

# FOD BOSS TEST PHOTOS – DELTA LAX & SLC

TO DATE THE FOD BOSS HAS UNDERGONE TEST OPERATIONS AT DELTA SLC OVER THREE SEPARATE TIME PERIODS.



This is FOD from a 15 minute sweep in front of GSE on C5.  
Rocks , sand and other FOD: WGT=16.5/lbs  
Metal FOD: WGT=3/lbs. Feb 15, 2001 (LAX)

This is a collection of FOD from 5 different gates. Each gate took about 10 to 15 minutes to sweep. The weight ranges from 1 to 2.5/lbs.  
All done on Feb. 15, 2001 (LAX)

The FOD\*BOSS was tested at Delta Salt Lake City (SLC) on three separate occasions beginning October 20<sup>th</sup> 2000 and ending August 24<sup>th</sup> 2001. The unit was transferred around the Delta Airlines system and tested by Delta stations at Portland (PDX), Los Angeles (LAX), and San Francisco (SFO), during the intervening dates as noted on the chart on page five.

The charted SLC statistics cover a period spanning a total of thirteen months at this writing, with results from two additional months of FOD\*BOSS operational testing (July & August 2001) at SLC pending addition to the chart upon receipt of GSE tire consumption data from Delta headquarters in Atlanta.

A total of **1083** GSE tires were replaced in the *ten charted months* that had either *no* FOD\*BOSS operations at all, *or the initial clean up* of a test period, in order to establish the **BASELINE** months tire consumption.

The *first full month immediately following* each of the three cycles of actual FOD\*BOSS test operations is used as a **RESULT** month. These three months are highlighted in yellow on the chart on page five.

**The total number of GSE tires replaced in these three months was 184.**

In the calculations shown below \$50.00 per unit has been used as the replacement cost of a GSE tire.

### **BASELINE MONTHS**

**1083** tires x **\$50** each = **\$54,150** div. by 10 mo. =  
**\$5,415 per month** average cost of GSE tire replacements

### **TEST RESULT MONTHS**

**184** tires x **\$50** each = **\$9,200** – div. by 3 mo. =  
**\$3,066 per month**

**\$5,415 - \$3,066 = \$2,349**

**43.38% savings in GSE tire costs per month.**

**(or 76% increase in costs if the calculation of percentages is done going in the other mathematical direction.)**

**IF THESE FIGURES ARE PROJECTED  
OVER AN ANNUAL BASIS...**

**\$5,415 per month x 12 months = \$64,980**

**\$3,066 per month x 12 months = \$36,792**

**Estimated Annual Savings: \$28,188**

**Purchase cost of FOD Boss: \$5,585**

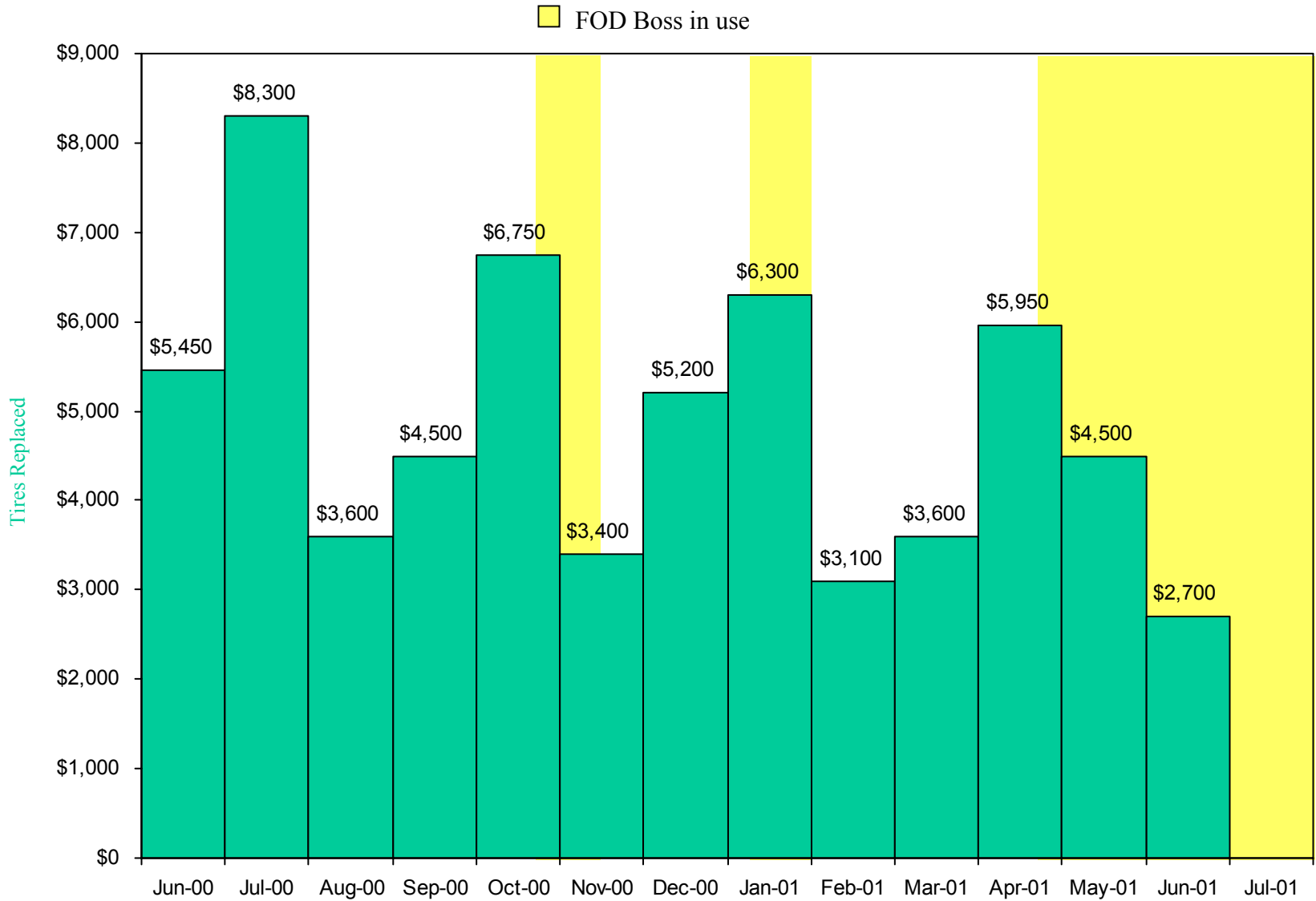
**APPROXIMATE RETURN ON INVESTMENT**

**\$22,603**

**Estimated lifespan of FOD Boss mat at SLC with 30 gate operation is 16 months (1 yr. 4 mo.), cost of replacement mats is \$4,290.**

**Based on these calculations of test results at Delta's 30 Gate operation in Salt Lake City the FOD Boss could be capable of returning its full purchase price, plus an additional 400% return on that investment every year. These dollar figures are based on the potential savings in GSE tires alone, and have not taken into account the much larger possible savings from reduced foreign object damage to aircraft engines and tires.**

# Tire Replacement Trend in Relation to FOD Boss Usage



**Delta Airlines**  
**June 2000-July 2001**

Yellow indicates first full reporting month after FOD Boss placed in service/testing at SLC

FOD Boss usage starts  
Oct-20 ends Nov-10

Jun-00		Jul-00		Aug-00		Sep-00		Oct-00		Nov-00		Dec-00	
Tire Size	Qty	Tire Size	Qty	Tire Size	Qty	Tire Size	Qty	Tire Size	Qty	Tire Size	Qty	Tire Size	Qty
245/75/16	55	245/75/16	50	245/75/16	24	245/75/16	24	245/75/16	13	245/75/16	6	245/75/16	11
235/70/15	14	235/70/15	37	235/70/15	10	235/70/15	22	235/70/15	18	235/70/15	16	235/70/15	12
800/16/5	20	800/16/5	9	800/16/5	12	800/16/5	20	800/16/5	9	800/16/5	30	800/16/5	32
600/9	0	600/9	20	600/9	26	600/9	24	600/9	35	600/9	16	600/9	33
500/8	20	500/8	50	500/8	0	500/8	0	500/8	60	500/8	0	500/8	11
700/10	0	700/10	0	700/10	0	700/10	0	700/10	0	700/10	0	700/10	2
825/20	0	825/20	0	825/20	0	825/20	0	825/20	0	825/20	0	825/20	3
650/10	0	650/10	0	650/10	0	650/10	0	650/10	0	650/10	0	650/10	0
1000/20	0	1000/20	0	1000/20	0	1000/20	0	1000/20	0	1000/20	0	1000/20	0
<b>Total</b>	<b>109</b>	<b>Total</b>	<b>166</b>	<b>Total</b>	<b>72</b>	<b>Total</b>	<b>90</b>	<b>Total</b>	<b>135</b>	<b>Total</b>	<b>68</b>	<b>Total</b>	<b>104</b>

FOD Boss usage starts  
Jan-08 ends Jan-31

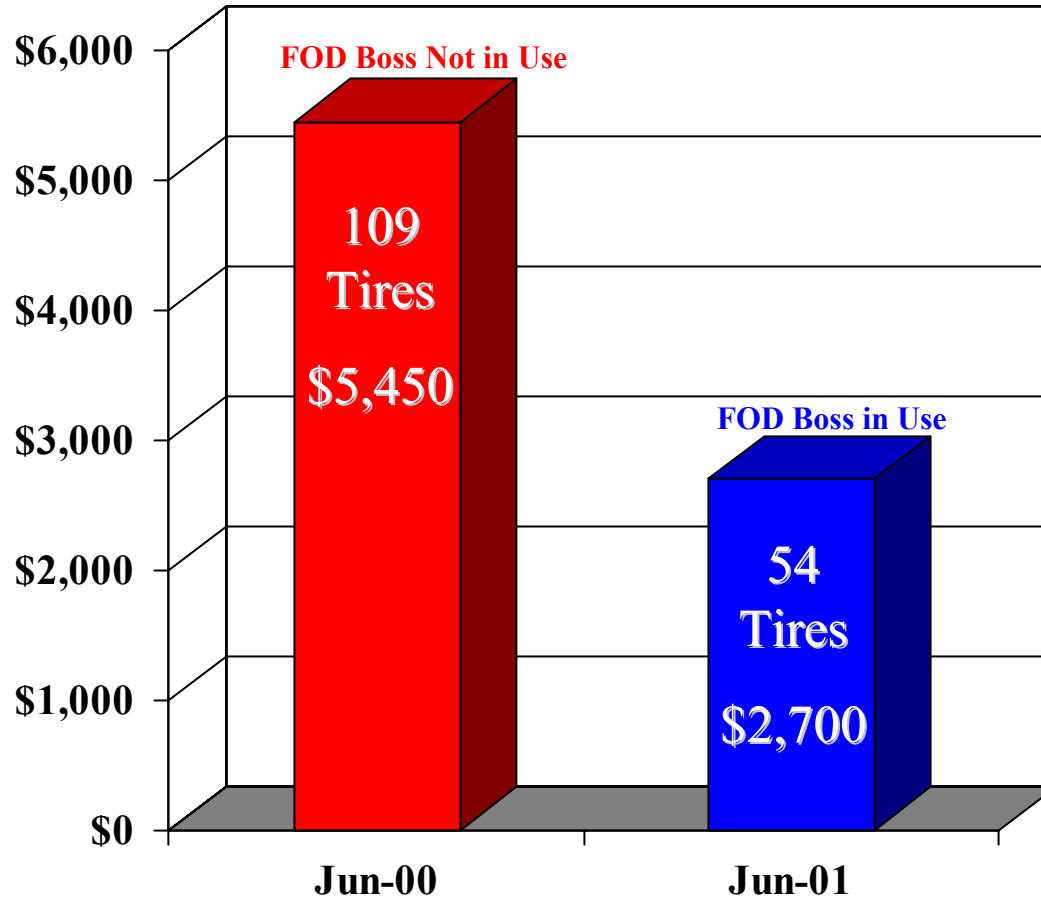
FOD Boss usage starts  
Apr-25 and continues thru August 24

Jan-01		Feb-01		Mar-01		Apr-01		May-01		Jun-01		Jul-01/Aug-01	
Tire Size	Qty	Tire Size	Qty	Tire Size	Qty	Tire Size	Qty	Tire Size	Qty	Tire Size	Qty	Tire Size	Qty
245/75/16	28	245/75/16	13	245/75/16	16	245/75/16	16	245/75/16	0	245/75/16	16	<b>Awaiting statistics from Atlanta for these months</b>	
235/70/15	20	235/70/15	0	235/70/15	16	235/70/15	8	235/70/15	8	235/70/15	0		
800/16/5	0	800/16/5	13	800/16/5	0	800/16/5	18	800/16/5	10	800/16/5	0		
600/9	34	600/9	18	600/9	16	600/9	51	600/9	38	600/9	22		
500/8	40	500/8	15	500/8	24	500/8	26	500/8	34	500/8	10		
700/10	0	700/10	0	700/10	0	700/10	0	700/10	0	700/10	0		
825/20	0	825/20	3	825/20	0	825/20	0	825/20	0	825/20	4		
650/10	4	650/10	0	650/10	0	650/10	0	650/10	0	650/10	0		
1000/20	0	1000/20	0	1000/20	0	1000/20	0	1000/20	0	1000/20	2		
<b>Total</b>	<b>126</b>	<b>Total</b>	<b>62</b>	<b>Total</b>	<b>72</b>	<b>Total</b>	<b>119</b>	<b>Total</b>	<b>90</b>	<b>Total</b>	<b>54</b>		

108.3	<b>AVG GSE TIRE REPLACEMENTS WITHOUT FOD BOSS</b>
61.3	<b>AVG GSE TIRE REPLACEMENT WITH FOD BOSS IN USE</b>

**43% REDUCTION AVG IN TIRE REPLACEMENTS FIRST FULL MONTH FOLLOWING EACH OF THREE SEPARATE FOD BOSS OPERATIONAL TEST PERIODS**

# Tire Replacement Comparing Same Month Previous Year



53% reduction from same month of previous year