

CW Cylinder Bore Measurement Record

Block # / Run # : CW11 / 3rd

Date: 12/4/2015

Test Number: 95-0-033

Tech:

Cylinder Bore Measurements w/o Stress Plate

Finish Target: (9- 13 Ra) μ in
Bore Gauge Set: 87.5 mm

Piston to Wall Clearance: (.0225 - .0475) mm
Cylinder Cross Hatch Target: (25°-35°) Deg

Instrument Cntrl # 175

Instrument Cntrl # 140

Cylinder Number	Location	Longitudinal Diameter (mm)	Transverse Diameter (mm)
	Top	87.524	87.524
1	Middle	87.522	87.522
	Bottom	87.516	87.520
	Top	87.520	87.530
2	Middle	87.528	87.526
	Bottom	87.524	87.522
	Top	87.516	87.522
3	Middle	87.520	87.520
	Bottom	87.516	87.514
	Top	87.520	87.520
4	Middle	87.518	87.518
	Bottom	87.512	87.516

Surface Finish (μ in)	Piston Diameter (mm)	Piston Clearance (mm)
11.0 ra	87.486	0.034
10.1 ra	87.484	0.038
10.0 ra	87.486	0.028
10.1 ra	87.485	0.031

Instrument Cntrl # 159

REGAP/EOT

Cylinder Number	Top Ring Gap	Second Ring Gap
1	0.065	0.070
2	0.065	0.070
3	0.065	0.070
4	0.065	0.070

Cylinder Number	Top Ring Gap	Second Ring Gap
1	0.068	0.074
2	0.066	0.074
3	0.066	0.073
4	0.066	0.073

Approved _____



CW Engine Measurement Record

Engine Number: CW11

Date: 12/4/2015

Test Number: 95-0-033

Technician: D.C.

Instrument Cntrl # (Journal) 41

Instrument Cntrl # (Bearing) 9

Main Bearing Journals (mm)

Diameter: (51.978mm - 52.002mm)

Journal Number	Horizontal Diameter	Vertical Diameter	Bearing Inside Diameter	Clearance .027mm - .052mm
1	51.992	51.992	52.017	0.025
2	51.993	51.993	52.022	0.029
3	51.993	51.993	52.024	0.031
4	51.993	51.993	52.022	0.029
5	51.991	51.991	52.017	0.026

Instrument Cntrl # (Journal) 41

Instrument Cntrl # (Bearing) 9

Rod Bearing Journals (mm)

Diameter: (51.978mm - 52.002mm)

Journal Number	Horizontal Diameter	Vertical Diameter	Bearing Inside Diameter	Clearance .027mm - .052mm
1	51.990	51.990	52.032	0.042
2	51.990	51.990	52.039	0.049
3	51.991	51.991	52.037	0.046
4	51.992	51.992	52.037	0.045

Instrument Cntrl # (Endplay) 99

Crankshaft End Play (0.22 mm - 0.45 mm)

.254

CW HEAD DATA SHEET

HEAD # CW 11
 HEAD RUN # 3rd
 DATE: 12/1/2015

Engine # CW 11
 Test # 95-0-033
 Instrument Cntrl # (Valve Guide) 172
 Instrument Cntrl # (Valve Stem) 133

	Valve Guide Diameter (5.51) mm	Valve Stem Diameter (5.5) mm	Clearance (0.03-0.07) mm
1A Intake	5.5 <u>22</u>	5.4 <u>73</u>	
1B Intake	5.5 <u>22</u>	5.4 <u>72</u>	
2A Intake	5.5 <u>22</u>	5.4 <u>76</u>	
2B Intake	5.5 <u>22</u>	5.4 <u>72</u>	
3A Intake	5.5 <u>22</u>	5.4 <u>74</u>	
3B Intake	5.5 <u>22</u>	5.4 <u>73</u>	
4A Intake	5.5 <u>22</u>	5.4 <u>73</u>	
4B Intake	5.5 <u>24</u>	5.4 <u>74</u>	

	Valve Guide Diameter (5.51) mm	Valve Stem Diameter (5.5) mm	Clearance (0.03-0.07) mm
1A Exhaust	5.5 <u>26</u>	5.4 <u>66</u>	
1B Exhaust	5.5 <u>22</u>	5.4 <u>67</u>	
2A Exhaust	5.5 <u>24</u>	5.4 <u>66</u>	
2B Exhaust	5.5 <u>26</u>	5.4 <u>65</u>	
3A Exhaust	5.5 <u>22</u>	5.4 <u>65</u>	
3B Exhaust	5.5 <u>26</u>	5.4 <u>66</u>	
4A Exhaust	5.5 <u>24</u>	5.4 <u>65</u>	
4B Exhaust	5.5 <u>26</u>	5.4 <u>65</u>	

Instrument Cntrl # (Length) 1

Instrument Cntrl # (Tension) Y1580

	SPRING FREE LENGTH (47mm)	SPRING TENSION (@28.5 mm), Kilos
1A Intake	<u>47.1</u>	<u>47</u> Kilos
1B Intake	<u>47</u>	<u>46</u> Kilos
2A Intake	<u>46.9</u>	<u>47</u> Kilos
2B Intake	<u>46.6</u>	<u>46</u> Kilos
3A Intake	<u>46.8</u>	<u>47</u> Kilos
3B Intake	<u>47</u>	<u>47</u> Kilos
4A Intake	<u>47</u>	<u>46</u> Kilos
4B Intake	<u>46.8</u>	<u>46</u> Kilos

	SPRING FREE LENGTH (47mm)	SPRING TENSION (@28.5 mm), Kilos
1A Exhaust	<u>46.9</u>	<u>47</u> Kilos
1B Exhaust	<u>46.7</u>	<u>47</u> Kilos
2A Exhaust	<u>46.8</u>	<u>46</u> Kilos
2B Exhaust	<u>46.8</u>	<u>47</u> Kilos
3A Exhaust	<u>46.7</u>	<u>47</u> Kilos
3B Exhaust	<u>46.8</u>	<u>47</u> Kilos
4A Exhaust	<u>47</u>	<u>46</u> Kilos
4B Exhaust	<u>47.1</u>	<u>47</u> Kilos

Instrument Cntrl # (Lash) 148

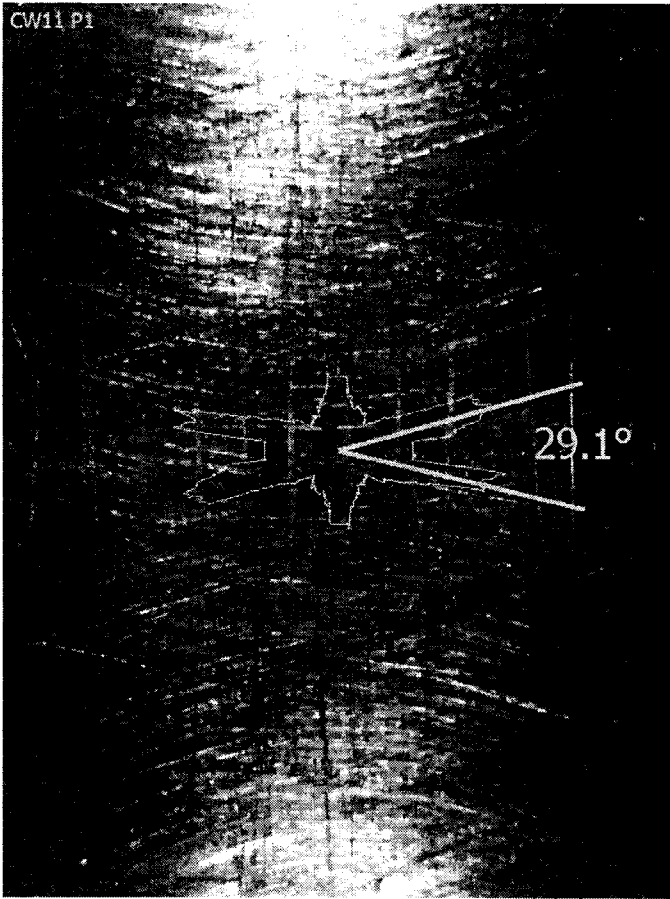
Intake Valve Lash Measurement (.19 - .31) mm	
1F	<u>.229</u>
1R	<u>.254</u>
2F	<u>.254</u>
2R	<u>.254</u>
3F	<u>.254</u>
3R	<u>.254</u>
4F	<u>.229</u>
4R	<u>.254</u>

Exhaust Valve Lash Measurement (.30 - .42) mm	
1F	<u>.356</u>
1R	<u>.356</u>
2F	<u>.330</u>
2R	<u>.356</u>
3F	<u>.356</u>
3R	<u>.356</u>
4F	<u>.356</u>
4R	<u>.381</u>

Head Flatness: good

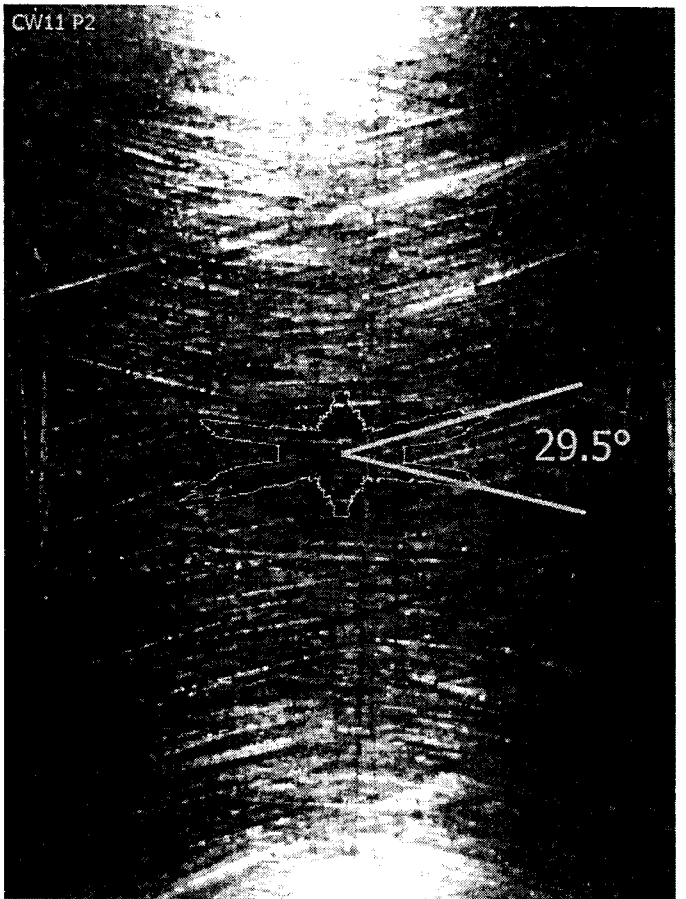
Initials: Daniel

CW11 P1



29.1°

CW11 P2



29.5°

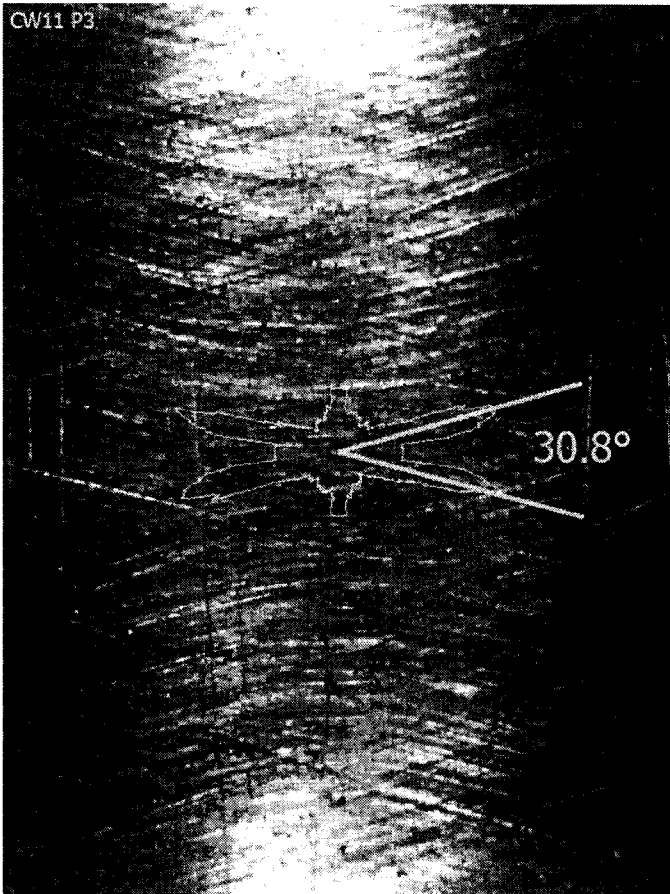
CW11

P1

95-0-033

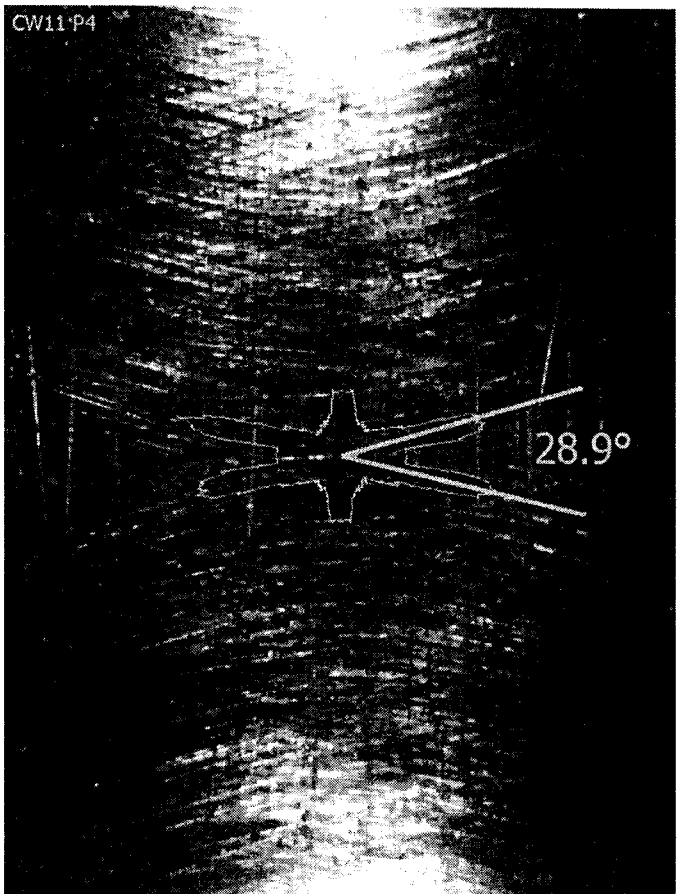
P2

CW11 P3



30.8°

CW11 P4



28.9°

OMF

P3

P4