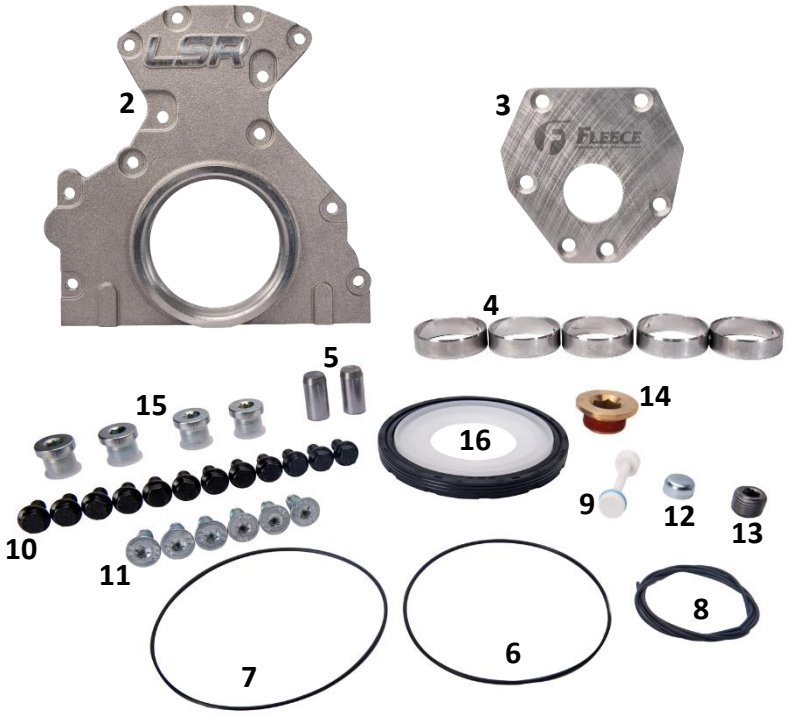
SUBJECT: FREEDOM SERIES LSR STANDARD DECK SOLID ALUMINUM ENGINE BLOCK OVERVIEW AND SPECIFICATIONS

P/N: FPE-LSR-FMJ-SD10X

CONTENTS:

Item #	Description	QTY
1	LSR engine block assembly	1
2	LSR rear cover	1
3	LSR cam thrust plate	1
4	Durabond cam bearings	5
5	Transmission dowel pin	2
6	Rear oil seal housing o-ring (GM 19166180)	1
7	Thrust plate o-ring (GM 19166178)	1
8	Rear cover o-ring (GM 19166181)	1
9	Oil galley bar bell	1
10	Rear cover bolts	12
11	Cam thrust plate bolts	6
12	Oil galley freeze plug	1
13	Steel oil galley plug	1
14	Brass coolant plug	1
15	16mm water plugs	1
16	Rear main seal	1



BUILDER NOTES:

- The LSR block is semi-machined and requires final machining to the builder's final specifications for the application. Required machining includes:
  - Final deck surface (0.011" additional provided on the deck surface)
  - Final cylinder hone
  - Final OD on the crankshaft mains (0.003" additional provided for the final hone)

- The camshaft and lifter bores are finished and ready for precision bearings and lifters.

- This engine block is pre-threaded to accept GM LT1/LT4 Style piston oil nozzles (GM PN 12678499)

- Confirm all installed components have sufficient clearance in relation to block casting features. This includes all rotating assemblies and the valvetrain components.

- The engine block requires thorough cleaning and inspection prior to assembly and run-in. Verify all oil passages are

TECHNICAL SPECIFICATIONS FOR LSR SOLID DECK ENGINE BLOCKS:

Specification	Measurement & Tolerance (inches)
Deck Height	9.251”
Cylinder Bore	4.110”
Maximum Cylinder Bore Size	4.185”
Cam Bore	2.3075” - 2.3088”
Lifter Bore	0.8430” - 0.8435”
Main Bore	2.7475” - 2.7485”

MAIN STUD TORQUE SPECIFICATIONS FOR LSR SOLID DECK ENGINE BLOCKS:

- Inner main stud nuts – 95 ft-lb
- Outer main stud nuts – 95 ft-lb
- Cross-bolts – 50 ft-lb

TORQUE SEQUENCE FOR MAIN STUDS AND CROSS-BOLTS

