

CDK Global

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Definition of Terms

DMS: Dealer Management System

Generic term referring to the business system a car dealership or similar organization uses to manage their business.

Validation

A means by which Matrix confirms that a work order entered by a user into the Matrix system is a valid work order, that it exists and can have fluid charged to it. The validation process happens before the fluid is dispensed.

Posting

The process of adding a fluid charge to a work order in the DMS. The posting process happens after the fluid is dispensed.

Work Order (up to 8 characters)

A unique (within the scope of the dealership) numeric or alphanumeric identifier that is linked to a list of labor and parts charges representing the expenses associated with a specific customer's vehicle repair. Also referred to as a repair order, or RO. In Matrix, the allowed work order characters are: A-Z, 0-9, dash (-), forward slash (/), period (.) and space (). The work order can be used more than once in Matrix (it does not have to be unique).

JobCode (up to 3 characters)

A code that identifies where on a work order the fluid charge should be added. The JobCode can be up to 3 characters long. The allowed JobCode characters are: A-Z, 0-9 and space ().

Matrix CDK Global Interface to Business System

The Interface provides two important basic functions that a standard Matrix system does not have:

- work order validation
- automatic posting of charges for dispensed fluid.

Work Order Validation

When a user enters a work order into the Matrix system, Matrix does not know if it is a legitimate work order in the user's business system. Even if the work order exists in the business system, it's possible that it's been closed or has a status that doesn't allow making any additional charges to it. Since the goal is to ensure that the work order is charged for the fluid dispensed against it, it is important to confirm the legitimacy of the work order prior to dispensing the fluid. The process is known as *Work Order Validation*.

Matrix validates work orders by comparing the work order entered to the "valid jobs file" that is automatically generated by the CDK Global System.

Work Order Validation provides a sample of a valid jobs file.

Valid Jobs File

The Valid Jobs File is how Matrix determines whether a work order is valid or not. This file is automatically generated by CDK Global and is updated every 30 seconds.

Work Order Posting

After the user has finished dispensing fluid with the Matrix system, the process of calculating the appropriate charge for the fluid and adding the charge to the work order in the CDK Global business system is called *Work Order Posting*.

Matrix will create a dispense file for each dispense. CDK Global then reads this file and loads the dispense into the system.

Matrix CDK GlobalInterface Configuration

The Third Party Interface Menus contain interface-specific configuration settings that are used to set up Matrix for CDK Global interaction.

General Settings Tab

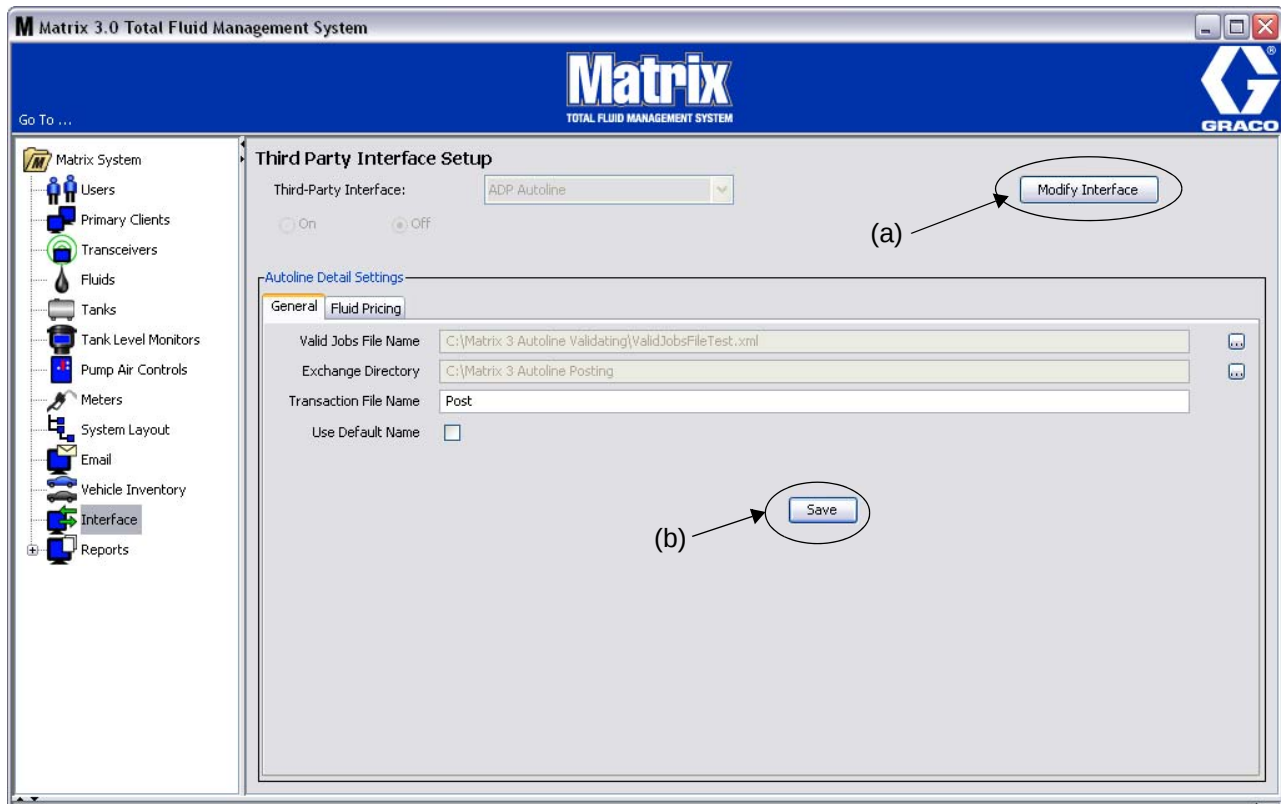


FIG. 1

- **Valid JobsFile Name:** Specifies the file name and location of the Valid Jobs file. This file is what Matrix 3 uses to determine what a valid work order is. CDK Global Daemon creates this file and updates it every 30 seconds.
- **Exchange Directory:** Specifies the location for Matrix 3 to create the Posting Files on the local computer. The CDK Global Daemon loads files from this location.
- **Transaction File Name:** If "Use Default Name" is not checked, the user can specify the Posting File Name and Matrix 3 will append a time stamp to the name (i.e., Posting File Name = Post). File name generated will be Post_06_04_2010_14_15_30_55. This dispense happened April 6, 2010 at 4:15:30 and 55 milliseconds.
- **Use Default Name:** If box is checked, the default posting name will be used and override Posting File Name. The default posting name is the RO number with appended time stamp (i.e., RO number is 12345). Posting File generated will be RO12345_06_04_2010_14_15_30_55. RO12345 was dispensed on April 6, 2010 at 4:15:30 and 55 milliseconds.
- **Modify Interface button (a):** Clicking button displays the External Interface Setup Dialog box shown in FIG. 3, page 5. This dialog box is used to specify the Third Party Interface you are using.
- **Save button (b):** Clicking button confirms and saves changes.

Fluid Pricing Settings Tab

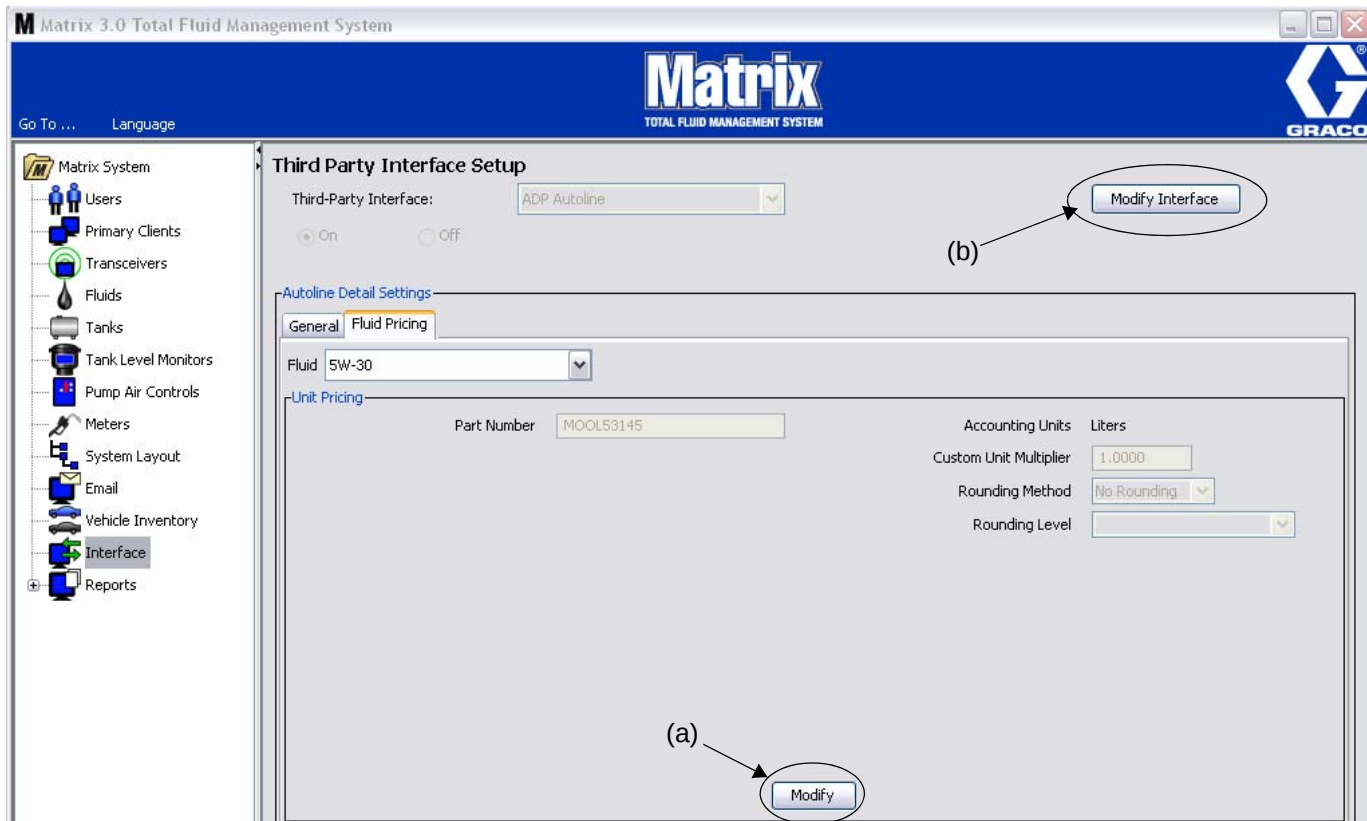


FIG. 2

- **Fluids:** Drop down menu that is populated with all fluids in the system. Each fluid in the system must be configured with a part number, custom unit multiplier, rounding method and rounding level. To add another fluid click the FLUIDS section.
- **Part No.:** The CDK Global part number associated with the fluid. (**Part Number Field is required and cannot be left blank.**)
- **Accounting Units:** Value is always equal to liters.
- **Custom Unit Multiplier:** Number used to convert the dispensed fluid volume from “standard” Matrix volumetric units to some other unit of measure.

Example 1: A dealer has a part number for an oil that represents a tenth of a quart.

The accounting units would be quarts and the custom unit multiplier would be 10. If 5 quarts of this oil were dispensed, the Matrix CDK GlobalInterface would post a quantity of 50 units of this part number to the CDK GlobalRO.

Example 2: A dealership wants to use a part number that represents multiple units of a fluid, where a quantity of 1 of a part is, for example, 6 quarts.

The custom unit multiplier would be specified as one-sixth, or 0.167. With this as the unit multiplier a dispense of anything less than 6.0 quarts would result in Matrix posting a quantity of 1 to the RO. Anything dispensed between 6.0 and 12.0 quarts would have a quantity of 2 posted, and so on.

NOTE: The Part Number, Accounting Units, and Custom Unit Multiplier fields must be coordinated for the proper fluid charge to be posted on the RO.

- **Rounding Method / Rounding Level:** Drop down box provides the option to make No Adjustment, Always Round Up, Always Round Down or Always Round to the Nearest Oil Dispense Amount. Unless the No Adjustment option is chosen, the dispense volume can be adjusted to the Next Whole Number (X.0) or To Tenths (X.X).

External Interface Setup

Before you can use the Interface you must enable the External Interface function.

1. Click the **Modify Interface** button (b) (FIG. 1). The External Interface Setup Dialog box shown in FIG. 3 displays. This dialog box is used to specify the Third Party Interface you are using.
2. From the drop down menu (A - FIG. 3) select CDK Global.

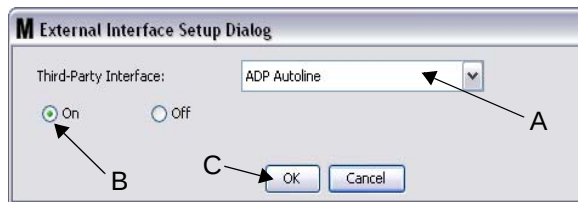


FIG. 3 External Interface Setup Dialog

3. Click **"ON"** (B - FIG. 3). Third Party Interface enables Matrix to use the third party interface.
4. Click the **OK** button (C - FIG. 3) to close the screen and confirm your selection.
 - This is one of two settings that must be configured to enable the interface. The other setting is in the Meter's configuration settings, located within the setup screens.
 - When the system is OFF (disabled), the interface is disabled for all meters and the system functions like a standard Matrix Premier system.
 - Each meter has its own interface setting. It is possible to have some meters using the CDK Global Interface (dispenses by the meter are billed to the correct RO on the DMS) and some meters not using the interface (no dispenses by the meter are billed to an RO on the DMS). In all cases, Matrix will record the exact amount dispensed by any meter, independent of interface settings.

Meter Setup

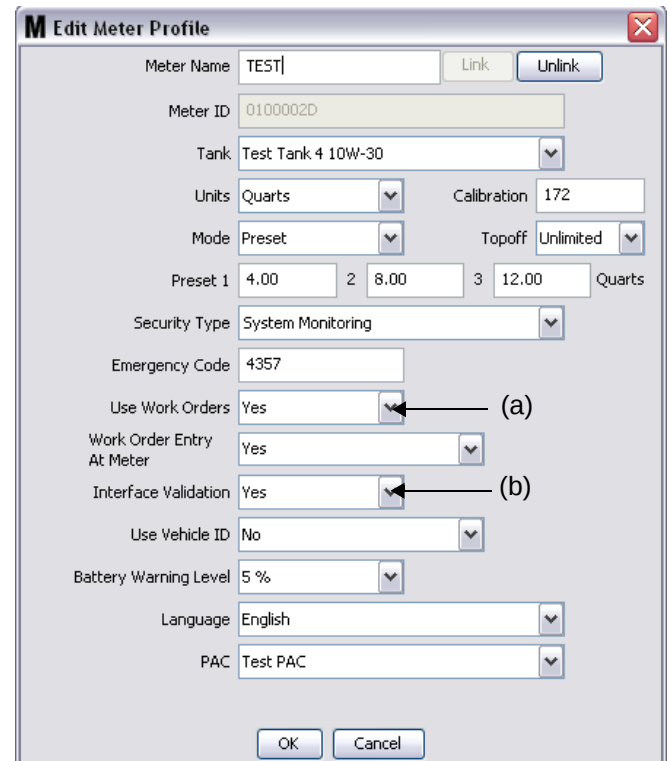


FIG. 4

The Matrix setup screens include a screen called *Meters*. This screen includes a list of all the meters in the system.

Clicking on the modify button for a meter, displays the Edit Meter Profile screen for that meter (FIG. 4). See the Graco Matrix Instruction Manual Meters section, for complete instructions for Adding a Meter and Modifying Existing Meter Information.

For a meter to use the interface, the meter must be configured to use work orders, i.e., *Use Work Orders* set (A) to "yes" (FIG. 4) and the interface for this meter turned on; i.e., *Interface Validation* (b) set to "yes".

Typically all meters in the system have these settings. However, under certain circumstances a Matrix user may choose to have different settings for specific meters. This is fine. It is important to note, however, that the interface only works for meters configured with the "yes" option selected in the *Use Work Orders* (a) and *Interface Validation* (b) fields.

NOTE: If any field in the profile is changed, changes will not be loaded into the meter until it goes to sleep and wakes up again, is registered again, or completes a dispense.

CDK Global General Information

The CDK Global fluid dispenser interface provides the ability to generate an export file containing the valid jobs of a specific DMS. This valid jobs file is imported by Matrix to provide the end user the ability to validate whether an RO is in the system and can be dispensed against.

On the other hand the CDK Global fluid dispenser interface is able to import transaction files generated by Matrix 3.

Both files should be stored in a specific directory on the PC where the CDK Global fluid dispenser daemon is running. The file names and the directory are configurable within Matrix 3 and . The CDK Global fluid dispenser daemon is able to process XML formatted files.

Work Order Validation

The work order validation process allows Matrix 3, working in conjunction with the CDK Global business system, to decide whether a work order is valid so fluid can be dispensed against it. The validation process occurs prior to any fluid being dispensed by the Matrix system. If a work order is not validated, Matrix 3 will not allow fluid to be dispensed against it.

If the CDK Global business system allows dispensing against a particular work order, then the appropriate charges are posted to that work order in the business system.

The following list is provided as a sample of suggested and/or typical validation criteria:

- the work order exists
- the work order is open,
- charges can be added to the work order.

When a work order is entered into the Matrix system, Matrix reads the Valid Jobs file and if the work order that was entered matches a work order in the Valid Jobs file, then Matrix will allow fluid to be dispensed against that work order. If Matrix doesn't find a match it will reject that work order and no fluid can be dispensed.

Example: Valid Jobs File

```
<?xml version="1.0" encoding="UTF-8"?>
<ValidJobs>
  <Header>
    <Version>1.0</Version>
    <TimeStamp>29/11/2007 13:45:03</TimeStamp>
  </Header>
  <JobDetails>
    <Company>01</Company>
    <WipNumber>12345</WipNumber>
    <RegistrationNo/>
    <ChassisNo/>
    <RequiredProduct>
      <LineNo>2</LineNo>
      <Product>XYZ</Product>
      <Quantity>4.32</Quantity>
    </RequiredProduct>
  </JobDetails>
</ValidJobs>
```

This example File represents a valid work order 12345 that requires 4.32 Liters of product XYZ on Line 2 of the work order.

Work Order Posting

Regardless of how the work order was validated, when a meter finishes dispensing fluid against it, the meter sends the Matrix 3 PC the amount that was dispensed. The Matrix PC, in turn, sends this information along with the work order number, fluid name, etc. and creates a dispense file with this information in the directory from the setup information.

CDK Global daemon will then grab those files at a specific time interval and post the changes to the work order.

When entering a work order into Matrix, a user may need to enter more than just the work order. A work order may contain multiple lines with multiple labor operations. The fluid charge usually applies to one specific labor operation.

The job code field in Matrix is used to provide a way for the end user to designate where on a work order to apply the fluid charge. The job code field is limited to three alphanumeric digits if a user doesn't enter a job code, then by default line 0 is used.

EXAMPLE: Posting File

```
<?xml version="1.0" encoding="UTF-8"?>
<FluidTransaction>
  <TransactionNo>1270668201460</TransactionNo>
  <WipNo>12345</WipNo>
  <LineNo>1</LineNo>
  <ProductNo>XYZ</ProductNo>
  <DispenserId type="MatrixMeter">0100002D</DispenserId>
  <Quantity>1.01</Quantity>
  <TransactionDate>07/04/2010</TransactionDate>
  <TransactionTime>14:23:21</TransactionTime>
  <RegistrationNo />
  <Technician>Matrix</Technician>
</FluidTransaction>
```

This Posting File represents a dispense of 1.01 Liters of product XYZ applied to work order 12345 on Line 1.

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