**Conceptual Data Modeling – Diagram Report**

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# BMT [Entity Relation]

C:\Users\mk932275\AppData\Local\Temp\radBD463.tmp

## Entity: Customer

**Description:** An entity that is not employeed by the company, but is associated with it through a financial transaction.

**Comments:** Someone who is ordering a mold piece.

**Purpose:** A person that is ordering a piece from the company.

**Normalize:**

**Primary Keys:**

Customer\_ID

**Foreign Keys:**

**Non-Key Attributes:**

Phone\_Number

City

State

Zip

Company\_Name

**Attribute:** City

**Description:** The city in which the customer lives.

**Attribute:** Company\_Name

**Description:** The name of the customer.

**Attribute:** Customer\_ID

**This attribute is a primary key**

**Description:** The ID that uniquely identifies a customer.

**Attribute:** Phone\_Number

**Description:** The customer's phone number.

**Attribute:** State

**Description:** The state in which the customer lives.

**Attribute:** Zip

**Description:** The code that uniquely identifies where a customer lives.

**Relationship line:** places order

**Cardinality:** One Customer places order Zero, One or Many Z-Bill

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**Foreign Keys and Roles:** <none>

## Entity: Employee

**Description:** An employee that may or may not have many different jobs within the company.

**Comments:** Someone employeed by the company which may be a CEO, truck driver, or receptionist.

**Purpose:** An individual employeed by the company that either processes and/or delivers an item.

**Normalize:**

**Primary Keys:**

Employee\_ID

**Foreign Keys:**

**Non-Key Attributes:**

Employee\_Name

**Attribute:** Employee\_ID

**This attribute is a primary key**

**Description:** An ID that uniquely identifies an employee.

**Attribute:** Employee\_Name

**Description:** The first and last name of the employee.

**Relationship line:** works on

**Cardinality:** One Employee works on Zero, One or Many Status

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**Foreign Keys and Roles:** <none>

**Relationship line:** turned into

**Cardinality:** One Employee turned into Zero, One or Many Z-Bill

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**FK Primary Key Name:** Employee\_ID

**Role Name:**

**Physical Role Name:**

## Entity: Job Order

**Description:** A document that contains detailed information concerning a specific job.

**Comments:** Is a description of the job that the customer wants to be performed.

**Purpose:** A description about the work that is ordered by a customer.

**Normalize:**

**Primary Keys:**

Job\_Number

Z-Bill\_Number

Customer\_ID

Employee\_ID

**Foreign Keys:**

Z-Bill\_Number

Customer\_ID

Employee\_ID

**Non-Key Attributes:**

Details

Tire\_Size

Location

Ticket\_Date

**Attribute:** Customer\_ID

**This attribute is a primary key**

**This attribute is a foreign key**

**Description:** The ID that uniquely identifies a customer.

**Attribute:** Details

**Description:** The details of the job being worked on.

**Attribute:** Employee\_ID

**This attribute is a primary key**

**This attribute is a foreign key**

**Description:** An ID that uniquely identifies an employee.

**Attribute:** Job\_Number

**This attribute is a primary key**

**Description:** The unique number that identifies a specific job order.

**Attribute:** Location

**Description:** The location of where the piece is at.

**Attribute:** Ticket\_Date

**Description:** The start and end date of the work.

**Attribute:** Tire\_Size

**Description:** The size of the tire.

**Attribute:** Z-Bill\_Number

**This attribute is a primary key**

**This attribute is a foreign key**

**Description:** A number that uniquely identifies the Z-Bill

**Relationship line:** contains

**Cardinality:** One Z-Bill contains Zero, One or Many "Job Order"

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**Foreign Keys and Roles:** <none>

**Relationship line:** worked on

**Cardinality:** One "Job Order" worked on Zero, One or Many Status

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**FK Primary Key Name:** Job\_Number

**Role Name:**

**Physical Role Name:**

## Entity: Mold

**Description:** A piece of equipment that is used to create different tire pieces depending on the size.

**Comments:** The piece of equipment that is used to create the piece the customer wants.

**Purpose:** A mold that is used to create a tire piece.

**Normalize:**

**Primary Keys:**

Tic\_Code

**Foreign Keys:**

**Non-Key Attributes:**

Delivery\_Ticket\_Number

**Attribute:** Tic\_Code

**This attribute is a primary key**

**Description:** A 5 digit combination of numbers and alphabetical characters.

**Attribute:** Delivery\_Ticket\_Number

**Description:** A number identifying a delivery ticket.

**Relationship line:** contains

**Cardinality:** One Mold contains Zero, One or Many Piece

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**FK Primary Key Name:** Tic\_Code

**Role Name:**

**Physical Role Name:**

## Entity: Piece

**Description:** The item that an employee has ordered.

**Comments:** The object created by the company that the customer is purchasing.

**Purpose:** The final product that is created for an employee.

**Normalize:**

**Primary Keys:**

Tic\_Code

Piece\_Number

**Foreign Keys:**

Tic\_Code

**Non-Key Attributes:**

Mold\_Size

Mold\_Code

**Attribute:** Mold\_Code

**Description:** A code identifying a specific mold.

**Attribute:** Mold\_Size

**Description:** The size of the mold.

**Attribute:** Piece\_Number

**This attribute is a primary key**

**Description:** An identifier that uniquely identifies a piece.

**Attribute:** Tic\_Code

**This attribute is a primary key**

**This attribute is a foreign key**

**Description:** A 5 digit combination of numbers and alphabetical characters that uniquely identify the Piece..

**Relationship line:** contains

**Cardinality:** One Mold contains Zero, One or Many Piece

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**FK Primary Key Name:** Tic\_Code

**Role Name:**

**Physical Role Name:**

**Relationship line:** has many

**Cardinality:** One Piece has many Zero, One or Many Status

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**Foreign Keys and Roles:** <none>

## Entity: Status

**Description:** Describes the current position of the work.

**Comments:** Is a way to be able to view that status of a certain job

**Purpose:** To have a status of each process.

**Normalize:**

**Primary Keys:**

Job\_Number

Employee\_ID

Piece\_Number

Z-Bill\_Number

Customer\_ID

Tic\_Code

**Foreign Keys:**

Job\_Number

Employee\_ID

Piece\_Number

Z-Bill\_Number

Customer\_ID

Tic\_Code

**Non-Key Attributes:**

Beginning\_Date

End\_Date

Ticket\_Number

**Attribute:** Beginning\_Date

**Description:** It displays the beginning date of the work.

**Attribute:** Customer\_ID

**This attribute is a primary key**

**This attribute is a foreign key**

**Description:** The ID that uniquely identifies a customer.

**Attribute:** Employee\_ID

**This attribute is a primary key**

**This attribute is a foreign key**

**Description:** An ID that uniquely identifies an employee.

**Attribute:** End\_Date

**Description:** It displays the end date of the work.

**Attribute:** Job\_Number

**This attribute is a primary key**

**This attribute is a foreign key**

**Description:** The unique number that identifies a specific job order.

**Attribute:** Piece\_Number

**This attribute is a primary key**

**This attribute is a foreign key**

**Description:** An identifier that uniquely identifies a piece.

**Attribute:** Tic\_Code

**This attribute is a primary key**

**This attribute is a foreign key**

**Description:** A 5 digit combination of numbers and alphabetical characters.

**Attribute:** Ticket\_Number

**Description:**

**Attribute:** Z-Bill\_Number

**This attribute is a primary key**

**This attribute is a foreign key**

**Description:** A number that uniquely identifies the Z-Bill

**Relationship line:** has many

**Cardinality:** One Piece has many Zero, One or Many Status

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**Foreign Keys and Roles:** <none>

**Relationship line:** worked on

**Cardinality:** One "Job Order" worked on Zero, One or Many Status

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**FK Primary Key Name:** Job\_Number

**Role Name:**

**Physical Role Name:**

**Relationship line:** works on

**Cardinality:** One Employee works on Zero, One or Many Status

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**Foreign Keys and Roles:** <none>

## Entity: Z-Bill

**Description:** An order created by the customer detailing what item they need.

**Comments:** A reciept created by a customer, also refered to as a delivery bill.

**Purpose:** Displays the details that is needed by the customer.

**Normalize:**

**Primary Keys:**

Z-Bill\_Number

Customer\_ID

Employee\_ID

**Foreign Keys:**

Customer\_ID

Employee\_ID

**Non-Key Attributes:**

Purchase\_Order\_Number

Date

Delivery\_Note

Exp\_Number

Services

**Attribute:** Customer\_ID

**This attribute is a primary key**

**This attribute is a foreign key**

**Description:** The ID that uniquely identifies a customer.

**Attribute:** Date

**Description:** The date that the job was ordered by the customer.

**Attribute:** Delivery\_Note

**Description:** Contains the information about the customer, places, and items.

**Attribute:** Employee\_ID

**This attribute is a primary key**

**This attribute is a foreign key**

**Description:** An ID that uniquely identifies an employee.

**Attribute:** Exp\_Number

**Description:** A numerical value that identifies expenses.

**Attribute:** Purchase\_Order\_Number

**Description:** A number that identifies a purchase by a customer.

**Attribute:** Services

**Description:** A description of the services to be done.

**Attribute:** Z-Bill\_Number

**This attribute is a primary key**

**Description:** A number that uniquely identifies the Z-Bill

**Relationship line:** turned into

**Cardinality:** One Employee turned into Zero, One or Many Z-Bill

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**FK Primary Key Name:** Employee\_ID

**Role Name:**

**Physical Role Name:**

**Relationship line:** places order

**Cardinality:** One Customer places order Zero, One or Many Z-Bill

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**Foreign Keys and Roles:** <none>

**Relationship line:** contains

**Cardinality:** One Z-Bill contains Zero, One or Many "Job Order"

**Identifying:** T

**Description:**

**Parent Update:** Cascade

**Parent Delete:** Restrict

**Child Insert:** Restrict

**Child Update:** Restrict

**FK Constraint Name:**

**Foreign Keys and Roles:** <none>

