

## COMTEC Combustion Technologies Inc.

We are pleased to announce the attached results recently received from Iceland where a COMTEC combustion enhancement device, Model No. 3C150RES, was installed on the M.V. Jon Kjartansson SU111 on 14<sup>th</sup> August 2000. This is an Icelandic Trawler with a Wartsila slow speed diesel engine developing 6695 BHP and burning marine diesel oil.

The report has been compiled from an analysis of the data downloaded from the on board computer for those periods of pre and post installation of the COMTEC unit.

These periods are from April / August, 2000, and August / November, 2000, during which time the vessel had approx 1,640 operating hours prior to installation and approx 1,180 operating hours after installation.

The most significant results are highlighted as follows:

**Turbo Boost Pressure** increased 15.6% over pre install values. This is indicative of a developed power increase of a similar value. Adjusted for rack and fuel increases there was a net increase in power developed of 7.1%.

Under normal conditions and without a COMTEC unit there would be a similar % increase in fuel consumption.

**Fuel consumption.** There was no fuel saving as the increased power was utilized under the vessel's operation profile

**Engine Loading** aggregate increased 7.33% and the ratio Turbo to Load changed by 7.2% but the ratio of Fuel to Load increased only by 1.86% indicating **an improved combustion was being achieved.**

The foregoing reflects the operating cycle of a fishing vessel where the increase in power is extremely important.

**Fuel Savings** would have been achieved under different operating conditions wherein the increase in power is not required. A reduction in the fuel rack position, returning to the baseline power output, would result in a **fuel saving of 7.1%.**

This % reduction in fuel consumption would result in a corresponding reduction in **Carbon Dioxide**. It should also be pointed out that the % increase in net power without a corresponding increase in fuel indirectly reduces Carbon Dioxide emissions.

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Ref.	date	Time	Pressure	% Load	Fuel Rack	Lt/hr	used	Fuel/Turbo	Fuel/Load	Fuel/Rack
562										
563	1,11	2,00	0,70	42,0	18	365		521,43	8,69	20,28
564		8,00	0,50	35,0	15	291		582,00	8,31	19,40
565		12,00	0,65	41,0	18	348	13595	535,38	8,49	19,33
566		18,00	0,61	43,0	18	349		572,13	8,12	19,39
567										
568	4,11	2,00	1,09	52,0	24	520		477,06	10,00	21,67
569		8,00	2,18	84,0	38	871		399,54	10,37	22,92
570		12,00	2,40	91,0	39	955	10800	397,92	10,49	24,49
571		18,00	2,38	92,0	38	934		392,44	10,15	24,58
572										
573	5,11	2,00	0,54	35,0	18	302		559,26	8,63	16,78
574		8,00	2,40	85,5	37	862		359,17	10,08	23,30
575		12,00	2,45	92,0	39	970	14200	395,92	10,54	24,87
576		18,00	2,38	87,0	37	931		391,18	10,70	25,16
577										
578	6,11	12,00	2,20	85,0	37	890	15450	404,55	10,47	24,05
579		18,00	2,20	82,0	36	860		390,91	10,49	23,89
580										
581	7,11	8,00	2,38	85,0	37	905		380,25	10,65	24,46
582		12,00	2,35	88,0	38	910	12850	387,23	10,34	23,95
583		18,00	2,34	89,0	37	918		392,31	10,31	24,81
584										
585	8,11	2,00	1,43	83,0	27	610		426,57	7,35	22,59
586		8,00	2,33	90,0	37	922		395,71	10,24	24,92
587		12,00	2,40	91,5	38	945	18200	393,75	10,33	24,87
588		18,00	2,40	90,5	39	947		394,58	10,46	24,28
589										
590	9,11	2,00	0,43	33,0	14	270		627,91	8,18	19,29
591		8,00	2,34	88,5	38	930		397,44	10,51	24,47
592		12,00	2,40	91,0	38	940	20900	391,67	10,33	24,74
593		18,00	2,35	90,0	38	932		396,60	10,36	24,53
594										
595	After	MODE	2	85	37	860		430,00	10,12	23,24
596	Unit									
597	Install	AVGE	1,836952	78,171196	33,48677	780,833		443,889100	9,879468	23,019570
598								425,069898	9,988756	23,317656
599		MEDIAN	2	84,25	36	850,5		422,885000	10,060000	23,510000
600		HARMEAN	1,455518	72,23643	31,11685	690,7751		436,16	9,825387	22,86432
601		SKEW	-1,611996	-1,80978	-1,87898	-1,79357		2,894241	-2,484710	-2,066617
602										
603	Before	MODE	1,6	85	36	850		425,00	10	23,61
604	Unit							531,25	10	23,61111
605	Install	AVGE	1,588805	72,82932	31,14781	712,9283		475,4885	9,699036	22,58331
606								448,72	9,789029	22,88855
607		MEDIAN	1,71	77	33	751		442,11	9,98	23,03
608		HARMEAN	1,228681	67,70185	28,98682	629,8534		461,60	9,531264	22,34001
609		SKEW	-1,04717	-1,23914	-1,28577	-1,19321				
610	CHANGE		15.6%	7.33%	7.5%	9.5%				
611	Avg before/after		1,156185	1,073348	1,075092	1,095248		0,933543	1,018603	1,019318
612	CHANGE		16.96%	9.4%	9.1%	13.25%		0,947295	1,020403	1,018748
613	Median before/after		1,169591	1,094156	1,090909	1,132490		0,95651535	1,008016	1,020842