

**Idle Speed****Fast Idle****MAF****PASS****LOW****MAP****PASS****LOW****VGT****HIGH****PASS****EGR****PASS****PASS****Print****Exit****Result  
analysis**

The turbo REA has moved but is not within the set limits, do not replace. Please investigate other possible causes, such as induction system leaks \_sticking REA arm.

#### IDLE SPEED TEST RESULT

#### PRIMARY CAUSE/ CONCERN

REA/ Vanes stuck :

Visual check of REA connector and actuator arm condition:  
Check the actuator arm for signs of corrosion and ease of movement.  
Check the connectors are seated correctly.  
Check for damage to connectors and wiring harness.  
Check for any foreign object /water ingress.  
Rectify faults as required.

#### SECONDARY CAUSES/ CONCERNS

Compressor turbine damage :

Visual Check turbine condition:  
Check for any sustained damage to compressor impeller, from centre to the tips, scrutinise any small marks, see document for visual guide.  
Check compressor housing for scoring marks or high polished surfaces, to indicate bearing failure, inspect the throw of the centre shaft for movement.  
Rectify faults as required.

#### FAST IDLE TEST RESULT

#### PRIMARY CAUSE/ CONCERN

Low pressure leak :

Carry out boost pressure leak test, instructions are on TOPIx: Powertrain, 303:00 and navigate to 'Leakage test using smoke test equipment'  
Visual check of all pipe work after MAF sensor to inlet side of the turbo:  
Check joints/mating faces are secure and flush fitting with no gaps or creases in grommets/flanges.  
Check all fasteners are secured and correctly tightened.  
Check for cracks/splits/holes/weathering in pipe work.  
Rectify faults as required.

#### SECONDARY CAUSES/ CONCERNS

Boost leak :

Carry out boost pressure leak test, instructions are on TOPIx: Powertrain, 303:00 and navigate to 'Leakage test using smoke test equipment'  
Visual check of all pipe work from boost side of turbo to inlet manifold:  
Check joints/mating faces are secure and flush fitting with no gaps or creases in grommets/flanges.  
Check all fasteners are secured and correctly tightened.  
Check for cracks/splits/holes/weathering in pipe work.  
Rectify faults as required.

MAF and MAP low :

Carry out visual checks on the condition of the MAF \_MAP sensor:  
Check the connectors are seated correctly.  
Check for damage to connectors and wiring harness.  
Check for any foreign object /water ingress.  
Rectify faults as required.