**IRRIGATION and MOTORS**

1. Alter table Machine, add new columns: Hydrometer, Hourmeter

|  |  |
| --- | --- |
| Machine | |
| ….. |  |
| Hourmeter | double |
| Hydrometer | double |
| …. |  |

2 (?)**Expand Transaction Types Table** to include “Fuel Deposit” and “Gauge Adjustment- Up”, “Gauge Adjustment \_Down”. “Fuel deposit” is to be used to indicate Fuel Purchase and “Withdrawal “to indicate usage. Since there is no exact way to keep track of tank level we should adjust the gauge measurements. (?)

New Tables:

|  |  |  |
| --- | --- | --- |
| Engine Log Table | | |
| Engine Log Id | PK |  |
| Date |  |  |
| Operator Id | FK | User to select HR Id. We may want to create team of Operators and let user to select person in the group (optional) |
| Engine Id |  |  |
| Hour On |  |  |
| Hour Off |  |  |
| Hour meter On |  |  |
| Hour meter OFF |  |  |
| Duration |  | In hours |
| Irrigation | Boolean |  |
| Activity ID |  | If Irrigation is FALSE user should be able to select activity that took place on the same DATE and has record in Activity- Machine table with that Date. If Irrigation flag is TRUE than this field to remain NULL |
|  |  |  |

1. New Table – Fuel Usage Log

|  |  |  |
| --- | --- | --- |
| Fuel Usage Log | | |
| Usage Log Id | PK |  |
| Engine Log Id | FK |  |
| Consumption | double |  |
| Final Level | double | Calculated Field |
| Deposited | double |  |
| Transaction Type ID | FK | Comes from Transaction Type table |
| Note | text |  |

3. New Table – Irrigation Details

|  |  |
| --- | --- |
| Irrigation Details | |
| ID | PK |
| Engine Log ID | FK |
| Zone | date |
| Machine Id | FK |
| Hidrometer ON | Time (HH:MM) |
| Hidrometer OFF | Time(HH : MM) |
| Water Usage | Double |
| Water Cost | double |
| Duration | double |
| Depreciation Cost | double |
| Maintenance Cost | double |
| Observations | text |
|  |  |
|  |  |

4.

|  |  |  |
| --- | --- | --- |
| Consumable Resources | | |
| Resource Type | text |  |
| Unit Id | FK |  |
| Unit Cost | double |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Fuel Purchases | | | |
| Invoice Id |  |  |  |
| Qty |  |  |  |
| Fuel Type |  |  |  |
| Cost |  |  |  |
|  |  |  |  |