Parts emporium essay sample

1. EG151 Exhaust Gasket

D(21 weeks) = 2142

D(annual) = 5304

H= (12. 99)(1-0. 32)(0. 21)= 1. 85

EOQ= 338 gaskets placed 15. 68 times per year

Cost of ordering = (15. 68)($20) =$313. 60

Average cycle inventory = 338/2= 169 gaskets

Standard deviation = 2. 86 gaskets

Associated z value for 95% confidence = 1. 65

Safety stock = 4 gaskets

Reorder point = 208 gaskets

Total holding costs = $312. 65

In conclusion, Parts Emporium should order 338 gaskets whenever current inventories reach 208 gaskets. This equates to a total yearly inventory cost of $626. 25.

DB032 Drive Belts

D(11weeks)= 520 belts

D(annual)= 2459 belts

H= (8. 89)(1-0. 32)(0. 21)=$1. 27

EOQ= 197 belts ordered 12. 48 times per year

Annual ordering costs= (12. 48)($10) = $124. 82

Average cycle inventory = 1997/2= 98. 5 gaskets

Holding costs = $125. 10

Safety stock = 19 gaskets

Reorder point = 161 gaskets

In conclusion, Parts Emporium should order 197 belts whenever inventories reach 161 gaskets. This equates to an annual inventory cost of $249. 92.

2. Using the current inventory management system, Parts Emporium is using a lot of 150 gaskets, being ordered 35. 36 times per year to meet their demand of 5304 gaskets. This equates to an annual ordering cost of $707. 20. The average cycle inventory would increase from 37. 5 to 169 gaskets. Currently, there are 11 backordered gaskets after 21 weeks, which equates to an average of 27. 24 gaskets backordered per year. The lost margin on 27. 24 gaskets is (27. 24)(12. 99)(32%)= $113. 23. The annual holding cost is currently $66. 04. The total inventory cost with the current system is $886. 47, which is $260. 22 more that the system outlined above.

The current system is using a lot size for the belts of 1000, which would need to be ordered 2. 45 times per year on average. This equates to an annual ordering cost of $24. 50. The average cycle inventory is 500 belts, which costs $635 to hold each year. The total inventory costs with the current system is $659. 50, which is $409. 58 more than the system outlined above.