BROWN AND HURLEY
The BIG TRUCK People

TRUCK SALES, TRAILER SALES, PARTS & SERVICE

A.B.N. 66 010 732 966

985-1005 Yaamba Road, Parkhurst QLD 4701
Phone: (07) 4923 8000 Fax: (07) 4936 1443
rocky.service@brownandhurley.com.au
www.brownandhurley.com.au

*** * * DOCUMENT COPY * * ***

SERVICE TAX INVOICE

Document No.:	**3109291**
Document Date:	30/01/2024
Repair Order No.:	871625
RO Creation Date:	08/01/2024
Rego No.:	XQ86MI
Make/Model:	2020 KENWORTH K200
Vehicle ID No.:	6F5000000LA467853
Fleet No:	
Odometer:	814913
Engine Hours:	10365
Delivery Date:	28/08/2020
Invoice To:	10957
Customer ABN:	
P/Order No.:	PO
Page:	1 of 4
Paccar ID:	1278900

K015 Noise in engine and low power

PROMO ID: 1334858 **$3,317.95**

***EXTENDED COVERAGE CERT NO: 12905 ***

Connected Insite and followed troubleshooting for Turbocharger Noise:

Lower Bull bar

Restricted intake air filter: Visually inspect vehicle intake system for blockage or damage – No signs

Charge air cooler or exhaust system leak: Engine not running. Visually inspect air intake system for leak – leak found. Visually inspect air compressor plumbing for possible air leaks. Visually inspect the exhaust piping for leaks, cracks and loose connections – Leak found. Visually inspect the intake plumbing for possible leaks – Leak found. Visually inspect the charge air cooler hoses for possible air leaks – Leak found. Pressure test the charge air cooler to check for leaks – Oil found.

Leaks in the air intake system: YES

Leaks in the exhaust system: YES

Turbocharger is malfunctioning:

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Removed CAC hoses and air intake manifold, removed all exhaust pieces, removed blown turbo and took photos of failed parts. Found exhaust system full of oil contaminating the EGP. Removed and replaced intercooler, Removed A/C condenser, recovered AC amount of 1.47kg. Removed front grill to allow for removal of condenser. Photographed oil in intercooler. Fitted new intercooler, followed by condenser and shroud. Removed valve cover and drained engine oil due to turbo failure, oil had made its way through the engine. Checked for metal contamination in the oil. Removed and opened oil filter; found metal contamination in filter. As per Cummins procedure, a full main bearing replacement and oil cooler replacement is required. Took photos. Removed coolant transfer pipe, removed oil cooler housing, replaced oil cooler element and replaced gaskets. Replaced oil thermostat and O-ring. Replaced oil cooler housing gasket. Refitted housing with new oil cooler element. Torqued all bolt and refitted coolant transfer pipe with new O'rings. Installed new turbo with new gaskets and O-rings, replaced 2 studs, torqued mounting nuts. Installed new pyro sensor and AFT injector due to the compressor wheel causing damaged to both parts. Refitted all air intake with new CAC hoses due to contamination, all metal pieces were flushed through the hotwash to clean out oil as well exhaust pieces. Removed sump, oil pickup before having to weld nuts on the end of the stiffener plate bolts to be able to remove stiffener plate as all bolts were seized. Removed sump gasket. Clean lubricating oil pan. Remove and inspect lubricating oil pump for reuse. No damage found on 1 and 4 rod bearings – replaced components. As per Cummins procedure, replaced all main bearings and thrust washers on 4. Used lubriplate on new bearings and thrust washer. Followed Cummins procedure step by step and used correct torque sequence. Measured crank end clearance and within specs. Measured idler and gear backlash and within specs. Pulled down oil pump and found pitting in gears, as per Cummins procedure, replaced oil pump. Measured idler and gear backlash and within specs. Installed new oil pump, torqued bolts. Refitted stiffener plate with new bolts. Refitted oil pickup with new O-ring. Re-installed oil sump with new gasket and Greymaxx on the corners. Tied up all harnesses under sump with zip ties. Fitted new engine oil filter, refilled with 50L of Vectron oil and fitted grill. R&R air cleaner. Fitted grommet in front cover which was removed to turn the engine over. Removed fuel injector rail plug and cranked. Refitted plug and started truck. Ran for a period and burnt remaining oil out of exhaust. Replaced Flexi piece of exhaust due to oil contamination and refitted all remaining exhaust. Re-gassed A/C, replaced O-rings and replaced receiver/dryer. Full QA as per workshop procedure. Road test vehicle and washed down truck ready for collection.

CLAIM# 871625

Workshop Sublet - 512004- Claytons Towing **$756.00**

INVOICE# T0320230

Part Number	Part Description	Quantity	Total Cost
5607734RX	RECON TURBOCHARGER KIT	1.00	4,490.63
A052V133-1	DEVICE AFTERTREATMENT	1.00	8,575.88
P21-1027	SENSOR-PYROMETER VDO	1.00	266.86
3689587	STUD HIGH TEMPERATURE	2.00	77.64
7/8HDWASHZP	WASHER 7/8 x 44.00 x 3.5mm	1.00	1.32
3347939	SEAL INJECTOR O RING	6.00	96.12
D50-1078	HOSE-HUMP, CAC	1.00	92.83
1600366	HOSE	1.00	355.72

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2866337CUM	GASKET	2.00	67.76
2894829	CONNECTOR INJ FUEL SUPPLY	1.00	393.18
LF14000NN	LUBE FILTER	1.00	53.71
4026684	GASKET OIL PAN	1.00	657.62
4376196	SET LUB OIL COOLER GASKET	1.00	336.57
4386527	THERMOSTAT	1.00	239.51
5633630	KIT MAIN BEARING	1.00	951.31
3680781	SCREW HEXAGON FLANGE HEAD CAP	10.00	263.90
3680425	PLATE BLOCK STIFFENING	1.00	731.94
4955831	KITOIL COOLER	1.00	1,523.15
3336204	SEAL ORING	1.00	33.03
3683607	SEAL MOULDED	1.00	23.38
3683814	SEALO RING	2.00	22.12
100328	SEAL O RING	1.00	34.83
2882087	SET ROD BEARING (STD)	2.00	452.16
3680202	** Replaced by 3691445	4.00	357.72
5680039RX	RECON LUBE PUMP ISX	1.00	1,554.02
3685865D	CORE LUBE PUMP ISX	1.00	671.00
3415966	VECTON 15W-40 CK-4/E9 3X5L AZ	3.00	110.46
3678756	SEAL O RING	1.00	36.11
P150695PAC	AIR FILTER ELEMENT	1.00	104.27
5307918	6 HOLE INJECTOR DOSER	1.00	323.95
M66-6945-0440	PIPE-EXH 5" FLEX	1.00	1,192.98
CSC82052	BOLT	4.00	22.40
K251-571	FILTER-FREON, RECEIVER/DRYER	1.00	131.71
	Parts Totals:	**59.00**	**$24,245.79**

Technician Labour Postings

Technician	Job Code	Type	Clocked In Date	Start Time	Finish Time	Hours Worked
TWOTLEY	K015#	W	09/01/2024	07:14:00	12:00:00	4.7667
TWOTLEY	K015#	W	09/01/2024	12:52:00	15:38:00	2.7667
MLEVER	K015#	W	09/01/2024	13:05:00	13:10:00	.0833
TWOTLEY	K015#	W	10/01/2024	07:07:00	12:00:00	4.8833

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TWOTLEY	K015#	W	10/01/2024	12:46:00	16:36:00	3.8333
TWOTLEY	K015#	W	11/01/2024	07:00:00	12:01:00	5.0167
TWOTLEY	K015#	W	11/01/2024	12:48:00	17:04:00	4.2667
TWOTLEY	K015#	W	12/01/2024	07:00:00	12:00:00	5.0000
TWOTLEY	K015#	W	12/01/2024	12:45:00	15:38:00	2.8833
TWOTLEY	K015#	W	19/01/2024	07:05:00	12:00:00	4.9167
DSMITHWICK	K015#	W	19/01/2024	10:56:00	12:05:00	1.1500
TWOTLEY	K015#	W	22/01/2024	07:00:00	07:38:00	.6300
ADOW	K039-1	R	08/01/2024	00:01:00	03:22:00	3.3500

Advisor: Hannah Briggs

PARTS	$24,245.79
LABOUR	$2,486.35
MISC. CONSUMABLES	$0.00
ENVIRONMENTAL LEVY	$0.00
SUBLET	$831.60
OTHER CHARGES	$756.00
TOTAL GST CHARGED	$0.00
TOTAL Incl. GST	$28,319.74

Workshop Trading Hours: Mon-Fri 7am to 6pm, Sat 8am to 12pm
*** Refrigerant trading authority number: AU13435 ***

Customer's Signature

Bank Account Details for Direct Payments:
Bank: CBA Branch: Kyogle
BSB: 062563 Account No.: 10059314 Account Name: The Brown and Hurley Group Pty Ltd

PayID 66010732966

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