

Detailed Analysis

Bearing conversion

Value Calculation

PacFlange Conveyor Unit 1-1/4" 4-bolt flange

Assumptions (for calculation purposes)		INPUTS	
Assumed Labour Gross Cost Trade (currency \$CAD)	\$ 75.00	per hour	
Maintenance crew number of personnel	2		
Assumed Labour Gross Cost Production (currency \$CAD)	\$ 42.00	per hour	
Production crew number of personnel	5		
Number of bearings to be replaced (multiples of two)	2	bearings	
Time required to disassemble conveyor, replace old bearings with new and and reassemble and test conveyor	4	hours	
Cost of loss of production (currency \$CAD)	\$ 3.50	per lbs wholesale	
Approx. number of pounds production lost	2000	lbs per hour	
	Unit cost	expected operating life (months)	
NEW	PacFlange part number PAC125F207	\$ 244.00	36
	Thermoplastic housing size 207 fitted with Thorplas White plain bearing operating in wet environment without external lubrication on a SS shaft sleeve.		
OLD	SKF standard duty part no. SKF F4B 104-TF	\$ 199.50	6
	Solid-Oil Filled Flange Mount Ball Bearing - Four-Bolt Flange, 1.2500 in Bore, Cast Iron Housing, Standard Duty, Set Screw Locking, M Seal & Flingers		

<u>Gross Labour Cost to complete repairs</u>	<u>Units</u>	<u>Unit cost</u>	<u>Extended cost</u>
Time required to disassemble conveyor, replace old bearings with new and and reassemble and test conveyor	4	hours	
Direct labour cost to complete repairs	2	\$ 75.00	\$ 600.00

<u>Cost of unplanned shut-down (lost production)</u>	<u>Units</u>	<u>Unit cost</u>	<u>Extended cost</u>
Production personnel idle during repair	5		
Production personnel cost per hour		\$ 42.00	
Lost Gross Labour cost during downtime (cost per hour)			\$ 210
Loss of production (lbs per hour @ wholesale cost)	2000	\$ 3.50	\$ 7,000
Cost of replacement bearings	2	\$ 199.50	\$ 399
Total Cost of shut-down for one bearing repair			\$ 8,209

<u>Estimated / Reported operating life (months)</u>	<u>Typical Op-life</u>	<u>No. bearings required per 3 year period</u>	<u>Number repair shut-downs needed</u>
PacFlange part number PAC125F207	months 36	2	1
SKF standard duty part no. SKF F4B 104-TF	months 6	12	5

Total Cost of shut-downs due to single bearing failure per 3 year period			
PacFlange part number PAC125F207		NEW	\$ -
SKF standard duty part no. SKF F4B 104-TF		OLD	\$ 41,045