Relationship Normalization (Truck Trailer Purpose Details):

UNF
PURPOSE (purpose_no, desc_info, (truck_trailer_combo_code, truck_vin, truck_rego_no, trailer_code, trailer_manufacturer, trailer_model, trailer_class, trailer_load_capacity, trailer_dimension))

Repeating Groups**:**
Have been identified in the parenthesis above.

1NF
PURPOSE (<u>purpose_no</u>, desc_info)

TRUCK_TRAILER_PURPOSE (<u>purpose_no</u>, <u>truck_trailer_combo_code</u>, truck_vin, truck_rego_no, trailer_code, trailer_manufacturer, trailer_model, trailer_class, trailer_load_capacity, trailer_dimension)

Candidate Keys:
- <u>purpose_no, truck_trailer_combo_code</u>
- <u>purpose_no, truck_vin, truck_trailer_combo_code</u>
- <u>purpose_no, truck_rego_no, truck_trailer_combo_code</u>
- <u>purpose_no</u>

Partial Dependencies:
truck_trailer_combo_code ->   truck_vin, truck_rego_no, trailer_code, trailer_manufacturer, trailer_model, trailer_class, trailer_load_capacity, trailer_dimension

truck_vin -> truck_rego_no

trailer_code -> trailer_manufacturer, trailer_model, trailer_class, trailer_load_capacity, trailer_dimension

2NF
PURPOSE (<u>purpose_no</u>, desc_info)

TRUCK_TRAILER_PURPOSE (<u>purpose_no, truck_trailer_combo_code</u>)

COMBO_DETAIL (<u>truck_trailer_combo_code</u>, truck_vin, truck_rego_no, trailer_code, trailer_manufacturer, trailer_model, trailer_class, trailer_load_capacity, trailer_dimension)

Transitive dependencies:
truck_vin -> truck_rego_no

trailer_code -> trailer_manufacturer, trailer_model, trailer_class, trailer_load_capacity, trailer_dimension
trailer_model -> trailer_manufacturer, trailer_load_capacity, trailer_dimension

3NF
PURPOSE (purpose_no, desc_info)

TRUCK_TRAILER_PURPOSE (purpose_no, truck_trailer_combo_code)

COMBO_DETAIL (truck_trailer_combo_code, truck_vin, trailer_code)

TRUCK (truck_vin, truck_rego_no)

TRAILER (trailer_code, trailer_model)

TRAILER_DETAIL(trailer_model, trailer_class, trailer_manufacturer, trailer_load_capacity, trailer_dimension)

Full dependencies:
purpose_no -> desc_info
truck_trailer_combo_code -> truck_vin, trailer_code
truck_vin -> truck_rego_no
trailer_code -> trailer_model
trailer_model -> trailer_class, trailer_manufacturer, trailer_load_capacity, trailer_dimension

Relationship Normalization (Company Job Sheet):

UNF
QUOTE (quote_no, quote_prep_date, quote_purpose_no, quote_purpose_desc, quote_day_req, quote_cost)

JOB (job_no, job_truck_trailer__combo, job_driver_emp_no, job_driver_name, job_mech_emp_no, job_mech_name, job_pickup_date_time, job_intended_dropoff_date_time, job_actual_dropoff_date_time, job_cost, job_cli_pay_date)

Repeating groups:
There are no repeating groups

1NF
QUOTE (quote_no, quote_prep_date, quote_purpose_no, quote_purpose_desc, quote_day_req, quote_cost)

JOB (job_no, job_truck_trailer__combo, job_driver_emp_no, job_driver_name, job_mech_emp_no, job_mech_name, job_pickup_date_time, job_intended_dropoff_date_time, job_actual_dropoff_date_time, job_cost, job_cli_pay_date)

Candidate Keys:
Job_no
Quote_no

Partial dependencies:
There are no partial dependencies

2NF
QUOTE (quote_no, quote_prep_date, quote_purpose_no, quote_purpose_desc, quote_day_req, quote_cost)

JOB (job_no, job_truck_trailer__combo, job_driver_emp_no, job_driver_name, job_mech_emp_no, job_mech_name, job_pickup_date_time, job_intended_dropoff_date_time, job_actual_dropoff_date_time, job_cost, job_cli_pay_date)

Transitive dependencies:
quote_purpose_no -> quote_purpose_desc
job_driver_emp_no -> driver_name
job_mech_emp_no -> job_mech_name

3NF
QUOTE (quote_no, quote_prep_date, quote_purpose_no, quote_day_req, quote_cost)

QUOTE_PURPOSE (quote_purpose_no, quote_purpose_desc)

JOB (job_no, job_truck_trailer__combo, job_pickup_date_time, job_intended_dropoff_date_time, job_actual_dropoff_date_time, job_cost, job_cli_pay_date)

DRIVER_DETAIL (job_driver_emp_no, job_driver_name)

MECH_DETAIL (job_mech_emp_no, job_mech_name)

Full dependencies:
quote_no -> quote_prep_date, quote_purpose_no, quote_day_req, quote_cost
quote_purpose_no -> quote_purpose_desc
job_no -> job_truck_trailer__combo, job_pickup_date_time, job_intended_dropoff_date_time, job_actual_dropoff_date_time, job_cost, job_cli_pay_date
job_driver_emp_no -> job_driver_name
job_mech_emp_no -> job_mech_name

Collected 3NF Relations:

PURPOSE (purpose_no, desc_info)

TRUCK_TRAILER_PURPOSE (purpose_no, truck_trailer_combo_code)

COMBO_DETAIL (truck_trailer_combo_code, truck_vin, trailer_code)

TRUCK (truck_vin, truck_rego_no)

TRAILER (trailer_code, trailer_model)

TRAILER_DETAIL(trailer_model, trailer_class, trailer_manufacturer, trailer_load_capacity, trailer_dimension)

QUOTE (quote_no, quote_prep_date, quote_purpose_no, quote_day_req, quote_cost)
QUOTE_PURPOSE (quote_purpose_no, quote_purpose_desc)

JOB (job_no, job_truck_trailer__combo, job_pickup_date_time, job_intended_dropoff_date_time, job_actual_dropoff_date_time, job_cost, job_cli_pay_date)

DRIVER_DETAIL (job_driver_emp_no, job_driver_name)

MECH_DETAIL (job_mech_emp_no, job_mech_name)

After Attribute Synthesis:

PURPOSE (purpose_no, desc_info)

TRUCK_TRAILER_PURPOSE (purpose_no, truck_trailer_combo_code)

COMBO_DETAIL (truck_trailer_combo_code, truck_vin, trailer_code)

TRUCK (truck_vin, truck_rego_no)

TRAILER (trailer_code, trailer_model)

TRAILER_DETAIL(trailer_model, trailer_class, trailer_manufacturer, trailer_load_capacity, trailer_dimension)

QUOTE (quote_no, quote_prep_date, quote_purpose_no, quote_day_req, quote_cost)

JOB (job_no, job_truck_trailer__combo, job_pickup_date_time, job_intended_dropoff_date_time, job_actual_dropoff_date_time, job_cost, job_cli_pay_date)

EMPLOYEE (emp_no, emp_name)