

## I N V O I C E

MAY 31,2017

INVOICE #: 57029

BILL TO: 216748  
CASS CO ENGINEER

SHIP TO:

\* SAME \*

ATLANTIC IA 50022  
PHONE:

CUST PO#: #29-HPOP,TURBO

Pump Model/Type	S/N Out	Core S/N In	Other Ref/VIN	CPL INJ
S300G	02A025170053		478046	
Equipment ID	YR-MAKE.....	VEH MODEL.....	ENGINE	MILES/HOURS
FREIGHTLINER	4	E#KAL09684		203066

SERVICE  
DESCRIPTION

AMOUNT

WHILE ON TEST DRIVE, LEFT REAR DRIVE BRAKES LOCKED UP.  
INSPECTED BRAKE SYSTEM; FOUND S-CAM WAS STUCK IN THE S-CAM TUBE  
DUE TO LACK OF MAINTENANCE. WHILE REPLACING S-CAM AND S-CAM  
TUBE, COULDN'T GET THE SLACK ADJUSTER OFF, SO HAD TO REPLACE IT  
AS WELL. REINSTALLED WHEELS AND ADJUSTED REAR AXLE BRAKES AS  
NECESSARY. TEST DROVE TRUCK - NO PROBLEMS.  
TRUCK #29 IS A 2004 (MFG 10/03) FREIGHTLINER WITH 203,066 MILES;  
VIN: 1FVHCYDC64HM87407; ENGINE S/N: KAL09684.

PART NUMBER	PARTS DESCRIPTION	QUANTITY	LIST PRICE	UNIT PRICE	TOTAL AMOUNT
2394306	HOSE	1			
212-3706	TUBE ASSY	1			
214-7568	SEAL ORING	3			
228-7089	ORING SEAL	2			
227-5904	SEAL ORING	1			
10R-8899	HIGH PRESS OIL PUMP	1			
SHIPIN	FRT IN FOR PARTS	1			
CLAMP-CT400L	CONSTANT TORQ CLAMP 3-1/	1			
ANTIFREEZE, ZXED1	ZEREX EXTENDED LIFE,GAL,	2			
483260	PIPE WRAP 2"X4'	1			
478046	TURBO, S300AG072 REMAN	1			
SERIAL # 02A025170053					
SHIPIN	FRT IN FOR TURBO	1			
03142	EXHAUST STUD KIT	1			
205-1332	HOSE ASSY	1			
2210V7536	BRAKE CAMSHAFT	1			
KIT8042	BRAKE REPAIR KIT	1			
40010141	SLACK ADJUSTER	1			

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TRUCK DIES ANY TIME THEY OPUT A LOAD ON IT - DOESN'T WANT TO GO.  
AT AN INTERSECTION. TRIES TO DIE; OIL PRESSURE GOES TO ZERO.  
TRUCK MAY NOT START. THEY HAVE A HARD TIME STARTING.  
THEY CHANGED FUEL FILTER - NO HELP.

---COUNTY DOESN'T USE THIS MUCH AND IT PLANNING TO SELL.

HPOP LABOR: 18.0 HR  
LAPTOP SCAN CHECK-CAT  
TURBO LABOR 13.2  
BRAKE LABOR: 5.0 HR

TRUCK WOULD NOT START. FOUND BATTEREIES WERE DEAD FROM KEY  
BEING LEFT ON; CHARGED BATTERIES BUT TRUCK STILL WOULD NOT  
START. INSPECTED TRUCK - FOUND NO OBVIOUS CAUSE OF NO START.  
HOOKED UP LAPTOP WITH CAT ET SOFTWARE; FOUND ENGINE WAS NOT  
BUILDING HIGH PRESSURE OIL. TESTED HIGH PRESSURE OIL PUMP  
(HPOP) AND FOUND IT WAS BAD. INSTALLED REPLACEMENT HPOP AND  
TRUCK STARTED RIGHT UP.

TEST DROVE VEHICLE AND FOUND IT TO BE LOW ON POWER. INSPECTED  
TRUCK AND FOUND BOOST PRESSURE WAS LOW. INSPECTED INTAKE  
COMPONENTS, CHARGE AIR COOLER AND HOSES. FOUND NO LEAKS OR  
BLOCKAGES. TESTED TURBO WASTEGATE - FOUND IT WAS STUCK.  
REMOVED TURBOCHARGER - HAD TO HEAT ALL THE NUTS AND BOLTS TO  
REMOVE THE TURBO AS THEY WERE CORRODED DUE TO RUST AND DIFFICULT  
TO REMOVE. INSTALLED REPLACEMENT TURBO. TEST DROVE - NOW HAD  
POWER BACK.

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# INVOICE

MAY 31, 2017

**PAID**  
INVOICE # 57029  
JUN 15 2017

BILL TO: 216748  
CASS CO ENGINEER

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ATLANTIC IA 50022  
PHONE:

CUST PO#: #29-HPOP, TURBO

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Equipment ID	YR-MAKE	VEH MODEL	ENGINE	MILES/HOURS
FREIGHTLINER	4	E#KAL09684		203066
E85-3299Q6257	BRACKET ASSY, CAMSHFT	1		
SHIPIN	FRT IN FOR PARTS	1		
715-2000	GREASE ZERK	1		
8L2779	ORING	1		
OIL-CJ4	15W40 OIL CJ4, ROTELLA T	3		
GREASE-PROMOLY	MOLY GREASE EP2, 14OZ CA	1		

\*\*\*\*\* JOB SUMMARY \*\*\*\*\*  
LABOR .....  
PART SALES .....

PAYMENT UPON RECEIPT

INVOICE TOTAL .....

ACCEPTED BY: X .....

Thank you for your business! We appreciate your trust.