Operating Lease Support System Phase-2 Project
for

DIPO STAR FINANCE
Solusi Kredit Otomotif Terpercaya

To Be Design
Of
Unit/ Vehicle Maintenance Process

Revision 3.0

Prepared by PT. Berlian Sistem Informasi

PT BERLIAN SISTEM INFORMASI

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1 Introduction

1.1 Purpose of Document

To-Be Design Document is defined as a one of deliverable document during requirement analysis and business process design of Operating Lease Business in Dipo Star Finance, PT (DSF). This document is also a confirmation tool for both Berlian Sistem Informasi, PT (BSI) and Dipo Star Finance, PT (DSF) regarding the blueprint module of the to-be developed system.

The document will simplify of business process that has been collected and/ or observed from the user (based on user requirement analysis workshop). Business process described by defining roles, objective of process including business rules that applied or valid in Dipo Star Finance, PT (DSF).

Once the document is signed by authorized people (defined in document approval, page 4), the the content of this document will be mutual consensus of both parties and thus is legally binding. If there any change requests after sign – off this document, will be considered as out of scope and would be applied up to get the next consensus.

The system (as explained in this document) does not cover any kind of integration with any kind of application currently running within Dipo Star Finance, PT (DSF)

1.2 Scope of Document

Total of Operating Lease scope for phase-2 includes 7 processes:

a. Visit Customer Survey Process
b. Board of Directors Decree/ Surat Keputusan Direksi (SKD) Process
c. Operating Lease Agreement Process
d. Procurement Management Process
e. Unit/ Vehicle Management Process
f. Unit/ Vehicle Maintenance Process
g. Billing Collection Process

This document only explains to be design of several business areas in Unit Maintenance process.

1.3 Target Reader

The target reader of this document are:

a. DSF project director;

b. DSF project manager;
c. DSF key user or project team member;
d. DSF IT department representative;
e. BSI project director;
f. BSI project manager;
g. BSI key user or project team member;
h. BSI operation team member.

1.4 Process flow Notation standards

Throughout the document certain standards related to flow diagram has been adhered to. The following template describes the detais of each symbol used in the process flow diagram. Author may choose one of the following process flow tables format which suit most to the process flow (please see on the next page).

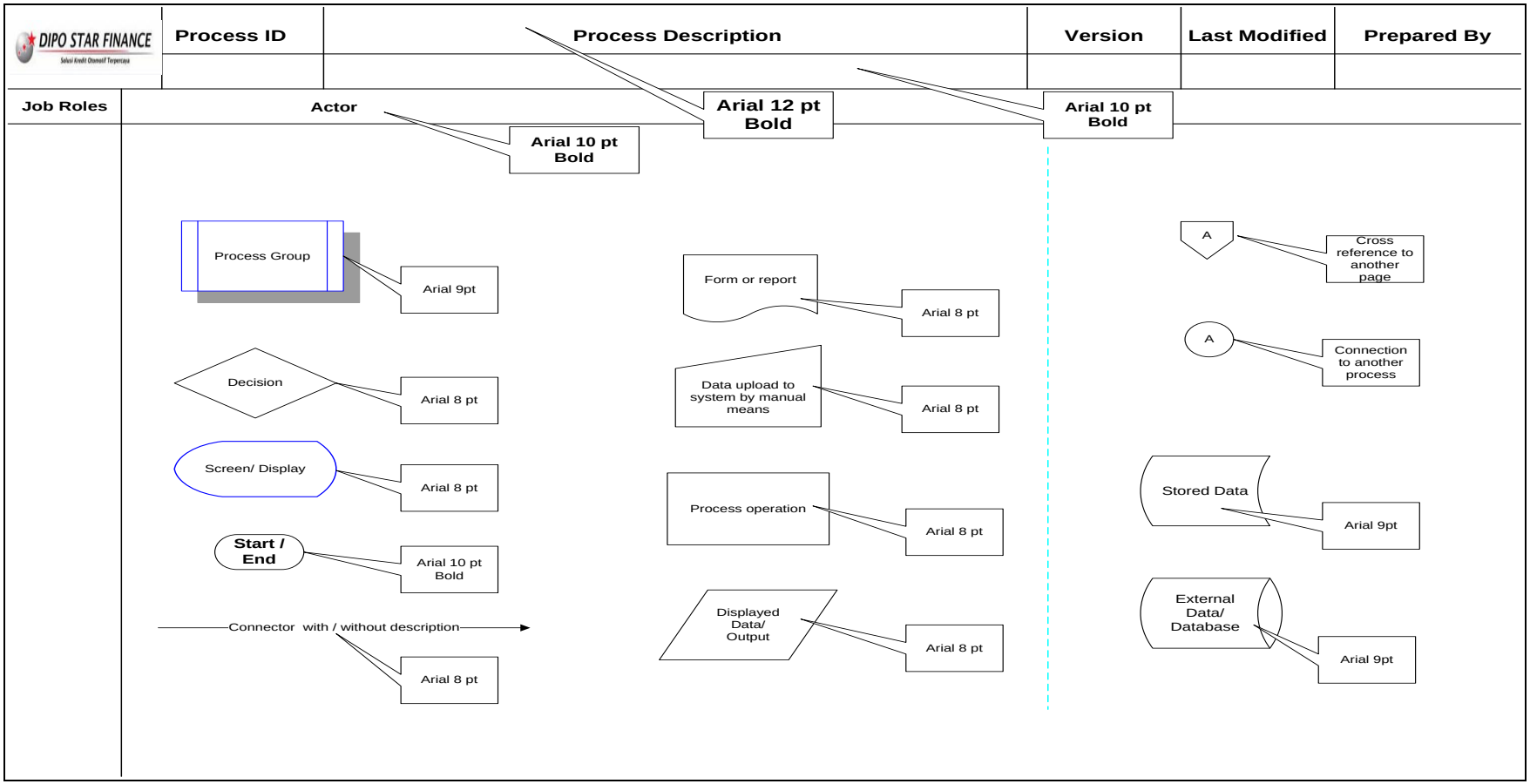


Figure 1 – Template or Standard of Business Process Flow Design

2 System Design View

2.1 General Description

This system is build to support operating lease business of Dipo Star Finance, PT (DSF). As the objective are expected to manage and monitor Unit/ Vehicle Maintenance Process. One of the outcomes in the Unit/ Vehicle Maintenance process that will be get benefit is; system shall monitor whole maintenance process such as regular and irregular maintenance, and also manage work order. And we develop this document based on user requirement that already defined on the Requirement Analysis activity.

As for this to be design for Phase-2, we can find the overall 7 processes of Operating Lease Phase-2 which is:

a. Visit Customer Survey Process
b. Board of Directors Decree/ Surat Keputusan Direksi (SKD) Process
c. Operating Lease Agreement Process
d. Procurement Management Process
e. Unit/ Vehicle Management Process
f. Unit/ Vehicle Maintenance Process
g. Billing Collection Process

This to be design only covers Unit/ Vehicle Maintenance Process.

2.2 Process Organization

A process organization is a group of processes to be executed and worked in order to achieve common objectives. Currently, there are eight block processes that has determined and acknowledged for the operating lease business.

At this part, the business process can be imagined as a high-level block diagram as shown on below.

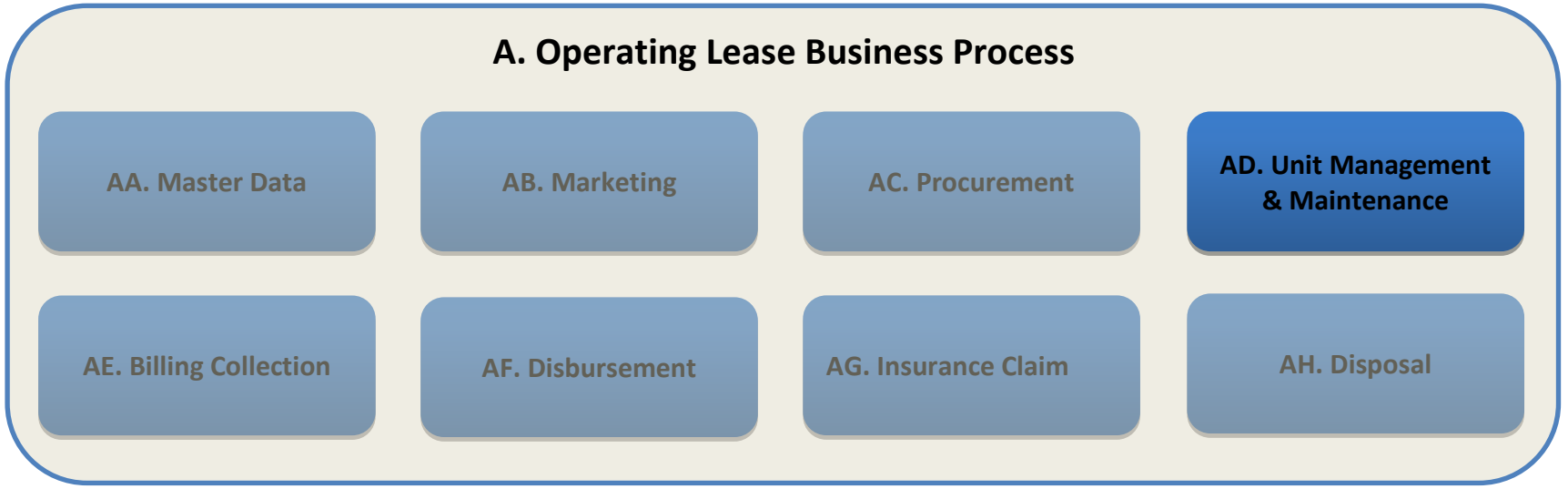


Figure 2 – Block diagram of Operating Lease business process (high level view)

At this part also, business process can be decomposed into to breakdown of business area or functional area. The purpose is to show all the processes and identify relationships and dependencies among them. Note a decomposition doesn't drill into the how; it merely outlines the what. For the operating lease business a decomposition processes (that has been determined in the workshop) can be described on below:

Lv0	Lv1		Lv2		Lv3	
	ID	Process Name	ID	Sub-Process Name	ID	Sub-Process Name
Operating Lease	AD	Unit Management & Maintenance Process	AD.2	Unit/ Vehicle Maintenance Process	AD.2.1	Maintenance Schedule Creation
					AD.2.2	Monitor Regular Maintenance Schedule of OPL Unit
					AD.2.3	Monitor Maintenance Schedule of Replacement unit
					AD.2.4	Manage Irregular Maintenance Request of OPL Unit
					AD.2.5	Manage Work Order
					AD.2.6	Monitor Under Maintenance of Unit
					AD.2.7	Monitor Historical Maintenance of Unit

Figure 3 – Business Process Decomposition of Unit/ Vehicle Maintenance Process

As shown on above, there are several business area are describes on the Unit/ Vehicle Maintenance Process. Unit/ Vehicle maintenance process explains the several business areas in order to achieve and manage common goals in the process. Overview a group process is explained on the next section at point 3 Process Flows.

Several of level 3 Sub-Process of the BPD (Business Process Decomposition) above will take place as the current development in Phase-2, several others (the Phase-1) which had been developed before, will be included in Change Request, and also several will not be included in development (out of scope).

Here are the lists for the development Phase-2:

A. Unit/ Vehicle Maintenance Process
   AD.2.1 Maintenance Schedule Creation.
   AD.2.2 Monitor Regular Maintenance Schedule of OPL Unit.
   AD.2.3 Monitor Maintenance Schedule of Replacement Unit.
   AD.2.4 Manage Irregular Maintenance Request of OPL Unit.
   AD.2.5 Manage Work Order.
   AD.2.6 Monitor Under Maintenance of Unit.
   AD.2.7 Monitor Historical Maintenance of unit.

High Level of Unit/ Vehicle Maintenance process will be described at point 3.1.1 and Detail Level of Unit/ Vehicle Maintenance process will be described 3.2.1 – 3.2.7

3 Process Flow

3.1 High Level Process Flow

Overview of marketing process from view point of each of business area is explained on below:

- **AD.2 Unit/ Vehicle Maintenance Process**

This process is triggered by regular maintenance schedule. There are three processes for maintenance, the first is full maintenance, the second is CSD Maintenance, and the third is No Maintenance. Full Maintenance or CSD schedule checking will be conducts 2 weeks before maintenance actual date, in this time DSF will do Workshop booking and Manage Work Order and also inform the customer for the maintenance in the next 2 weeks. DSF checks again 1 day before maintenance actual date, in this time DSF inform the customer to carry the unit to workshop. Workshop then receives the unit, checks the unit based on Work Order, and after finishing the maintenance, the invoice will be sent to PIC maintenance on DSF.

3.1.1 AD.2 Unit/ Vehicle Maintenance Process

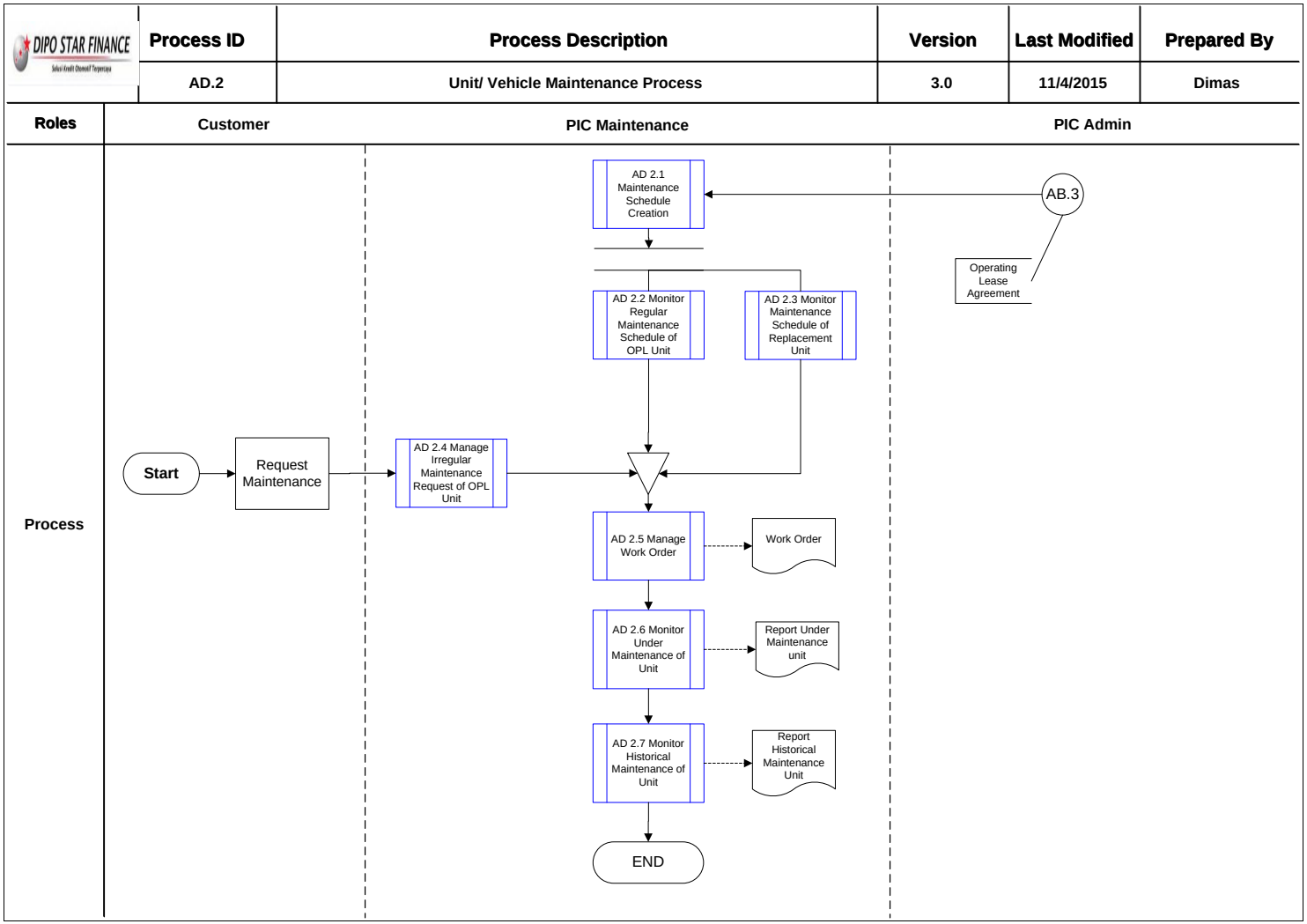


Figure 4 – High Level Process Diagram of Unit/ Vehicle Maintenance Process

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.1	Maintenance Schedule Creation	Anytime	To Create and Update Schedule	PIC Maintenance		Agreement	Report Regular Maintenance Schedule
	Business Rules: - PIC Maintenance Create and update Regular Maintenance Schedule for Unit OPL and also Replacement Unit. - The Schedule date is generated from KM/Month of Unit. - PIC Maintenance determined schedule based on KM/Month of unit - The First day off maintenance schedule is initiated one month after BAST date.						
AD.2.2	Monitor Regular Maintenance Schedule of OPL Unit	Anytime	To monitor Regular Maintenance Schedule of OPL unit	PIC Maintenance		Data Maintenance Schedule	Reminder
	Business Rules: - Monitor Regular Maintenance Schedule can be done after Maintenance Schedule Creation. - This regular maintenance schedule can be monitored at least after the maintenance schedule has been created. - User will be informed for maintenance according to maintenance schedule. - Relates to the maintenance, PIC Maintenance will do workshop booking. - Work Order Created for Regular maintenance schedule.						

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.3	Monitor Maintenance Schedule of replacement Unit	Anytime	To monitor Replacement Schedule Maintenance of unit	PIC Maintenance		Data Maintenance Schedule	Reminder
	Business Rules: - Monitor Schedule Maintenance for replacement unit can be done after Maintenance Schedule Creation. - This replacement unit maintenance schedule can be monitored at least after the maintenance schedule has been created. - PIC Maintenance takes replacement unit to workshop for maintenance. - Work Order created for Maintenance replacement unit.						
AD.2.4	Manage Irregular Maintenance Request	Request Customer	To Manage Request For Irregular Maintenance and prepare the schedule maintenance	PIC Maintenance		Customer Request	Data Historical Maintenance of Unit
	Business Rules: - Irregular Maintenance came from Customer request. - PIC Maintenance update schedule for unit maintenance. - PIC Maintenance sends replacement unit if maintenance need replacement unit based on agreement. - PIC Maintenance checks causes.						
AD.2.5	Manage Work Order	Anytime	To Create Work Order for	PIC Maintenance		Maintenance Schedule.	Data Work Order

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
			Maintenance Unit			Irregular Maintenance Request	
	Business Rules: - Work Order created by PIC maintenance as a decree to workshop, so workshop can conduct the maintenance - Work Order created for Regular and Irregular Maintenance. - After Work Order approved, Work Order send to workshop. - Work Order created by system. - Work Order Send from DSF to Workshop by mail or courier.						
AD.2.6	Monitor Under Maintenance of unit	When unit under maintenance	To Monitor repaired time when unit under Maintenance	PIC Maintenance		Time Estimated from Workshop	Data Report Under Maintenance of Unit
	Business Rules: - Monitor under Maintenance Unit can conduct after unit come to workshop. - This Monitor under maintenance can be monitored after receive maintenance estimated time from workshop. - PIC Maintenance can update unit status when under maintenance. - The status can be set into “ongoing”, “completed”, “and waiting”. - PIC Maintenance remind workshop if status still “ongoing”. - PIC Maintenance noted result of maintenance.						
AD.2.7	Monitor Historical Maintenance	Anytime	To Monitor Record History Maintenance unit	PIC Maintenance		Regular Maintenance and Irregular	History of Vehicle Maintenance

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
	of Unit					Maintenance	
	Business Rules - Monitor under Maintenance Unit can conduct after unit finish the maintenance. - Historical maintenance can be a reference for maintenance unit.						

3.2 Detail Level Process Flow

3.2.1 AD.2.1 Maintenance Schedule Creation

DIPO STAR FINANCE	Process ID	Process Description	Version	Last Modified	Prepared By
	AD.2.1	Maintenance schedule Creation	3.0	11/4/2015	Dimas

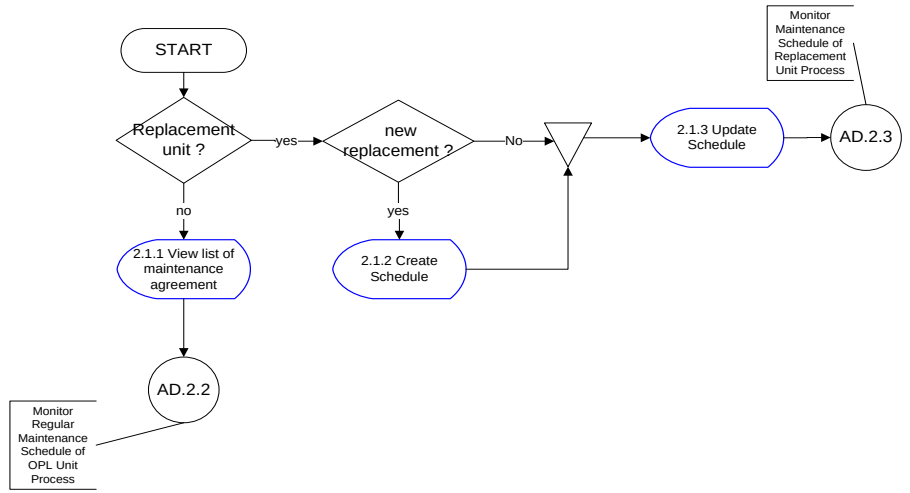
Roles	PIC Maintenance
Process	

Figure 5 – Detail Level Process Diagram of Regular Maintenance Schedule Creation

- **Process description**

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.1.1	View list of maintenance agreement	Anytime	Check Agreement and check type of unit	PIC Maintenance	1.7.1	Data Agreement	
	Business Rules: - PIC Maintenance checked unit type and can filter for replacement unit and also OPL Unit. - PIC Maintenance creates and update schedule maintenance for replacement unit. - PIC Maintenance View List schedule maintenance of OPL unit 14 days (On Calendar Days) before due date. - PIC Maintenance View List schedule maintenance of OPL unit 1 days (On Calendar Days) before due date. - PIC Maintenance view list of agreement that cover with maintenance by system.						
AD.2.1.2	Create Schedule	After Buy new replacement unit	To Create Schedule for new replacement Unit	PIC Maintenance	1.7.1	BAST	Maintenance Date
	Business Rules: - Create regular schedule by system for maintenance it's happen only on maintenance for new replacement unit - PIC Maintenance Create Schedule for replacement unit maintenance. - Create schedule for replacement unit also based on KM/Months.						
AD.2.1.3	Update Schedule	After Check KM	To Update the Schedule with actual date	PIC Maintenance	1.7.1	Data Maintenance Schedule	Update Schedule
	Business Rules:						

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
	- This Process occurs after check KM Per Months. - PIC Maintenance Update the Schedule with the actual Date based on KM per Months.						

3.2.2 AD.2.2 Monitor Regular Maintenance Schedule of OPL Unit

Process ID	Process Description	Version	Last Modified	Prepared By
AD.2.2	Monitor Regular Maintenance Schedule of OPL Unit	3.0	11/4/2015	Dimas

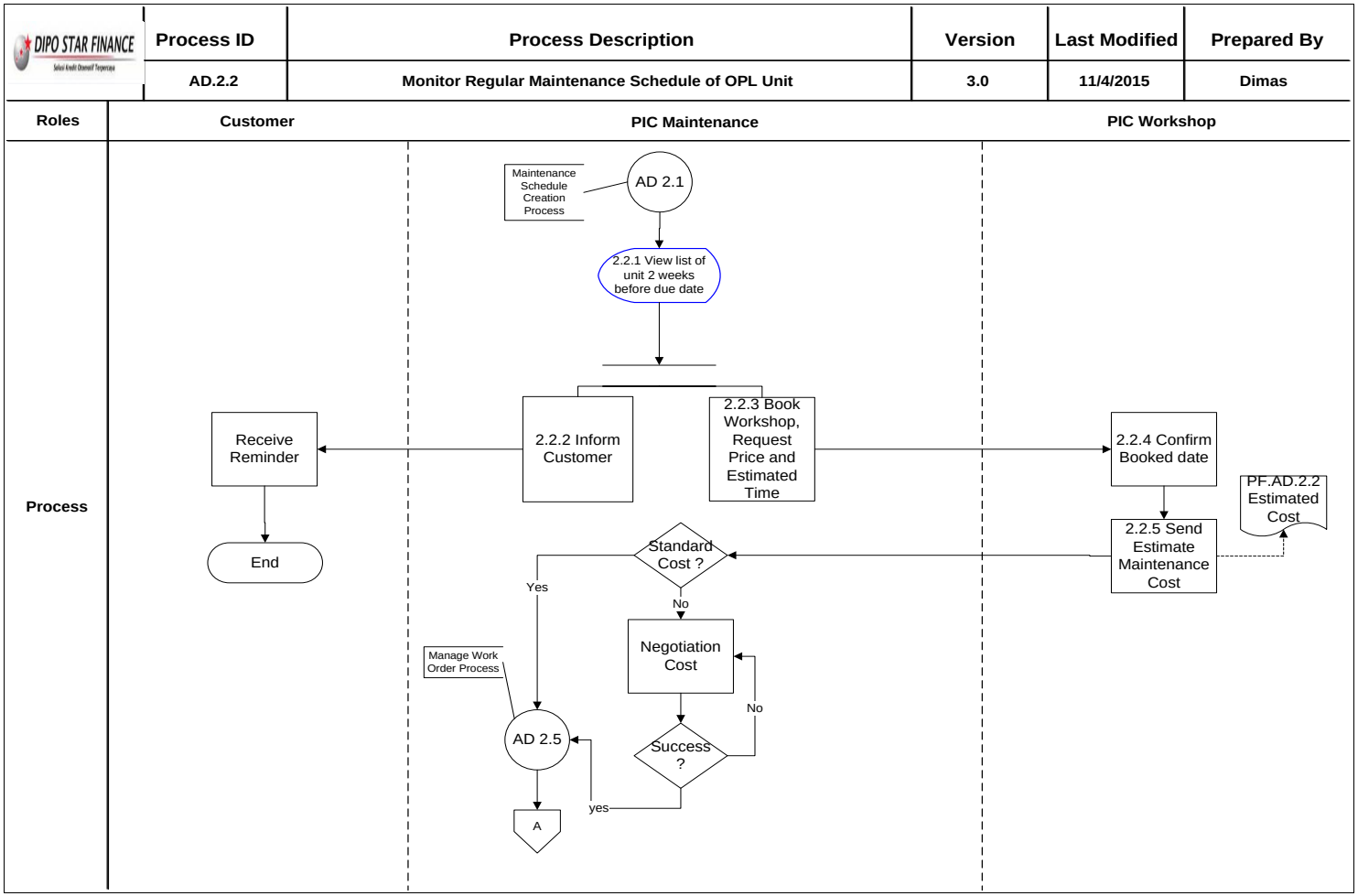


Figure 6 – Detail Level Process Diagram of Monitor Regular Maintenance Schedule

- **Process description**

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.2.1	View List of unit 2 weeks before due date	anytime	To check upcoming regular schedule	PIC Maintenance	1.7.1	Data Maintenance Schedule	
	Business Rules: - PIC Maintenance View list schedule maintenance of unit 2 weeks before due date. - From this interface PIC Maintenance can check upcoming schedule two weeks before due date maintenance, and then inform the customer and also booked workshop. - Customer will be informed for maintenance according to maintenance schedule. - Relates to the maintenance, DSF will do workshop booking. - Work Order will be created in this monitoring process.						
AD.2.2.2	Inform Customer	After view schedule	To Inform the Customer	PIC Maintenance		Data Maintenance schedule	Remind to Customer
	Business Rules: - After check the schedule, PIC maintenance Inform the customer by phone or email two weeks before due date for maintenance. - PIC Maintenance tells the customer to prepare their unit.						
AD.2.2.3	Booked Workshop, Request Price and	After View Schedule	To Booked Workshop and request estimated price	PIC Maintenance		Data Maintenance Schedule	Request Price

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
	estimated time						
	Business Rules: - Booked Workshop and request price can be conduct after view the schedule maintenance two weeks before the date. - PIC Maintenance Booked Workshop for upcoming maintenance and request the estimated price and maintenance estimated time. - PIC Maintenance Booked workshop by phone or email and Request estimated price and maintenance estimated time.						
AD.2.2.4	Confirm Booked Date	after Booked Workshop	To confirm booked date	PIC Workshop		Data Maintenance Schedule	Confirmation Information
	Business Rules: - After DSF send request price, request Maintenance estimated time, and booked workshop. - PIC workshop confirms the booked date for upcoming maintenance. - PIC Workshop is also calculated for maintenance cost.						
Ref. # (Process ID)	**Activity**	**Freq.**	**Objectives**	**Responsibility (Job Roles)**	**Related RTM No.**	**Input (Doc & Format)**	**Output (Doc & Format)**
AD.2.2.5	Send Estimated Maintenance Cost	After Confirm Booked date	Send Estimated price to DSF	PIC Workshop		Estimated Price	Maintenance Cost

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
	Business Rules: - After confirm booked date and calculated cost maintenance. - PIC workshop Send Estimated Price and Maintenance estimated time to DSF. - The estimated price and estimated time sends by email and courier.						

3.2.3 AD.2.2 Monitor Regular Maintenance Schedule of OPL Unit

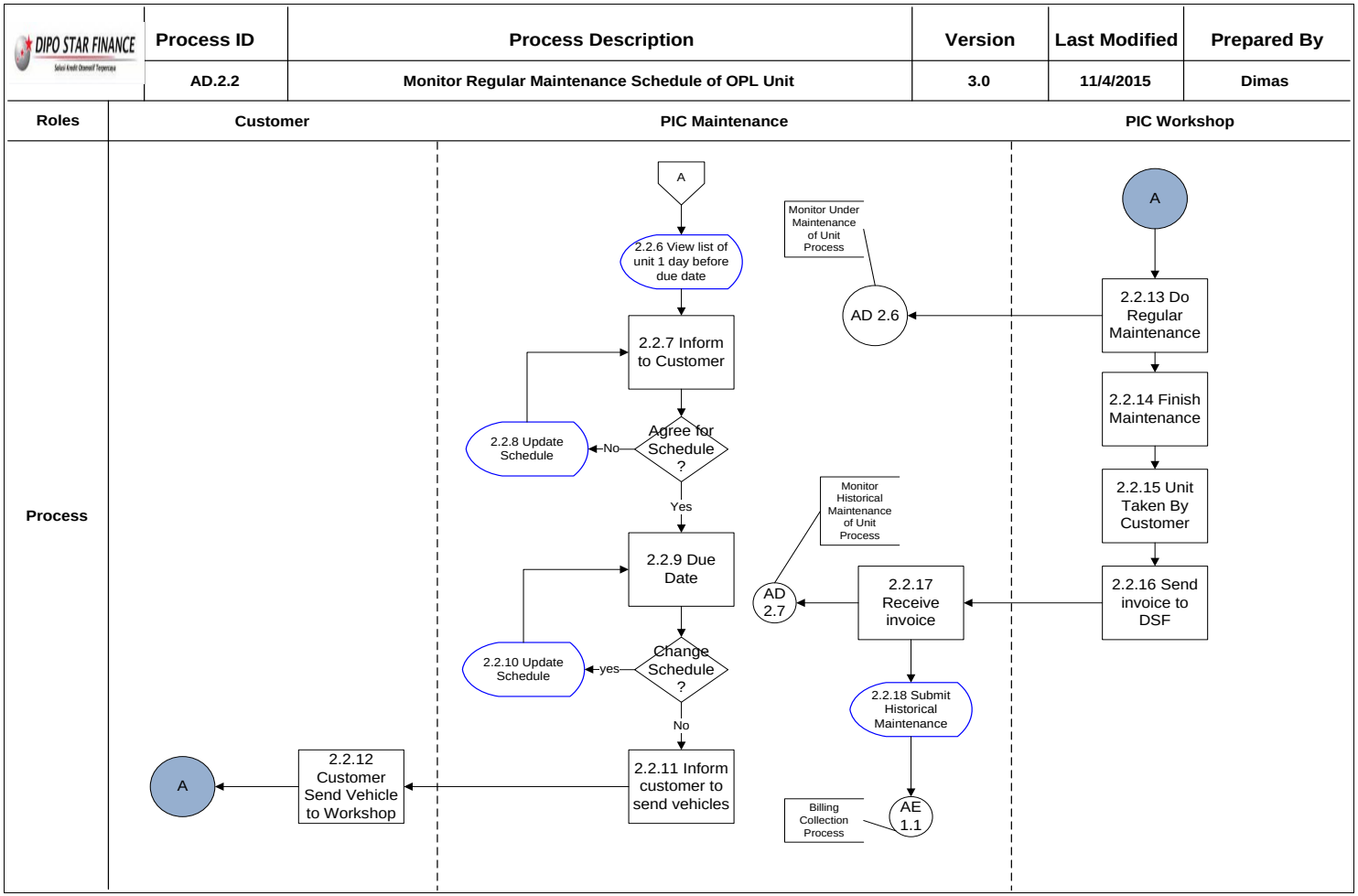


Figure 7 – Detail Level Process Diagram of Monitor Regular Maintenance Schedule

- **Process description**

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.2.6	View list of unit 1 day before due date	After 2 weeks before due date	To View upcoming schedule maintenance	PIC Maintenance	1.7.1	Data Maintenance Schedule	Reminder
	Business Rules: - View list of unit 1 day before due date conduct after work order created and View schedule again to remind customer one day before due date. - PIC Maintenance check one day in calendar day before due date by system to view upcoming schedule and inform the customer to send vehicle.						
AD.2.2.7	Inform The Customer	After view schedule	Inform the customer	PIC Maintenance		Data Maintenance Schedule	Reminder by phone or email
	Business Rules: - After view the schedule, PIC Maintenance inform customer by phone or email. - In this process DSF remind the customer to send their vehicle to workshop						
AD.2.2.8	Update Schedule	After Inform Customer	To update schedule maintenance	PIC Maintenance	1.7.1	Data Maintenance	Update schedule
	Business Rules: - Update schedule process occur after the customer not agree with the schedule for maintenance. The Customer can propose new schedule or PIC Maintenance can give suggestion. - PIC Maintenance update schedule by system.						

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.2.9	Due Date	After inform the customer	Check Due Date	PIC Maintenance	1.7.1	Data Maintenance	Schedule Confirm for Maintenance
	Business Rules: - PIC Maintenance confirm for maintenance to customer. - If any change occurs, PIC maintenance will update the schedule and reconfirm again.						
AD.2.2.10	Update Schedule	After due date	To update schedule maintenance	PIC Maintenance	1.7.1	Data Maintenance	Update schedule
	Business Rules: - Update schedule process occur when customer confirm to change the schedule for maintenance. - The Customer can propose new schedule or from PIC Maintenance Suggestion. - PIC Maintenance update schedule by system.						
Ref. # (Process ID)	**Activity**	**Freq.**	**Objectives**	**Responsibility (Job Roles)**	**Related RTM No.**	**Input (Doc & Format)**	**Output (Doc & Format)**
AD.2.2.11	Inform Customer to send vehicle	after confirm maintenance	To Inform Customer	PIC Maintenance		Data Maintenance Schedule	Reminder by phone or mail.
	Business Rules: - After confirmation for maintenance, PIC Maintenance informs the customer to send vehicle to workshop.						

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
	- PIC Maintenance informs the customer by phone or email.						
AD.2.2.12	Customer send vehicle to workshop	After inform customer to send vehicle	Customer send vehicle to workshop	Customer		Data Maintenance Schedule	
	Business Rules: - After customer get information from PIC Maintenance, Customer send vehicle to workshop						
AD.2.2.13	Do Regular Maintenance	After Customer send vehicle	Workshop do the regular maintenance	PIC Workshop		Work Order	
	Business Rules: - Regular Maintenance conducts by PIC workshop after Customer send their vehicle to Workshop. - PIC Workshop check and do Regular Maintenance based on work order. - PIC Workshop informs the status of unit when under maintenance to PIC Maintenance.						
AD.2.2.14	Finish Maintenance	After do regular maintenance	Workshop finish the maintenance	PIC Workshop			Maintenance Report
	Business Rules: - Workshop finishing the PIC maintenance and also inform customer to take their unit. - PIC Workshop informs the customer by phone or email to take their unit.						

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.2.15	Unit Taken by Customer	After Finish Maintenance	Customer take unit	Customer			
	Business Rules: - Unit Taken by Customer is conduct by customer after PIC Maintenance informs unit has been done for maintenance. - PIC Workshop tells PIC Maintenance the unit has been taken by customer.						
AD.2.2.16	Send Invoice	After unit taken by customer	Workshop send invoice to DSF	PIC Workshop		Maintenance Report	Invoice
	Business Rules: - Send Invoice is conduct by PIC Workshop after unit has been taken by customer. - PIC workshop create invoice and then the invoice send to PIC Maintenance. Invoice consists of list part unit or service. - Invoice send by mail or courier.						
AD.2.2.17	Receive Invoice	After send Invoice	Receive invoice from workshop	PIC Maintenance		Workshop invoice	Invoice from DSF
	Business Rules: - After receive invoice from workshop, PIC Maintenance create DSF invoice and send to customer to get payment. In this process PIC maintenance input historical maintenance of unit that includes with maintenance cost.						
AD.2.2.18	Submit Historical	After Receive Invoice	To submit Historical Maintenance of unit	PIC Maintenance	1.7.4	Invoice	Data Historical Maintenance

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
	Maintenance						
	Business Rules: - PIC Maintenance submits data Historical Maintenance of unit. - Maintenance cost and Maintenance Type that include in Historical Maintenance of unit is needed by billing process to identify the billing process. - Type of Maintenance consist of Full Maintenance especially Back charge and CSD.						

3.2.4 AD.2.3 Monitor Maintenance Schedule of Replacement Unit

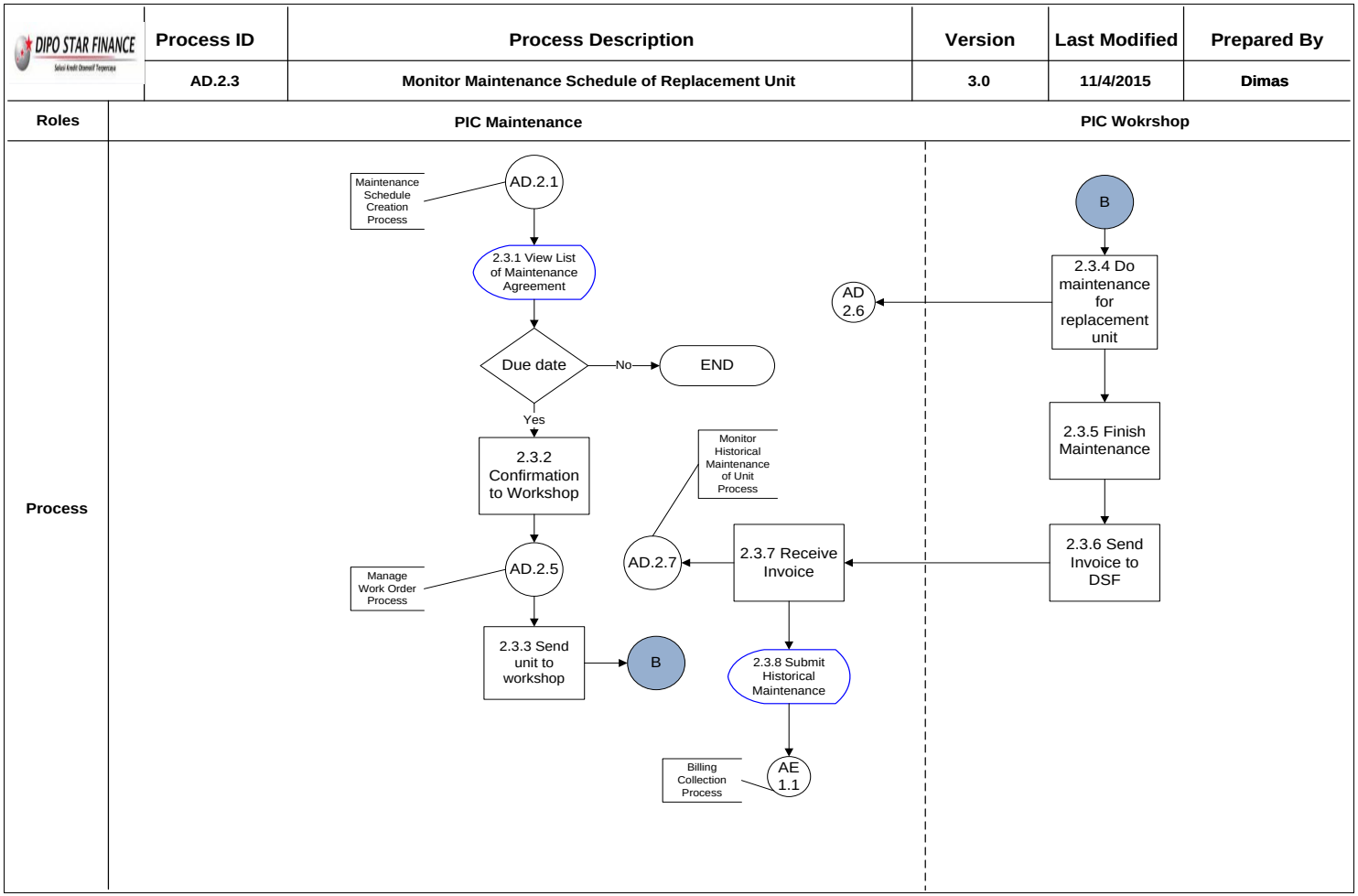


Figure 8 – Detail Level Process Diagram of Monitor Replacement Maintenance Schedule

- **Process description**

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.3.1	View list of Maintenance Agreement	After update schedule maintenance	To check schedule maintenance for replacement unit	PIC Maintenance	1.7.1	Data Maintenance Schedule	Reminder
	Business Rules: - PIC Maintenance conduct view list of Maintenance Agreement after update schedule maintenance for replacement unit. - PIC Maintenance view schedule for replacement unit and check due date schedule maintenance. - Relates to the maintenance, PIC Maintenance will do workshop booking.						
AD.2.3.2	Confirmation to Workshop	After view schedule replacement	To confirm workshop and booked workshop	PIC Maintenance		Data Maintenance Schedule	Work Order
	Business Rules: - After view schedule maintenance for replacement unit, PIC Maintenance Confirm and booked the workshop for maintenance. - PIC Maintenance creates Work Order for replacement unit. - PIC Maintenance will send unit to workshop.						
AD.2.3.3	Send Unit to Workshop	After confirmation to workshop	Send unit to workshop	PIC Maintenance		Data Maintenance Schedule	Work Order
	Business Rules: - Send unit to workshop is conduct by PIC Maintenance after get confirmation from workshop.						

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
	- PIC Maintenance sends the replacement unit and also sends the work order.						
AD.2.3.4	Do Maintenance for replacement unit	After send unit and work order to Workshop	Workshop do maintenance for replacement unit	PIC Workshop		Work Order	
	Business Rules: - After PIC Maintenance send unit and work order to workshop, PIC workshop do regular maintenance for replacement unit. - PIC Workshop will inform PIC Maintenance status of unit when under maintenance.						
AD.2.3.5	Finish Maintenance	After do Maintenance	Workshop create report after finish maintenance	PIC Workshop		Work Order	Maintenance Report
	Business Rules: - PIC Workshop finishes the maintenance and informs PIC Maintenance that the replacement unit has been done for maintenance. - PIC Maintenance will take unit from workshop.						
AD.2.3.6	Send invoice to DSF	After finish maintenance	Workshop send invoice to DSF	PIC Workshop		Maintenance Report	Invoice
	Business Rules: - PIC Workshop send invoice to PIC Maintenance. - Invoice send invoice by courier or mail.						

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.3.7	Receive Invoice	After send invoice	Receive invoice from workshop	PIC Maintenance		Workshop invoice	DSF invoice
	Business Rules: - PIC Maintenance Receive Invoice from Workshop. - DSF will pay the maintenance cost for replacement unit. - PIC Maintenance will note historical maintenance from replacement unit.						
AD.2.3.8	Submit Historical Maintenance	After Receive Invoice	To submit Historical Maintenance of unit	PIC Maintenance	1.7.4	Invoice	Data Historical Maintenance
	Business Rules: - PIC Maintenance submits data Historical Maintenance of unit. - Maintenance cost and Maintenance Type that include in Historical Maintenance of unit is needed by billing process to identify the billing process. - Type of Maintenance consist of Full Maintenance especially Back charge and CSD.						

3.2.5 AD.2.4 Manage Irregular Maintenance Request of OPL Unit

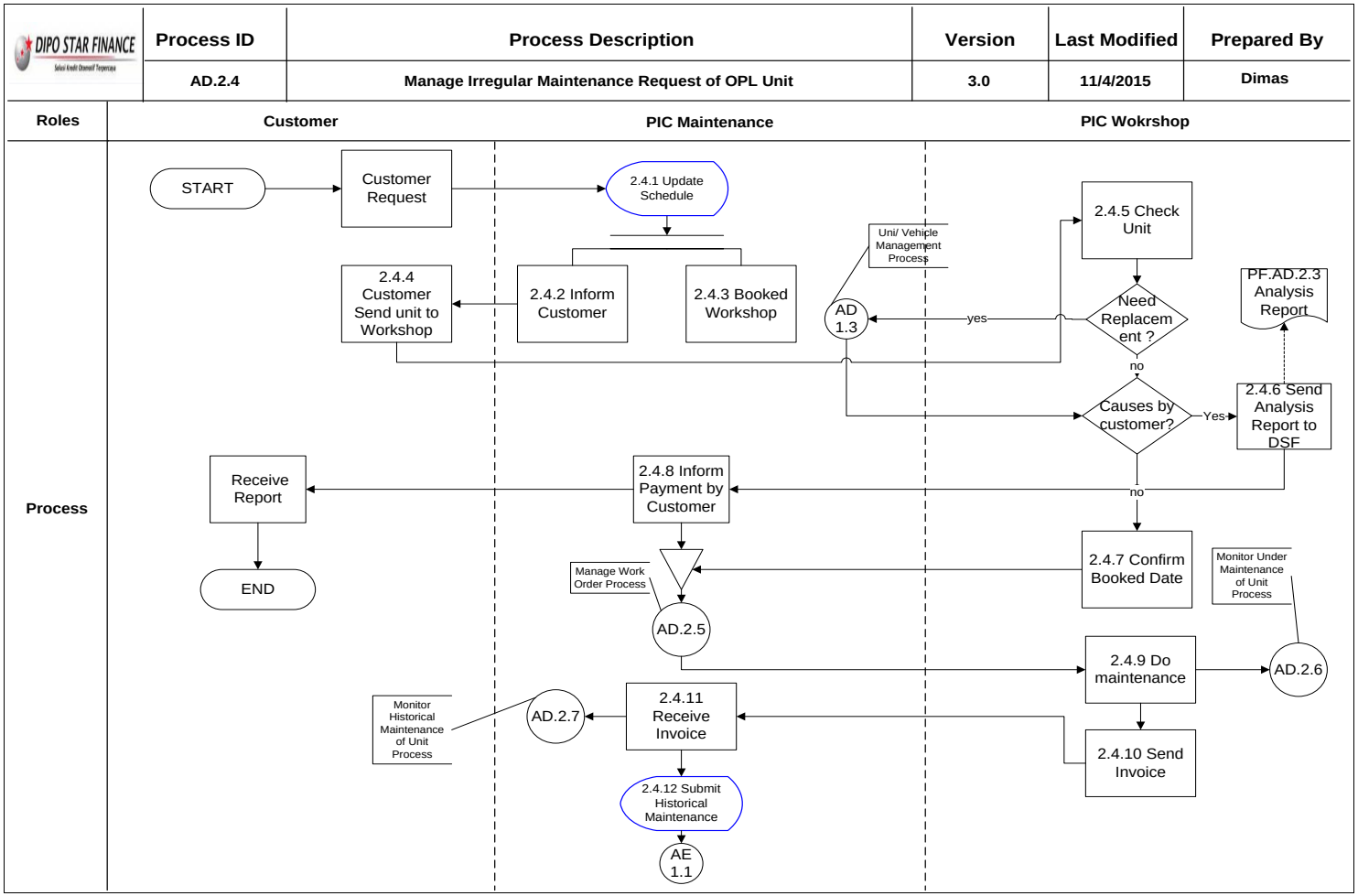


Figure 9 – Detail Level Process Diagram of Manage Irregular Maintenance Request

- **Process description**

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.4.1	Update Schedule	After Customer Request	To update schedule for irregular maintenance	PIC Maintenance	1.7.1	Customer Request	Data Maintenance Schedule
	Business Rules: - Update Schedule is conduct by PIC Maintenance after get request from customer. - PIC Maintenance updates the schedule of unit for irregular maintenance.						
AD.2.4.2	Inform Customer	After update schedule	To Inform the customer	PIC Maintenance		Data Maintenance Schedule	Reminder by phone or email
	Business Rules: - Inform Customer conduct by PIC Maintenance after PIC update Schedule. - PIC Maintenance informs by phone or email customer to send vehicle to workshop. - User will be informed for maintenance according to maintenance schedule. - Relates to the maintenance, PIC Maintenance will do workshop booking.						
AD.2.4.3	Booked Workshop	After Input schedule	To Booked Workshop for irregular Maintenance	PIC Maintenance		Data Maintenance Schedule	Confirmation from workshop
	Business Rules: - PIC Maintenance confirm booked workshop - PIC Maintenance confirms date for irregular maintenance to workshop.						

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.4.4	Customer send unit to workshop	After Inform the customer	Customer send unit to workshop	PIC Maintenance		Data Maintenance Schedule	
	Business Rules: - Customer send unit to workshop.						
Ref. # (Process ID)	**Activity**	**Freq.**	**Objectives**	**Responsibility (Job Roles)**	**Related RTM No.**	**Input (Doc & Format)**	**Output (Doc & Format)**
AD.2.4.5	Check unit	after customer send unit to workshop	To check unit damage if need replacement	PIC workshop		Data Maintenance Schedule	Report from workshop
	Business Rules: - PIC Workshop check unit damage and create report or announcement that this unit need replacement or no.						
AD.2.4.6	Send analysis Report to DSF	After check unit	Send report to DSF	PIC Workshop		Unit check	Report from workshop
	Business Rules: - PIC Workshop send report to DSF to explain this unit damage because customer. Report send by post. - This include Confirmation Booked Date workshop						
AD.2.4.7	Confirm Booked Date	After check unit	Send report to DSF	PIC Workshop		Unit check	Report from workshop

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
	Business Rules: - PIC Workshop send report to DSF to explain this unit damage because itself and create Work Order. - PIC Workshop confirmation for Booked date and send estimated price, and also maintenance estimated time.						
AD.2.4.8	Inform Payment by Customer	After report send to DSF	To inform customer for payment maintenance	PIC Maintenance		Report from workshop	Information for Payment
	Business Rules: - Inform payment by customer can conduct after PIC Maintenance receive causes irregular report from workshop and on that report the reason for irregular maintenance is because customer. - Inform the customer for payment maintenance and also explain the unit damage happen because customer. - PIC Maintenance Create Work Order.						

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.4.9	Do Maintenance	After create Work Order	To repair the unit	PIC Workshop		Work Order	Status Vehicle
	Business Rules: - PIC Workshop repair the unit based on Work Order.						
AD.2.4.10	Send Invoice	After Repair the unit	Workshop send invoice to DSF	PIC Workshop		Work Order	Invoice

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
	Business Rules: - PIC Workshop send invoice to DSF.						
AD.2.4.11	Receive Invoice	After send invoice	Receive invoice from workshop	PIC Maintenance		Workshop invoice	Invoice from DSF
	Business Rules: - PIC Maintenance Receive Invoice from Workshop and paid the cost.						
AD.2.4.12	Submit Historical Maintenance	After Receive Invoice	To submit Historical Maintenance of unit	PIC Maintenance	1.7.4	Invoice	Data Historical Maintenance
	Business Rules: - PIC Maintenance submits data Historical Maintenance of unit. - Maintenance cost and Maintenance Type that include in Historical Maintenance of unit is needed by billing process to identify the billing process. - Type of Maintenance consist of Full Maintenance especially Back charge and CSD.						

3.2.6 AD.2.5 Manage Work Order

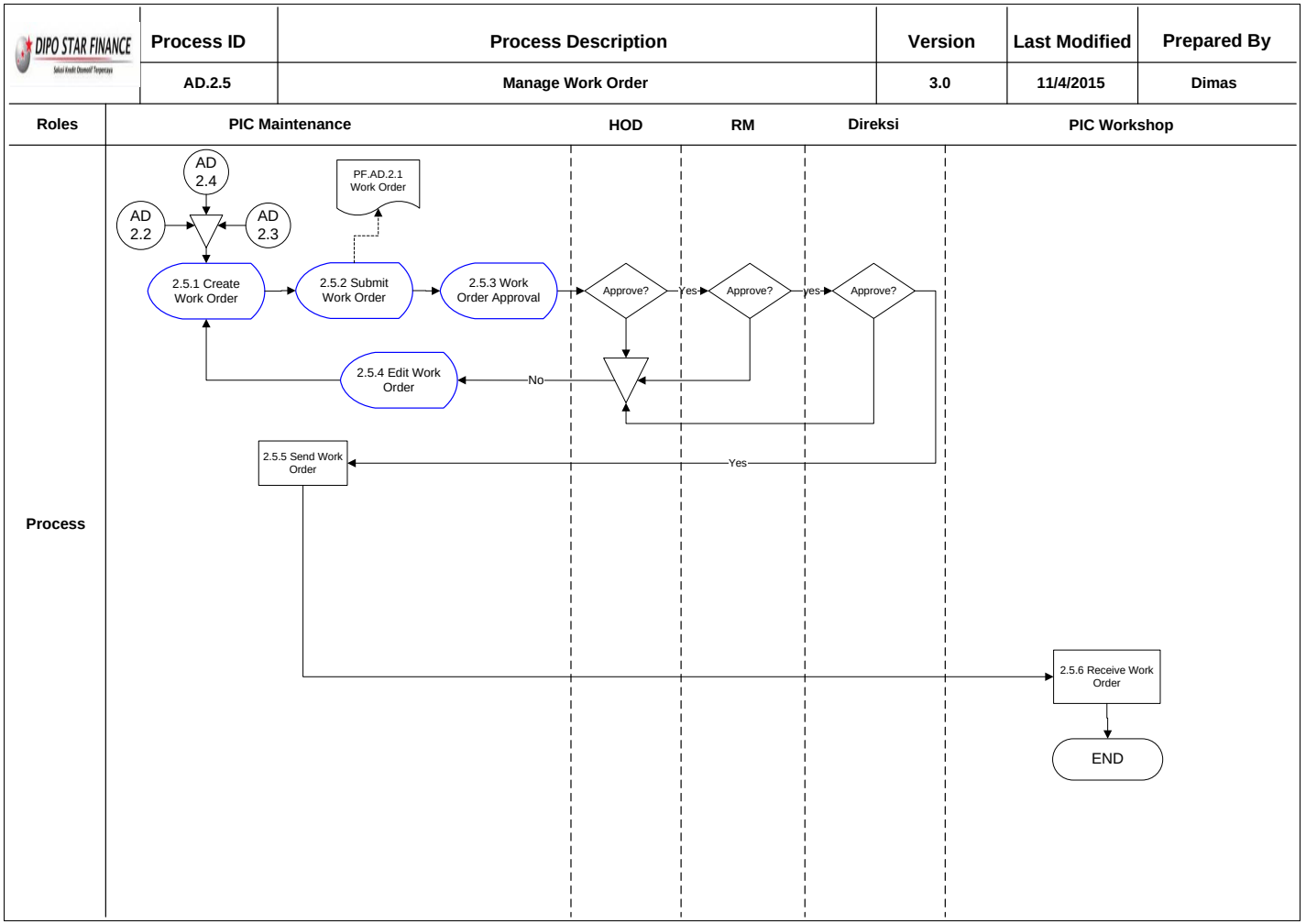


Figure 10 – Detail Level Process Diagram of Manage Work Order

- **Process description**

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.5.1	Create Work Order	after check schedule	N/A	PIC Maintenance	1.7.3	Data Work Order	Work Order Document Created
	Business Rules: - Work order triggered by regular maintenance schedule, this Work Order created 2 weeks before maintenance schedule, and also from irregular Maintenance to create work order input the data from work list document						
AD.2.5.2	Submit Work Order	after Create Work Order	To submit the work order	PIC Maintenance	1.7.3	Data Work Order	Data Work Order and Hard Copy Work Order
	Business Rules: - PIC Maintenance submits the work order to get approval. - PIC Maintenance Print the Work Order.						
AD.2.5.3	Work Order Approval	After Work Order Created	To Make sure Work Order before submit	PIC Maintenance	1.7.3	Data Work Order	Valid Work Order
	Business Rules: After Work Order Created, On this stage, work order will be going into approval process from HOD to Directors based on Maintenance cost. - Approval path HOD for maintenance cost from range Rp. 2.000.000 – Rp. 3.000.000						

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
	- Approval path RM for maintenance cost from range Rp. 3.000.001 – Rp. 4.000.000 - Approval path Director for maintenance cost above Rp. 4.000.001						
AD.2.5.4	Edit Work Order	After Work order reject	To revise Work Order	PIC Maintenance	1.7.3	Data Work Order	Revised Work Order
	Business Rules: - If any stake holder not approve, work order will be revised. After revised, work order will be going into approval process again.						
AD.2.5.5	Send Work Order	after work Order Approved	Send Work Order to Workshop	PIC Maintenance			Work Order
	Business Rules: - PIC Maintenance send Work Order to Workshop						
AD.2.5.6	Receive Work Order	after Send Work Order	To receive Work Order from DSF	PIC Workshop			Work Order
	Business Rules: - PIC Workshop receive Work Order from DSF.						

3.2.7 AD.2.6 Monitor Under Maintenance of Unit

Process ID	Process Description	Version	Last Modified	Prepared By
AD.2.6	Monitor Under Maintenance of Unit	3.0	11/4/2015	Dimas

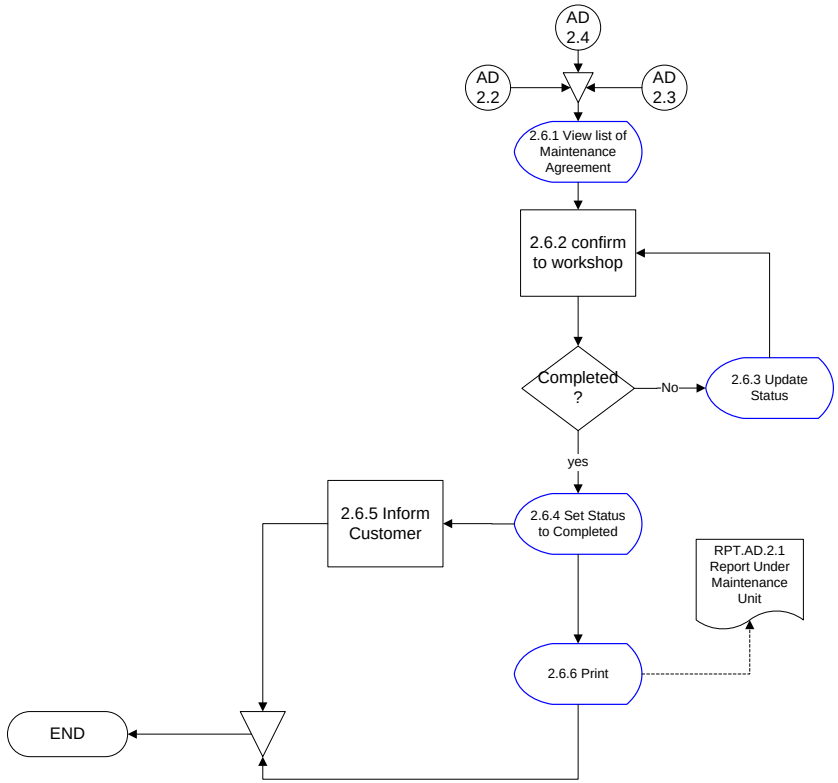
Roles	PIC Maintenance
Process	

Figure 11 – Detail Level Process Diagram of Monitor Under Maintenance Unit

- **Process description**

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.6.1	View list of under maintenance status	After unit under maintenance	To check unit when under maintenance	PIC Maintenance	1.7.2	Report Maintenance	List unit under maintenance
	Business Rules: - PIC Maintenance view list unit that under maintenance.						
AD.2.6.2	Confirm Workshop	After view list of under maintenance status	To get confirmation about maintenance duration	PIC Maintenance	1.7.2	List unit under maintenance	Status unit under maintenance
	Business Rules: - PIC Maintenance contact workshop to get information about under maintenance unit. PIC Maintenance asks information about maintenance duration.						
AD.2.6.3	Update Status	After confirm to workshop	To update status of unit under maintenance	PIC Maintenance	1.7.2	Status Unit	Update status
	Business Rules: - PIC Maintenance update status to ongoing if unit still under maintenance. PIC Maintenance updates status to wait parts coming if unit need repaired for some parts. PIC Maintenance always update status if unit still not complete for maintenance						

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.6.4	Set Status to completed	After Workshop Confirmation	To update status to complete	PIC Maintenance		Maintenance Status	Update Status
	Business Rules: - PIC Maintenance updates status to complete after workshop confirm unit has been finish for maintenance.						
Ref. # (Process ID)	**Activity**	**Freq.**	**Objectives**	**Responsibility (Job Roles)**	**Related RTM No.**	**Input (Doc & Format)**	**Output (Doc & Format)**
AD.2.6.5	Inform Customer	After set status to completed	To Inform Customer	PIC Maintenance	1.7.2	Status Maintenance	Information by phone or email
	Business Rules: - PIC Maintenance inform customer to take the unit.						
AD.2.6.6	Print	After set status to completed	To print Report under maintenance unit	PIC Maintenance	1.7.2	Status Maintenance	Report under maintenance unit
	Business Rules: - PIC Maintenance Print report under maintenance unit.						

3.2.8 AD.2.7 Monitor Historical Maintenance of Unit

Process ID	Process Description	Version	Last Modified	Prepared By
AD.2.7	Monitor Historical Maintenance of Unit	3.0	11/4/2015	Dimas

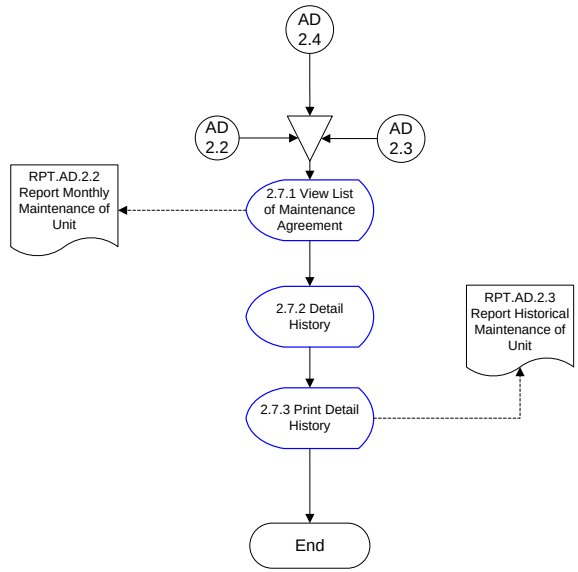
Roles	PIC Maintenance
Process	

Figure 12 – Detail Level Process Diagram of Monitor Historical Maintenance of Unit

- **Process description**

Ref. # (Process ID)	Activity	Freq.	Objectives	Responsibility (Job Roles)	Related RTM No.	Input (Doc & Format)	Output (Doc & Format)
AD.2.7.1	View List of Maintenance agreement	after Finish Maintenance regular and irregular	To view list historical maintenance of unit	PIC Maintenance	1.7.4	Report Maintenance	List historical Maintenance of unit
	Business Rules: - PIC Maintenance view list of historical maintenance. - PIC Maintenance can print report Monthly Maintenance Unit.						
AD.2.7.2	Detail History	After View Historical Maintenance	To view detail history of unit	PIC Maintenance	1.7.4	List Historical Maintenance of Unit	Detail History of unit
	Business Rules: - PIC Maintenance view Detail History of unit						
AD.2.7.3	Print Detail History	After view Detail History	To Print History of unit	PIC Maintenance	1.7.4	Detail History of unit	Hardcopy History
	Business Rules: - PIC Maintenance Print Detail History.						

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4 Functional Decomposition

This chapter provides an overview of the high level mapping of processes determines the available functionality and how the future of processes will be supported using Operating Lease Support System.

Lv 0	Lv1		Lv2		Lv3		Functions Name
	ID	Process Name	ID	Sub-Process Name	ID	Sub-Process Name	
Operating Lease	AD	Unit Management and Maintenance Process	AD.2	Unit/ Vehicle Maintenance Process	AD.2.1	Maintenance Schedule Creation	1.7.1 Create Regular Maintenance Schedule
					AD.2.2	Monitor Regular Maintenance Schedule of OPL Unit	1.7.1 Monitor Regular Maintenance
					AD.2.3	Monitor Maintenance Schedule of Replacement Unit	1.7.1 Monitor Regular Maintenance
					AD.2.4	Manage Irregular Maintenance Request of OPL Unit	1.7.1 Manage Irregular Request
					AD.2.5	Manage Work Order	1.7.3 Manage Work Order
					AD.2.6	Monitor Under Maintenance Unit	1.7.2 Monitor Under Maintenance
					AD.2.7	Monitor Historical Maintenance of Unit	1.7.4 Monitor Historical Unit

5 Functional Specification Summary

This chapter provides an overview of the functional Specification summary includes report, print form, and data that will be developed in Operating Lease Phase-2.

NO.	FUNCTIONAL SPECIFICATION ID	FUNCTIONAL SPECIFICATION NAME	RELATED ID PROCESS	DESCRIPTION AND PURPOSE	STANDARD /CUSTOM
1	FC.AD.2.1	Maintenance Schedule Creation	AD.2.1.1 View list of maintenance agreement AD.2.1.2 Create Schedule AD.2.1.3 Update Schedule	1. To view list of maintenance agreement. 2. update schedule maintenance unit. 3. create schedule for new replacement unit	Custom
	Screen : 1. List of Maintenance Agreement.				
2	FC.AD.2.2	Monitor Regular Maintenance Schedule of OPL Unit	AD.2.2.1 View list of maintenance agreement AD.2.2.8 Update Schedule AD.2.2.10 Update Schedule AD.2.2.18 Submit Historical Maintenance	1. To view list of maintenance agreement. 2. Update schedule if any change from due date schedule. 3. To submit Historical Maintenance.	Custom
	Screen : 1. List of Maintenance Agreement.				

	2. Update Schedule.				
3	FC.AD.2.3	Monitor Maintenance Schedule of Replacement Unit	AD.2.3.1 View list of maintenance agreement AD.2.3.8 Submit Historical Maintenance	1. To view list of maintenance agreement of replacement unit. 2. To submit Historical Maintenance.	Custom
	Screen : 1. List of Maintenance Agreement.				
4	FC.AD.2.4	Manage Irregular Maintenance Request of OPL Unit	AD.2.4.1 Update Schedule AD.2.4.12 Submit Historical Maintenance	1. To Update schedule maintenance unit for Irregular accident. 2. To submit Historical Maintenance.	Custom
	Screen : 1. List of Maintenance Agreement. 2. Update Schedule.				
5	FC.AD.2.5	Manage Work Order	AD.2.5.1 Create Work Order AD.2.5.2 Submit Work Order AD.2.5.4 Edit Work Order AD.2.5.5 Print Work Order	1. To Create Work Order for regular and irregular maintenance. 2. Submit work order to get approval, if any mistakes happen work order can be edit, after get approval work order will be print.	Custom

	Screen : 1. Create Work Order. 2. Edit Work Order.				
6	FC.AD.2.6	Monitor Under Maintenance Unit	AD.2.6.1 View List of Maintenance Agreement AD.2.6.3 Update Status AD.2.6.4 Update Status Set to completed AD.2.6.6 Print	1. To view list of maintenance agreement to check status of under maintenance. 2. update status for under maintenance unit, to print report under maintenance unit	Custom
	Screen : 1. List of Maintenance Agreement. 2. Set Status				
7	FC.AD.2.7	Monitor Historical Maintenance of Unit	AD.2.7.1 View List of Maintenance Agreement AD.2.7.2 Detail History AD.2.7.3 Print	1. To view list of maintenance agreement to check detail history. 2. To Print Historical maintenance of unit.	Custom
	Screen : 1. List of Maintenance Agreement. 2. Detail History.				
Total Screen Unit/ Vehicle Maintenance Process: **4 Screen**					

- **Report List(RPT) /Print Form (PF)/ Data (DT)**

NO.	REPORT ID #	REPORT/PRINT FORM/DATA	RELATED PROCESS	DESCRIPTION AND PURPOSE	REQUIRED INFORMATION AND CONTENT	STANDARD /CUSTOM
1	PF.AD.2.1	Work Order	AD.2.5.5	Work Order as decree for regular and irregular maintenance	No. Work Order, Workshop Code, Unit Type, etc.	Custom
2	RPT.AD.2.1	Report Under Maintenance Unit	AD.2.6.5	To report status unit when under maintenance	No. Report Under Maintenance, Contract Number, Unit Type, Police Number, etc.	Custom
3	RPT.AD.2.2	Report Monthly Maintenance Unit	AD.2.7.1	To report Maintenance Unit per Monthly	Agreement Number, Police Number, Type Unit, etc.	Custom
4	RPT.AD.2.3	Historical Maintenance Unit	AD.2.7.2	To Report historical maintenance of unit	Contract Number, Unit Type, Police Number, Maintenance Cost, etc.	Custom
Total Report Unit/ Vehicle Maintenance Process: **3 Report** **Total Print Form Unit/ Vehicle Maintenance Process:** **1 Report**						

APPENDIX – USER STORIES AND FUNCTIONAL DECOMPOSITION MAPPING

As for the functions mapping, we can see the overall process and the connections with the User Stories Document created at June, 11th 2015 below (the User Stories only features Prioritized Function of Regular Maintenance for Phase-2):

User Stories Operating Lease	Functional Decomposition To Be Design	Remarks

Phase-2						
Prioritized Function Features	**User Stories Features**	**Lv.2 Sub-Process Name**	**Lv.3 Sub-Process Name**	**Functions Name**	**Features Name**	
Regular Maintenance	Regular Maintenance Schedule Monitoring	Unit Maintenance Process	AD.2.1 Maintenance Schedule Creation AD.2.2 Monitor Regular Maintenance Schedule of OPL Unit AD.2.3 Monitor Maintenance Schedule of Replacement Unit	Monitor Regular Maintenance Schedule	View Regular Maintenance Schedule Input Maintenance Date Request Print Regular Maintenance Schedule Convert Regular Maintenance Schedule to Excel/PDF Regular Maintenance Schedule Reminder Setting of Reminder	Monitor Regular Maintenance Schedule is mapped with AD.2.1 Regular Maintenance Schedule Creation, AD.2.2 Monitor Maintenance Regular / Replacement Schedule. The User Stories of Regular Maintenance Schedule Monitoring is accommodated by the functional decomposition To Be Design AD.2.1 Regular Maintenance Schedule Creation, AD.2.2 Monitor Maintenance Regular / Replacement Schedule.
Irregular Maintenance	Manage Irregular Maintenance Request	Unit Maintenance Process	AD.2.4 Manage Irregular Maintenance Request of OPL Unit	Input schedule Irregular Maintenance	Input Schedule	The User Stories of Irregular Maintenance is accommodated by the functional decomposition To Be Design AD.2.3 Manage Irregular Maintenance Request
Create Work Order (including Approval for WO)	Create Work Order	Work Oder Process	AD.2.5 Manage Work Order	Manage Work Order	List of Work Order Create Work Order Edit Work Order View Work Order Submit Work Order Cancel Work Order Print Work Order	Create Work Order (including approval for SKD) is mapped with AB.2.4 Manage Work Oder Creation of Operating Lease. The User Stories Create Work Order is accommodated by the functional decomposition To Be Design AD.2.4 Manage Work Order.

					Convert Work Order Document to Excel/PDF	
Vehicle Under Maintenance Monitoring	To check maintenance process based on WO Compliment	Vehicle Under Maintenance Monitoring Process	AD.2.6 Monitor Under Maintenance Unit	Monitor Under Maintenance Vehicle	View under maintenance vehicle status Set under maintenance vehicle status Under maintenance Alert system Setting of Alert Print report of Under maintenance vehicle Convert report of Under maintenance vehicle to Excel/PDF	Monitor vehicle under Maintenance is mapped with AD.2.5 Monitor Under Maintenance Unit. The User Stories of under Maintenance unit is accommodated by the functional decomposition To Be Design AD.2.5 Monitor Under Maintenance Vehicle
Monitoring historical unit	To monitor history maintenance of unit	Monitor Historical Maintenance of Unit Process	AD.2.7 Monitor Historical Maintenance of Unit	Vehicle Maintenance History	List of Vehicle Maintenance History Print Vehicle Maintenance Convert Vehicle Maintenance to Excel/PDF	Monitor Historical of Maintenance unit is mapped with AD.2.6 Monitor Historical Maintenance Unit. The User Stories of Historical Maintenance of unit is accommodated by the functional decomposition To Be Design AD.2.6 Monitor Historical Maintenance of Unit