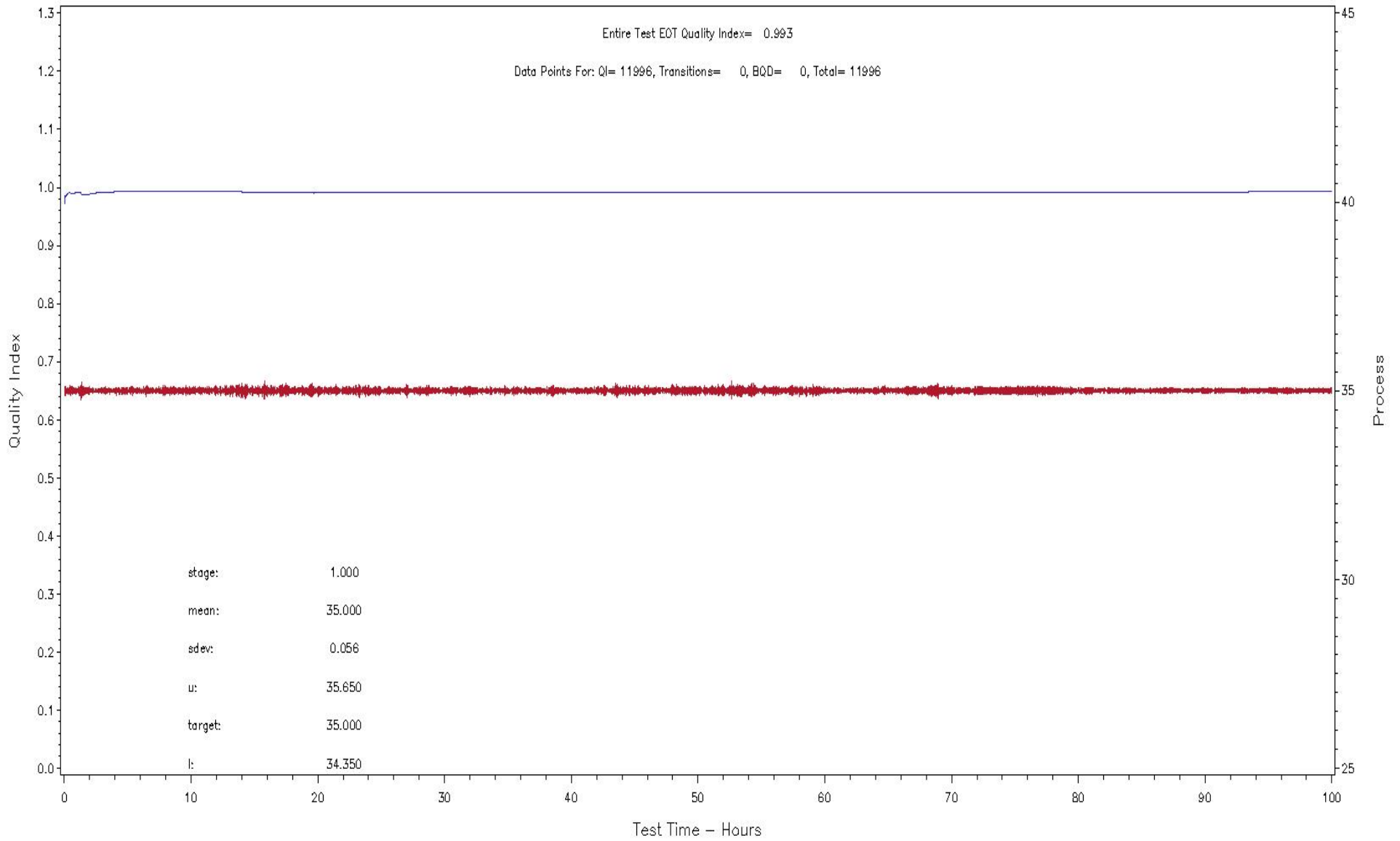
GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Temperature – Degrees C (CONTROL)
LAB= A Stand= 71 CMIR= 107864



GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Temperature – Degrees C (CONTROL)
LAB= F Stand= 3111 CMR= 112941



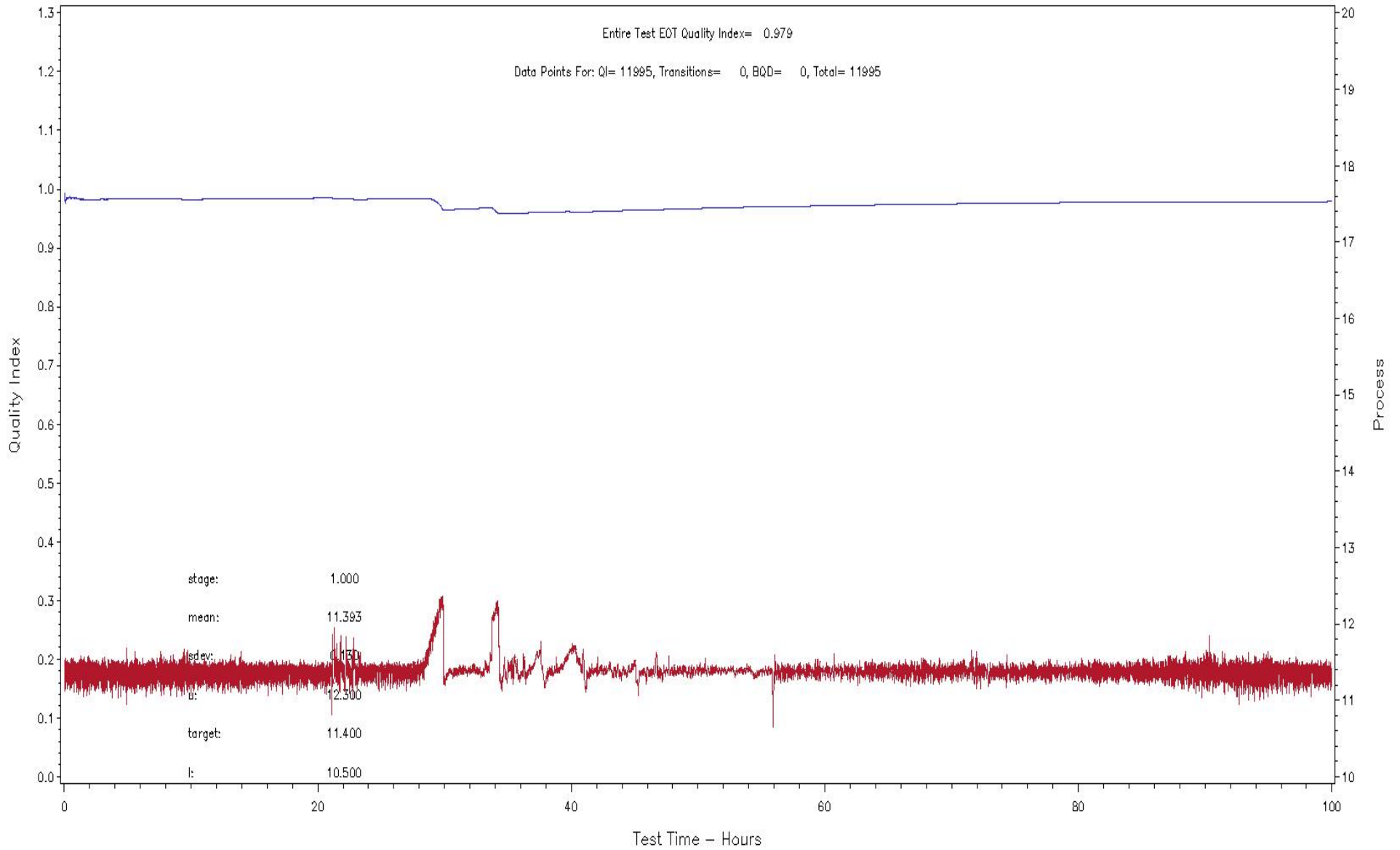
GMOD QUALITY INDEX OPERATIONAL REVIEW
Intake Air Temperature – Degrees C (CONTROL)
LAB= BStand= 333 CMIR= 112939



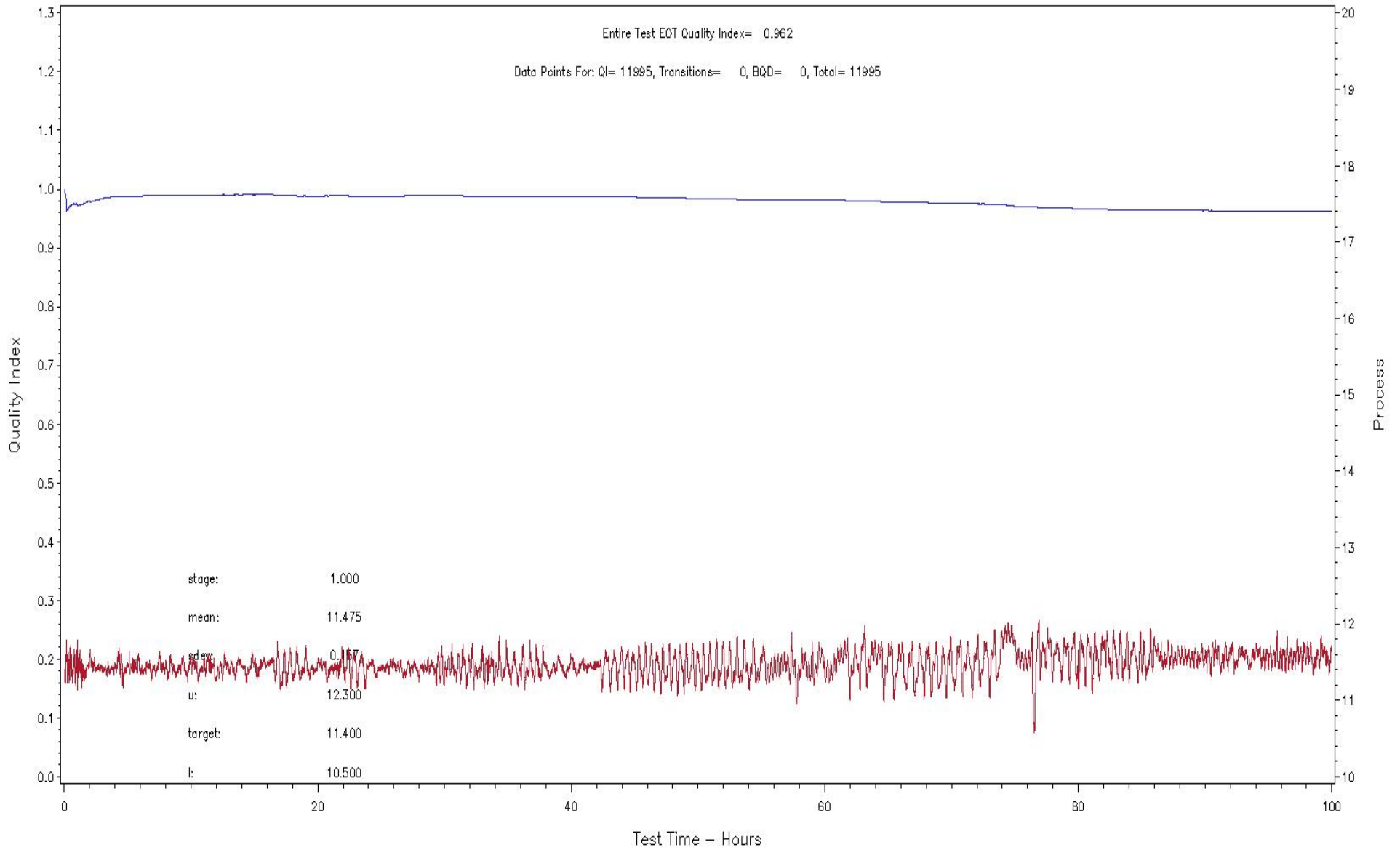
Intake Air Dew Point

- All Values above Zero

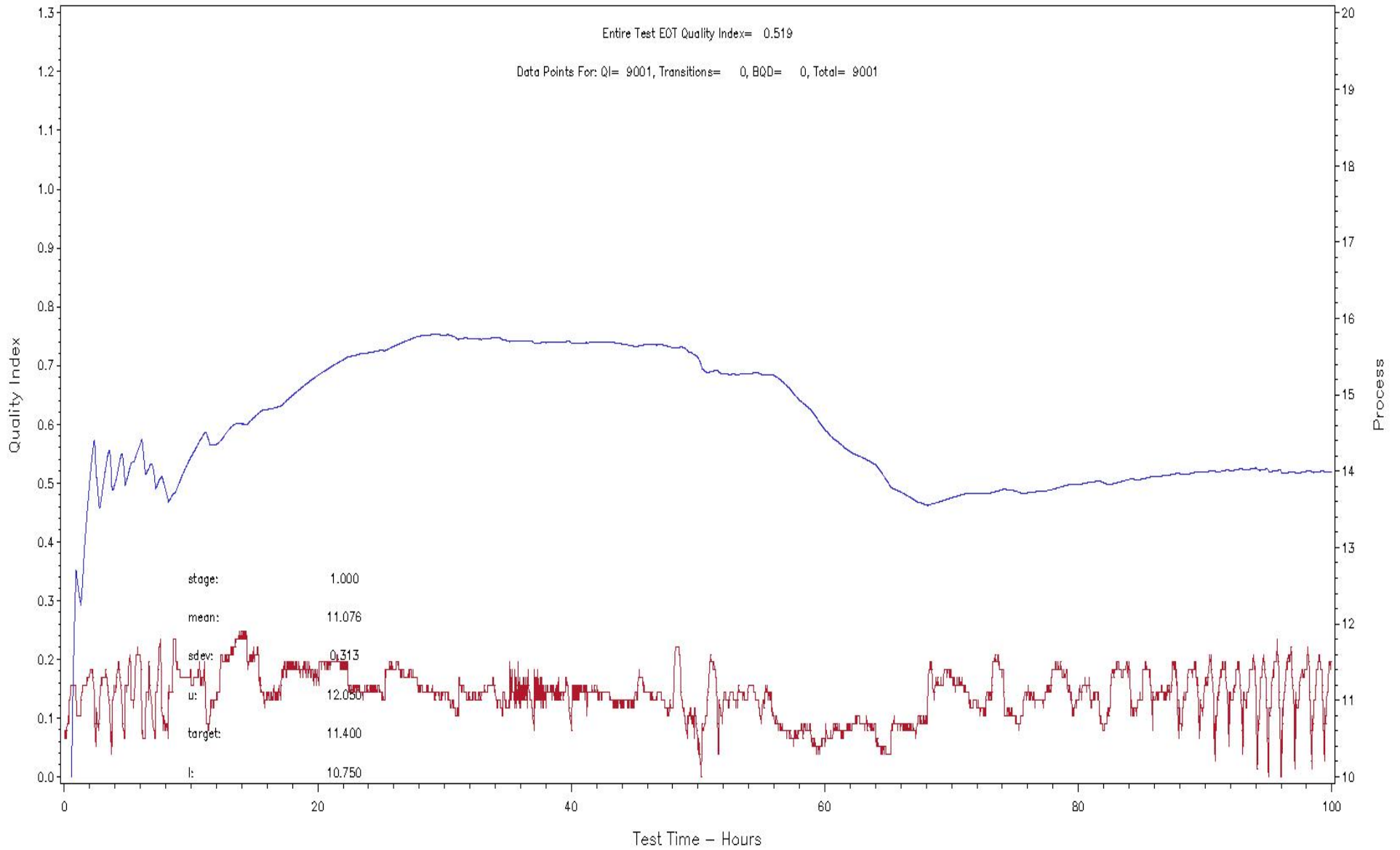
GMOD QUALITY INDEX OPERATIONAL REVIEW
Inke Air Dew Point Temperature – Degree C (CONTROL)
LAB= GStand= 180 CMIR= 108822



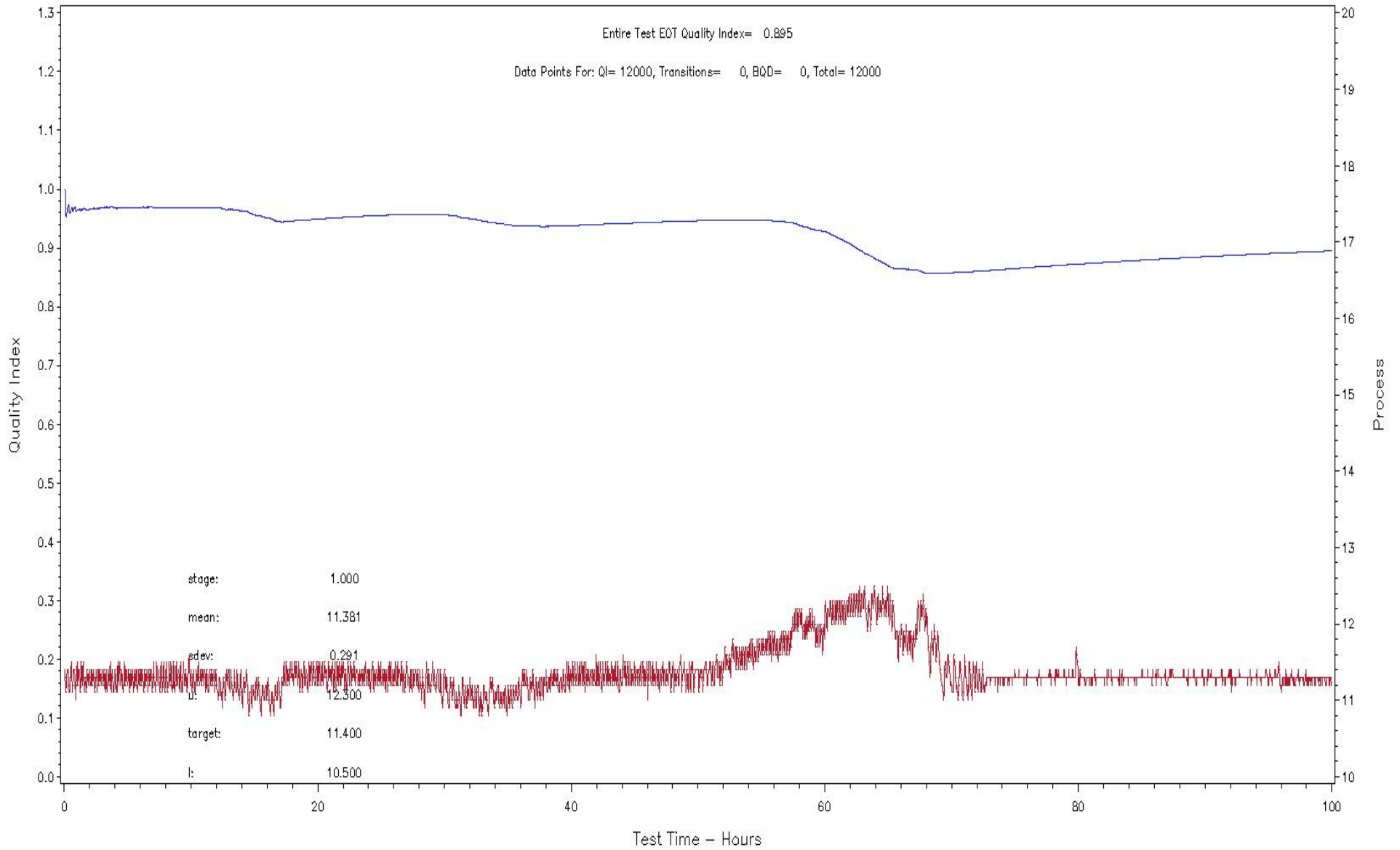
GMOD QUALITY INDEX OPERATIONAL REVIEW
Inke Air Dew Point Temperature – Degree C (CONTROL)
LAB= GStand= 126 CMIR= 112909



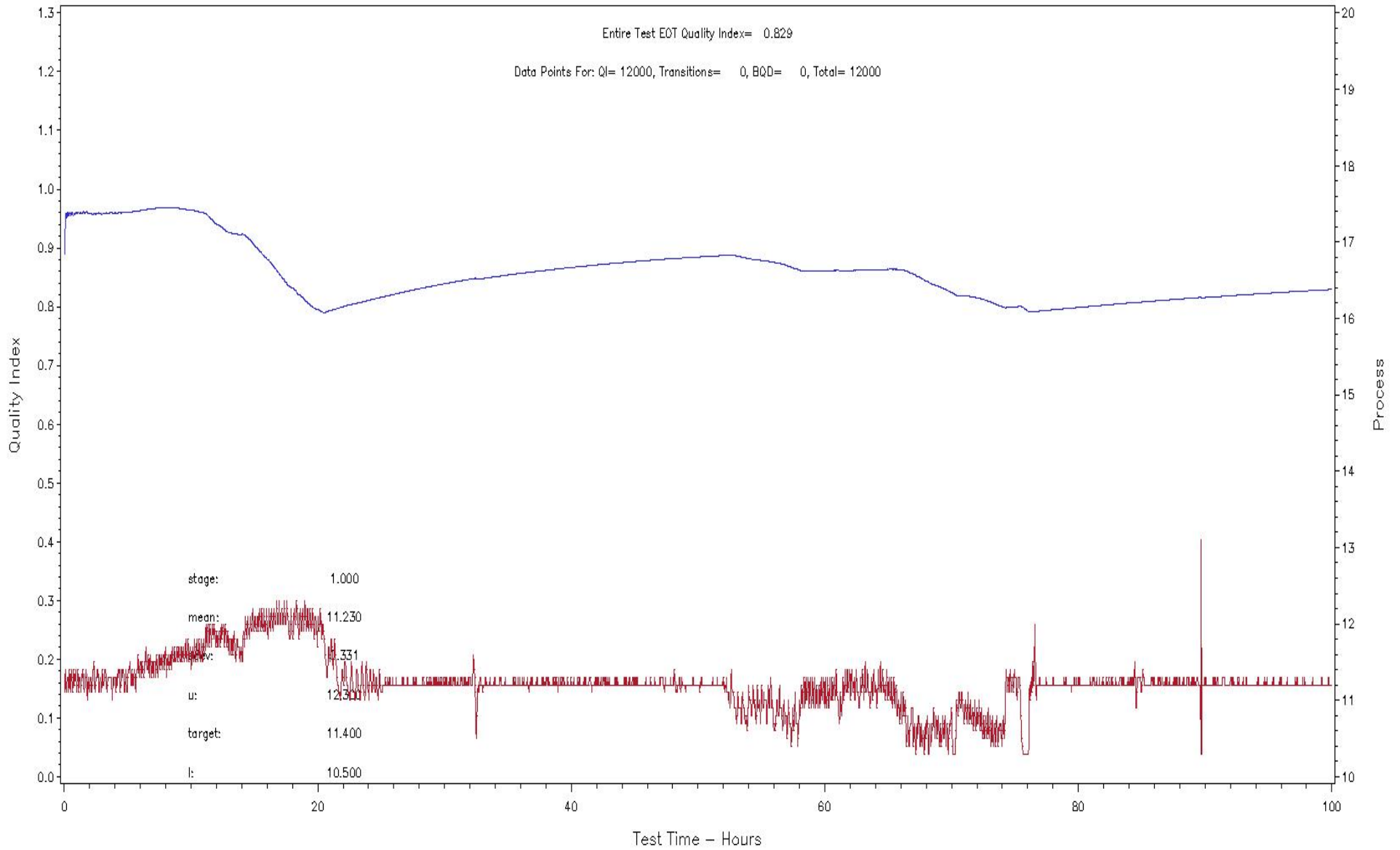
GMOD QUALITY INDEX OPERATIONAL REVIEW
Inke Air Dew Point Temperature – Degree C (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



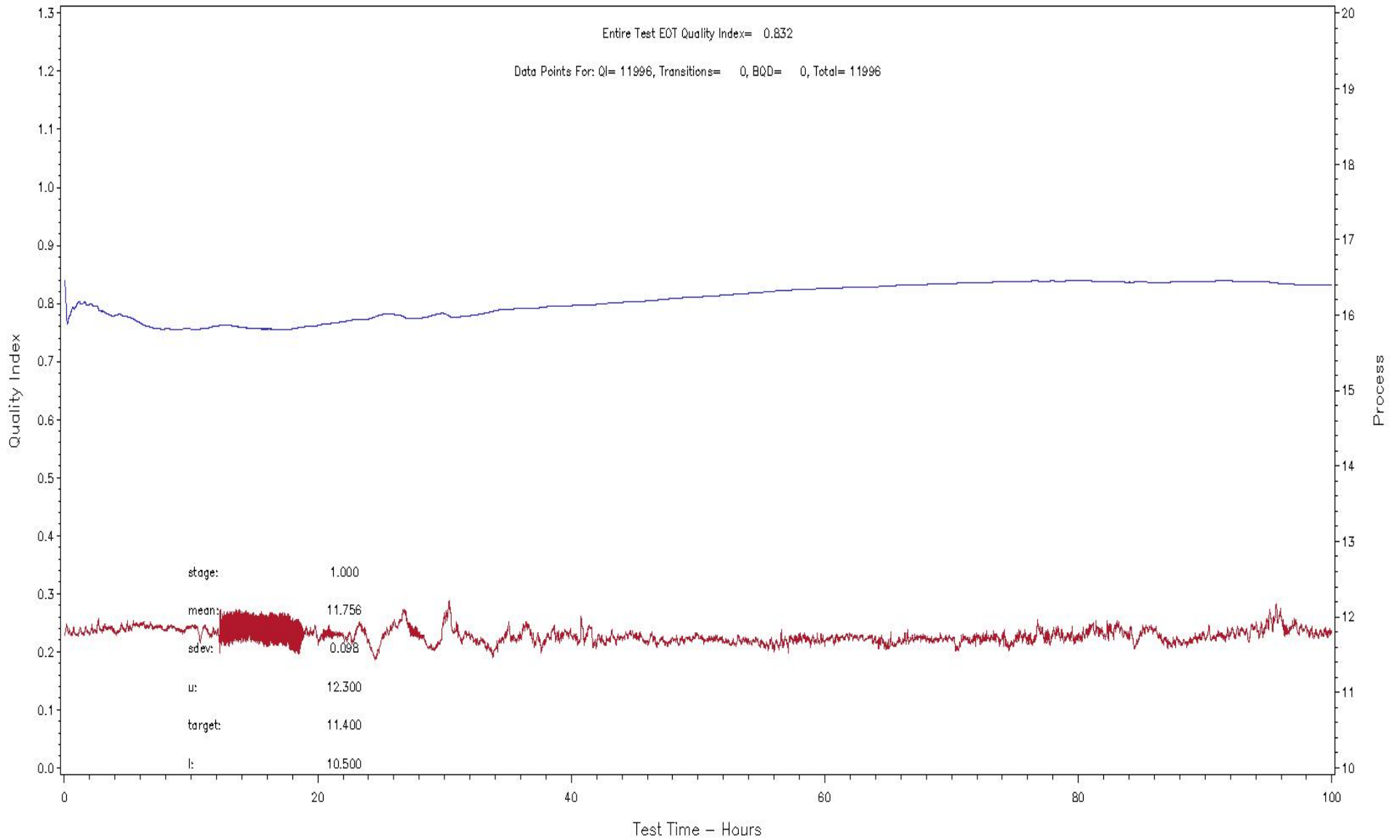
GMOD QUALITY INDEX OPERATIONAL REVIEW
Inke Air Dew Point Temperature – Degree C (CONTROL)
LAB= A Stand= 69 CMIR= 112925



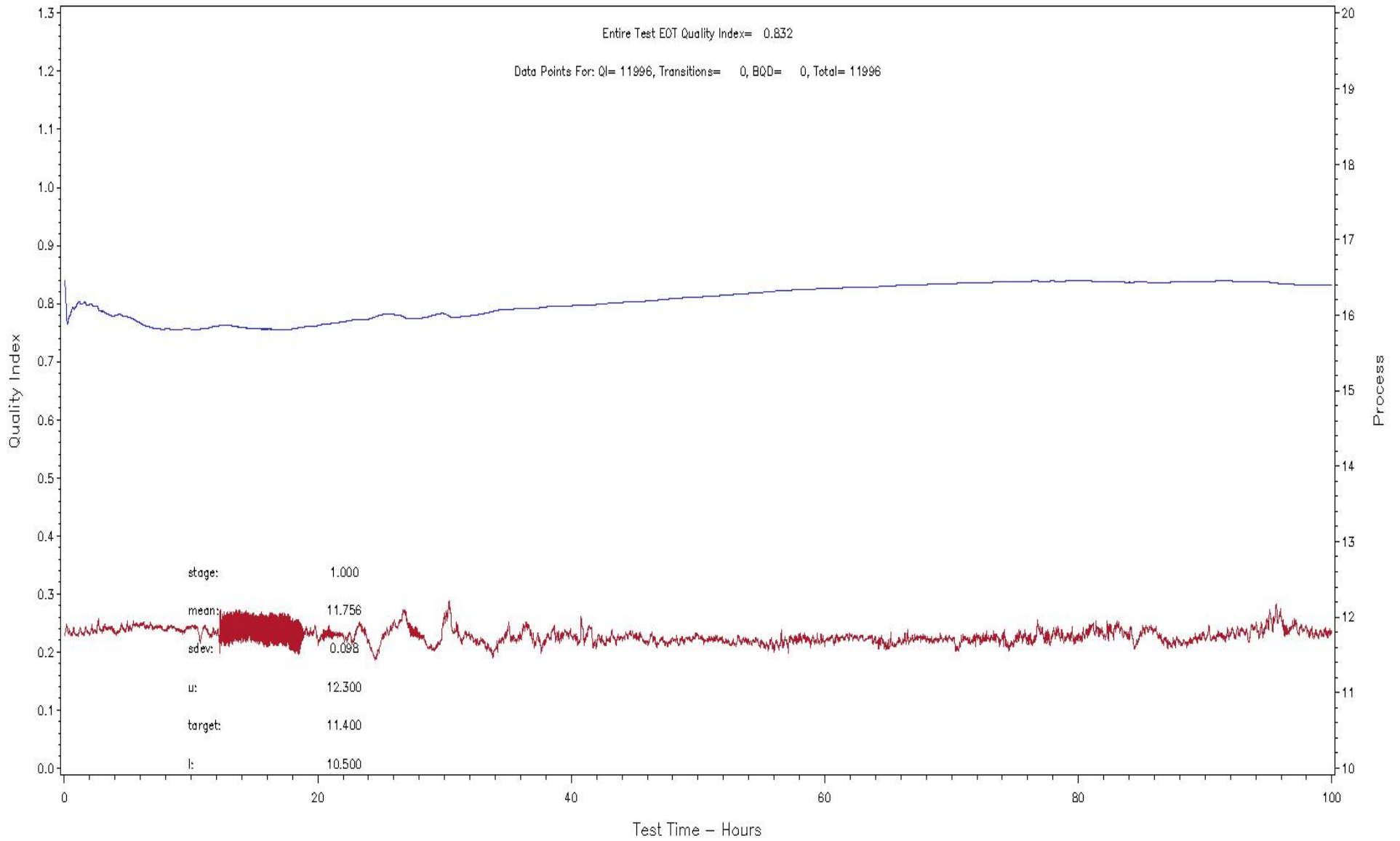
GMOD QUALITY INDEX OPERATIONAL REVIEW
Inke Air Dew Point Temperature – Degree C (CONTROL)
LAB= A Stand= 71 CMIR= 107864



GMOD QUALITY INDEX OPERATIONAL REVIEW
Inke Air Dew Point Temperature – Degree C (CONTROL)
LAB= BStand= 333 CMIR= 112939



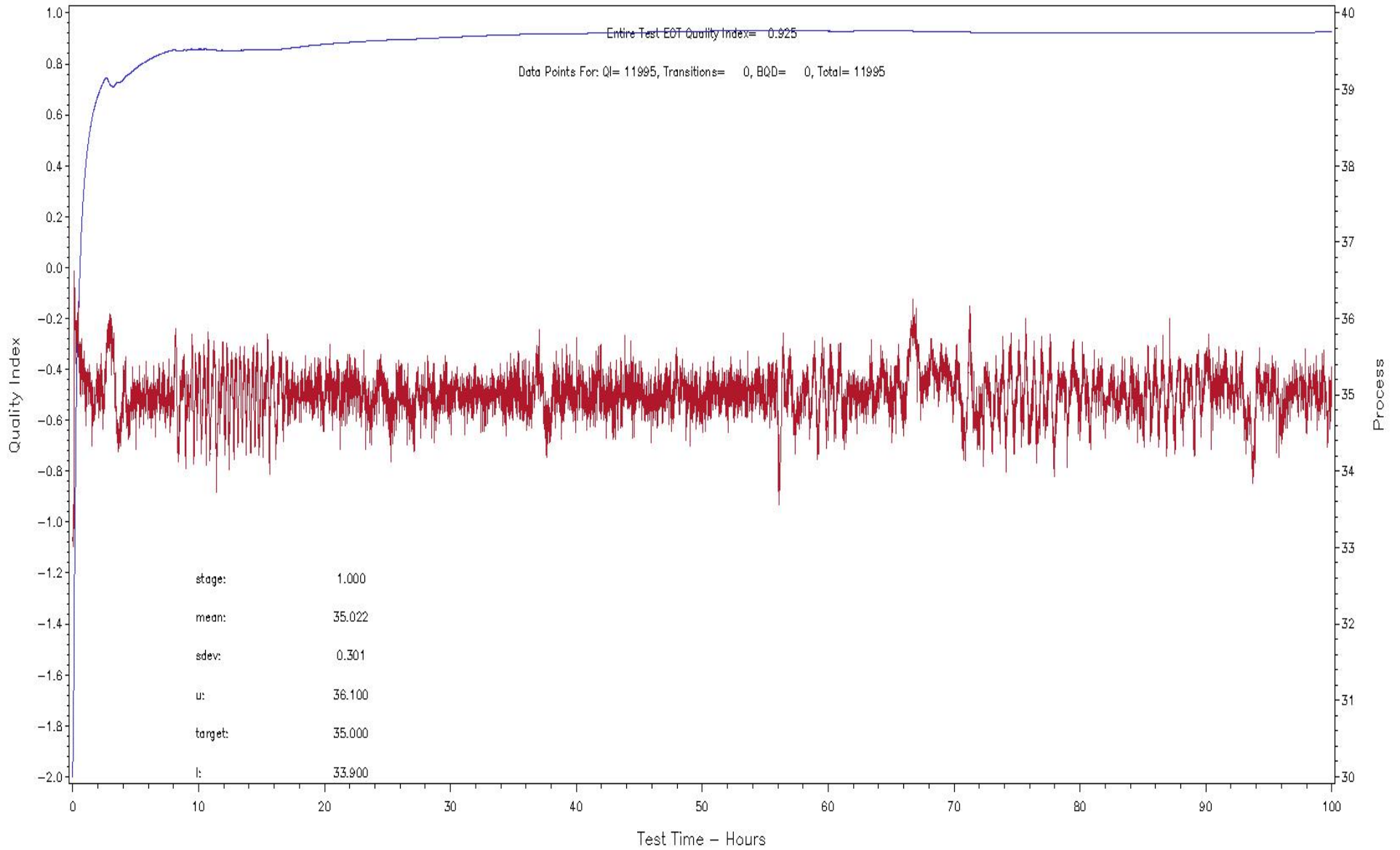
GMOD QUALITY INDEX OPERATIONAL REVIEW
Inke Air Dew Point Temperature – Degree C (CONTROL)
LAB= BStand= 333 CMIR= 112939



Fuel Temperature

- All Values above Zero

GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Inlet Temperature – Degrees C (CONTROL)
LAB= GStand= 180 CMIR= 108822



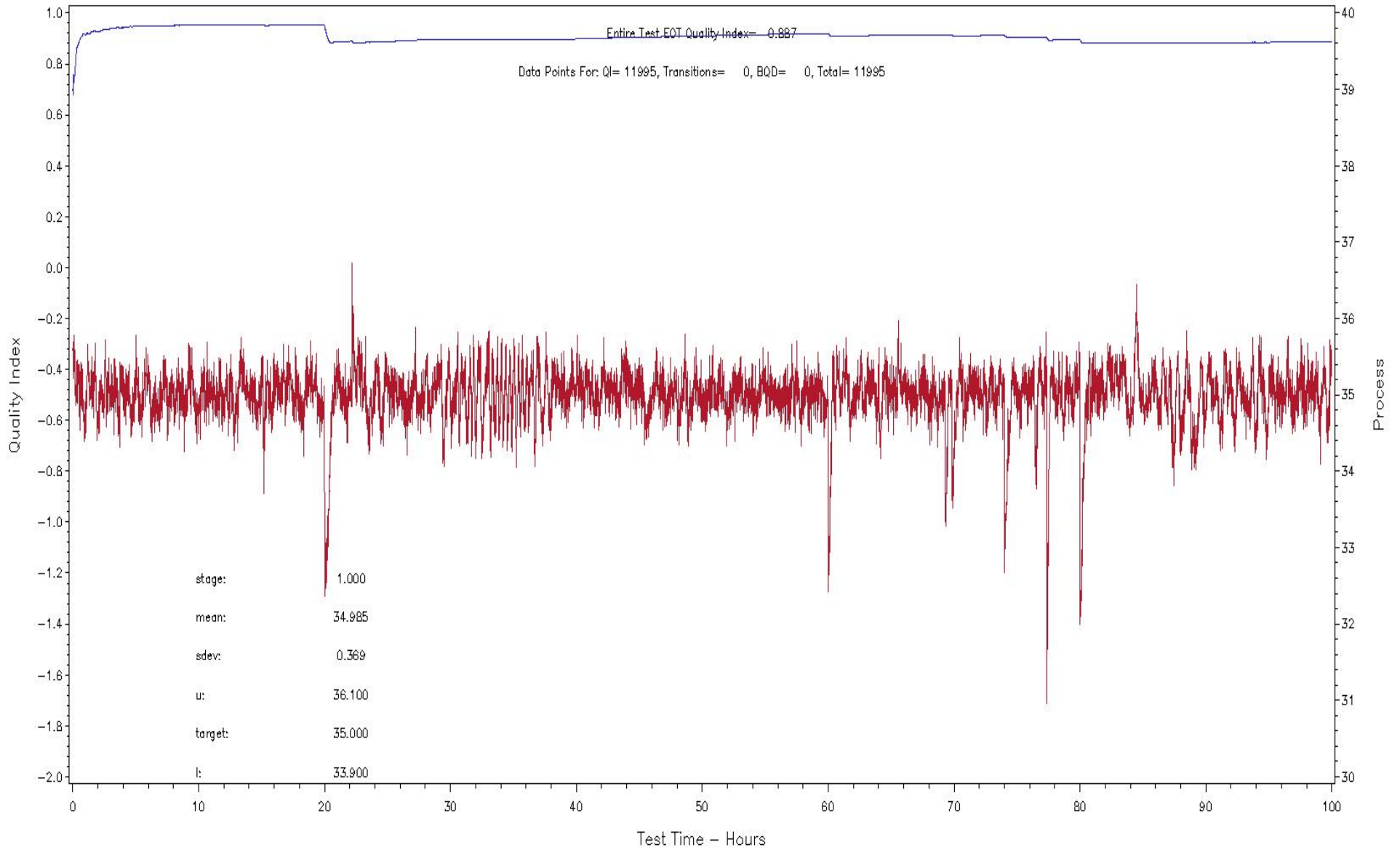
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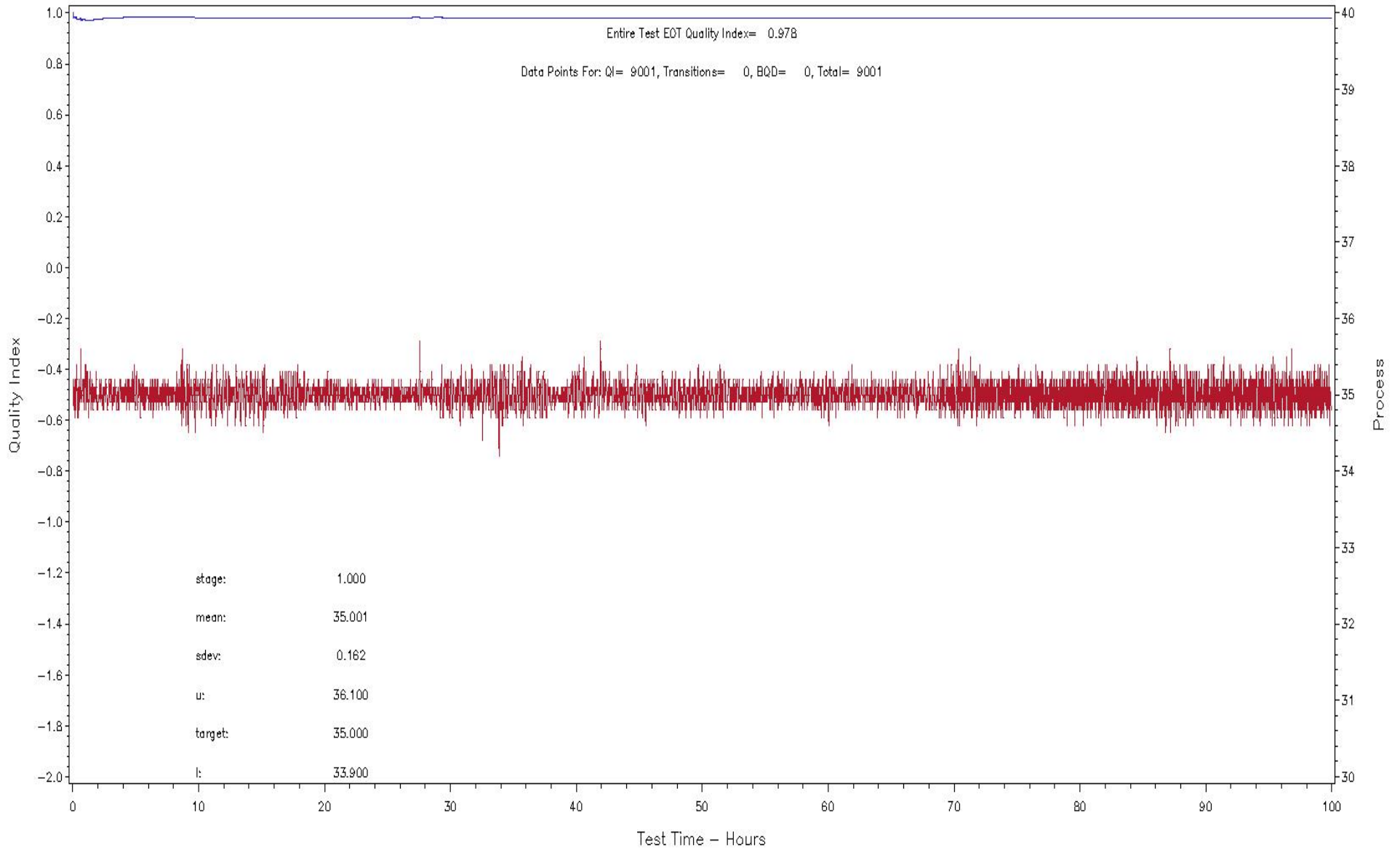
Test Monitoring Center
<http://astmtmc.cmu.edu>



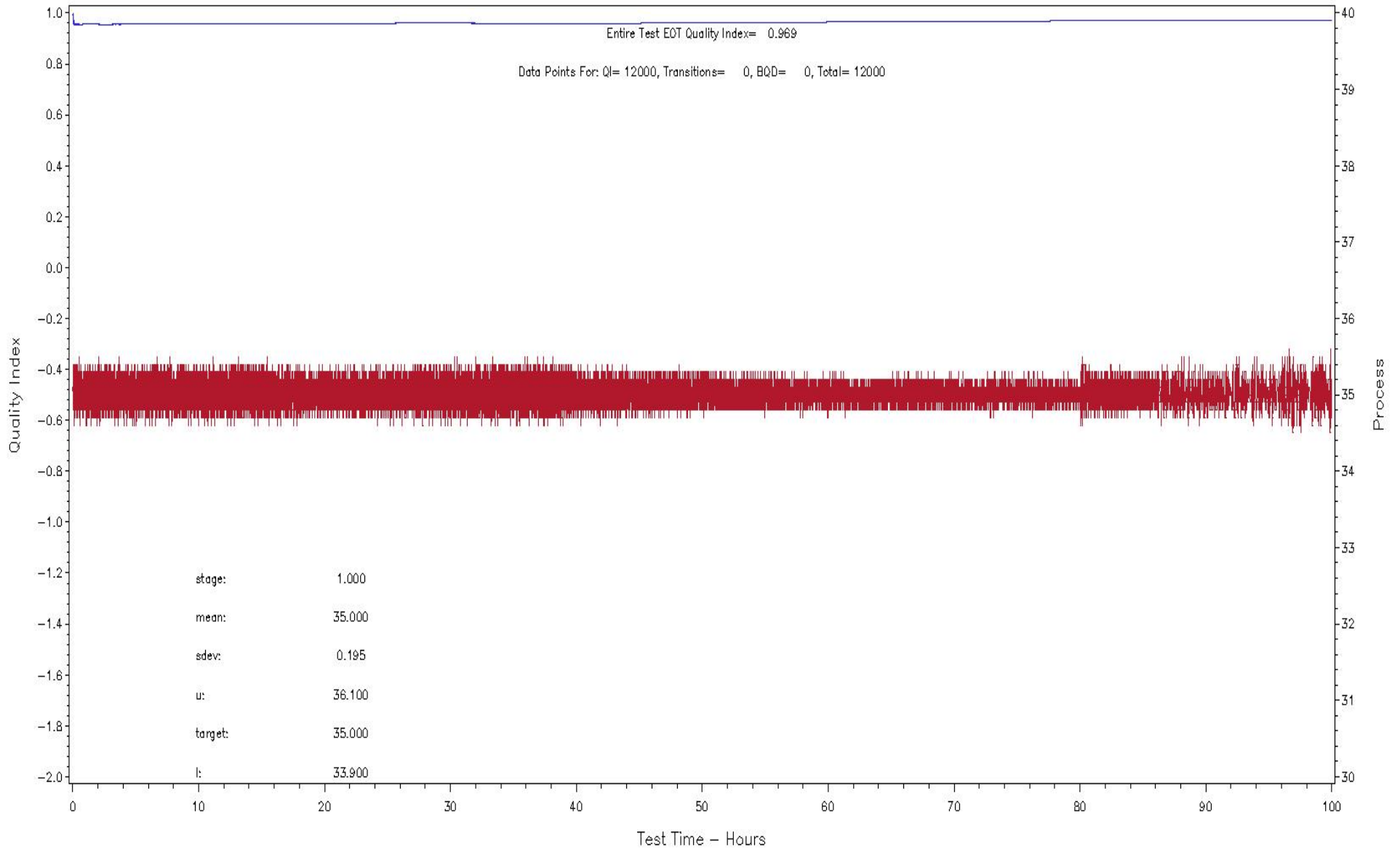
GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Inlet Temperature – Degrees C (CONTROL)
LAB= GStand= 126 CMR= 112909



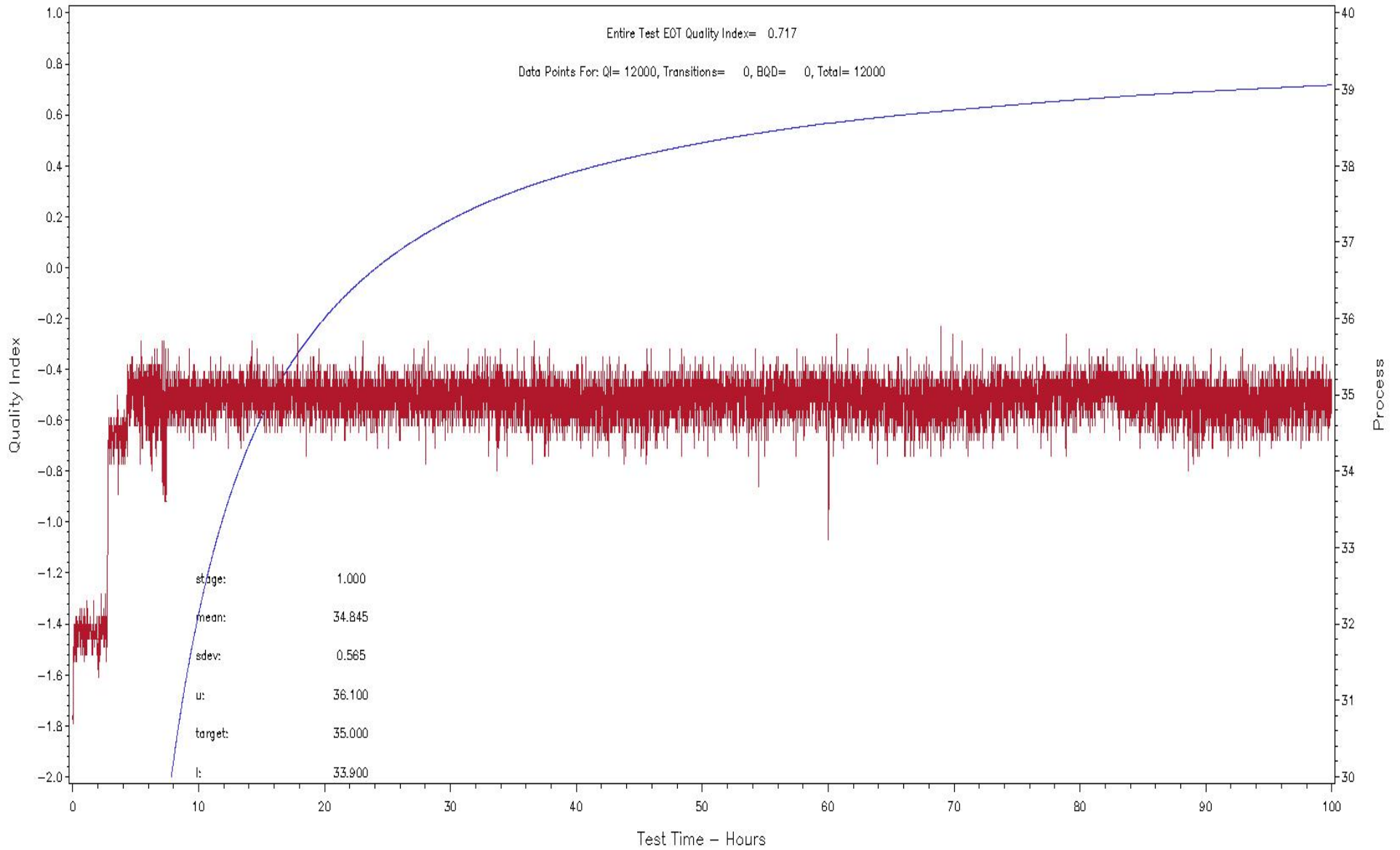
GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Inlet Temperature – Degrees C (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



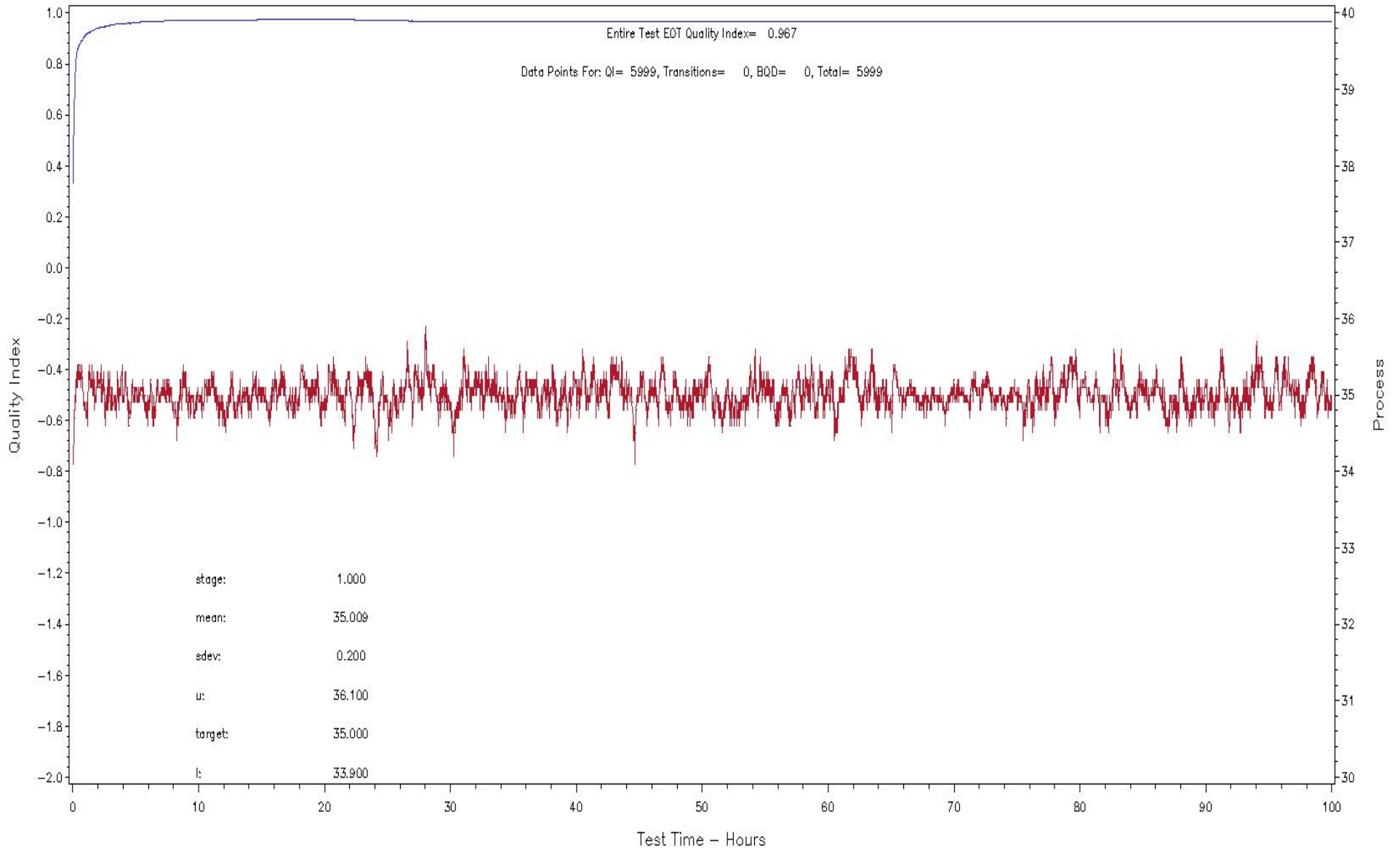
GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Inlet Temperature – Degrees C (CONTROL)
LAB= A Stand= 69 CMIR= 112925



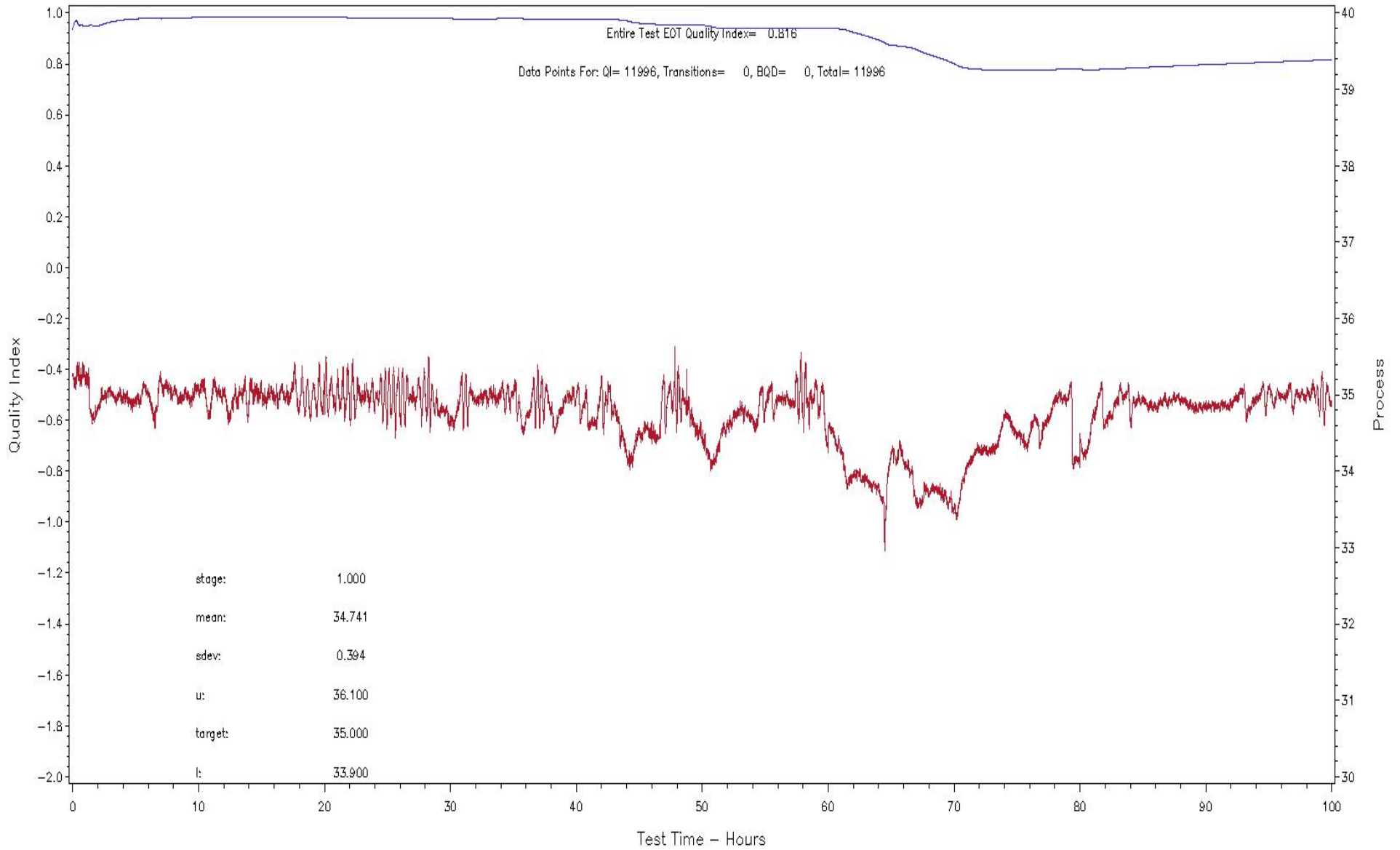
GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Inlet Temperature – Degrees C (CONTROL)
LAB= A Stand= 71 CMIR= 107864



GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Inlet Temperature – Degrees C (CONTROL)
LAB= F Stand= 3111 CMR= 112941



GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Inlet Temperature – Degrees C (CONTROL)
LAB= BStand= 333 CMR= 112939



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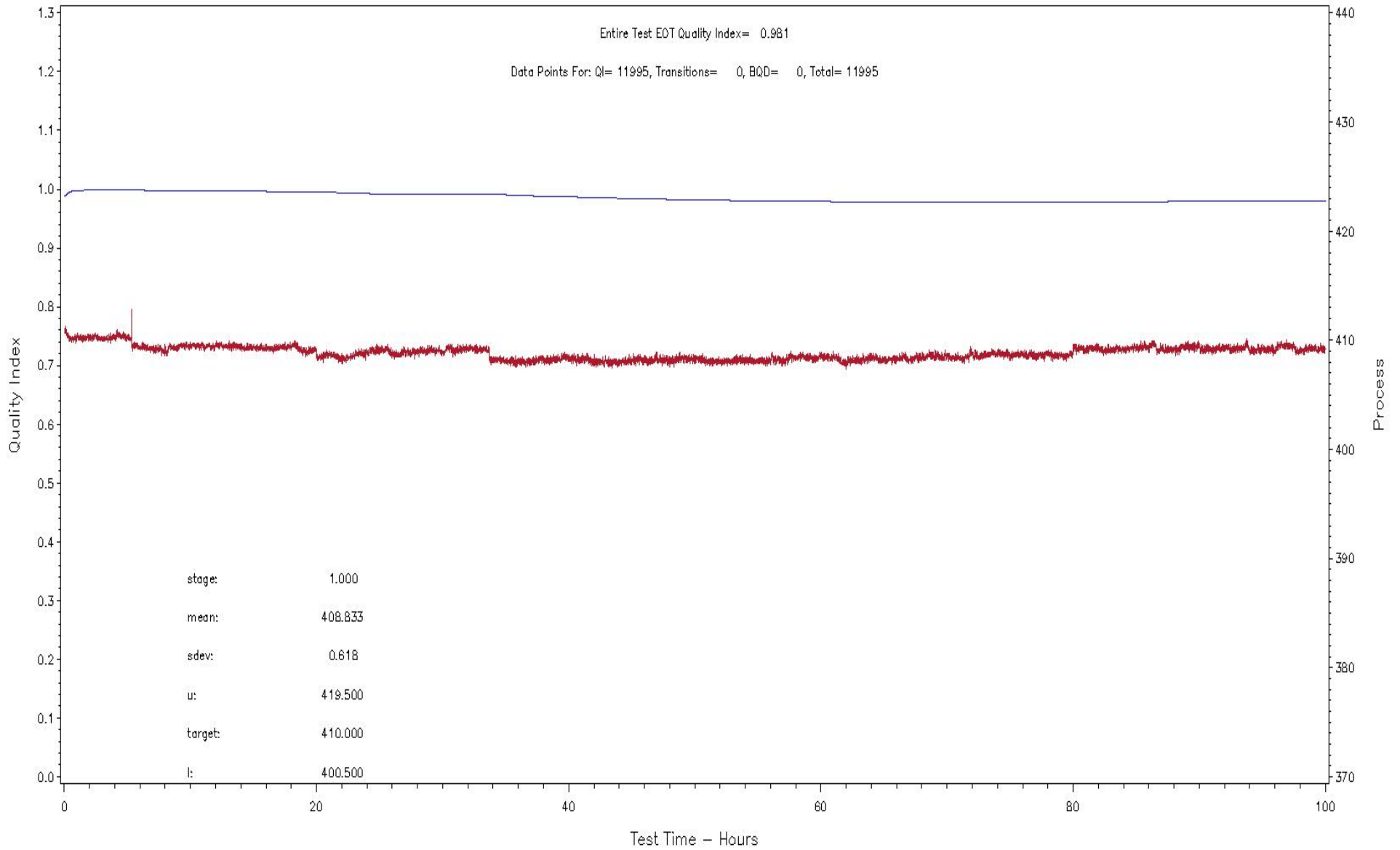
Test Monitoring Center
<http://astmtmc.cmu.edu>



Fuel Pressure

- All Values above Zero

GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Pressure - kPa (CONTROL)
LAB= GStand= 180 CMIR= 108822



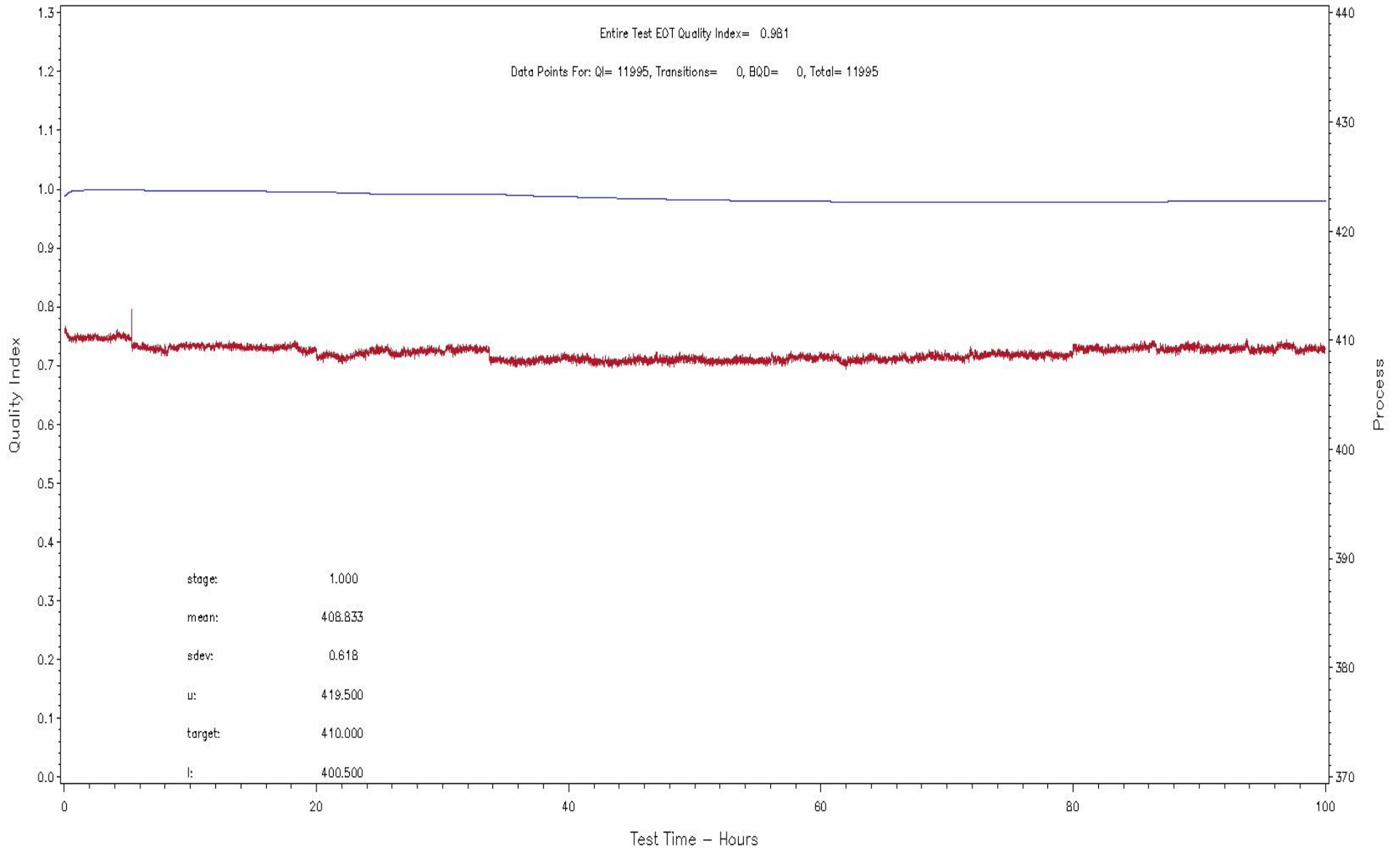
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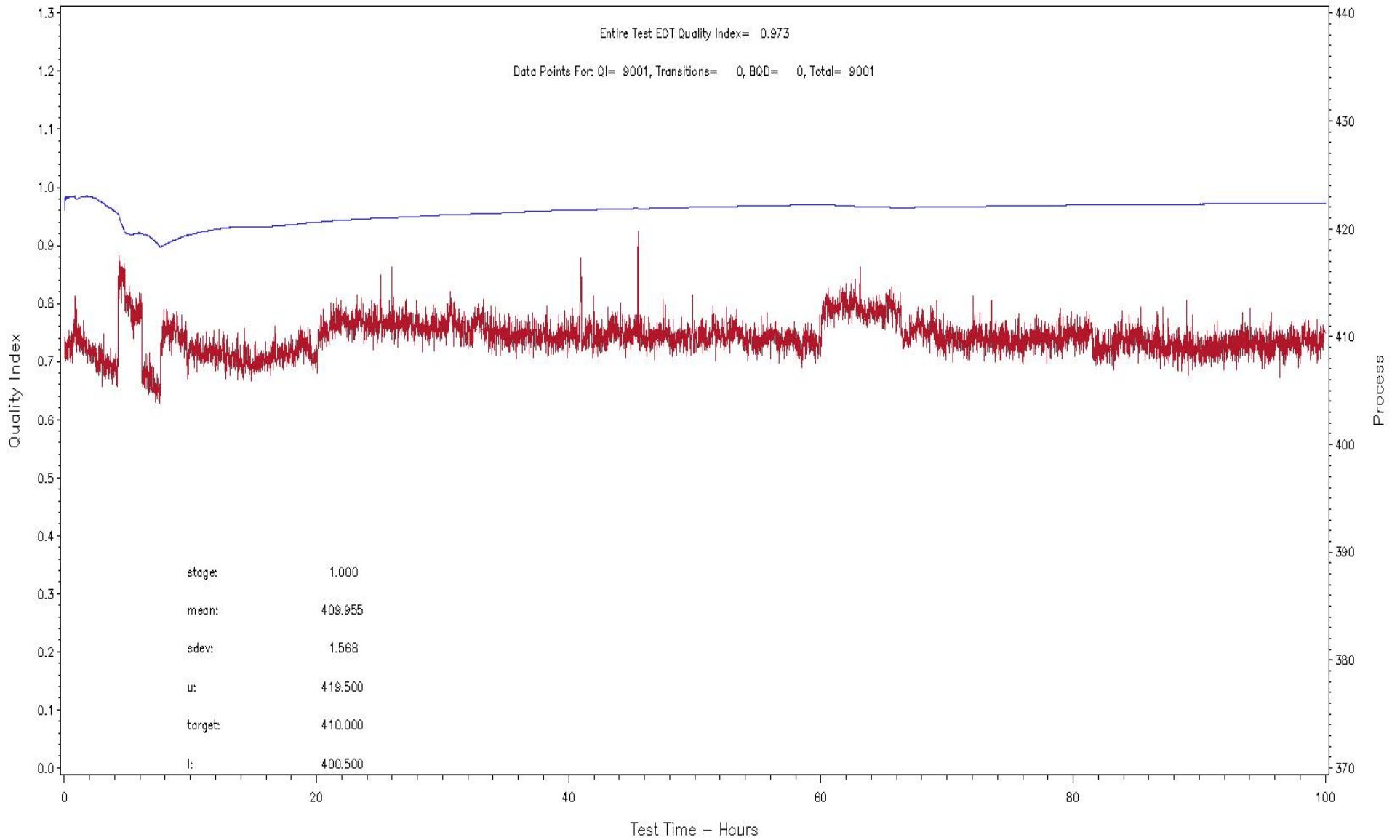
Test Monitoring Center
<http://astmtmc.cmu.edu>



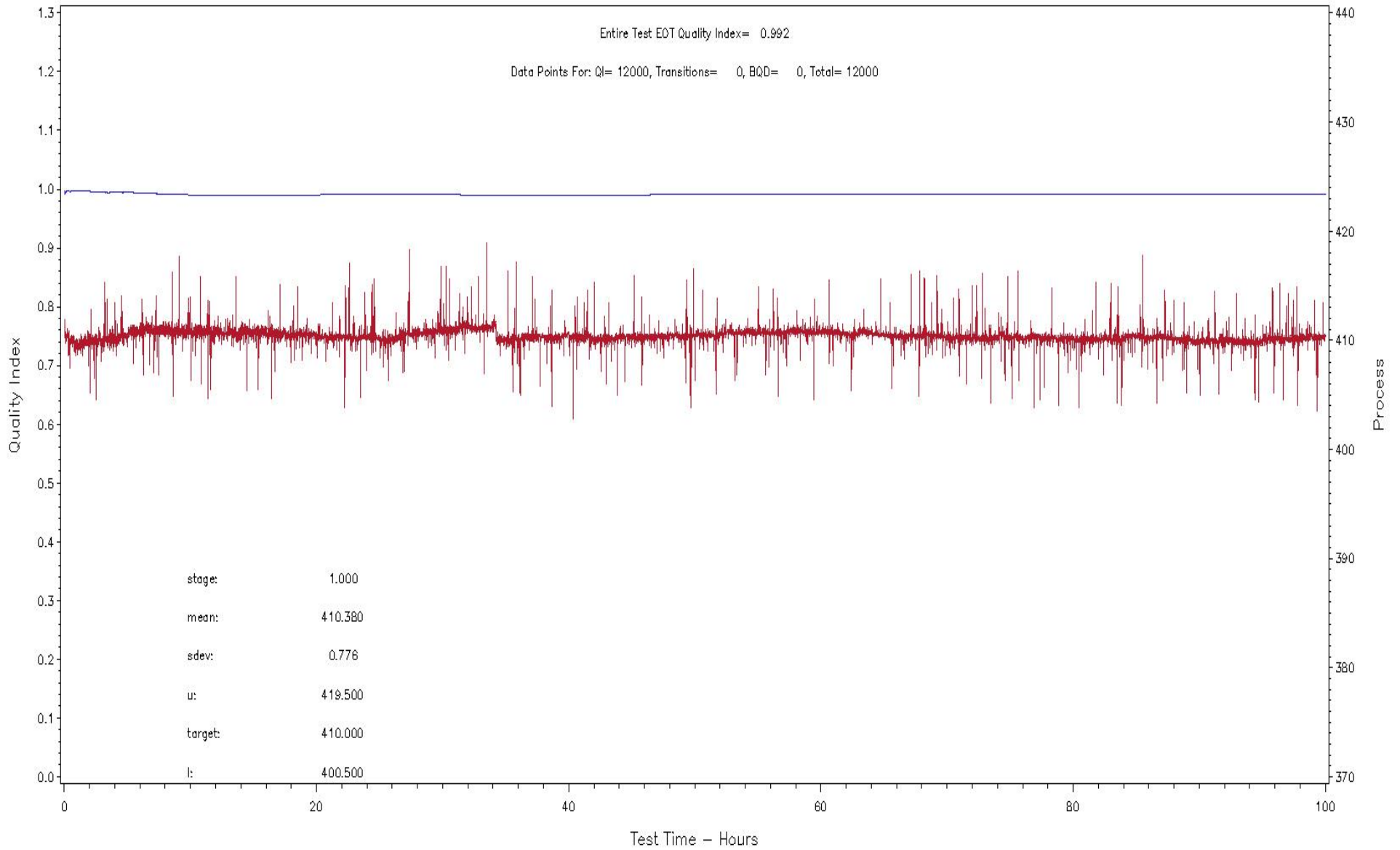
GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Pressure - kPa (CONTROL)
LAB= GStand= 180 CMIR= 108822



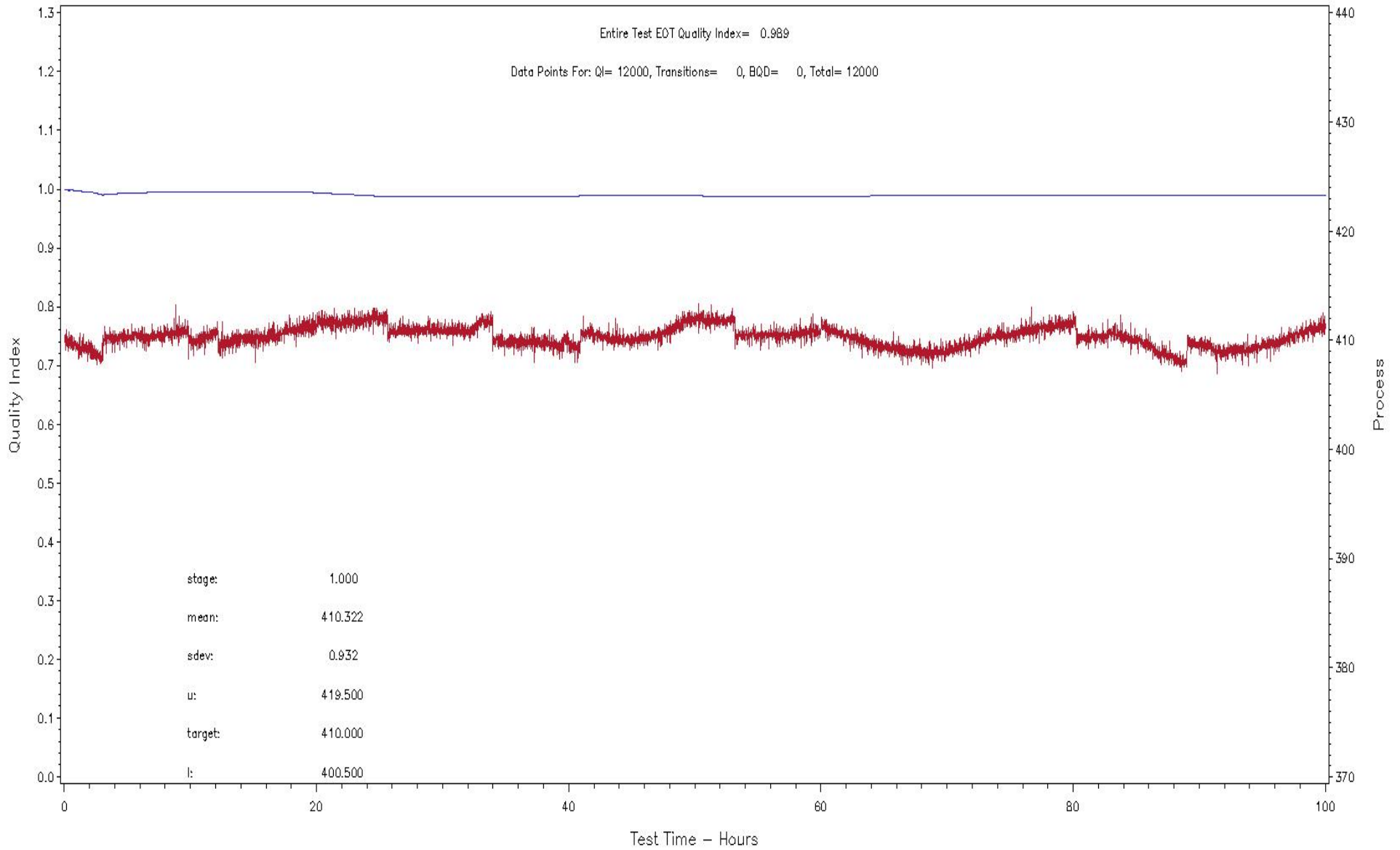
GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Pressure - kPa (CONTROL)
LAB= D Stand= DB114 CMIR= 112934



GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Pressure - kPa (CONTROL)
LAB= A Stand= 69 CMIR= 112925



GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Pressure - kPa (CONTROL)
LAB= A Stand= 71 CMIR= 107864



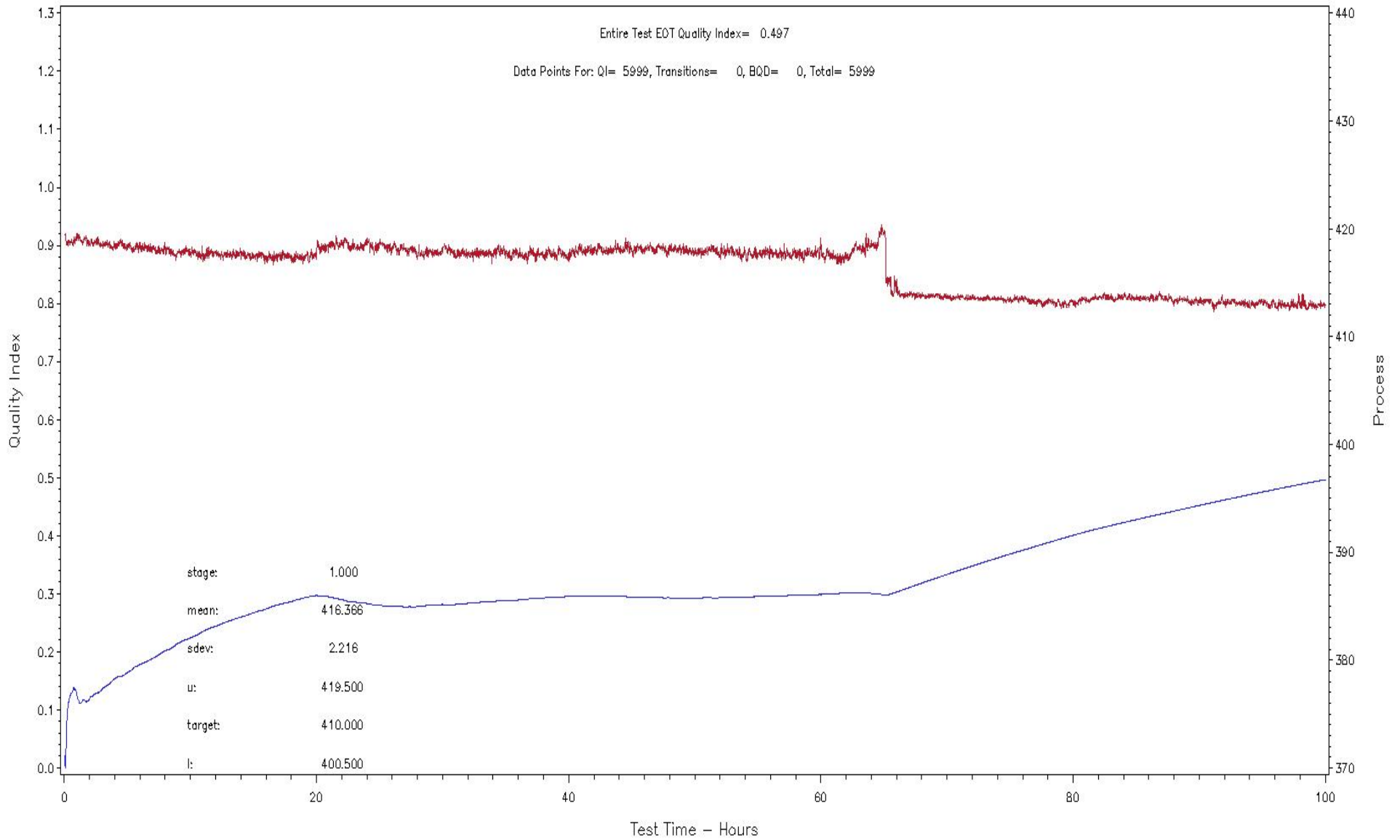
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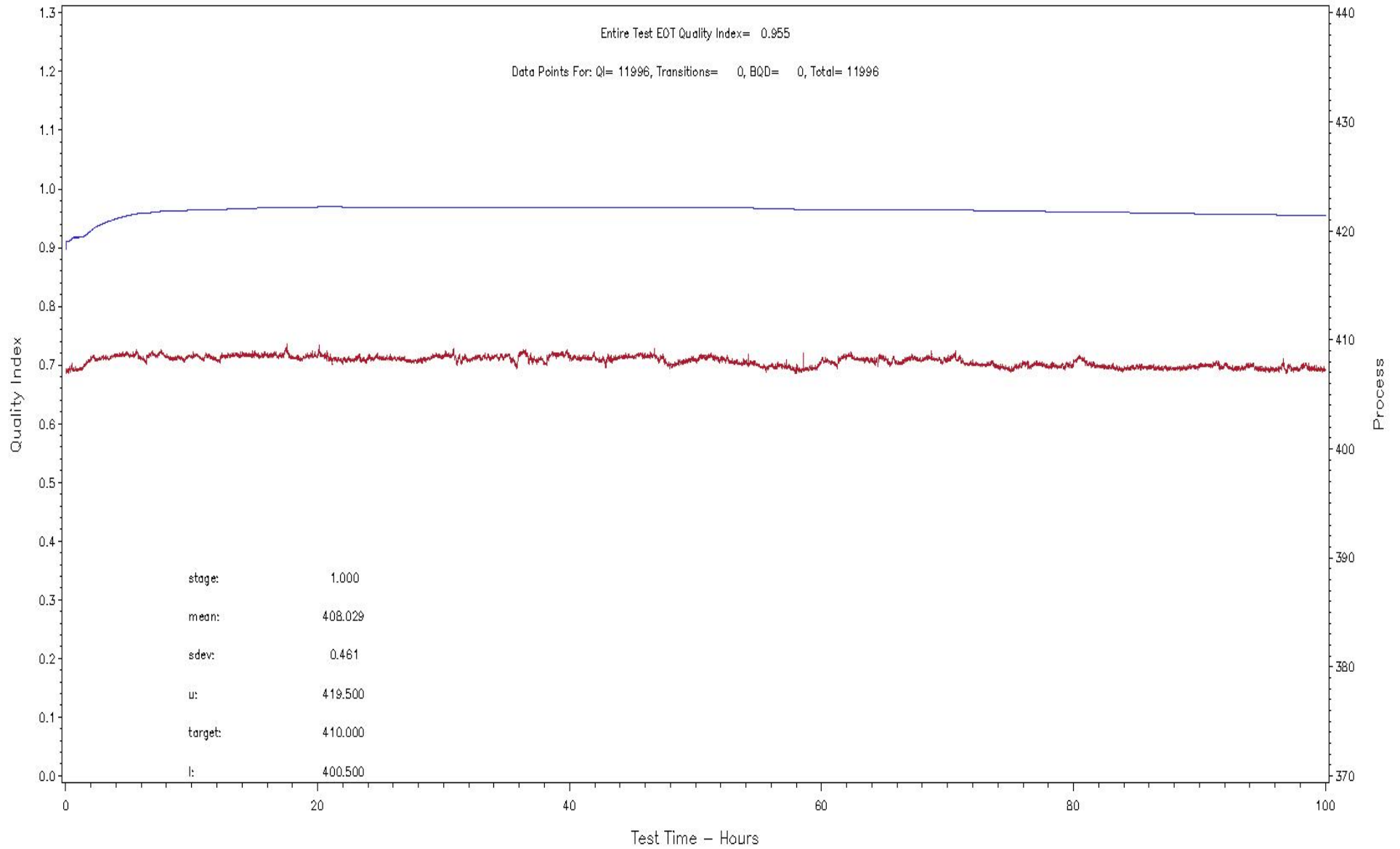
Test Monitoring Center
<http://astmtmc.cmu.edu>



GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Pressure - kPa (CONTROL)
LAB= F Stand= 3111 CMIR= 112941



GMOD QUALITY INDEX OPERATIONAL REVIEW
Fuel Pressure - kPa (CONTROL)
LAB= B Stand= 333 CMIR= 112939





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