1. **Searching for vehicles**

**Lock Types**: Lookup on vehicle table.

**Number of Locks**: No locks needed. All operations are read only

**Enabling Conditions**: Trigger by successful login and appropriate privileges

**Frequency**: Approximately 250 times a day

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **Login**

**Lock Types**: Read only on user table

**Number of Locks**: No locks needed.

**Enabling Conditions**: none

**Frequency**: around 20 logins a day

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **View vehicle details**

**Lock Types**: Lookup vehicle from vehicle table, read only operation.

**Number of Locks**: No locks needed.

**Enabling Conditions**: none

**Frequency**: about 100 per day.

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **Add Vehicle**

**Lock Types**: Insert on vehicle table

**Number of Locks**: 1

**Enabling Conditions**: Trigger by successful login and inventory clerk privilege

**Frequency**: Every successful login, but not critical.

**Consistency (ACID)**: Not critical, existing vehicles can be viewed when new vehicle is being added

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **Vehicle Sale**

**Lock Types**: Insert on sale table, read/insert on customer table

**Number of Locks**: 1 or 2

**Enabling Conditions**: Successful login, salesperson privilege, sale of a vehicle

**Frequency**: less than 20 times a day

**Consistency (ACID)**: Not critical, vehicle and customer can be viewed while it is being sold

**Subtasks**: Confirm Sale, Lookup customer and Add customer, mother task is needed to control

subtasks

1. **Vehicle Repair**

**Lock Types**: Read, Insert, Update on Repair; Read on vehicle; Read on vehicle

**Number of Locks**: 3

**Enabling Conditions**: Trigger by successful login, service clerk privilege

**Frequency**: less than 20 times a day

**Consistency (ACID)**: Customer and vehicle must exist before repair could be carried out

**Subtasks**: Mother Task is required to control all sub tasks

1. **List Vehicles Sold by Color**

**Lock Types**: Read only on Sales and Vehicle

**Number of Locks**: No locks needed.

**Enabling Conditions**: Trigger by successful login and appropriate privileges

**Frequency**: Approximately once a month.

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **List Vehicles Sold by Type**

**Lock Types**: Read only on Sales and Vehicle

**Number of Locks**: No locks needed.

**Enabling Conditions**: Trigger by successful login and appropriate privileges

**Frequency**: Approximately once a month.

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **List Vehicles Sold by Manufacturer**

**Lock Types**: Read only on Sales and Vehicle

**Number of Locks**: No locks needed.

**Enabling Conditions**: Trigger by successful login and appropriate privileges

**Frequency**: Approximately once a month.

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **List 15 top customers by gross Income**

**Lock Types**: Lookup sales, customer, vehicle and repair tables

**Number of Locks**: No locks needed. All operations are read only

**Enabling Conditions**: Trigger by successful login and appropriate privileges

**Frequency**: Approximately 1-3 times a month.

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **View drilldown for selected customers for sales and repairs**

**Lock Types**: Lookup sales, customer, vehicle and repair tables

**Number of Locks**: No locks needed. All operations are read only

**Enabling Conditions**: Trigger by successful login and appropriate privileges

**Frequency**: Approximately 1-3 times a month.

**Consistency (ACID)**: Not critical, order is not critical.

Sales or repair details can be obtained in any order

**Subtasks**: Sales details and repair details. Mother Task is not needed.

1. **List repair details for each manufacturer**

**Lock Types**: Lookup on Vehicle and repair tables;

**Number of Locks**: No locks needed. All operations are read only

**Enabling Conditions**: : Trigger by successful login and appropriate privileges

**Frequency**: 1-3 times a month

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **View drilldown for selected manufacturers with repairs and vehicle details**

**Lock Types**: Lookup on Vehicle and repair tables;

**Number of Locks**: No locks needed. All operations are read only

**Enabling Conditions**: Trigger by successful login and appropriate privileges

**Frequency**: Approximately 1-3 times a month.

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Repair information by type,, and further by model. Mother Task is not needed.

1. **List sales below invoice price**

**Lock Types**: Lookup on Vehicle, sales and user tables

**Number of Locks**: No locks needed. All operations are read only

**Enabling Conditions**: Trigger by successful login and appropriate privileges

**Frequency**: Approximately 1-3 times a month.

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **Display average time vehicle remains in inventory**

**Lock Types**: Lookup on Vehicle and tables

**Number of Locks**: No locks needed. All operations are read only

**Enabling Conditions**: Trigger by successful login and appropriate privileges

**Frequency**: Approximately 1-3 times a month.

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **Display parts and vendor details**

**Lock Types**: Lookup on Parts table

**Number of Locks**: No locks needed. All operations are read only

**Enabling Conditions**: Trigger by successful login and appropriate privileges

**Frequency**: Approximately 1-3 times a month.

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **View sales summary page**

**Lock Types**: Lookup on sales and vehicle tables

**Number of Locks**: No locks needed. All operations are read only

**Enabling Conditions**: Trigger by successful login and appropriate privileges

**Frequency**: Approximately once a month

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed

1. **View drilldown for selected year/month for top performing salesperson**

**Lock Types**: Lookup on sales, user and vehicle tables

**Number of Locks**: No locks needed. All operations are read only

**Enabling Conditions**: Trigger by successful login and appropriate privileges

**Frequency**: Approximately once a month

**Consistency (ACID)**: Not critical, order is not critical.

**Subtasks**: Mother Task is not needed. No decomposition needed