

- NOTE: Inspect connectors for signs of water ingress, and pins for damage and/or corrosion.
- NOTE: If DTCs are recorded and, after performing the pinpoint tests, a fault is not present, an intermittent concern may be the cause. Always check for loose connections and corroded terminals.
- NOTE: For a full list of engine control module (ECM) DTCs:
REFER to: [Electronic Engine Controls](#) (303-14 Electronic Engine Controls - 2.4L Duratorq-TDCi HPCR (103kW/140PS) - Puma, Diagnosis and Testing).

DTC	Description	Possible cause	Action
P006A00	Manifold absolute pressure (MAP) sensor - mass or volume air flow correlation	<ul style="list-style-type: none"> • NOTE: The MAP sensor is part of the manifold absolute pressure temperature (MAPT) sensor • Restricted air intake path • Exhaust gas recirculation (EGR) valve stuck open • Turbocharger fault • MAP sensor fault • Mass air flow (MAF) sensor fault 	Check the intake air path for restrictions. Rectify as necessary. Check for DTCs indicating an EGR, turbocharger, MAPT or MAF sensor fault. Rectify as necessary. Clear the DTCs and check for normal operation.
P010029	Mass or volume air flow A circuit - signal invalid	<ul style="list-style-type: none"> • Restricted air intake path • Check for leak between mass air flow (MAF) sensor and turbocharger • MAF sensor fault • Turbocharger fault • Exhaust gas recirculation (EGR) valve fault 	Check the intake air system for leaks, restrictions, etc. Check for related DTCs. Rectify as necessary. Clear the DTCs and test for normal operation.
P04031A	Exhaust gas recirculation (EGR) control circuit - circuit resistance below threshold	<ul style="list-style-type: none"> • EGR control valve actuator circuit: short circuit to ground • EGR control valve actuator circuit: short circuit to power • EGR control valve actuator circuit: open circuit • EGR control valve fault 	Check the EGR control valve actuator and circuits. Refer to the electrical guides. Install a new EGR valve if necessary. REFER to: Exhaust Gas Recirculation (EGR) Valve (303-08 Engine Emission Control - 2.4L Duratorq-TDCi HPCR (103kW/140PS) - Puma, Removal and Installation). Clear the DTCs and test for normal operation.
P04031B	Exhaust gas recirculation (EGR) control circuit - circuit resistance above threshold	<ul style="list-style-type: none"> • EGR control valve actuator circuit: short circuit to ground • EGR control valve actuator circuit: short circuit to power • EGR control valve actuator circuit: open circuit • EGR control valve fault 	
P040311	Exhaust gas recirculation (EGR) control circuit - circuit short to ground	<ul style="list-style-type: none"> • EGR control valve actuator circuit: short circuit to ground • EGR control valve fault 	
P040312	Exhaust gas recirculation (EGR) control circuit - circuit short to battery	<ul style="list-style-type: none"> • EGR control valve actuator circuit: short 	