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GROUP: Engine

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SUBJECT:

Gasoline Engine Diagnostic Inspection Procedure

OVERVIEW:

This bulletin provides a procedure to determine repair versus replacement of a gasoline long block engine assembly. This procedure is to be used prior to conducting any engine related repairs or removal of engine components.

MODELS:

2007 - 2008	CS	Pacifica
2007 - 2008	DR	Ram 1500 Pickup
2009 - 2013	DS	Ram 1500 Pickup
2007 - 2009	DH	Ram 2500 Pickup
2010 - 2013	DJ	Ram 2500 Pickup
2007 - 2009	D1	Ram 3500 Pickup
2013	D2	Ram 3500 Pickup
2009	DC	Ram 3500 Cab Chassis
2012 - 2013	DD	Ram 3500 Cab Chassis
2007 - 2009	HB	Durango
2009	HG	Aspen
2007 - 2013	JK	Wrangler
2007 - 2013	JS	Sebring/200/Avenger
2007	KJ	Liberty
2008 - 2012	KK	Liberty
2007 - 2011	KA	Nitro
2007 - 2013	LX	300/Magnum/Charger
2011 - 2013	LD	Charger
2008 - 2013	LC	Challenger
2007 - 2013	MK	Compass/Patriot
2007 - 2012	PM	Caliber
2007 - 2010	PT	PT Cruiser

2007 - 2011	ND	Dakota
2007	RS	Town & Country/Voyager/Grand Caravan
2008 - 2013	RT	Town & Country/Grand Caravan
2007 - 2013	WK	Grand Cherokee
2007 - 2010	XK	Commander
2009 - 2013	JC	Journey
2012 - 2013	WD	Durango
2013	PF	Dart
2012 - 2013	FF	Fiat 500

NOTE: This bulletin applies to vehicles equipped with a gasoline engine repaired in the United States and Canada only.

DIAGNOSIS:

Engine Noise Diagnosis

- Does engine exhibit an audible knock or tapping type noise at normal operating temperature?
 - Yes>>> Proceed to Step 2.
 - No>>> No further action necessary.
- Perform Injector Kill Test (note: Injector Kill test may not be available on wiTECH for all vehicles. Manual injector deactivation may be necessary). Does the engine noise change in sound/intensity?
 - Yes>>> Remove engine oil pan and inspect connecting rod and main bearings for damage, then proceed to Step 3.
 - No>>> Continue normal diagnosis to pinpoint cause of noise, then proceed to Step 3.
- Complete the Repair/Replace Powertrain Worksheet (70% rule analysis) available in TechCONNECT> Repair Information> Diagnostic Check Sheets> Repair Replace Worksheet.

Oil Consumption Diagnosis

- Perform the Oil Consumption Test located in TechCONNECT>Service Info>09 - Engine>Diagnosis and Testing>Oil Consumption Test and Diagnosis. **(Note: This procedure can be found utilizing any 2011 Model Year and later Year/Model/Engine selection)** Did the vehicle pass the Oil Consumption Test?
 - Yes>>> No further action necessary.
 - No>>> Proceed to Step 2.
- Check the Positive Crankcase Ventilation(PCV) system. Make sure the system is not restricted and the PCV valve has the correct part number and correct vacuum source (18-20 in. Hg at idle below 3000 ft. above sea level is considered normal). Were any issues noted?
 - Yes>>> Repair as necessary.
 - No>>> Proceed to Step 3.
- Perform a Cylinder Compression Test and record the results. **(Note: Refer to the applicable service information for the vehicle in question to locate Cylinder Compression Test Specifications)**

- 4. Perform a Cylinder Leak Down Test (**Note: Cylinder leakage should not exceed 15%**) Did the vehicle pass the Cylinder Compression Test and Cylinder Leak Down Test?
 - a. Yes>>> No further action necessary.
 - b. No>>> Continue normal diagnosis to pinpoint cause of failure then complete the Repair/Replace Powertrain Worksheet (70% rule analysis) available in TechCONNECT> Repair Information> Diagnostic Check Sheets> Repair Replace Worksheet.

POLICY:

Reimbursable within the provisions of the warranty.

NOTE: These labor operation numbers are only to be used when repair exceeds 70% of the cost of engine long block assembly replacement. Also, these labor operation numbers are to be used in conjunction with a corresponding primary labor operation number.

NOTE: Returned engine assemblies received with missing components are subject to warranty part return chargebacks. See Warranty Administration Manual, Parts Section, Warranty Parts Return (United States Only).

NOTE: Warranty repairs claiming any engine long block replacement Labor Operation Numbers must include a completed Diagnostic Check Sheet. Refer to US Warranty Bulletin D-13-03 or Canadian Warranty Bulletins 2013-01/2012-11, available in DealerCONNECT under: efiles>Service>Warranty>CDJR Bulletins (Canada: efiles>Service>Warranty>Service Administration Bulletins), for additional information.

TIME ALLOWANCE:

Labor Operation No:	Description	Amount
09-01-70-70	Long Block 4 cylinder engine, compression and leak down test (3 - Highly Skilled)	0.6 Hrs.
09-01-70-71	Long Block 6 cylinder engine, compression and leak down test (3 - Highly Skilled)	0.8 Hrs.
09-01-70-72	Long Block 8 cylinder engine, compression and leak down test (3 - Highly Skilled)	1.8 Hrs.
09-01-70-72	Long Block 8 cylinder engine, compression and leak down test, Challenger and Charger/300/Magnum Only (3 - Highly Skilled)	1.1 Hrs.
09-01-70-75	Long Block 4 cylinder engine, main and rod bearing inspection (3 - Highly Skilled)	1.5 Hrs.
09-01-70-76	Long Block 6 cylinder engine, main and rod bearing inspection, Front Wheel Drive Only (3 - Highly Skilled)	2.0 Hrs.

09-01-70-76	Long Block 6 cylinder engine, main and rod bearing inspection, Rear Wheel Drive Only (3 - Highly Skilled)	2.3 Hrs.
09-01-70-77	Long Block 8 cylinder engine, main and rod bearing inspection (3 - Highly Skilled)	2.3 Hrs.