

## **Truck Trailer Purpose Details**

### **UNF**

```
QUOTE_PURPOSE(quote_purpose_no, quote_purpose_desc,  
(combo_code, truck_vehicle_id_no, truck_vehicle_reg_no,  
trailer_id_code, trailer_type_manufacturer,  
trailer_type_model, trailer_class_no, trailer_load_capacity,  
trailer_dimensions))
```

### **1NF**

```
QUOTE_PURPOSE(quote_purpose_no, quote_purpose_desc)  
  
QUOTE_COMBO(quote_purpose_no, combo_code, truck_vehicle_id_no,  
truck_vehicle_reg_no, trailer_id_code,  
trailer_type_manufacturer, trailer_type_model,  
trailer_class_no, trailer_load_capacity, trailer_length,  
trailer_width)
```

#### **Candidate keys:**

(quote\_purpose\_no, combo\_code), (truck\_vehicle\_id\_no, trailer\_id\_code,  
quote\_purpose\_no)

#### **Partial dependencies:**

combo\_code -> truck\_vehicle\_id\_no, truck\_vehicle\_reg\_no, trailer\_id\_code,  
trailer\_type\_manufacturer, trailer\_type\_model, trailer\_class\_no, trailer\_load\_capacity,  
trailer\_length, trailer\_width

### **2NF**

```
QUOTE_PURPOSE(quote_purpose_no, quote_purpose_desc)  
  
QUOTE_COMBO(quote_purpose_no, combo_code)  
  
COMBO(combo_code, truck_vehicle_id_no, truck_vehicle_reg_no,  
trailer_id_code, trailer_type_manufacturer,  
trailer_type_model, trailer_class_no, trailer_load_capacity,  
trailer_length, trailer_width)
```

#### **Transitive dependencies:**

truck\_vehicle\_id\_no -> truck\_vehicle\_reg\_no  
  
trailer\_id\_code -> trailer\_type\_manufacturer, trailer\_type\_model, trailer\_class\_no,  
trailer\_load\_capacity, trailer\_length, trailer\_width

```
QUOTE_PURPOSE(quote_purpose_no, quote_purpose_desc)  
  
QUOTE_COMBO(quote_purpose_no, combo_code)
```

COMBO(combo\_code, truck\_vehicle\_id\_no, trailer\_id\_code)

TRUCK(truck\_vehicle\_id\_no, truck\_vehicle\_reg\_no)

TRAILER(trailer\_id\_code, trailer\_type\_manufacturer,  
trailer\_type\_model, trailer\_class\_no, trailer\_load\_capacity,  
trailer\_length, trailer\_width)

**Transitive dependencies:**

(trailer\_type\_manufacturer, trailer\_type\_model) -> trailer\_class\_no, trailer\_load\_capacity,  
trailer\_length, trailer\_width

**3NF**

QUOTE\_PURPOSE(quote\_purpose\_no, quote\_purpose\_desc)

QUOTE\_COMBO(quote\_purpose\_no, combo\_code)

COMBO(combo\_code, truck\_vehicle\_id\_no, trailer\_id\_code)

TRUCK(truck\_vehicle\_id\_no, truck\_vehicle\_reg\_no)

TRAILER(trailer\_id\_code, trailer\_type\_manufacturer,  
trailer\_type\_model)

TRAILER\_TYPE(trailer\_type\_manufacturer, trailer\_type\_model,  
trailer\_class\_no, trailer\_load\_capacity, trailer\_length,  
trailer\_width)

**Full dependencies:**

quote\_purpose\_no -> quote\_purpose\_desc

combo\_code -> truck\_vehicle\_id\_no, trailer\_id\_code

truck\_vehicle\_id\_no -> truck\_vehicle\_reg\_no

trailer\_id\_code -> trailer\_type\_manufacturer, trailer\_type\_model

trailer\_type\_manufacturer, trailer\_type\_model -> trailer\_class\_no, trailer\_load\_capacity,  
trailer\_length, trailer\_width

**Monash Haulers Job Sheet**

**UNF**

JOB(job\_no, quote\_no, quote\_prep\_date, quote\_purpose\_no,  
quote\_purpose\_desc, quote\_no\_of\_days, quote\_cost, combo\_code,  
job\_driver\_emp\_no, job\_driver\_emp\_name, job\_mechanic\_emp\_no,  
job\_mechanic\_emp\_name, job\_pickup\_datetime,

```
job_intended_drop_datetime, job_actual_drop_datetime,  
job_cost, job_paid_date)
```

## 1NF

```
JOB(job_no, quote_no, quote_prep_date, quote_purpose_no,  
quote_purpose_desc, quote_no_of_days, quote_cost, combo_code,  
job_driver_emp_no, job_driver_emp_fname, job_driver_emp_gname,  
job_mechanic_emp_no, job_mechanic_emp_fname,  
job_mechanic_emp_gname, job_pickup_datetime,  
job_intended_drop_datetime, job_actual_drop_datetime,  
job_cost, job_paid_date)
```

### Candidate keys:

job\_no, quote\_no, (job\_driver\_emp\_no, job\_pickup\_datetime), (job\_mechanic\_emp\_no,  
job\_pickup\_datetime), (job\_driver\_emp\_no, job\_actual\_drop\_datetime), (job\_mechanic\_emp\_no,  
job\_actual\_drop\_datetime)

### Partial dependencies:

job\_driver\_emp\_no -> job\_driver\_emp\_fname, job\_driver\_emp\_gname

job\_mechanic\_emp\_no -> job\_mechanic\_emp\_fname, job\_mechanic\_emp\_gname

## 2NF

```
JOB(job_no, quote_no, quote_prep_date, quote_purpose_no,  
quote_purpose_desc, quote_no_of_days, quote_cost, combo_code,  
job_driver_emp_no, job_mechanic_emp_no, job_pickup_datetime,  
job_intended_drop_datetime, job_actual_drop_datetime,  
job_cost, job_paid_date)
```

```
JOB_DRIVER(job driver emp no, job_driver_emp_fname,  
job_driver_emp_gname)
```

```
JOB_MECHANIC(job mechanic emp no, job_mechanic_emp_fname,  
job_mechanic_emp_gname)
```

### Transitive dependencies:

quote\_no -> quote\_prep\_date, quote\_purpose\_no, quote\_purpose\_desc,  
quote\_no\_of\_days, quote\_cost

```
JOB(job_no, quote_no, combo_code, job_driver_emp_no,  
job_mechanic_emp_no, job_pickup_datetime,  
job_intended_drop_datetime, job_actual_drop_datetime,  
job_cost, job_paid_date)
```

```
JOB_DRIVER(job driver emp no, job_driver_emp_fname,  
job_driver_emp_gname)
```

JOB\_MECHANIC(job mechanic emp no, job\_mechanic\_emp\_fname,  
job\_mechanic\_emp\_gname)

QUOTE(quote no, quote\_prep\_date, quote\_purpose\_no,  
quote\_purpose\_desc, quote\_no\_of\_days, quote\_cost)

#### Transitive dependencies:

quote\_purpose\_no -> quote\_purpose\_desc

### 3NF

JOB(job no, quote\_no, combo\_code, job\_driver\_emp\_no,  
job\_mechanic\_emp\_no, job\_pickup\_datetime,  
job\_intended\_drop\_datetime, job\_actual\_drop\_datetime,  
job\_cost, job\_paid\_date)

JOB\_DRIVER(job driver emp no, job\_driver\_emp\_fname,  
job\_driver\_emp\_gname)

JOB\_MECHANIC(job mechanic emp no, job\_mechanic\_emp\_fname,  
job\_mechanic\_emp\_gname)

QUOTE(quote no, quote\_prep\_date, quote\_purpose\_no,  
quote\_no\_of\_days, quote\_cost)

QUOTE\_PURPOSE(quote purpose no, quote\_purpose\_desc)

#### Full dependencies:

job\_no -> quote\_no, job\_assigned\_combo, job\_driver\_emp\_no, job\_mechanic\_emp\_no,  
job\_pickup\_datetime, job\_intended\_drop\_datetime, job\_actual\_drop\_datetime, job\_cost,  
job\_paid\_date

job\_driver\_emp\_no -> job\_driver\_emp\_fname, job\_driver\_emp\_gname

job\_mechanic\_emp\_no -> job\_mechanic\_emp\_fname, job\_mechanic\_emp\_gname

quote\_no -> quote\_prep\_date, quote\_purpose\_no, quote\_no\_of\_days, quote\_cost

quote\_purpose\_no -> quote\_purpose\_desc

### COLLECTED 3NF RELATIONS

1. QUOTE\_PURPOSE(quote purpose no, quote\_purpose\_desc)
2. QUOTE\_COMBO(quote purpose no, combo code)
3. COMBO(combo code, truck\_vehicle\_id\_no, trailer\_id\_no)
4. TRUCK(truck vehicle id no, truck\_vehicle\_reg\_no)
5. TRAILER(trailer id code, trailer\_type\_manufacturer,  
trailer\_type\_model)

6. TRAILER\_TYPE(trailer type manufacturer,  
trailer type model, trailer\_class\_no,  
trailer\_load\_capacity, trailer\_length, trailer\_width)
7. JOB(job\_no, quote\_no, combo\_code, job\_driver\_emp\_no,  
job\_mechanic\_emp\_no, job\_pickup\_datetime,  
job\_intended\_drop\_datetime, job\_actual\_drop\_datetime,  
job\_cost, job\_paid\_date)
8. JOB\_DRIVER(job driver emp no, job\_driver\_emp\_fname,  
job\_driver\_emp\_gname)
9. JOB\_MECHANIC(job mechanic emp no, job\_mechanic\_emp\_fname,  
job\_mechanic\_emp\_gname)
10. QUOTE(quote\_no, quote\_prep\_date, quote\_purpose\_no,  
quote\_no\_of\_days, quote\_cost)
11. QUOTE\_PURPOSE(quote purpose no, quote\_purpose\_desc)

## ATTRIBUTE SYNTHESIS

1 & 11

QUOTE\_PURPOSE(quote purpose no, quote\_purpose\_desc)

2

QUOTE\_COMBO(quote purpose no, combo code)

3

COMBO(combo code, truck\_vehicle\_id\_no, trailer\_id\_code)

4

TRUCK(truck vehicle id no, truck\_vehicle\_reg\_no)

5

TRAILER(trailer id code, trailer\_type\_manufacturer,  
trailer\_type\_model)

6

TRAILER\_TYPE(trailer type manufacturer, trailer type model,  
trailer\_class\_no, trailer\_load\_capacity, trailer\_length,  
trailer\_width)

7

JOB(job\_no, quote\_no, combo\_code, job\_driver\_emp\_no,  
job\_mechanic\_emp\_no, job\_pickup\_datetime,  
job\_intended\_drop\_datetime, job\_actual\_drop\_datetime,  
job\_cost, job\_paid\_date)

8 & 9

EMPLOYEE(emp\_no, emp\_fname, emp\_gname)

10

QUOTE(quote\_no, quote\_prep\_date, quote\_purpose\_no,  
quote\_no\_of\_days, quote\_cost)