



# TUNGALOY TEST TOOL EVALUATION REPORT

DATE: **08/02/05**

REPORT# : \_\_\_\_\_

COMPANY: CONTACT: TEL: FAX:	Tier 1 Automotive	SALESMAN: PART DESCRIPTION: WORK MATERIAL: MAT'L HARDNESS:	<i>John Ledford</i>
			Brake Rotor
			Cast Iron
			150-250 Bhn

TYPE OF OPERATION	Finish Turn I.B - O.B. Plates	MACHINING OPERATION (SKETCH)
MACHINE TOOL & TYPE	GMX 320 EMAG VSC 315	
RIGIDITY	High	
COOLANT TYPE	Dry	
COOLANT METHOD	None	

TOOLING REQUIRED	COMPANY / COMPETITOR	Competitor	TUNGALOY	TUNGALOY	TUNGALOY
		CURRENT	FIRST TEST	SECOND TEST	THIRD TEST
	TOOL DESCRIPTION	Straddle Turn	Straddle Turn	Straddle Turn	
	HOLDER/BODY TYPE	Special	Special	Special	
	INSERT	SNGN	SNGN	SNGN	
	INSERT GRADE	UNK	CX710	CX710	
CUTTING PARAMETERS	WORKPIECE/CUTTER DIAMETER	406	406	406	
	FEED RATE (IPR = f or IPM = F)	.18 mm/rev	.18 mm/rev	.18 mm/rev	
	CUTTING SPEED (RPM=R or SFM=V)	1000 SM min	1000 SM min	1000 SM min	
	H.P. REQUIRED (% or ACTUAL)	50%	50%	50%	
	DEPTH OF CUT (INCHES)	0.508	0.508	0.508	
TOOL PERFORMANCE	CYCLE TIME FOR TOOL (min)	0.133	0.116	0.116	
	PIECES PER EDGE	30	200	200	
	TOOL LIFE (min per edge)	3.990	23.200	23.200	
	EDGES USED PER INSERT	4	4	4	
	PIECES PER INSERT	120	800	800	
	SURFACE FINISH (RMS)	Max	1.13-.98	N/A	
	REASON FOR INDEXING	tool life	Tool Life	Tool Life	
	EST ANNUAL INSERT USAGE (pcs)	5750	863	863	
COST EVALUATION	INSERT COST	\$13.00	\$10.00	\$10.00	
	NUMBER OF INSERTS IN TOOL (multi)	2	2	2	
	INSERT COST PER PIECE	\$0.22	\$0.03	\$0.03	
	INSERT INDEX TIME (min)	3.00	3.00	3.00	
	HOURLY MACHINE DEPT. COST	\$100.00	\$100.00	\$100.00	
	TOTAL ANNUAL PIECES	345,000	345,000	345,000	
	MACH TIME + TOOL COST FOR TOOL	\$0.438	\$0.218	\$0.218	
	WON or LOST		WON	WON	

**NOTES:**

Competitor tool life is set at 30 hits with this material; Tungaloy tool life was set at 200 hits for 2 days straight maintaining tool life of 200 hits with surface finish OB.1.05max IB .70 max with low values of IB .33 OB .37 after running 200 parts.



# TUNGALOY AMERICA, INC

## COST ANALYSIS AND SAVINGS REPORT

Company: Tier 1 Automotive  
Contact: 0

DATE: 02-Aug-05  
TTA Rep: John Ledford

# TUNGALOY

## HIGH OUTPUT TECHNOLOGY

	Competitor	TUNGALOY	Insert: SNGN
	Competitor	HIGH OUTPUT TECHNOLOGY	Grade: CX710
Cost of Insert	\$ 13.00	\$ 10.00	
Number of Corners	4	4	
Cost Per Corner	\$ 3.25	\$ 2.50	
Number of Inserts In Tool	2	2	
Cost Per Loaded Tool	\$ 6.50	\$ 5.00	
Number of Parts Per Corner	30	200	
Insert Cost Per Part	\$ 0.217	\$ 0.025	
Number of Parts Run Per Year	345,000	345,000	
Cost of Inserts Used Per Year	\$ 74,750.00	\$ 8,625.00	

### Down-Time Cost

Note: If Insert Change is Internal to Cycle Place 0 in Insert(s) Changing Time

	Competitor	TUNGALOY
		HIGH OUTPUT TECHNOLOGY
Machine Operating Cost per Hour	\$ 100.00	\$ 100.00
Minutes in 1 Hour	60	60
Operating Cost per Minute	\$ 1.67	\$ 1.67
Insert(s) Changing Time (in minutes)	3.00	3.00
Cost per Insert Change	\$ 5.00	\$ 5.00
Number of Insert Changes per Year	11,500	1,725
Cost of Yearly Downtime	\$ 57,500.00	\$ 8,625.00

### Cycle Time Savings

	Competitor	TUNGALOY
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Machine Operating Cost per Hour	\$ 100.00	\$ 100.00
Minutes in 1 hour	60	60
Operating Cost per Minute	\$ 1.67	\$ 1.67
Cycle Time for Tool (in Minutes)	0.1330	0.1160
Operating Cost per Part	\$ 0.22	\$ 0.19
Number of Parts Ran per Year	345,000	345,000
Cost of Cycle Time per Year	\$ 76,475.00	\$ 66,700.00
Estimated Annual Cost	\$ 208,725.00	\$ 83,950.00

### TOTAL SAVINGS PER YEAR

Cost of Inserts	\$ 66,125.00
Cost of Down Time	\$ 48,875.00
Cost of Cycle Time	\$ 9,775.00

**Total Savings \$124,775.00**

**WINNER**



# TUNGALOY AMERICA, INC

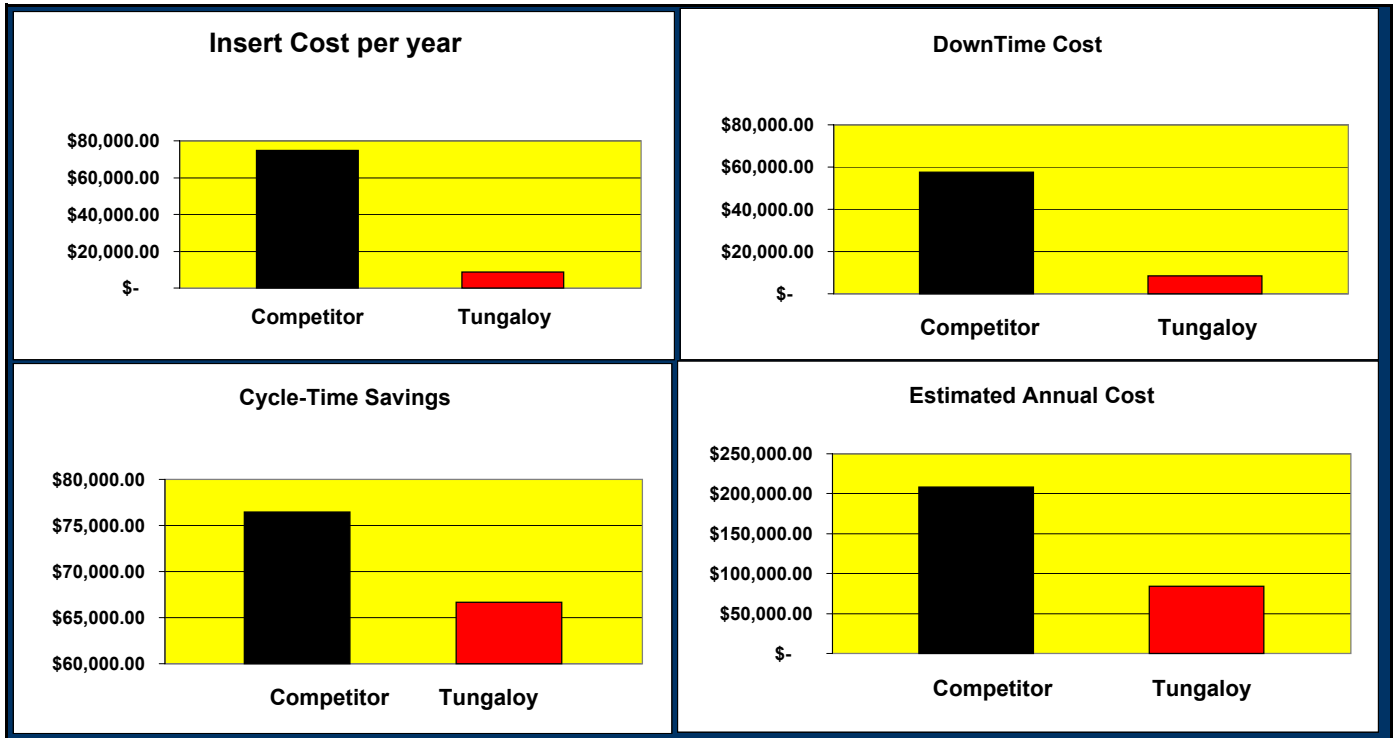
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## HIGH OUTPUT TECHNOLOGY





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## HIGH OUTPUT TECHNOLOGY

