

Final Test Status: FAILED

Executed Test: HOT TEST SHORT Engine Serial Number: 86111301

Test Number: 1

Test Configuration

Engine Serial Number 86111301 **Test Specification Number** 95171 MODEL ISB6.7E5285 MOD_TYPE CM2880 TST PAL **VOLTAGE** 25.00 PROD ID BFR SHUTOFF FX80024.08 E ECMCOD

Test Information

Testbed: ZCK_TC01

Operator: Cummins Operator

Test Date: 2022-02-24 Test Start: 20:26:20

Test End:

Teststatus per Phase

| Testpoint | Teststatus | Operator | PLC-Error | Meas.Err. | Mat. Review | ECM Error |
|-----------------|------------|----------|-----------|-----------|-------------|-----------|
| SETUP | PASSED | 0 | 0 | 0 | 0 | 0 |
| COLD_CRANK | PASSED | 0 | 0 | 0 | 0 | 0 |
| COLD_CRANK_2 | PASSED | 0 | 0 | 0 | 0 | 0 |
| ENGINE_START | PASSED | 0 | 0 | 0 | 0 | 0 |
| LOW_IDLE | PASSED | 0 | 0 | 0 | 0 | 0 |
| HIGH_IDLE | PASSED | 0 | 0 | 0 | 0 | 0 |
| RATED_HP | PASSED | 0 | 0 | 0 | 0 | 0 |
| TORQUE_PEAK | FAILED | 0 | 0 | 1 | 0 | 0 |
| LOW_IDLE_2 | PASSED | 0 | 0 | 0 | 0 | 0 |
| ENGINE_SHUTDOWN | PASSED | 0 | 0 | 0 | 0 | 0 |
| FINAL_STATUS | FAILED | 0 | 0 | 1 | 0 | 0 |



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Reject Codes

| Code | Testpoint | Description | Туре | Channel | Unit | Lower Limit | Value | Upper Limit |
|---------|--------------|--|------|---------|------|-------------|-------|-------------|
| OVERRID | SETUP | Error on setting the parameter [SEND_OPERATION=r | ECM | - | - | 0.00 | 0.00 | 0.00 |
| OVERRID | ENGINE_START | Error on setting the parameter [SEND_OPERATION=r | ECM | _ | - | 0.00 | 0.00 | 0.00 |
| OVERRID | ENGINE_START | Error on setting the parameter [T_Dual_Accelerator_E | ECM | - | - | 0.00 | 0.00 | 0.00 |
| TFRL | TORQUE_PEAK | Torque Peak Fuel Rate low | MES | FB_RATE | kg/h | 23.00 | 21.48 | 33.00 |



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ECM Fault Codes

| Testpoint | Number | Description | Masked | Active |
|-------------|--------|---|--------|--------|
| LOW_IDLE | 249 | OEM AMBIENT AIR TEMPERATURE HIGH ERROR | Α | Α |
| LOW_IDLE | 428 | WATER IN FUEL SENSOR CIRCUIT SHORTED HIGH ERROR | Α | Α |
| LOW_IDLE | 584 | STARTER RELAY CIRCUIT SHORTED LOW | Α | А |
| LOW_IDLE | 1669 | Air-assisted) - Aftertreatment Diesel Exhaust Fluid Tank Level Sensor Circuit | Α | А |
| LOW_IDLE | 1678 | (Air-assisted) - Aftertreatment Diesel Exhaust Fluid Tank Temperature Sens | Α | Α |
| LOW_IDLE | 1683 | 1683,Aftertreatment Diesel Exhaust Fluid Tank Heater - Voltage Above Nor | Α | Α |
| LOW_IDLE | 2182 | ENG BRK DRIVE #1 LOW CONTROL ERROR | Α | Α |
| LOW_IDLE | 2555 | GHC LOW VOLTAGE ERROR #1 | Α | Α |
| LOW_IDLE | 2771 | Aftertreatment Outlet NOx Sensor - Abnormal Update Rate | Α | Α |
| LOW IDLE | 3558 | 3558 | Α | Α |
| LOW IDLE | 3565 | Metering valve circuit voltage above normal (SCR) | A | Α |
| LOW IDLE | 3572 | DEF pressure sensor circuit voltage below normal (SCR) | A | Α |
| LOW IDLE | 3577 | Purge valve circuit voltage above normal (SCR) | A | Α |
| LOW IDLE | 4173 | Air pressure sensor circuit voltage below normal (SCR) | A | Α |
| LOW IDLE | 4174 | DEF Temperature sensor circuit voltage above normal (SCR) | A | Α |
| LOW IDLE | 4177 | Air pump valve circuit voltage below normal (SCR) | A | A |
| HIGH IDLE | 249 | OEM AMBIENT AIR TEMPERATURE HIGH ERROR | A | A |
| HIGH IDLE | 428 | WATER IN FUEL SENSOR CIRCUIT SHORTED HIGH ERROR | A | A |
| HIGH IDLE | 584 | STARTER RELAY CIRCUIT SHORTED LOW | A | A |
| HIGH IDLE | 1669 | Air-assisted) - Aftertreatment Diesel Exhaust Fluid Tank Level Sensor Circuit | F - | A |
| HIGH IDLE | 1678 | , | A | A |
| HIGH IDLE | 1683 | 1683,Aftertreatment Diesel Exhaust Fluid Tank Heater - Voltage Above Nor | A | A |
| HIGH IDLE | 2182 | ENG BRK DRIVE #1 LOW CONTROL ERROR | A | A |
| | 2555 | GHC LOW VOLTAGE ERROR #1 | A | A |
| HIGH_IDLE | 2555 | | A | |
| HIGH_IDLE | | Aftertreatment Outlet NOx Sensor - Abnormal Update Rate | | A |
| HIGH_IDLE | 3558 | 3558 | A | A |
| HIGH_IDLE | 3565 | Metering valve circuit voltage above normal (SCR) | A | A |
| HIGH_IDLE | 3572 | DEF pressure sensor circuit voltage below normal (SCR) | A | A |
| HIGH_IDLE | 3577 | Purge valve circuit voltage above normal (SCR) | A | A |
| HIGH_IDLE | 4173 | Air pressure sensor circuit voltage below normal (SCR) | A | A |
| HIGH_IDLE | 4174 | DEF Temperature sensor circuit voltage above normal (SCR) | A | A |
| HIGH_IDLE | 4177 | Air pump valve circuit voltage below normal (SCR) | A | A |
| RATED_HP | 249 | OEM AMBIENT AIR TEMPERATURE HIGH ERROR | Α | Α |
| RATED_HP | 428 | WATER IN FUEL SENSOR CIRCUIT SHORTED HIGH ERROR | Α | Α |
| RATED_HP | 584 | | A | Α |
| RATED_HP | 1669 | Air-assisted) - Aftertreatment Diesel Exhaust Fluid Tank Level Sensor Circuit | | Α |
| RATED_HP | 1678 | , | Α | Α |
| RATED_HP | 1683 | , | Α | Α |
| RATED_HP | 2182 | ENG BRK DRIVE #1 LOW CONTROL ERROR | Α | Α |
| RATED_HP | 2555 | GHC LOW VOLTAGE ERROR #1 | Α | Α |
| RATED_HP | 2771 | Aftertreatment Outlet NOx Sensor - Abnormal Update Rate | Α | Α |
| RATED_HP | 3558 | 3558 | Α | A |
| RATED_HP | 3565 | Metering valve circuit voltage above normal (SCR) | Α | Α |
| RATED_HP | 3572 | DEF pressure sensor circuit voltage below normal (SCR) | Α | Α |
| RATED_HP | 3577 | Purge valve circuit voltage above normal (SCR) | A | Α |
| RATED_HP | 4173 | Air pressure sensor circuit voltage below normal (SCR) | A | Α |
| RATED_HP | 4174 | , , | A | Α |
| RATED HP | 4177 | , , , | A | Α |
| TORQUE PEAK | 249 | , , | A | Α |
| TORQUE PEAK | 428 | WATER IN FUEL SENSOR CIRCUIT SHORTED HIGH ERROR | A | Α |
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| Testpoint | Number | Description | Masked | Active |
|-------------|--------|---|--------|--------|
| TORQUE_PEAK | 1669 | Air-assisted) - Aftertreatment Diesel Exhaust Fluid Tank Level Sensor Circuit | Α | Α |
| TORQUE_PEAK | 1678 | (Air-assisted) - Aftertreatment Diesel Exhaust Fluid Tank Temperature Sens | Α | Α |
| TORQUE_PEAK | 1683 | 1683,Aftertreatment Diesel Exhaust Fluid Tank Heater - Voltage Above Nor | Α | Α |
| TORQUE_PEAK | 2182 | ENG BRK DRIVE #1 LOW CONTROL ERROR | Α | Α |
| TORQUE_PEAK | 2555 | GHC LOW VOLTAGE ERROR #1 | Α | Α |
| TORQUE_PEAK | 2771 | Aftertreatment Outlet NOx Sensor - Abnormal Update Rate | Α | Α |
| TORQUE_PEAK | 3558 | 3558 | Α | Α |
| TORQUE_PEAK | 3565 | Metering valve circuit voltage above normal (SCR) | Α | Α |
| TORQUE_PEAK | 3572 | DEF pressure sensor circuit voltage below normal (SCR) | Α | Α |
| TORQUE_PEAK | 3577 | Purge valve circuit voltage above normal (SCR) | Α | Α |
| TORQUE_PEAK | 4173 | Air pressure sensor circuit voltage below normal (SCR) | A | Α |
| TORQUE_PEAK | 4174 | DEF Temperature sensor circuit voltage above normal (SCR) | A | Α |
| TORQUE_PEAK | 4177 | Air pump valve circuit voltage below normal (SCR) | Α | Α |
| LOW_IDLE_2 | 249 | OEM AMBIENT AIR TEMPERATURE HIGH ERROR | Α | Α |
| LOW_IDLE_2 | 428 | WATER IN FUEL SENSOR CIRCUIT SHORTED HIGH ERROR | Α | Α |
| LOW_IDLE_2 | 584 | STARTER RELAY CIRCUIT SHORTED LOW | Α | Α |
| LOW_IDLE_2 | 1669 | Air-assisted) - Aftertreatment Diesel Exhaust Fluid Tank Level Sensor Circuit | Α | Α |
| LOW_IDLE_2 | 1678 | (Air-assisted) - Aftertreatment Diesel Exhaust Fluid Tank Temperature Sens | Α | Α |
| LOW_IDLE_2 | 1683 | 1683,Aftertreatment Diesel Exhaust Fluid Tank Heater - Voltage Above Nor | Α | Α |
| LOW_IDLE_2 | 2182 | ENG BRK DRIVE #1 LOW CONTROL ERROR | A | Α |
| LOW_IDLE_2 | 2555 | GHC LOW VOLTAGE ERROR #1 | A | Α |
| LOW_IDLE_2 | 2771 | Aftertreatment Outlet NOx Sensor - Abnormal Update Rate | A | Α |
| LOW_IDLE_2 | 3558 | 3558 | A | Α |
| LOW_IDLE_2 | 3565 | Metering valve circuit voltage above normal (SCR) | Α | Α |
| LOW_IDLE_2 | 3572 | DEF pressure sensor circuit voltage below normal (SCR) | Α | Α |
| LOW_IDLE_2 | 3577 | Purge valve circuit voltage above normal (SCR) | Α | Α |
| LOW_IDLE_2 | 4173 | Air pressure sensor circuit voltage below normal (SCR) | A | Α |
| LOW_IDLE_2 | 4174 | DEF Temperature sensor circuit voltage above normal (SCR) | Α | Α |
| LOW_IDLE_2 | 4177 | Air pump valve circuit voltage below normal (SCR) | Α | Α |

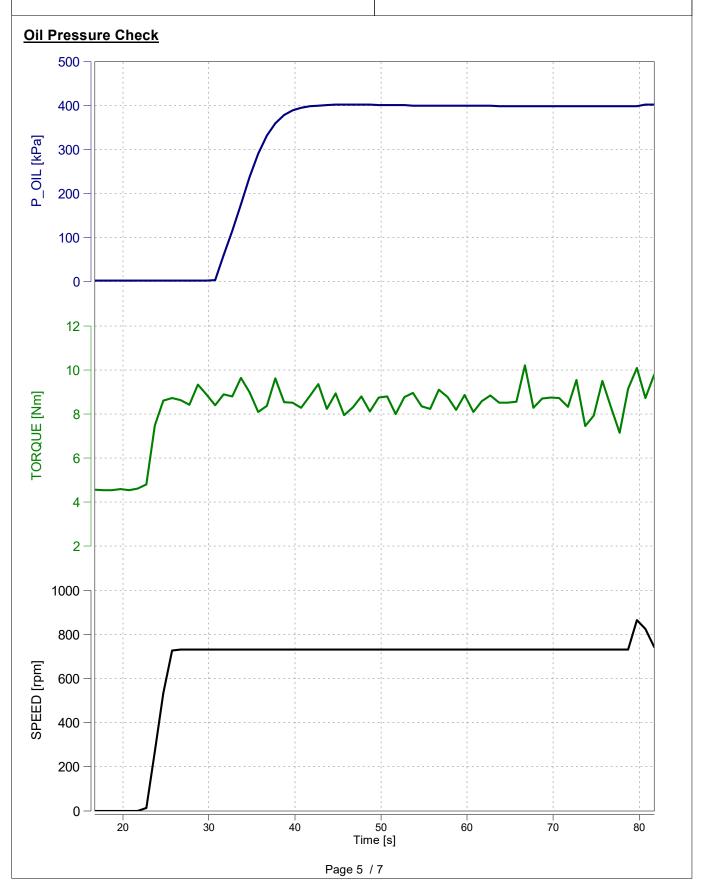


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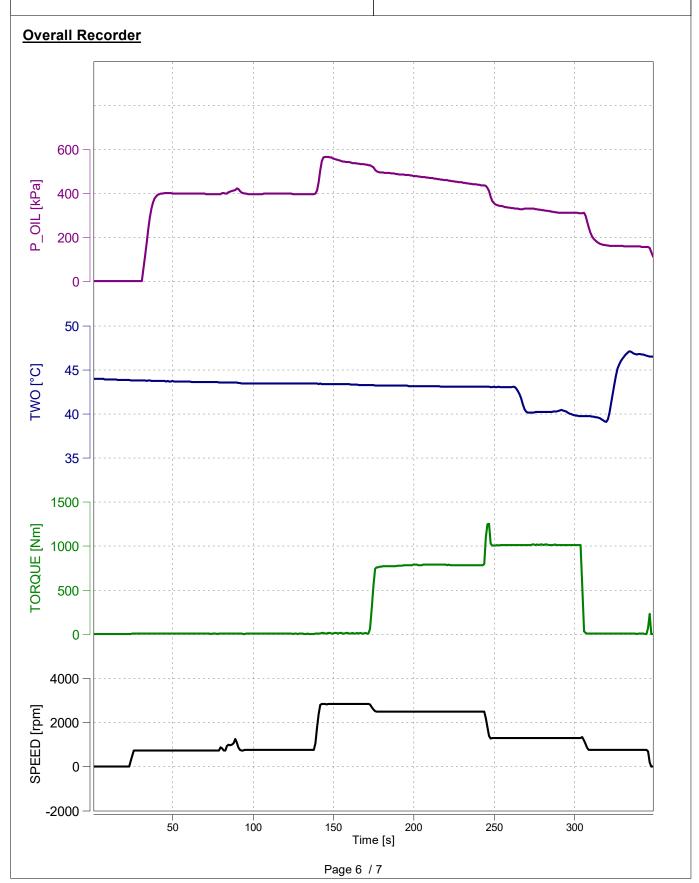


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| | Unit | Lower Limit | Value | Upper Limit | Status |
|-------------|------|-------------|---------|-------------|--------|
| LOW_IDLE | | | | | |
| SPEED | rpm | 698.00 | 749.87 | 810.00 | PASSED |
| P_OIL | kPa | 75.00 | 398.56 | | PASSED |
| OPA_ANLG | - | | 4.86 | | |
| HIGH_IDLE | | | | | |
| SPEED | rpm | 2800.00 | 2839.60 | 2900.00 | PASSED |
| P_OIL | kPa | | 535.62 | | |
| RATED_HP | | | | | |
| SPEED | rpm | 2498.00 | 2500.00 | 2502.00 | PASSED |
| Р | kW | 192.00 | 205.60 | 220.00 | PASSED |
| FB_RATE | kg/h | 41.00 | 45.77 | 51.00 | PASSED |
| P_INTAKE | kPa | | 160.69 | | |
| P_OIL | kPa | 275.00 | 445.41 | | PASSED |
| BLOW_VAL | kPa | 0.10 | 1.55 | 3.00 | PASSED |
| OPA_ANLG | - | 0.00 | 4.86 | 15.00 | PASSED |
| T_FUEL | °C | 38.00 | 38.95 | 45.00 | PASSED |
| P_FUEL | kPa | | * | | |
| T_TUR_IN | - | | * | | |
| TORQUE_PEAK | | | | | |
| SPEED | rpm | | 1299.99 | | |
| TORQUE | Nm | 916.00 | 1015.13 | 1076.00 | PASSED |
| FB_RATE | kg/h | 23.00 | 21.48 | 33.00 | FAILED |
| BLOW_VAL | kPa | 0.10 | 1.05 | 3.00 | PASSED |
| OPA_ANLG | - | 0.00 | 4.86 | 15.00 | PASSED |
| T_FUEL | °C | 38.00 | 39.03 | 45.00 | PASSED |
| P_FUEL | kPa | | * | | |
| T_TUR_IN | - | | * | | |
| LOW_IDLE_2 | | | | | |
| SPEED | rpm | 600.00 | 750.42 | 800.00 | PASSED |
| P_OIL | kPa | 100.00 | 161.02 | | PASSED |
| OPA ANLG | - | | 4.86 | | |