# **Optimum** Replacement Analysis





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### COMPACT TRUCK

# **Optimum** Replacement Analysis

As a vehicle ages, its capital costs decrease while its operating costs increase. The combination of the monthly capital and operating cost curves create a concave, total vehicle cost curve.

The **Economic Theory of Vehicle Replacement** utilizes this total cost curve as a valuable analytical tool that can be leveraged to assist fleet decision makers with the question of optimum vehicle replacement timing. According to this theory, the replacement of fleet vehicles should occur when the monthly operating costs increase at a faster rate than the monthly capital costs decrease, resulting in an increasing total cost curve. This theory, in conjunction with other fleet-specific variables listed below, is a valuable tool that can be used to establish a fleet's replacement parameters.

Vehicle Lifecycle Cost and Optimum Replacement Timing



# Replacement Analysis Conclusion

Assuming the blended data and assumptions are representative of the specific target vehicle, the optimum replacement timing\* is between 39 and 49 months, or 130,000 to 160,00 kilometers.

Optimum replacement period may vary depending on vehicle model, fleet policy, funding cost, accident occurrence and other variables such as these "soft factors":

- Lost driver productivity due to vehicle downtime when vehicle repairs are needed
- Lower driver morale due to perk value associated with newer vehicle
- Decrease in corporate image due to operating older vehicle model
- Constant change in technology and safety upgrades available on newer models

\*Please note: Manufacturer incentives are not included in analysis.



# Definitions

### Vehicle Capital Costs:

Monthly market value depreciation, or decrease in secondary market value attributed to vehicle age and mileage

### Vehicle Operating Costs:

Monthly maintenance and repair expenses incurred for scheduled maintenance, out-of-warranty repairs and temporary replacement rentals

# Assumptions

- Vehicle is driven 40,000 kilometers per year
- Vehicle is operated under normal driving conditions resulting in an average condition at time of disposal
- Cost curves based on blended segment internal LeasePlan data and external market data

Please contact a LeasePlan representative for a complimentary review of your fleet's replacement parameters at 1-855-588-3677, or visit us at www.leaseplan.ca

### FULL-SIZE PICKUP TRUCK

# **Optimum** Replacement Analysis

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Vehicle Lifecycle Cost and Optimum Replacement Timing

#### Domestic Full-size Pickup Truck \$450 \$425 \$400 \$375 **Total Vehicle** \$350 Costs monthly expenses \$325 Vehicle \$300 **Capital Costs** \$275 \$250 \$225 \$200 \$175 \$150 \$125 Vehicle \$100 **Operating Costs** \$75 \$50 \$25 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69

## **Replacement Analysis Conclusion**

Assuming the blended data and assumptions are representative of the specific target vehicle, the optimum replacement timing\* is between 51 and 61 months, or 170,000 to 200,000 kilometers.

months in service

Optimum replacement period may vary depending on vehicle model, fleet policy, funding cost, accident occurrence and other variables such as these "soft factors":

- Lost driver productivity due to vehicle downtime when vehicle repairs are needed
- Lower driver morale due to perk value associated with newer vehicle
- Decrease in corporate image due to operating older vehicle model
- Constant change in technology and safety upgrades available on newer models

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# Definitions

### Vehicle Capital Costs:

Monthly market value depreciation, or decrease in secondary market value attributed to vehicle age and mileage

### Vehicle Operating Costs:

Monthly maintenance and repair expenses incurred for scheduled maintenance, out-of-warranty repairs and temporary replacement rentals

# Assumptions

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# **Optimum** Replacement Analysis

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The **Economic Theory of Vehicle Replacement** utilizes this total cost curve as a valuable analytical tool that can be leveraged to assist fleet decision makers with the question of optimum vehicle replacement timing. According to this theory, the replacement of fleet vehicles should occur when the monthly operating costs increase at a faster rate than the monthly capital costs decrease, resulting in an increasing total cost curve. This theory, in conjunction with other fleet-specific variables listed below, is a valuable tool that can be used to establish a fleet's replacement parameters.



## **Replacement Analysis Conclusion**

Assuming the blended data and assumptions are representative of the specific target vehicle, the optimum replacement timing\* is between 43 and 53 months, or 140,000 to 170,000 kilometers

Optimum replacement period may vary depending on vehicle model, fleet policy, funding cost, accident occurrence and other variables such as these "soft factors":

- Lost driver productivity due to vehicle downtime when vehicle repairs are needed
- Lower driver morale due to perk value associated with newer vehicle
- Decrease in corporate image due to operating older vehicle model
- Constant change in technology and safety upgrades available on newer models

\*Please note: Manufacturer incentives are not included in analysis.



# Definitions

### Vehicle Capital Costs:

Monthly market value depreciation, or decrease in secondary market value attributed to vehicle age and mileage

### Vehicle Operating Costs:

Monthly maintenance and repair expenses incurred for scheduled maintenance, out-of-warranty repairs and temporary replacement rentals

# Assumptions

- Vehicle is driven 40,000 kilometers per year
- Vehicle is operated under normal driving conditions resulting in an average condition at time of disposal
- Cost curves based on blended segment internal LeasePlan data and external market data

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# **Optimum** Replacement Analysis

As a vehicle ages, its capital costs decrease while its operating costs increase. The combination of the monthly capital and operating cost curves create a concave, total vehicle cost curve.

The **Economic Theory of Vehicle Replacement** utilizes this total cost curve as a valuable analytical tool that can be leveraged to assist fleet decision makers with the question of optimum vehicle replacement timing. According to this theory, the replacement of fleet vehicles should occur when the monthly operating costs increase at a faster rate than the monthly capital costs decrease, resulting in an increasing total cost curve. This theory, in conjunction with other fleet-specific variables listed below, is a valuable tool that can be used to establish a fleet's replacement parameters.



# **Replacement Analysis Conclusion**

Assuming the blended data and assumptions are representative of the specific target vehicle, the optimum replacement timing\* is between 43 and 53 months, or 140,000 to 170,000 kilometers

Optimum replacement period may vary depending on vehicle model, fleet policy, funding cost, accident occurrence and other variables such as these "soft factors":

- Lost driver productivity due to vehicle downtime when vehicle repairs are needed
- Lower driver morale due to perk value associated with newer vehicle
- Decrease in corporate image due to operating older vehicle model
- Constant change in technology and safety upgrades available on newer models

\*Please note: Manufacturer incentives are not included in analysis.



# Definitions

### Vehicle Capital Costs:

Monthly market value depreciation, or decrease in secondary market value attributed to vehicle age and mileage

### Vehicle Operating Costs:

Monthly maintenance and repair expenses incurred for scheduled maintenance, out-of-warranty repairs and temporary replacement rentals

# Assumptions

- Vehicle is driven 40,000 kilometers per year
- Vehicle is operated under normal driving conditions resulting in an average condition at time of disposal
- Cost curves based on blended segment internal LeasePlan data and external market data

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### COMPACT SUV

# **Optimum** Replacement Analysis

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# **Replacement Analysis Conclusion**

# Assuming the blended data and assumptions are representative of the specific target vehicle, the optimum replacement timing\* is between 47 and 57 months, or 150,000 to 185,000 kilometers

Optimum replacement period may vary depending on vehicle model, fleet policy, funding cost, accident occurrence and other variables such as these "soft factors":

- Lost driver productivity due to vehicle downtime when vehicle repairs are needed
- Lower driver morale due to perk value associated with newer vehicle
- Decrease in corporate image due to operating older vehicle model
- Constant change in technology and safety upgrades available on newer models

\*Please note: Manufacturer incentives are not included in analysis.



# Definitions

### Vehicle Capital Costs:

Monthly market value depreciation, or decrease in secondary market value attributed to vehicle age and mileage

### Vehicle Operating Costs:

Monthly maintenance and repair expenses incurred for scheduled maintenance, out-of-warranty repairs and temporary replacement rentals

# Assumptions

- Vehicle is driven 40,000 kilometers per year
- Vehicle is operated under normal driving conditions resulting in an average condition at time of disposal
- Cost curves based on blended segment internal LeasePlan data and external market data

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### MIDSIZE SUV

# **Optimum** Replacement Analysis

As a vehicle ages, its capital costs decrease while its operating costs increase. The combination of the monthly capital and operating cost curves create a concave, total vehicle cost curve.

The **Economic Theory of Vehicle Replacement** utilizes this total cost curve as a valuable analytical tool that can be leveraged to assist fleet decision makers with the question of optimum vehicle replacement timing. According to this theory, the replacement of fleet vehicles should occur when the monthly operating costs increase at a faster rate than the monthly capital costs decrease, resulting in an increasing total cost curve. This theory, in conjunction with other fleet-specific variables listed below, is a valuable tool that can be used to establish a fleet's replacement parameters.



## **Replacement Analysis Conclusion**

Assuming the blended data and assumptions are representative of the specific target vehicle, the optimum replacement timing\* is between 48 and 58 months, or 160,000 to 190,000 kilometers.

Optimum replacement period may vary depending on vehicle model, fleet policy, funding cost, accident occurrence and other variables such as these "soft factors":

- Lost driver productivity due to vehicle downtime when vehicle repairs are needed
- Lower driver morale due to perk value associated with newer vehicle
- Decrease in corporate image due to operating older vehicle model
- Constant change in technology and safety upgrades available on newer models

\*Please note: Manufacturer incentives are not included in analysis.



# Definitions

#### Vehicle Capital Costs:

Monthly market value depreciation, or decrease in secondary market value attributed to vehicle age and mileage

#### Vehicle Operating Costs:

Monthly maintenance and repair expenses incurred for scheduled maintenance, out-of-warranty repairs and temporary replacement rentals

### Assumptions

- Vehicle is driven 40,000 kilometers per year
- Vehicle is operated under normal driving conditions resulting in an average condition at time of disposal
- Cost curves based on blended segment internal LeasePlan data and external market data

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### FULL-SIZE SUV

# **Optimum** Replacement Analysis

As a vehicle ages, its capital costs decrease while its operating costs increase. The combination of the monthly capital and operating cost curves create a concave, total vehicle cost curve.

The **Economic Theory of Vehicle Replacement** utilizes this total cost curve as a valuable analytical tool that can be leveraged to assist fleet decision makers with the question of optimum vehicle replacement timing. According to this theory, the replacement of fleet vehicles should occur when the monthly operating costs increase at a faster rate than the monthly capital costs decrease, resulting in an increasing total cost curve. This theory, in conjunction with other fleet-specific variables listed below, is a valuable tool that can be used to establish a fleet's replacement parameters.



## **Replacement Analysis Conclusion**

Assuming the blended data and assumptions are representative of the specific target vehicle, the optimum replacement timing\* is between 53 and 63 months, or 170,000 to 215,000 kilometers.

Optimum replacement period may vary depending on vehicle model, fleet policy, funding cost, accident occurrence and other variables such as these "soft factors":

- Lost driver productivity due to vehicle downtime when vehicle repairs are needed
- Lower driver morale due to perk value associated with newer vehicle
- Decrease in corporate image due to operating older vehicle model
- Constant change in technology and safety upgrades available on newer models

\*Please note: Manufacturer incentives are not included in analysis.



# Definitions

### Vehicle Capital Costs:

Monthly market value depreciation, or decrease in secondary market value attributed to vehicle age and mileage

### Vehicle Operating Costs:

Monthly maintenance and repair expenses incurred for scheduled maintenance, out-of-warranty repairs and temporary replacement rentals

# Assumptions

- Vehicle is driven 40,000 kilometers per year
- Vehicle is operated under normal driving conditions resulting in an average condition at time of disposal
- Cost curves based on blended segment internal LeasePlan data and external market data

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### FULL-SIZE CAR

# **Optimum** Replacement Analysis

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The **Economic Theory of Vehicle Replacement** utilizes this total cost curve as a valuable analytical tool that can be leveraged to assist fleet decision makers with the question of optimum vehicle replacement timing. According to this theory, the replacement of fleet vehicles should occur when the monthly operating costs increase at a faster rate than the monthly capital costs decrease, resulting in an increasing total cost curve. This theory, in conjunction with other fleet-specific variables listed below, is a valuable tool that can be used to establish a fleet's replacement parameters.



## **Replacement Analysis Conclusion**

Assuming the blended data and assumptions are representative of the specific target vehicle, the optimum replacement timing\* is between 45 and 55 months, or 150,000 to 180,000 kilometers.

Optimum replacement period may vary depending on vehicle model, fleet policy, funding cost, accident occurrence and other variables such as these "soft factors":

- Lost driver productivity due to vehicle downtime when vehicle repairs are needed
- Lower driver morale due to perk value associated with newer vehicle
- Decrease in corporate image due to operating older vehicle model
- Constant change in technology and safety upgrades available on newer models

\*Please note: Manufacturer incentives are not included in analysis.



# Definitions

### Vehicle Capital Costs:

Monthly market value depreciation, or decrease in secondary market value attributed to vehicle age and mileage

#### **Vehicle Operating Costs:**

Monthly maintenance and repair expenses incurred for scheduled maintenance, out-of-warranty repairs and temporary replacement rentals

## Assumptions

- Vehicle is driven 40,000 kilometers per year
- Vehicle is operated under normal driving conditions resulting in an average condition at time of disposal
- Cost curves based on blended segment internal LeasePlan data and external market data

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### MIDSIZE CAR

# **Optimum** Replacement Analysis

As a vehicle ages, its capital costs decrease while its operating costs increase. The combination of the monthly capital and operating cost curves create a concave, total vehicle cost curve.

The **Economic Theory of Vehicle Replacement** utilizes this total cost curve as a valuable analytical tool that can be leveraged to assist fleet decision makers with the question of optimum vehicle replacement timing. According to this theory, the replacement of fleet vehicles should occur when the monthly operating costs increase at a faster rate than the monthly capital costs decrease, resulting in an increasing total cost curve. This theory, in conjunction with other fleet-specific variables listed below, is a valuable tool that can be used to establish a fleet's replacement parameters.

### **Vehicle Lifecycle Cost and Optimum Replacement Timing** Domestic Mid-Size Car



## **Replacement Analysis Conclusion**

Assuming the blended data and assumptions are representative of the specific target vehicle, the optimum replacement timing\* is between 39 and 49 months, or 125,000 to 160,000 kilometers.

Optimum replacement period may vary depending on vehicle model, fleet policy, funding cost, accident occurrence and other variables such as these "soft factors":

- Lost driver productivity due to vehicle downtime when vehicle repairs are needed
- Lower driver morale due to perk value associated with newer vehicle
- Decrease in corporate image due to operating older vehicle model
- Constant change in technology and safety upgrades available on newer models

\*Please note: Manufacturer incentives are not included in analysis.



# Definitions

#### Vehicle Capital Costs:

Monthly market value depreciation, or decrease in secondary market value attributed to vehicle age and mileage

#### Vehicle Operating Costs:

Monthly maintenance and repair expenses incurred for scheduled maintenance, out-of-warranty repairs and temporary replacement rentals

## Assumptions

- Vehicle is driven 40,000 kilometers per year
- Vehicle is operated under normal driving conditions resulting in an average condition at time of disposal
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### COMPACT CAR

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## **Replacement Analysis Conclusion**

Assuming the blended data and assumptions are representative of the specific target vehicle, the optimum replacement timing\* is between 38 and 48 months, or 120,000 to 155,000 kilometers.

Optimum replacement period may vary depending on vehicle model, fleet policy, funding cost, accident occurrence and other variables such as these "soft factors":

- Lost driver productivity due to vehicle downtime when vehicle repairs are needed
- Lower driver morale due to perk value associated with newer vehicle
- Decrease in corporate image due to operating older vehicle model
- Constant change in technology and safety upgrades available on newer models

\*Please note: Manufacturer incentives are not included in analysis.



# Definitions

### Vehicle Capital Costs:

Monthly market value depreciation, or decrease in secondary market value attributed to vehicle age and mileage

#### **Vehicle Operating Costs:**

Monthly maintenance and repair expenses incurred for scheduled maintenance, out-of-warranty repairs and temporary replacement rentals

# Assumptions

- Vehicle is driven 40,000 kilometers per year
- Vehicle is operated under normal driving conditions resulting in an average condition at time of disposal
- Cost curves based on blended segment internal LeasePlan data and external market data

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