



JTB00667NAS3

TECHNICAL BULLETIN

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NOTE: The information in Technical Bulletins is intended for use by trained, professional Technicians with the knowledge, tools, and equipment required to do the job properly and safely. It informs these Technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by 'do-it-yourselfers'. If you are not a Retailer, do not assume that a condition described affects your vehicle. Contact an authorized Jaguar service facility to determine whether this bulletin applies to a specific vehicle.

INFORMATION

This reissue replaces all previous versions. Please destroy all previous versions.

Changes are highlighted in blue

SECTION:

303-01

SUBJECT/CONCERN:

Whine Noise From Engine Balance Shafts

AFFECTED VEHICLE RANGE:

MODEL:	MODEL YEAR:	VIN:	ASSEMBLY PLANT:	APPLICABILITY:
F-PACE (X761)	2017 Onwards	045080 Onwards	Solihull	INGENIUM I4 2.0L Diesel

MODEL:	MODEL YEAR:	VIN:	ASSEMBLY PLANT:	APPLICABILITY:
XE (X760)	2017	923882-978627	Solihull	INGENIUM I4 2.0L Diesel
XE (X760)	2017 Onwards	P10168 Onwards	Castle Bromwich	INGENIUM I4 2.0L Diesel
XF (X260)	2017 Onwards	Y11889 Onwards	Castle Bromwich	INGENIUM I4 2.0L Diesel

MARKETS:

NORTH AMERICA

CONDITION SUMMARY:

SITUATION:

A whine noise from the engine may be evident.

CAUSE:

This may be caused by excessive wear on engine dynamic balance shafts.

ACTION:

Should a customer express this concern, refer to the appropriate Diagnostic Procedure, and only if necessary Workshop Procedure, below.

PARTS:

F-PACE (X761)

PART NUMBER	DESCRIPTION	QUANTITY
JDE36994	Balance shafts	2
JDE39481	Seal(s) - Crankshaft oil - Rear	1
JDE38485	Seal(s) - Crankshaft oil - Front	1
STC50550	Sealer - Oil pan/engine	1
JDE39146	Bolt(s) - Crankshaft damper	4
T2R15200	Bolt(s) - Drive plate	8

PART NUMBER	DESCRIPTION	QUANTITY
AJ813202	Plug(s) - Oil drain	1
JDE37128	Filter - Engine oil	1
AJ813342	Gasket(s) - HP EGR exhaust manifold	2
AJ813345	Gasket(s) - DPF-to-EGR inlet	1
T2H14088	Gasket(s) - DPF-to-intermediate exhaust	1
T2H2804	Nut(s) - DPF-to-intermediate exhaust	2
C2D25075	Bolt(s) - Torque converter-to-drive plate	6
T2H11760	Gasket(s) - Turbocharger-to-Catalyst	1
T2R4991	O-ring(s) - A/C	2
C2P24809	O-ring(s) - A/C	4
T4A12521	Circlip(s) - Halfshaft	2
T2H9243	Bolt(s) - Halfshaft	4
T4A18130	Seal(s) - Differential support bracket-to-sump	1
T4A16359	Bolt(s) and washer(s) - Brake caliper	4
C2P12731	Nut(s) - Wheel hub	2
T4N8037	Nut(s) - Track rod end-to-vertical link	2
XR848057	Nut(s) - Stabilizer link, front arm bush, wheel knuckle	6
T2H13852	Plug(s) - Differential oil fill	1
T2H13851	Plug(s) - Differential oil drain	1
T2H3159	Nut(s) - Lower suspension arm ball joint	2
T2H6322	Bolt(s) - Wheel knuckle	2
T2H17786	Bolt(s) - Damper bracket	2
C2P11385	Bolt(s) - Damper bracket	2
ZZZ001	Oil - Engine	6.25L
ZZZ001	Oil - Differential	6.25L

XE (X760), XF (X260)

PART NUMBER	DESCRIPTION	QUANTITY
JDE36994	Balance shafts	2
JDE39481	Seal(s) - Crankshaft oil - Rear	1
JDE38485	Seal(s) - Crankshaft oil - Front	1
STC50550	Sealer - Oil pan/engine	1
JDE39146	Bolt(s) - Crankshaft damper	4
T2R15200	Bolt(s) - Drive plate	8
AJ813202	Plug(s) - Oil drain	1
JDE37128	Filter - Engine oil	1
AJ813342	Gasket(s) - HP EGR exhaust manifold	2
AJ813345	Gasket(s) - DPF-to-EGR inlet manifold	1
T2H14088	Gasket(s) - DPF-to-intermediate exhaust	1
T2H2804	Nut(s) - DPF-to-intermediate exhaust	2
C2D25075	Bolt(s) - Torque converter-to-drive plate	6
T2H11760	Gasket(s) - Turbocharger-to-catalyst	1
T2R4991	O-ring(s) - A/C	2
C2P24809	O-ring(s) - A/C	4
T2H18669	Bolt(s) and washer(s) - Brake caliper	4
C2P12731	Nut(s) - Wheel hub	2
T4N8037	Nut(s) - Track rod end-to-vertical link	2
XR848057	Nut(s) - Stabilizer link, front arm bush, wheel knuckle	6
T2H3159	Nut(s) - Lower suspension arm ball joint	2
T2H6322	Bolt(s) - Wheel knuckle	2
T2H17786	Bolt(s) - Shock absorber yoke	2
C2P11385	Bolt(s) - Shock absorber yoke	2
C2D23748	Circlip(s) - Halfshaft	2
T2H9243	Bolt(s) - Halfshaft	4

PART NUMBER	DESCRIPTION	QUANTITY
C2D27326	Seal(s) - Differential support bracket-to-oil pan	1
ZZZ001	Oil - Engine	6.25L

TOOLS:

E192496

Jaguar Land Rover-
approved
Midtronics battery
power supply



E179225

Jaguar Land Rover-
approved
diagnostic
equipment with
latest SDD
Software
Management Pack

WARRANTY:**NOTES:**

- If the vehicle has returned with the same customer complaint, perform the Workshop Procedure using part number JDE40476. This part has a restriction applied to it and retailers may be requested to provide evidence of the reported defect before the parts are released to complete a repeat repair.
- All vehicles: an allowance of \$106.94 USD or local equivalent is provided for the locally sourced engine oil (6.25L).
- F-PACE ONLY: an allowance \$41.60 USD or local equivalent is provided for the locally sourced differential oil (1.0L).

NOTES:

- Repair procedures are under constant review, and therefore times are subject to change; those quoted here must be taken as guidance only. Use TOPIx to obtain the latest repair time.

- The JLR claims submission system requires the use of causal part numbers. Labor only claims must show the causal part number with a quantity of zero.

DESCRIPTION	SRO	TIME (HOURS)	CONDITION CODE	CAUSAL PART
Balance shaft assembly - Renew with auto transmission - F-PACE (X761; AWD)	12.49.16	11.8	05	JDE36994
Balance shaft assembly - Renew with auto transmission - XE (X760; AWD)	12.49.16	11.6	05	JDE36994
Balance shaft assembly - Renew with auto transmission - XE (X760; RWD)	12.49.16	10.8	05	JDE36994
Balance shaft assembly - Renew with auto transmission - XF (X260; AWD)	12.49.16	11.6	05	JDE36994
Balance shaft assembly - Renew with auto transmission - XF (X260; RWD)	12.49.16	10.9	05	JDE36994
Diagnosis	80.30.12	0.3	05	JDE36994

NOTE:

Normal Warranty procedures apply.

DIAGNOSTIC PROCEDURE 'A':

This Diagnostic Procedure is for 2017MY vehicles ONLY.

1 Remove the accessory drive belt (see TOPIx Workshop Manual section 303-05: Accessory Drive - INGENIUM I4 2.0L Diesel - Removal and Installation - Accessory Drive Belt)

2 Verify whine noise is from the engine dynamic balance shafts:

1 Start the engine.

- If the whine noise is not evident, do not continue with this Technical Bulletin.
- Switch the engine OFF.

- Install the accessory drive belt (see TOPIx Workshop Manual section 303-05: Accessory Drive - INGENIUM I4 2.0L Diesel - Removal and Installation - Accessory Drive Belt).
- Perform normal diagnosis (see TOPIx Workshop Manual section 303-01A: Engine - INGENIUM I4 2.0L Diesel - Diagnosis and Testing).
- If the whine noise is evident, switch the engine OFF and then go to Step 3.

CAUTIONS:

- A Jaguar Land Rover-approved battery power supply must be connected to the vehicle startup battery.
- All ignition ON/OFF requests MUST be performed; failure to do these steps may cause damage to vehicle control modules.

3 Connect the Jaguar Land Rover-approved battery power supply to the vehicle startup battery.

4 NOTE:

The Jaguar Land Rover-approved diagnostic equipment must be loaded with SDD155.05 Software Management Pack v310 (or later).

Connect the Jaguar Land Rover-approved diagnostic equipment to the vehicle and begin a new session.

5 Follow all on-screen instructions.

NOTE:

The IDU2 kit (part number JLR-IDU2-ROW) contains the IDU2 and NVH sensor. The NVH sensor may require charging prior to use. Full instructions on how and when to use the tool are displayed within the IDU2 application on SDD.

6 If the hyperlink is not available:

- 1** Select **Diagnosis** from the Session Type screen.
- 2** Select the **Selected Symptoms** tab and then select:

- **Powertrain - Engine System - Engine Performance - Noises.**

3 Select the **Special Applications** tab.

4 Select **Run** to perform the **Noise vibration and harshness - Engine diagnostic** option.

- If the IDU2 application **passes**, switch the engine OFF and then submit a TA (Technical Assistance) request.
- If the IDU2 application **fails**, switch the engine OFF and then go to the Workshop Procedure below.

7 Exit the current session.

1 Select the **Session** tab.

2 Select the **Close Session** option.

8 Disconnect the diagnostic equipment and battery power supply from the vehicle.

DIAGNOSTIC PROCEDURE 'B':

This Diagnostic Procedure is for 2018MY-onwards vehicles ONLY.

1 Remove the accessory drive belt (see TOPIx Workshop Manual section 303-05: Accessory Drive - INGENIUM I4 2.0L Diesel - Removal and Installation - Accessory Drive Belt)

2 Verify the whine noise is from the engine dynamic balance shafts:

1 Start the engine.

- If the whine noise is not evident, do not continue with this Technical Bulletin.
 - Switch the engine OFF.
 - Install the accessory drive belt (see TOPIx Workshop Manual section 303-05: Accessory Drive - INGENIUM I4 2.0L Diesel - Removal and Installation - Accessory Drive Belt).

- Perform normal diagnosis (see TOPlx Workshop Manual section 303-01A: Engine - INGENIUM I4 2.0L Diesel - Diagnosis and Testing).
- If the whine noise is evident, switch the engine OFF and then go to Step 3.

3

Make sure the whine noise is NOT from the turbocharger.

- If the whine noise is from the turbocharger, do not continue with this Technical Bulletin.
 - Switch the engine OFF.
 - Install the accessory drive belt (see TOPlx Workshop Manual section 303-05: Accessory Drive - INGENIUM I4 2.0L Diesel - Removal and Installation - Accessory Drive Belt).
 - Perform normal diagnosis (see TOPlx Workshop Manual section 303-01A: Engine - INGENIUM I4 2.0L Diesel - Diagnosis and Testing).
- If the noise is not from the turbocharger, switch the engine OFF and then go to the Workshop Procedure below.

WORKSHOP PROCEDURE:

1

Replace the balance shafts (see TOPlx Workshop Manual section: 303-01A: Engine - INGENIUM I4 2.0L Diesel - Removal and Installation - Balance Shaft Assembly)