DISTRIBUTOR PARTS OPERATION MANUAL

HYUNDAI MOBIS | HYUNDAI

PART 1.
INTRO : GENERAL INFORMATION 5

01. INTRODUCTION OF HYUNDAI & GENESIS GENUINE PARTS 6
02. ROLES OF DISTRIBUTORS & PARTS MANAGERS 10
03. PARTS OPERATION SYSTEM - nMGN (New Mobis Global Network) 11
04. DISTRIBUTORS' INFORMATION AND KPI UPDATE 15
05. MOBIS PRICING POLICY 17
06. IMPORTANT FORMULAS 18
07. PARTS SUPPLY PROCEDURE 20

PART 2.
TECHNICAL INFORMATION 23

01. PARTS INFORMATION 24
02. STRUCTURE OF PART NUMBER 30
03. HOW TO READ PART INFORMATION 31

PART 3.
PARTS ORDER PREPARATION 35

01. ASSIGNING ORDER NUMBERS 36

PART 4.
PAYMENT ARRANGEMENT 39

01. IMPORTANCE OF PAYMENT ARRANGEMENT 40

PART 5.
ORDER 47

01. FLOW OF ORDER PROCESS 48
02. ORDER PLACEMENT 49
03. ORDER PLACEMENT RESULT 51
04. ORDER CONFIRMATION 52
05. PAYMENT REQUEST 55
06. PAYMENT ARRANGEMENT 56
07. ORDER PROCESSING 57
08. INVOICING & SHIPPING 59
09. ORDER & SALES SUMMARY STATUS 63

PART 6.
ETD & VOC 65

01. IMPORTANCE OF ETD & VOC REQUEST 66
02. ETD REQUEST 67
03. ETD REQUEST PLACEMENT 69
04. ETD REQUEST LIST 71
05. VOC REQUEST 75
06. VOC REQUEST PLACEMENT 77

PART 7.
PARTS CLAIM 79

01. ABOUT PARTS CLAIM 80
02. CLAIM PROCEDURE 85
03. SETTLEMENT OF CLAIMS : nMGN MANUAL 92
04. GUIDELINE FOR CLAIM EVIDENCE 95
05. FREQUENT CLAIM ERROR 106

PART 8.
PARTS PRICING 111

01. BASIC PRICING POLICY 112
02. SEVEN STEP PROCEDURE FOR PRICING 114
03. IDENTIFYNG PRICING OBJECTIVES 115
04. DETERMINE COST, VOLUME AND PROFIT RELATIONSHIPS 116
05. ANALYZE COMPETITOR'S PRICES AND OFFERS 118
06. DETERMINE PRICE 118
07. ADJUST PRICE 118
08. SELECT PRICING METHOD 119
09. PRICE ADJUSTMENT CYCLE AND NOTIFICATION 120
10. MOBIS PRICING FLOW 122
11. AUTO PARTS PRICE SURVEY 123
12. ATTACHMENT 124

PART 9.
INVENTORY MANAGEMENT 129

01. INVENTORY MANGEMENT THEORY 130
02. DEMAND FORECASTING 135
03. PURCHASE ORDER 141
04. PRACTICAL INVENTORY MANAGEMENT 145

PART 10-1.
WAREHOUSING 155

01. REQUIRED WAREHOUSE AREA CALCULATION 156
02. LOCATION NUMBERING SYSTEM 158
03. LOGISTICS INFORMATION SYSTEM - BAR CODE 162
04. LOCATION MANAGEMENT 165
05. NEW WAREHOUSE CONSTRUCTION 172
06. WAREHOUSE MANAGEMENT 184

PART 10-2.
WAREHOUSING (ECO-FRIENDLY PARTS) 201

07. ECO-FRIENDLY PARTS WAREHOUSE MANAGEMENT 202

PART 11.
ACCESSORIES 221

01. GENUINE ACCESSORIES 222
02. ACCESSORIES PART NUMBERING SYSTEM 223
03. ORDER PROCESS, PRICE AND PAYMENT 225
04. ACCESSORIES INFORMATION 226
05. MOBIS ACCESSORY DEVELOPMENT STRUCTURE 228
06. ACCESSORY OPPORTUNTIES & CHALLENGES 229
07. ACCESSORIES MARKETING SCHEDULE 230
08. ACCESSORY MARKETING 231
09. ACCESSORY ACRONYMS 240
10. ACCESSORY INVENTORY 241

PART 12.
PARTS CATALOG 243

01. PARTS CATALOG INTRODUCTION 244
02. EPC (Electronic Parts Catalog, Snap-on) 245
03. EPC EPC (Electronic Parts Catalog, Infomedia (Microcat)) 250
04. WPC (Web Parts Catalog) 256

PART 13.
FILE LAYOUT 259

01. OUTLINE 260
02. HEAD RECORD (FTP) 262
03. ORDER FILE 263
04. PRICE LIST 270
05. TECHNICAL FILE 271
06. REFERENCE INFORMATION 276

PART 14.
INTELLECTUAL PROPERTY PROTECTION 299

01. WHY INTELLECTUAL PROPERTY SHOULD BE PROTECTED 300
02. WHAT IS PROTECTED 301
03. GENUINE PARTS PACKAGING & LABEL 302
04. COMMON COUNTERFEIT 303
05. COUNTERFEIT SAMPLES 304
06. SIMPLE PROCEDURE TO DETECT SUSPICIOUS SHIPMENT 305
07. PROCEDURE FOR IP PROTECTION ACTIVITIES 306
08. SCOPE OF MOBIS IP PROTECTION 307

PART 15.
OUTRO : DEALER PARTS OPERATIONS CHECK LIST 309

01. FACILITY 310
02. ADMINISTRATION AND ORGANIZATION 316
03. PARTS PROCESS 332

PART 1.

GENERAL INFORMATION

01. INTRODUCTION OF HYUNDAI & GENESIS GENUINE PARTS

02. ROLES OF DISTRIBUTORS & PARTS MANAGERS

03. PARTS OPERATION SYSTEM – nMGN (New Mobis Global Network)

04. DISTRIBUTORS' INFORMATION AND KPI UPDATE

05. MOBIS PRICING POLICY

06. IMPORTANT FORMULAS

07. PARTS SUPPLY PROCEDURE

01. INTRODUCTION OF HYUNDAI & GENESIS GENUINE PARTS

WHAT ARE “HYUNDAI & GENESIS GENUINE PARTS”?

Hyundai & Genesis Genuine Parts are service parts and accessories which bear the Hyundai & Genesis trademark and are supplied exclusively by Hyundai Mobis (hereinafter collectively referred to as ‘Mobis’).

Hyundai & Genesis Genuine Parts are made according to rigid material specifications under strict quality control measures and are tested to meet or surpass standards in order to ensure durability.
In order to enable Hyundai to provide full warranty coverage and guarantee vehicle’s designed performance, distributors are requested to purchase only “Hyundai & Genesis Genuine Parts” and encourage dealers and customers to use only “Hyundai & Genesis Genuine Parts” when servicing HYUNDAI MOTOR COMPANY (hereinafter collectively referred to as ‘HMC’) vehicles.

WHY DO WE EMPHASIZE ON THE IMPORTANCE OF “HYUNDAI GENUINE PARTS”?

HMC & Mobis cannot guarantee that non-genuine parts fully meet HMC’s quality standards. They may fail to meet high safety, reliability and durability standards expected by customers, thus it could harm the reputation of Hyundai & Genesis brands and business of its distributors.
Even though non-genuine parts may be lower priced, their quality is most likely inferior to HMC’s quality and performance standards.

Using non-genuine parts may increase the chance of vehicle failure and HMC & Mobis would not be able to provide a warranty service to the vehicles that are damaged by using non-genuine parts.
In the long term, it is highly recommended to use only genuine parts to ensure superior service quality.

Non-genuine parts are categorized as below.

Category	Definition
Gray Parts	Genuine parts that are imported from other regions without the permission of HMC & Mobis. (Parallel imported parts)
Counterfeit Part	Fakes or unauthorized replicas of genuine parts. Counterfeit parts tend to have fake HMC / Mobis logos (resulting in trademark infringement) and have a reputation for being lower quality.
OEM Supplier Brands	Parts sold by OEM (Original Equipment Manufacturer) supplier with their own brands.
Aftermarket Parts	Parts manufactured and supplied by non-OEM companies with their own brands.

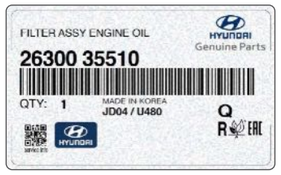
HMC GENUINE PARTS PACKAGE AND LOGO DESIGNS

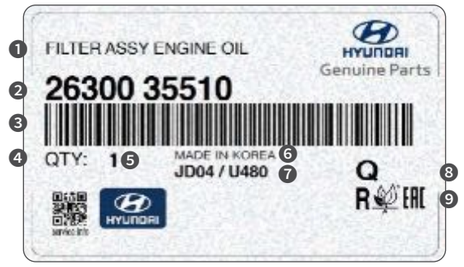
In order to build consistent brand identity and to differentiate from non-genuine parts, HMC utilizes unique designs and standards for its packages and logos. See the details of Hyundai and Genesis brand package and logo design below.

Category	Package	Logo
Hyundai		HYUNDAI Genuine Parts
Genesis		GENESIS
Hyundai & Genesis (Common)		HYUNDAI | GENESIS

PART LABEL INFORMATION

Part labels contain various information. As each text and number indicate specific information of the part, being able to comprehend the part labels can be of great help for users.
Below shows the details of its contents.

Brand	Package Labels (General)
Hyundai	
Genesis	
Hyundai & Genesis (Common)	



- Production date is shown in 4-byte code, in the format of "year & month & date" (Ex. JD04 = 2024/04/04)
- Supplier ± code is added (Each 4-byte code indicates a supplier)

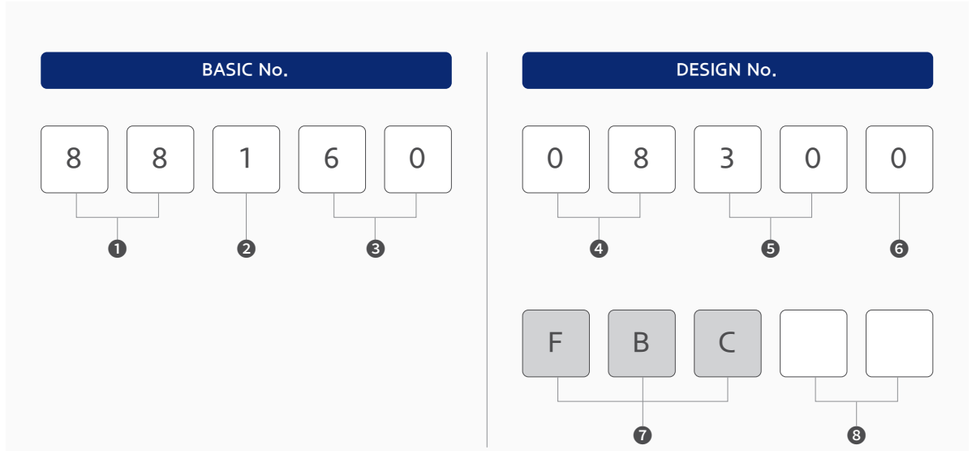
* Production year and month chart

yr.	15	16	17	18	19	20	21	22	23	24	25	26
Code	A	B	C	D	E	F	G	H	I	J	K	L
Mo.	1	2	3	4	5	6	7	8	9	10	11	12
Code	A	B	C	D	E	F	G	H	I	J	K	L

No.	Definition	Example
❶	Part Name	FILTER ASSY ENGINE OIL
❷	Part Number	2630035510
❸	Barcode (Part No. + Pack QTY + Date)	
❹	Quantity	1
❺	Unit	PCS
❻	Country	MADE IN KOREA
❼	Production Year & Month & Day	JD04
❽	Quality Mark	**Q** (Nonconformity), **I** (Inspection Standard), **J** (Quality Problem Report)
❾	Legal Code (Certification, Import Laws)	

PARTS NUMBER

Part number contains various information about the part as VIN does.
There are information of part group, applicable model, color code, etc.



❶	MAIN GROUP No.	Describes the part function or installation position
❷	SUB. GROUP No.	Detailed description of the MAIN GROUP No.
❸	BASIC DETAIL No.	Describes the part function
❹	VEHICLE MODEL No.	Describes the application model number
❺	DESIGN SERIAL No.	Distinguish the part from same BASIC No. and MODEL No.
❻	DESIGN REVISION No.	Revision number of the DESIGN SERIAL No.
❼	COLOR CODE	Color code
❽	SPARE	Spare code

(EXAMPLE)

Part No.	Part Name
88160-08300FBC	COVER-FR SEAT CUSHION-DRIVER
21100-02000	BLOCK ASSY-CYLINDER

02.
ROLES OF DISTRIBUTORS & PARTS MANAGERS

DISTRIBUTORS

As an exclusive distributor for the sale of authorized products in the territory, the distributor should be an effective market intermediary between the original manufacturer (OEM, in this case HMC / Mobis) and the customers / dealers.

In an assigned region, distributors should keep his/her role as a representative of HMC products and actively promote its sales by introducing new programs showing the highest standards of competence and workmanship.
Distributors should have and maintain sufficient and qualified staff to perform their duties.

Distributors are responsible for :

① Establishing sales infrastructures
② Growing the parts business
③ Setting the foundation for sustainable growth and continuous improvements
④ Managing the business and brand value and interfacing with the end customers

In addition, distributors are highly encouraged to submit a regular report based on the format prescribed by Mobis in nMGN including sales activities, operational figures, etc. See the paragraph [How to update monthly KPI report] in the same chapter.

PARTS MANAGER

A Parts Manager is required to fulfill his/her managerial responsibilities and encouraged to manage technical data which directly and indirectly improve parts operations.

Professional expertise of parts managers must not be limited to the immediate tasks and activities but also extends to the greater grasp of other variables affecting parts operations.

These may include :

① Designs, specifications and quality of vehicles
② Merchandise information, including materials, shapes and conditions of parts
③ Parts marketing (including general economy, market conditions and policies among competitors)
④ Parts inventory control management
⑤ Warehouse and stock management
⑥ Foreign trade business related to the imports of parts
⑦ Accounting and taxation
⑧ Personnel management and other general management skills
⑨ KPI analysis, including updating and sending reports to Mobis regularly

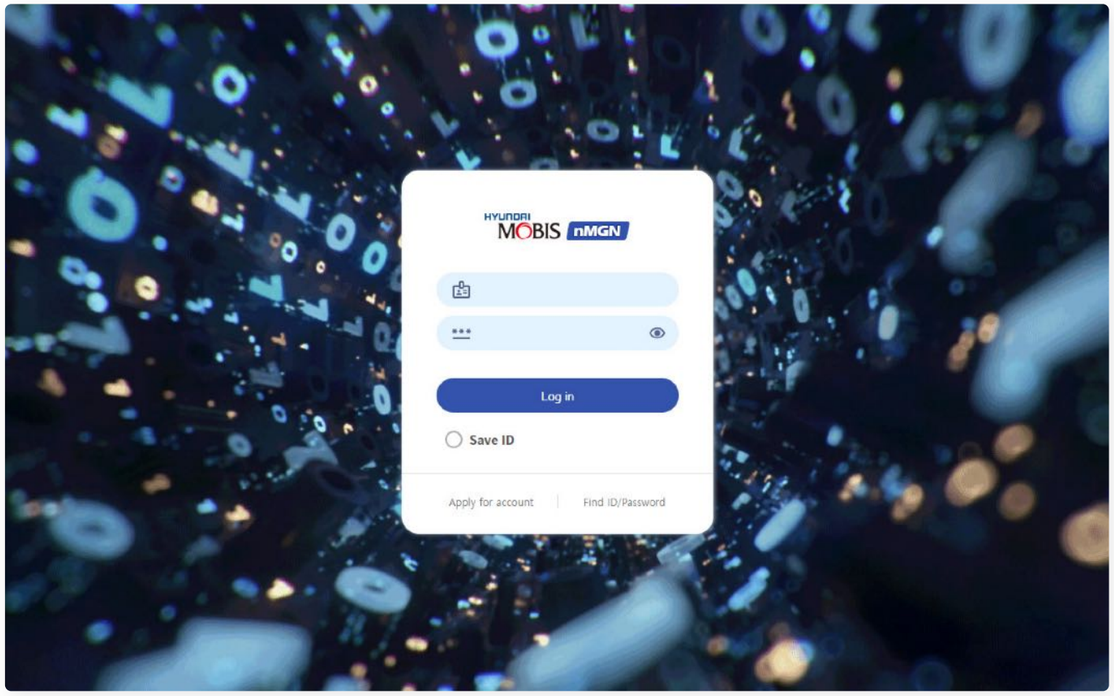
03.
PARTS OPERATION SYSTEM - nMGN (New Mobis Global Network)

WHAT IS nMGN?

nMGN(New Mobis Global Network) is a web-based system for general parts operation and information exchange between Mobis and distributors. This system can provide multiple functions and information for the distributors, such as order placement, technical information, claim status and more.

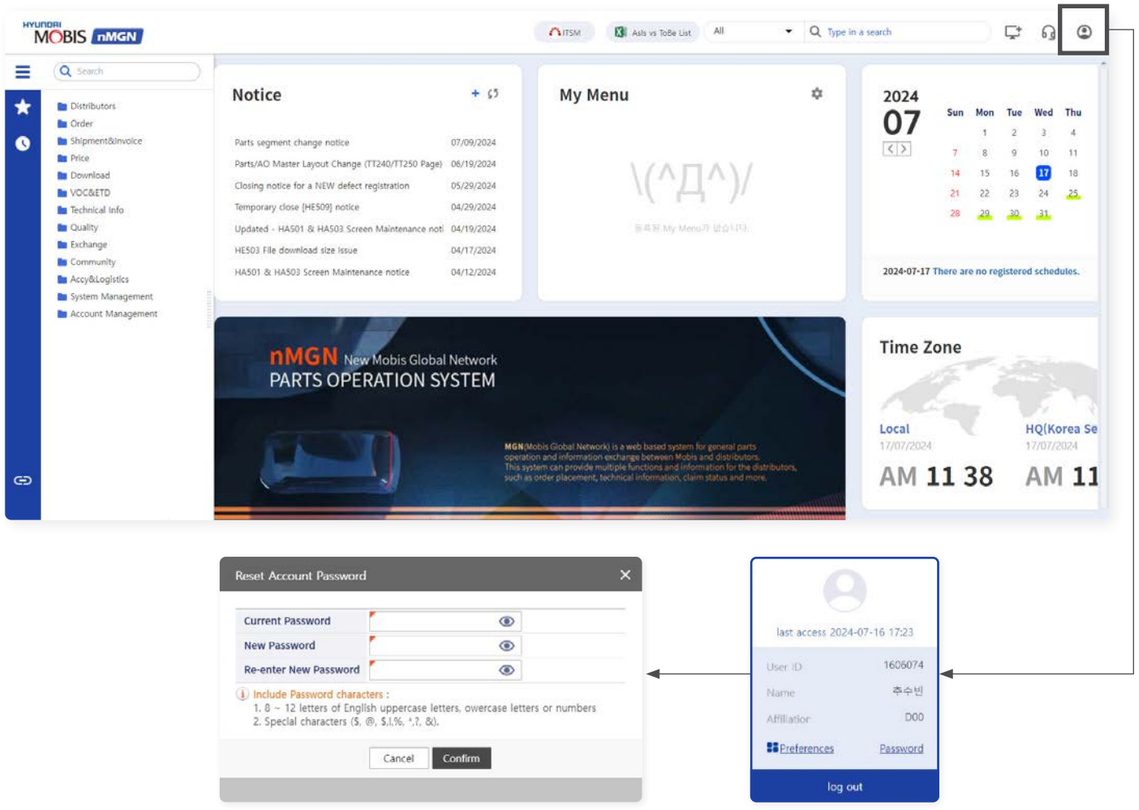
URL : https://nmgn.mobis.com/

Login Page



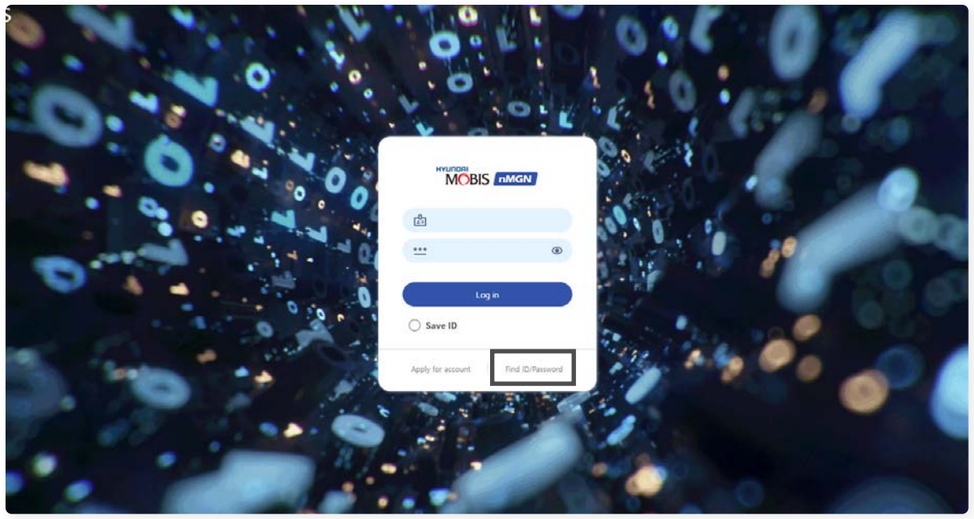
① This system is optimized for 1920 × 1080 pixel display and Edge/Chrome browser.
② For a security purpose, if a user does not access to the system for over 30 days of wrongly input password 5+ times, the user ID will be blocked. Also all users shall reset password every 90 days. To reset or find password, please refer to the following page.

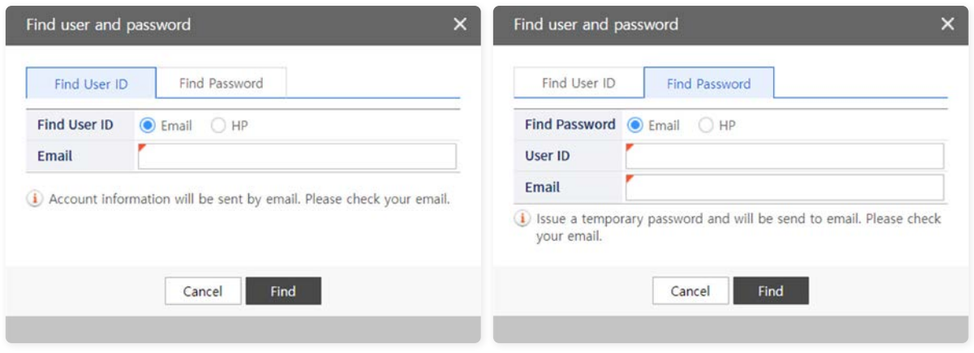
HOW TO RESET PASSWORD



① To reset password, click the human shaped icon in the red box above.
② Then, click on ‘Password’ on pop-up screen.
③ Input current password & new password : Please note that reuse of recently used passwords is not allowed; 5 recent passwords.

HOW TO FIND ID & INITIALIZE PASSWORD





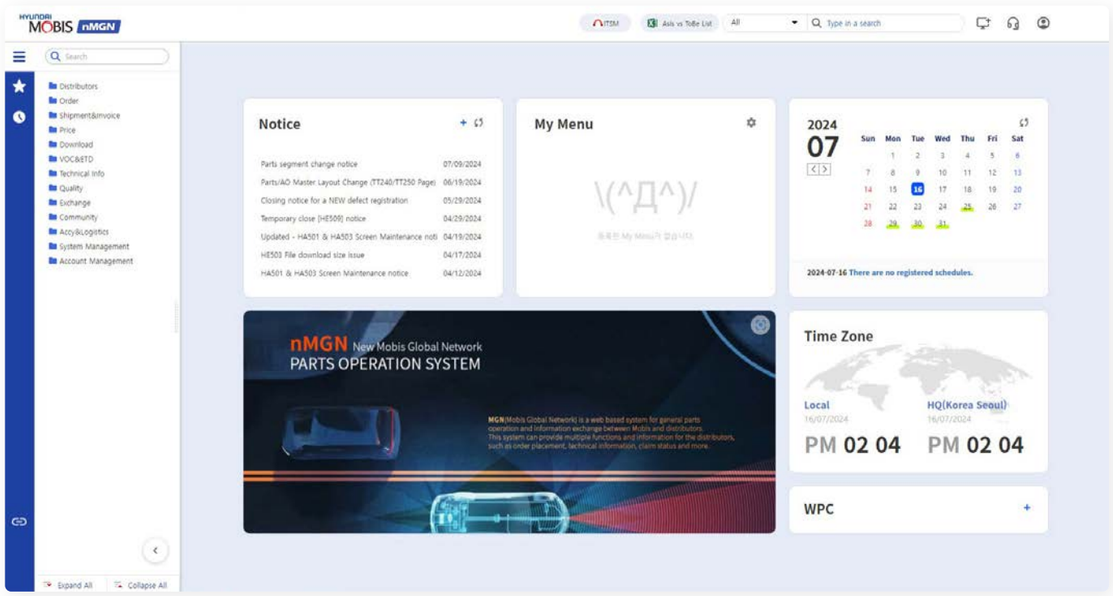
① To find ID or reset password, click the ‘Find ID/Password’ button in the red box above.
② If you cannot remember your ID, click ‘Find User ID’ tab on pop-up screen and input your email address. Then, ID will be sent to your mail.
③ If you cannot remember your password, click ‘Find Password’ tab on pop-up screen and input your ID & email. Then your password will be initialized with a temporary codes. It will be sent to your mail.
④ After receiving the temporary password, users are required to login into nMGN within the day.

FUNCTIONS ON nMGN

nMGN includes various functions for parts operation as below.

① Distributors : General + Parts Department Information / Price Structure List / Parts Order Plan / Order Process Code Summary / Monthly KPI Report
② Order : Order Processing / Payment
③ Shipment & Invoice : Shipment & Invoice details / FTA COO / Regular Info.
④ Price : Price / Promotion
⑤ Download : Order & Invoice File / Parts Master File / Price File
⑥ VOC & ETD : Request for ETD / VOC / package improvement
⑦ Technical Info : Parts Master / Parts Detail / Supersession / Multi / New / IRL list / Inventory Status
⑧ Community : Work Calendar / FAQ / Notice / DPOM / Defect Management
⑨ Accy & Logistics : Accessory List, Information / Logistics Management

Main Page



04. DISTRIBUTORS' INFORMATION AND KPI UPDATE

DISTRIBUTORS' INFORMATION AND KPI UPDATE

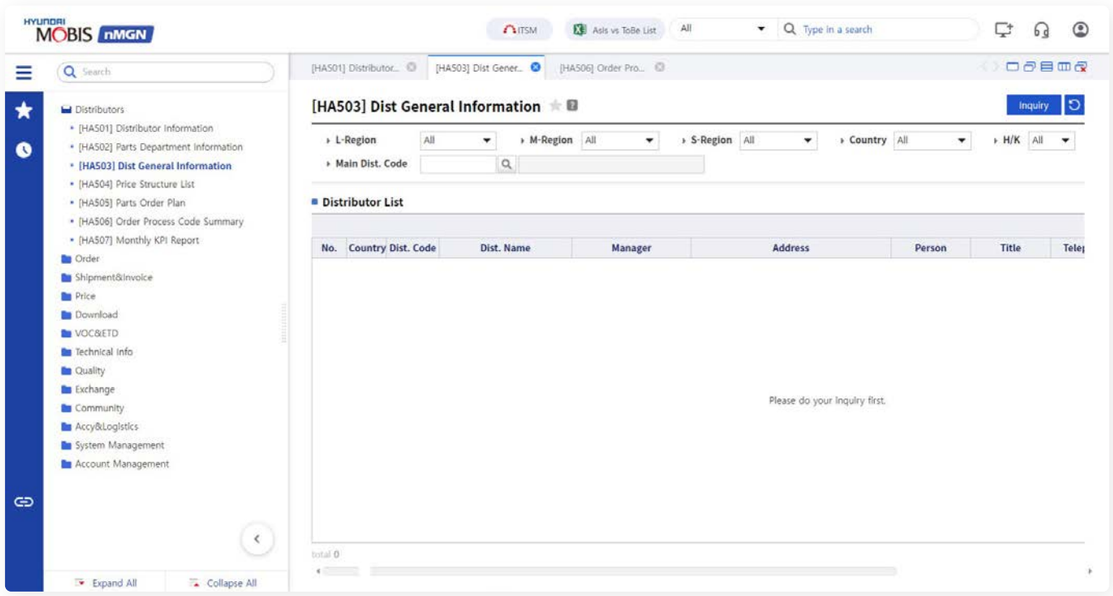
Parts manager is required to update distributors' information and monthly KPI result periodically.

Route : [nMGN] - [Distributors]

① Distributor Information : Distributors' basic information (Address, organization and so on.)
② Parts Dept. Info : Numbers of parts sales channel & staff, warehouse, system
③ Price Structure : Price structure of distributor
④ Parts Order Plan : Monthly parts purchase plan
⑤ Order Process Code Summary : General information regarding parts order (Dist Code, Proforma type, Price Code, D/C rate, Payment Condition, Currency, Region specs, Trade term, etc.)
⑥ Monthly KPI Report : Monthly KPI of the individual distributor

※ Distributors are required to update their information on a monthly basis. For monthly KPI result, it is highly recommended to update KPI by the 10th of every month.

General

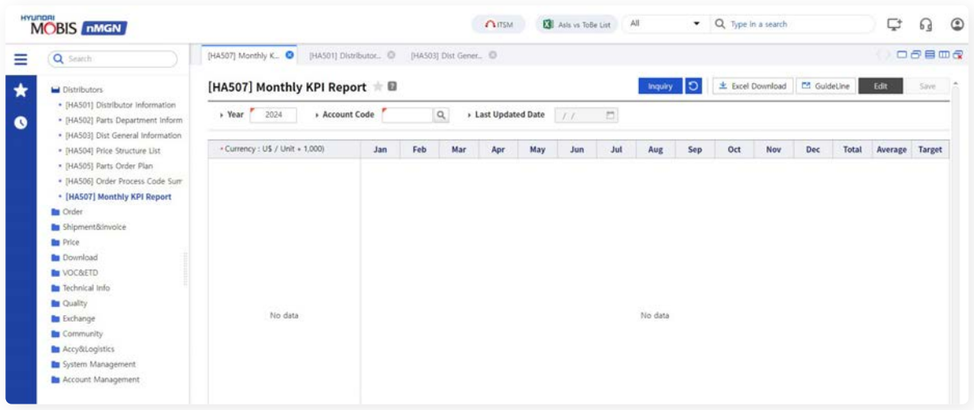


HOW TO UPDATE MONTHLY KPI REPORT

It is important to update monthly KPI report for better operation and support between Mobis and distributors. Parts manager should follow guideline below that explains Mobis' standard so that both of parties understand KPI report with the same criteria.

LOCATION : [nMGN] - [General] - [Monthly KPI report]

Monthly KPI Report



Guide Line

When making the figures, please consider your market situation very carefully.
All figures, except for 1,5&6 (Purchasing and Sales Forecast) should be LDC (Landed Cost) or Standard Cost base.

1. Purchase Order Plan(FOB)	Order plan to MOBIS in FOB, US Dollars
2. Monthly Start Inventory	Inventory amount as of the first day of the month
3. Arrival(Receiving)	The amounts of parts which arrived at distributor's warehouse during the month
4. Dealer Return	The amounts returned from dealer in cases distributors have dealer return policy.
5. Sales Forecast	Should be "Dealer Net" price base
6. Actual Sales(T/Over)	Total sales amounts during the month. Should be "Dealer Net" price base.
7.Cost of Sales	Sales cost (Landed Cost) for the parts sold during the month
8. Scrap	The scrapped parts amounts during the month
9. Month End Inventory	= (2 + 3 + 4 - 7 - 8)
10. MOS(Based on AMD3)	= 9 (Month End Inventory) / Last 3 Months' average Cost of Sales For the January and February, the cost of sales of the last year's November and December should exist in this KPI Report.
11. Excess/Obsolete	The amount of excess/obsolete parts excluding scrapped parts during the month
12. Number of Stock Item	Number of Items under stock control
13. Fill Rate(Dist ->DLR/Customer)	Σ(Filled pieces of Each Order Lin/Ordered pieces of Each Order Line)/(Total order line) ×100(%)
14. Gross Margin(%)	(Actual Sales – Cost of Sales)/(Actual Sales) ×100(%)
15. Vehicle Sales	Units of vehicles sold during the month

05.
MOBIS PRICING POLICY

BASIC PRICING POLICY

Mobis maintains price consistency by applying the 4 rules below :

1) **Model Pricing**
As a general rule, parts for Passenger A-segment car should be less expensive than comparable parts for the Passenger D-segment car. There is generally a correlation between parts prices for each model and the cost of the vehicle.

2) **Line Pricing**
There should be a reasonable correlation among the same components for various vehicles. For example, brake pads for all vehicles should have similar pricing. However, similar parts might have different prices due to the differences inspecifications, sourcing, manual manufacturing process and etc.

3) **Component Relationships**
A component part has to be cheaper than an assembly or a kit.

4) **Mirror Image**
Symmetrical parts are often expected to have similar pricing.

ANNUAL ADJUSTMENT

Mobis maintains price stability by taking large scale pricing actions on an annual basis.
This parts price adjustment is done once a year with different purposes.
Major parts price adjustment : Jan 1 st (Apply date can be different by regions)

Here are some factors considered in price adjustment :

- Exchange Rate Fluctuations (Korean Won vs. US Dollar)
- Economic Environment (Domestic and overseas)
- Profit Margin
- Competitiveness
- Cost changes

IRREGULAR ADJUSTMENT

Mobis is willing to sustain customers' satisfaction and offer reasonable prices.
Instances can occur where prices are influenced as follows :

- Customer Inquiry
- Sudden Cost Change (i.e. cost of material)
- System Errors
- Etc.

Irregular parts price adjustment: Effective 1st day of each month

06.
IMPORTANT FORMULAS

GROSS PROFIT

Gross profit is :

- Profit produced when selling parts.
- Profit produced by the department prior to the deduction of operating expenses.
- Price difference between the cost of the parts and the sale price.

(EXAMPLE) Engine sold to customer for $2,100
Cost of Engine to parts department $1,500
Sale price - Cost of Product = Gross Profit $600

GROSS PROFIT MARGIN

Gross profit Margin is :

- Percentage of the sale price which shows the profit retained.

Gross profit margin is the profit produced as a percent of the sale price.

(EXAMPLE) Engine sold to customer for $2,100
Cost of Engine $1,500 / Gross Profit on Sale $600
Gross Profit $600 / Sale Price $2,100 = Gross Profit Margin 28.5%

MARKUP

Markup is a factor to get a desired gross profit.

(EXAMPLE) If a person wants to sell a $10 part (cost) and make a 40% Gross Profit, how much does he have to sell the part for?

If the desired gross profit margin on the part is 40%, the calculation would be: 100 - 40 = 60 100 / 60 = 1.67

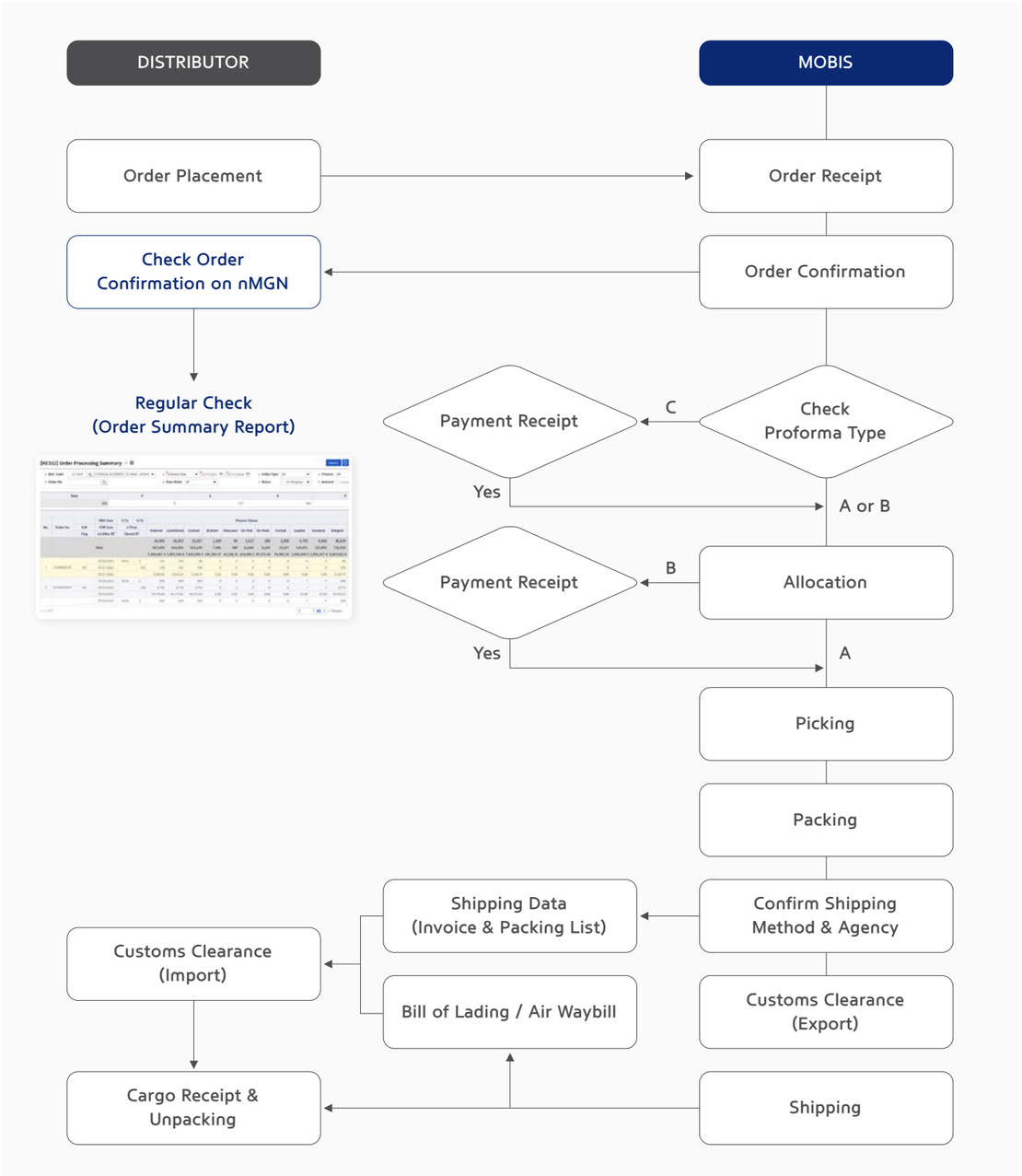
To obtain a 40% Gross Profit on the part, he should charge the cost times 1.67.
$10 × 1.67 = $16.7 (Sale price), Cost of Part = $10, Gross profit on sale = $6.7
Gross Profit margin Calculation
Profit $6.7 / Total Sale Price $16.7 = Margin 40%
Markup = Total sale price $ 16.7 / Cost of Part $10 = 1.67

PRICE STRUCTURE

Distributor should keep Price Structure chart below updated.

1. FOB		100		Starting with FOB set at100, get freight and insurance from actual cost history.
2. Freight				
3. Insurance				
4. C.I.F				F.O.B + Freight + Insurance
5. Sub Total	☐ Duty			5. SubTotal = Total sum of the following items (Duty + Wharfage + Inland Transportation + Forwarder + L/C Charge + Others)
	☐ Wharfage			
	☐ Inland Transportation			
	☐ Forwarder			
	☐ L/C Charge			
	☐ Others			
6. LDC				C.I.F. + Sub Total
7. Dist. Margin			%	(DealerNet - LDC) / DealerNet * 100
8. Dealer Net				LDC + Dist. Margin
9. Dealer Margin			%	(Retail without VAT- Dealer Net) / Retail without VAT * 100
10. Retail Without VAT				Dealer Net + Dealer Margin
11. VAT				
12. MSRP (Retail With VAT)				

07.
PARTS SUPPLY PROCEDURE



PART 2.

TECHNICAL INFORMATION

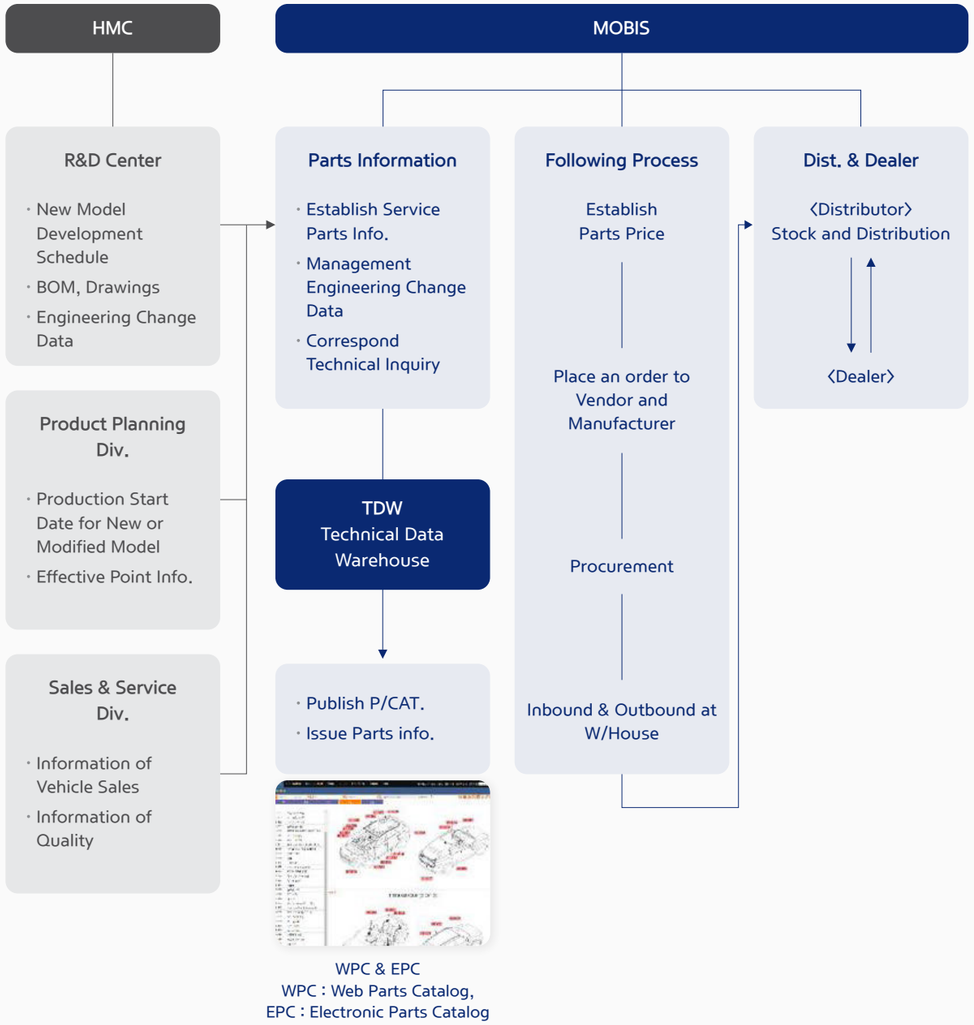
01. PARTS INFORMATION

02. STRUCTURE OF PART NUMBER

03. HOW TO READ PART INFORMATION

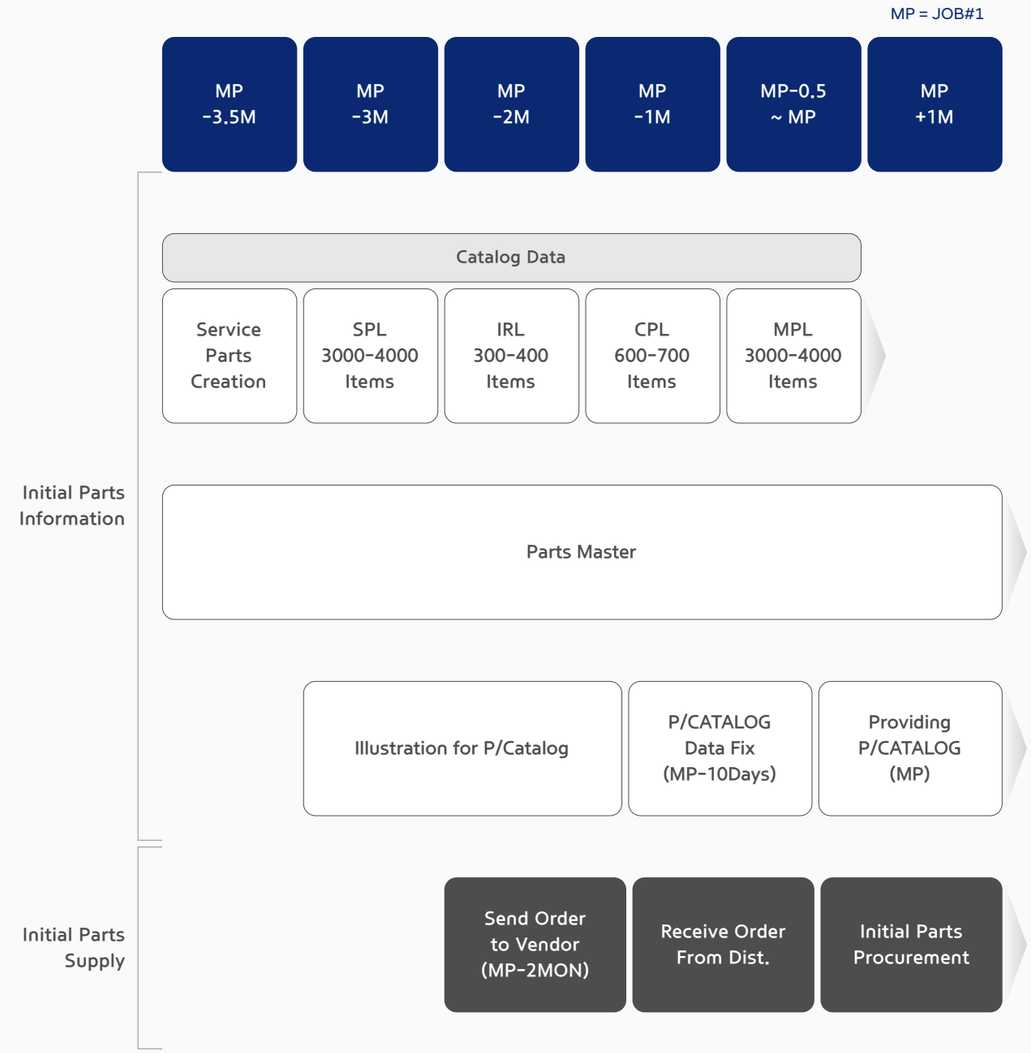
01.
PARTS INFORMATION

PARTS INFORMATION FLOW



WPC & EPC
WPC : Web Parts Catalog,
EPC : Electronic Parts Catalog

INITIAL PARTS INFORMATION



TERMINOLOGY

Terminology	Full Name	Remarks
SPL	Service Parts List	MP-3
IRL	Initial Recommendation Parts List	MP-2
CPL	Color Parts List	MP-1
MPL	Master Parts List	MP-0.5 ~ MP
BOM	Bill of Material	
EO	Engineering Order	
EPI	Effective Point Information	Time point when each part becomes effective
VIN	Vehicle Identification Number	17 Digits (refer to section VIN under PART 6.)
MP	Mass Production	
PP	Pilot Production	
PEL	Product Equipment List	
UCC	Usage Condition Code	
FSC	Full Specification Code	
OCN	Option Combination Number	
MI	Model Index	
PNC	Part Name Code	
MSDS	Material Safety Data Sheet	
MIP	Manufactured In Plant	

VEHICLES DEVELOPMENT & SERVICE PARTS

R	Vehicle Development					Remarks
	New Model	MY	F/L	MY	FMC	
Passenger Vehicle	Start	12 Month (1 Year)	24 Month (2 Year)	36 Month (3 Year)	48 Month (4 Year)	Life Cycle 4 Year
Commercial Vehicle	Start	24 Month (2 Year)	48 Month (4 Year)	72 Month (6 Year)	96 Month (8 Year)	Life Cycle 8 Year
Main Changing Parts	New	Exterior : Wheel, Wheel Cap, Outer Door Handle etc. Interior : Seat Cloth, Color, Cluster etc.	Exterior : Fender, Hood, R/Grille, Lamp etc Interior : Console, Cluster Trim, Key Color	Exterior : Wheel, Wheel Cap, Outer Door Handle etc. Interior : Seat Cloth, Color, Cluster etc	Almost all Parts Changed (Exterior / Interior)	Life Cycle 8 Year
Service Parts	3,000~4,000 Items	200~300 Items (7~10%)	800~1,000 Items (27~33%)	200~300 Items (7~10%)	1,500~2,000 Items (60~70%)	

1) **New Model**
   New concept & new model
   ex) Palisade (LX2)

2) **FMC (Full Model Change)**
   Full changed part except chassis part
   ex) All New Santafe (TM)

3) **F/L (Face Lift)**
   Remodeling & modifying the current models for longer life cycle
   ex) Santafe(DM, 2012), New Santafe(DM PE, 2015)

4) **MY (Model Year)**
   Modified for better commodity

PARTS SUPPLY UNIT

1) Definition of "Parts Supply Unit"

All parts units that are used for service

- Necessary items for vehicle repair (For new vehicles, usually 3,000~4,000 items)
- The followings are the factors that are considered to decide supply unit.

①	②	③	④	⑤
Parts Order / Supply and Demand Criteria	Maintenance Criteria	Criteria for Publishing Maintenance Guidebooks and Parts Catalog	Insurance Cost Calculation Criteria	Warranty Calculation Criteria

2) Creation Criteria of Parts Supply Unit

LV	P/Name	P/No.	QTY	Supply Unit
1	HEADLAMP ASSY-LH	92101-08000	1	✓
2	BULB	18647-55009	1	✓
3	LENS	92111-08000	1	

* Lens cannot be supplied as its own supply unit because it requires a special treatment to be properly attached to the headlamp.

Followings are the criteria for official supply unit for service.

- Removal-Adhesive : Can be removed or attached
- Warranty : Unit of warranty after replacing a part
- Packing, Transportation : Packing, inventory mgt. transportation with facility
- Maintenance : Unit of parts maintenance with ease
- Feasibility : Feasible unit of vendor & MIP supply
- Competitiveness : Competitiveness unit against other companies

NOTICE

1) Information such as SPL and P/Cat. data provided by Parts Technical Information Team are based on the regions. (DOM, EUR, GEN, MES, AUS, USA, CAN, etc) Thus, the parts information provided to a certain distributor can also contain other country specific information. Therefore, distributors should order the proper parts that match their vehicles order specification. Mobis supports proper ordering of parts by providing both UCC and OPTION information.

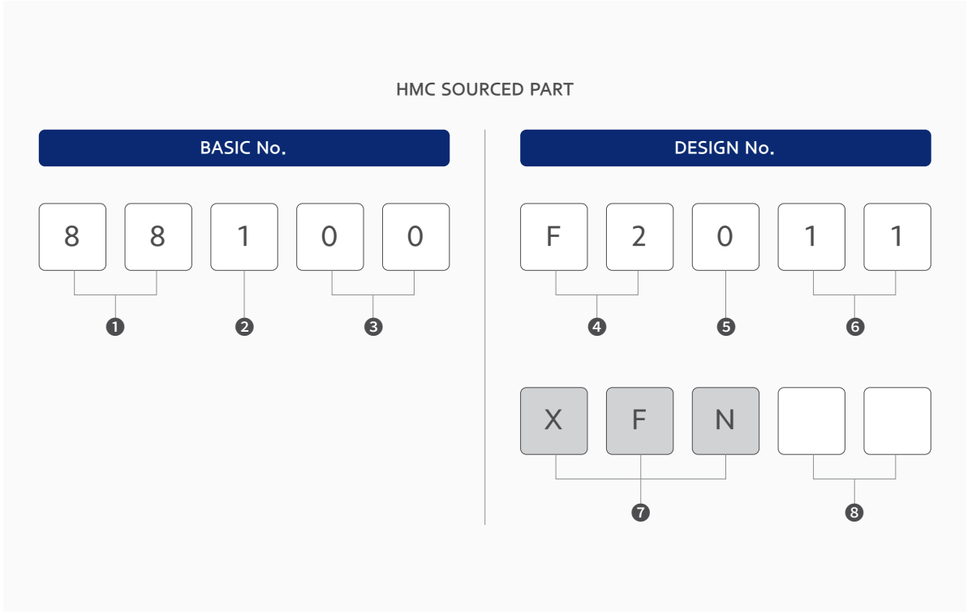
2) Distributors are responsible for obsolete parts generated by unnecessary orders due to confusion and spec. changes in vehicles. HMC vehicle spec. changes after placing initial order can cause parts to become obsolete. Incorrect vehicle spec. information provided by distributor can cause parts to become obsolete.

3) In the case of the IRL, recommended items & quantities should be amended with consideration of local market conditions. Statistical information provided by Mobis is unified information based on world market information.

ex) The demand of brake linings, pads, clutch disks are higher in mountainous areas than in flat areas. : Distributors should place orders considering the local market characteristics.

02.
STRUCTURE OF PART NUMBER

PART NUMBER STRUCTURE



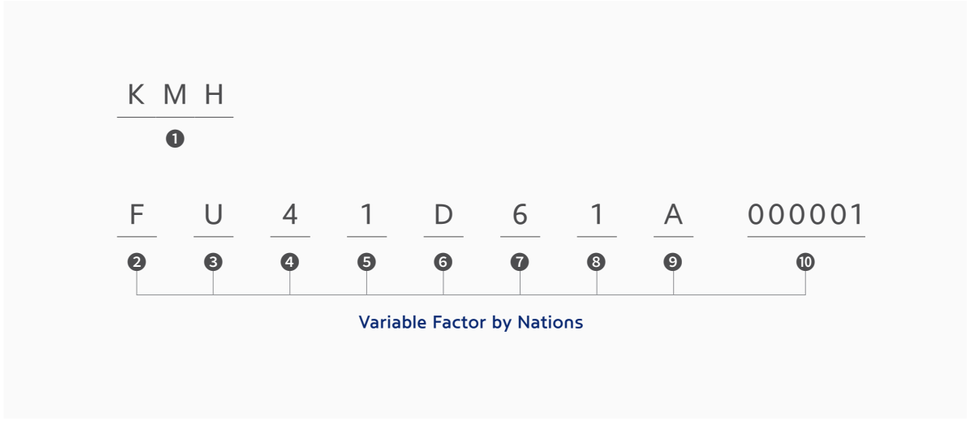
❶	MAIN GROUP No.	Describes the part function or installation position
❷	SUB GROUP No.	Detailed description of the MAIN GROUP No.
❸	BASIC DETAIL No.	Describes the part function
❹	VEHICLE MODEL No.	Describes the application model number
❺	DESIGN SERIAL No.	Distinguish the part from same BASIC No. and MODEL No.
❻	DESIGN REVISION No.	Revision number of the DESIGN SERIAL No.
❼	COLOR CODE	Color code
❽	SPARE	Spare code

(EXAMPLE)

PART No.	PART NAME
88100-F2011XFN	CUSHION ASSY-FR SEAT, LH
21100-02000	BLOCK ASSY-CYLINDER

03.
HOW TO READ PART INFORMATION

VEHICLE IDENTIFICATION NUMBER (VIN)



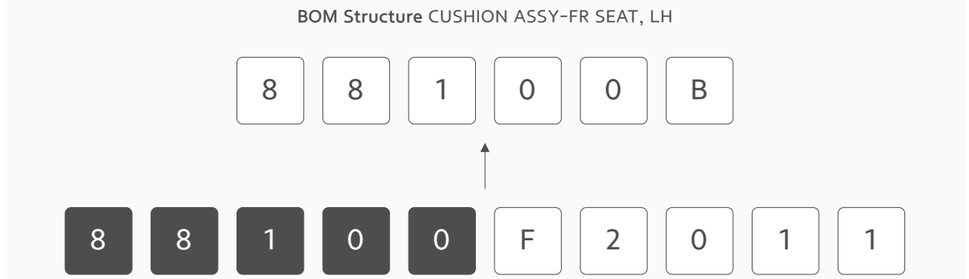
❶	W.M.I (World Manufacturer Identifier)	ex) KMH : Hyundai motor car produced by Korea
❷	Vehicle Line	F : XG/TG, S : SM/CM
❸	Model & Series	U : Middle (GLS) / High (HGS)
❹	Body Type	4 : Sedan-4DR, 5 : Sedan-5DR
❺	Restraint System (Front Seat)	1 : Active belt 2 : Passive belt 3 : Driver side : Airbag + Active belt
	Passenger Side : Passive Belt	4 : Air bag + Active belt 5 : Depowered Airbag 6 : Advanced or Depowered-with Suppression
❻	Engine Type	D : 3,000cc Gasoline (XG/TG) E : 3,500cc Gasoline (XG/TG) D : 2,700cc Gasoline (SM/CM) E : 3,300cc Gasoline (SM/CM)
❼	Check Byte	Check byte tells whether Vehicle Identification No. is correct or not.
❽	Model Year	Y : 2000, 1 : 2001, 2 : 2002 3 : 2003, 4 : 2004, 5 : 2005 6 : 2006, 7: 2007, 8 : 2008
❾	Plant Code	A : Asan, U : Ulsan
❿	Vehicle Production Serial Number	000001-99999

ENGINE MODEL CODE



❶	Engine Fuel	G : Gasoline
❷	Engine Range	6 : V-type, 4cycle, 6cylinder
❸	Model & Series	U : Middle (GLS) / High (HGS)
❹	Body Type	4 : Sedan-4DR, 5 : Sedan-5DR
❺	Restraint System (Front Seat)	1 : Active belt 2 : Passive belt 3 : Driver side : Airbag + Active belt
	Passenger Side : Passive Belt	4 : Air bag + Active belt 5 : Depowered Airbag 6 : Advanced or Depowered-with Suppression
❻	Engine Type	D : 3,000cc Gasoline (XG/TG) E : 3,500cc Gasoline (XG/TG) D : 2,700cc Gasoline (SM/CM) E : 3,300cc Gasoline (SM/CM)

PNC (PART NAME CODE)



- Most PNC's are based on the first 5 digits of parts number but not the same. (Group & Detail or Serial No.)
- The PNC indicates each part in the illustration on WPC/EPC.
- PNC normally consists of 5 bytes. A 6th byte may be used to describes certain parts like "LH" and "RH".
- PNC per each part number is the same in the all parts lists.

INTERCHANGEABILITY CODE

No.	Code	Interchangeability Code Description
1	Y	New and Old Parts are Interchangeable
2	M	New Parts are Usable on Old Car, but Old Parts are Not Usable on New Car
3	N	New and Old Parts are Not Interchangeable
4	J	Old Parts are Not Available (Part Changed Before Mass Production)

TECHNICAL INQUIRY

WPC : http://wpc.mobis.com ▶ TECHNICAL INQUIRY

- Distributor must provide detailed information when making an inquiry.
  e.g. Parts Catalog No. / Car Name & Option Specification / VIN / Photos
- The lead time of replies from the Parts Technical Information Team will be shortened by providing the basic information listed above when making a technical inquiry.
- Technical inquires via WPC is prioritized over other forms of communication (such as email) and has therefore shorter lead time for replies.

PART 3.

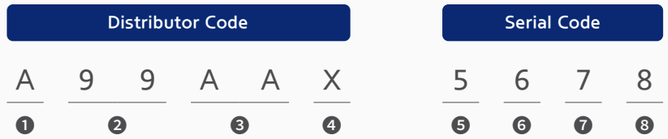
PARTS ORDER PREPARATION

01. ASSIGNING ORDER NUMBERS

01.
ASSIGNING ORDER NUMBERS

ASSIGN ORDER NUMBER

Mobis order number is a 10 byte-code, consisting of distributor code and order serial code as an example below.



DISTRIBUTOR CODE

❶	Region Code	A : Asia Pacific, B : America C : Europe, D/E : Middle East & Africa
❷	Nation Code	Each nation is assigned with one nation code with its region code. e.g. B01 = Argentina, B02 = Bahamas, etc..
❸	Unique Distributor Code	Each Distributor has its own code (Same as accounting code) e.g. B22AC / B22AE “Commercial Vehicle Only” distributors have a “H” in the middle. e.g. B22HA / B22HB
❹	PDC Code	Used to identify each PDC (parts distribution center) of the Distributor. When distributor has only one PDC, the code is “X”. When distributor has more than two PDCs, different codes are given to each PDC. e.g. B28AAG / B28AAN

SERIAL CODE

❺	Year Code	Last digit of the year when order is placed. e.g. 2024 → 4, 2025 → 5 (Numerical seq. for PV parts order) e.g. 2024 → N, 2025 → O (Alphabetical seq. for CV parts order)
❻	Month Code	Alphabetical sequence “A” through “L” e.g. JAN. → A, FEB. → B, MAR. → C, ... , DEC. → L
❼	Order Sequence	Alphabetical sequence for the same order type for the same month. e.g. A99AAX4A A C (C TYPE - 1st ORDER) A99AAX4A B C (C TYPE - 2nd ORDER) A99AAX4A C C (C TYPE - 3rd ORDER) * Maximum 36 orders in sequence can be used (A → Z, 0 → 9)
❽	Order Type	Detailed order type descriptions follow on the next page.

ORDER NUMBER IS A KEY FACTOR WHICH CONTRIBUTES TO A SMOOTH PROCESS AND BETTER COMMUNICATION

ORDER TYPE CODE

Order type code varies as below.

	Order Type	Description	Ship Mode	Remark
Basic	C	Monthly Stock Order	Sea	Regular Stock Order
	E	Emergency Order	Air	Replenishment Order (Daily)
	V	VOR Order	Air	Vehicle Off the Road Order (By general airlines)
	X		Courier	Vehicle Off the Road Order (By courier service such as DHL)
Special	A	Service Special Tool	Air / Sea / Courier	Tools used in Service
	B	Accessory Parts	Air / Sea	Order for accessory
	T	Air Contioner Kit	Air / Sea	Order for air conditioner kit
	D	Claim Order	Air / Sea / Courier	Not to be used for orders, assigned by Mobis claims only
	F	Dangerous Parts	Air / Sea	Dangerous parts (e.g. air bag, seat belt) should be ordered seperately.
	I	Initial Order for New Models	Air / Sea / Courier	Newly launched car models
	L	Initial Order for New Market	Air / Sea / Courier	Newly introduced vehicles in your market (already in production)
	Q	Campaign or Quality	Air / Sea / Courier	Campaign, PDI or quality problem parts
	K	Marketing Material	Air / Sea / Courier	Display materials (e.g. posters, leaflets, display kit)
	W	Promotion Order	Air / Sea / Courier	Order for promotional items
	Z	Final Buy Order	Sea	Final order for balanced out items
	M	A/M	Air / Sea	For special purpose only
	O	Emergency Sea Order	Sea	Sea freight order prior to others (only for special market)
	P	A/P	Air / Sea	PL2 items Hyundai
	R	Weekly Supplementary	Air / Sea	Weekly replenishment order
	U	MPA Factory Project Order	Air / Sea	For USA only
	S	Premium Order	Air / Sea	Order for premium models
	Y	Special Order	Air / Sea	For special cases such as natural disaster
	2	Brazil INMETRO	Air / Sea / Courier	For Brazil only
	4	Quotation Only	Air / Sea	For quotation only
	5	Order for NA, NB Items	Air / Sea	For these amend code items only

PART 4.

PAYMENT ARRANGEMENT

01. IMPORTANCE OF PAYMENT ARRANGEMENT

01. IMPORTANCE OF PAYMENT ARRANGEMENT

IMPORTANCE OF PAYMENT ARRANGEMENT

For ensuring timely delivery of parts ordered, it is essential for distributors to arrange payments in time. Orders will only be processed after payment is fully confirmed.

Mobis is managing distributors payment by proforma type “A”, “B”, “C” based on the conditions such as distributors’ official financial commitment and order frequency. Distributors can find out their proforma type by checking with their regional managers at Mobis. For some proforma types, order quantity is not reserved until payment is fully secured, which may eventually result in delay of parts supply.
In order to avoid any delay, it is highly recommended to arrange payment in time.

※ Delivery lead time can be calculated once payment is confirmed. To make an urgent orders without any delay, it is highly recommended to keep advanced payment that could covers 4 to 5 shipments at least.

ORDER PROCESSING BY PROFORMA TYPE

Proforma Type	Order Placement	Receiving	Confirmation	Allocation	Picking	Packing	Invoicing	Shipping
A	■	■	■	■	■	■	■	■
B	■	■	■	■				
C	■	■						

■ Auto processing
■ Processing after payment
□ Back order → Order to vendors

PAYMENT METHODS

Find three types of payment for distributors as below.

Methods	Interchangeability Code Description
T/T (Telegraphic Transfer) in Advance	Upon T/T remittance, give notice to Mobis with a copy of the bank cable.
L/C (Letter of Credit) at SIGHT	① Irrevocable L/C at sight by first grade international bank. ※ Under the newly developed system, the notify bank should be KEB HANA, SHINHAN or STANDARD CHARTERED KOREA BANK. Mobis can receive L/C detail through EDI(Electronic Data Interchange) process with only these 3 banks. ② Distributors will bear charges for delay or discrepancy.
D/A (Document against Acceptance), D/P (Document against Payment)	① Only for Mobis overseas subsidiary that have agreement with Mobis HQ. ② D/A & D/P should be guaranteed by first grade international bank. ③ Interest charges for deferred payments expected

BANK INFORMATION FOR TELEGRAPHIC TRANSFER

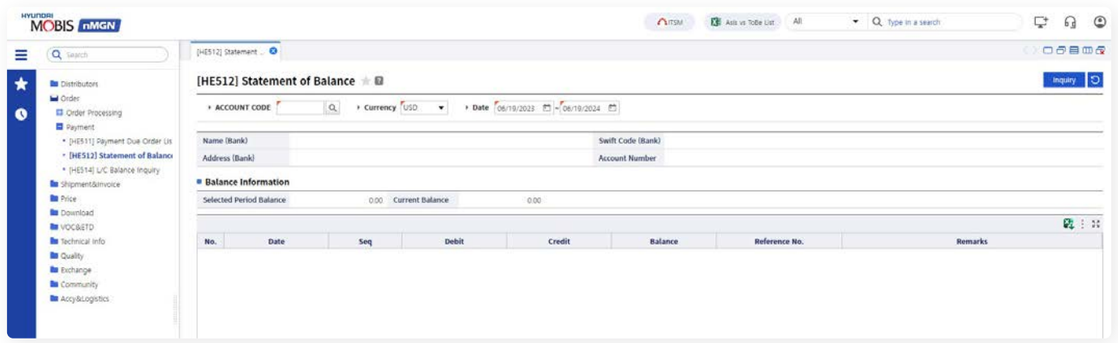
Refer to nMGN (https://nmgn.mobis.com) “Statement of Balance” for banking information.

Beneficiary for T/T Transfer & on L/C

HYUNDAI MOBIS :
SEOUL INTERNATIONAL TOWER, 203, TEHERAN-RO, GANGNAM-GU, SEOUL, KOREA

Distributors can find Mobis bank swift code and account number on nMGN.

nMGN Screen



nMGN ❯ Order ❯ [HE512] Statement of Balance
Input distributor code and set start date as 01/01/2000 and Click ‘Inquiry’ button.
User can check current T/T balance and receivable account number which is assigned to each distributor.

STANDARD TERMS AND CONDITIONS FOR L/C

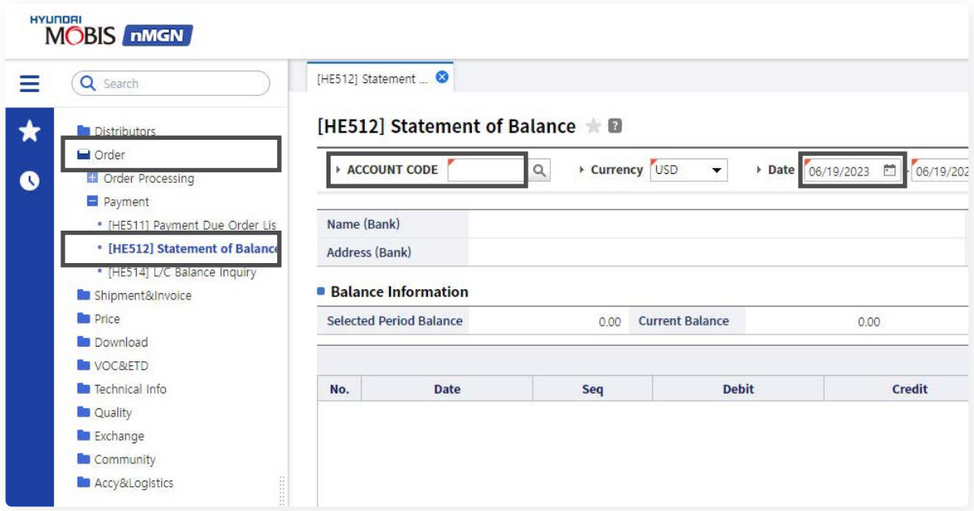
Mobis has established standard terms and L/C conditions to streamline the administrative work. Unless conflict arose from other regulations or local laws, distributors are required to observe the followings standards;

- Issuing and Expiry Date : It should be opened at least one month before the desired shipping date with a minimum validity of three calendar months.
- Description of Goods : Automobile Service Parts.
- Partial Shipment and Trans-Shipment : Acceptable if distributor has special reasons.
- Shipping Port : Any Korean port
- Bank Charges : Distributor’s are charged for fees other than transactions in Korea.
- Shipping Mark : Standard shipping mark agreed between Mobis and the distributor.

HOW TO CHECK OUT T/T BALANCE STATUS

Access to nMGN (https://nmgn.mobis.com) and follow below steps to check current balance.

nMGN Screen



- Date : Shipment finalized date
- Debit : Deducted amount from balance due to shipment or claim debit
- Credit : Added amount to balance due to T/T remittance or claim credit

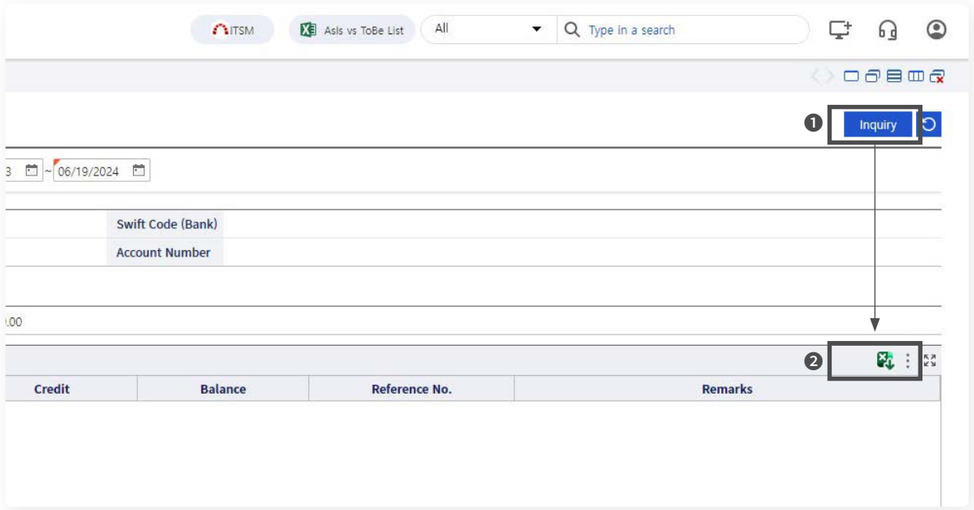
The current balance on nMGN includes claim refund amount. In order to find out distributor's payment balance, the claim amounts need to be deducted from total balance.

How to do so is explained in the next page.

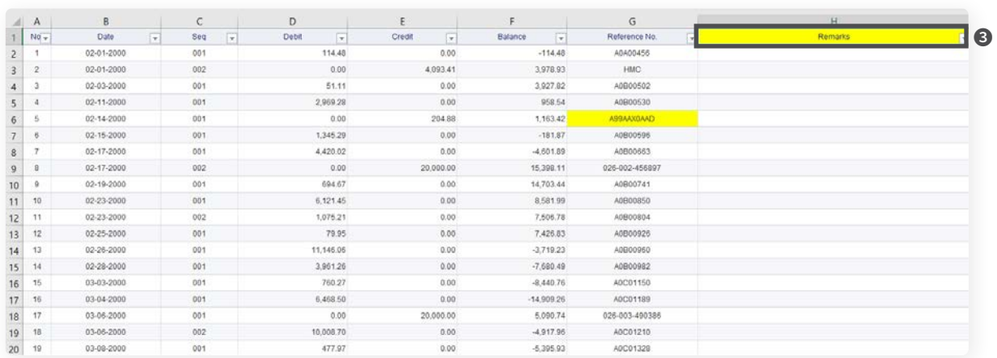
HOW TO DEDUCT CLAIM AMOUNT FROM "CURRENT BALANCE"

Access to nMGN (https://nmgn.mobis.com) and follow below steps to check current balance.

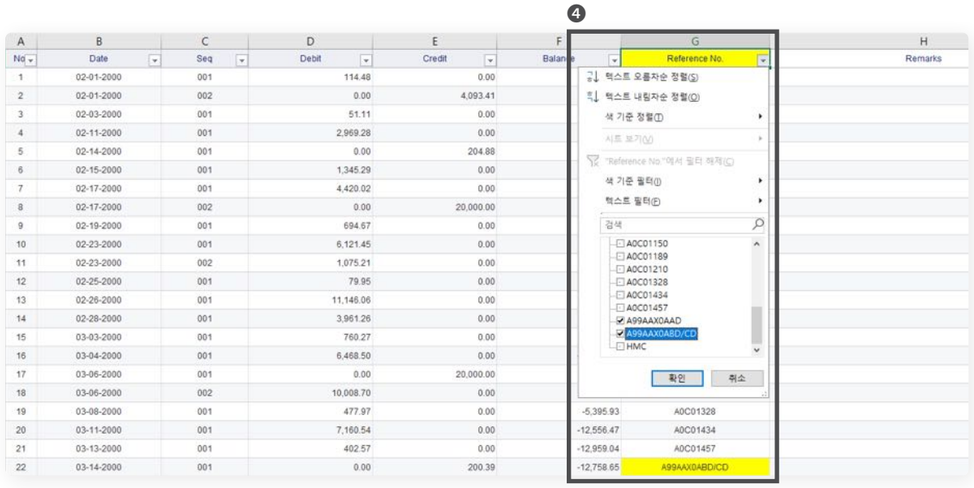
nMGN Screen



① Set start date as 01/01/2000 and Click "Inquiry" button first. The click the "Excel" icon to generate a file.
② Open or save - open "excel file".

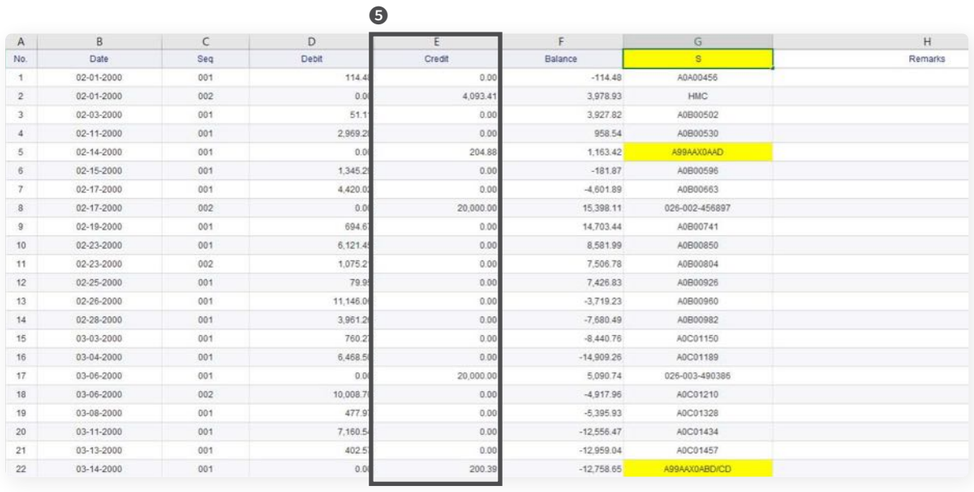


③ Set filter function for columns.



A	B	C	D	E	F	G	H
No	Date	Seq	Debit	Credit	Balance	Reference No.	Remarks
1	02-01-2000	001	114.48	0.00			
2	02-01-2000	002	0.00	4,093.41			
3	02-03-2000	001	51.11	0.00			
4	02-11-2000	001	2,969.28	0.00			
5	02-14-2000	001	0.00	204.88			
6	02-15-2000	001	1,345.29	0.00			
7	02-17-2000	001	4,420.02	0.00			
8	02-17-2000	002	0.00	20,000.00			
9	02-19-2000	001	694.67	0.00			
10	02-23-2000	001	6,121.45	0.00			
11	02-23-2000	002	1,075.21	0.00			
12	02-25-2000	001	79.95	0.00			
13	02-26-2000	001	11,146.06	0.00			
14	02-28-2000	001	3,961.26	0.00			
15	03-03-2000	001	760.27	0.00			
16	03-04-2000	001	6,468.50	0.00			
17	03-06-2000	001	0.00	20,000.00			
18	03-06-2000	002	10,008.70	0.00			
19	03-08-2000	001	477.97	0.00			
20	03-11-2000	001	7,160.54	0.00			
21	03-13-2000	001	402.57	0.00			
22	03-14-2000	001	0.00	200.39			

④ Click “Reference No.” column and set search keyword as final word “D” (Claim Order Number)



A	B	C	D	E	F	G	H
No.	Date	Seq	Debit	Credit	Balance	S	Remarks
1	02-01-2000	001	114.48	0.00	-114.48	A0A00456	
2	02-01-2000	002	0.00	4,093.41	3,978.93	HMC	
3	02-03-2000	001	51.11	0.00	3,927.82	A0B00502	
4	02-11-2000	001	2,969.28	0.00	958.54	A0B00530	
5	02-14-2000	001	0.00	204.88	1,163.42	A99AAX0AAD	
6	02-15-2000	001	1,345.29	0.00	-181.87	A0B00596	
7	02-17-2000	001	4,420.02	0.00	-4,601.89	A0B00663	
8	02-17-2000	002	0.00	20,000.00	15,398.11	026-002-456897	
9	02-19-2000	001	694.67	0.00	14,703.44	A0B00741	
10	02-23-2000	001	6,121.45	0.00	8,581.99	A0B00850	
11	02-23-2000	002	1,075.21	0.00	7,506.78	A0B00804	
12	02-25-2000	001	79.95	0.00	7,426.83	A0B00926	
13	02-26-2000	001	11,146.06	0.00	-3,719.23	A0B00960	
14	02-28-2000	001	3,961.26	0.00	-7,680.49	A0B00982	
15	03-03-2000	001	760.27	0.00	-8,440.76	A0C01150	
16	03-04-2000	001	6,468.50	0.00	-14,909.26	A0C01189	
17	03-06-2000	001	0.00	20,000.00	5,090.74	026-003-490386	
18	03-06-2000	002	10,008.70	0.00	-4,917.96	A0C01210	
19	03-08-2000	001	477.97	0.00	-5,395.93	A0C01328	
20	03-11-2000	001	7,160.54	0.00	-12,556.47	A0C01434	
21	03-13-2000	001	402.57	0.00	-12,959.04	A0C01457	
22	03-14-2000	001	0.00	200.39	-12,758.65	A99AAX0ABD/CD	

⑤ Check “refunded amount” and “not yet refunded amount” in “Credit” Column

▶ (Current Balance) - (Not Yet Refunded Amount) = Actual T/T Balance which can be used

PART 5.

ORDER

01. FLOW OF ORDER PROCESS
02. ORDER PLACEMENT
03. ORDER PLACEMENT RESULT
04. ORDER CONFIRMATION
05. PAYMENT REQUEST
06. PAYMENT ARRANGEMENT
07. ORDER PROCESSING
08. INVOICING & SHIPPING
09. ORDER & SALES SUMMARY STATUS

01.
FLOW OF ORDER PROCESS



02.
ORDER PLACEMENT

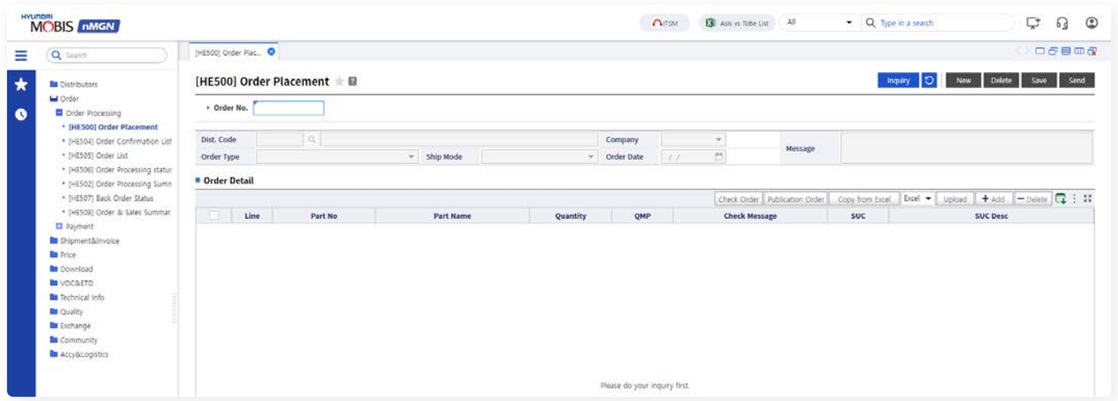
ORDER CREATION

Orders can easily be placed directly on nMGN as shown in the following. It is possible to type in each part number line by line, or you can copy the part numbers & quantities from prepared excel file using “Copy from Excel” button to place an order. Just copy what you need from the excel file and come back to nMGN screen and press “copy from excel”.

Alternatively, use can upload an Excel or Text File. Please download and use the Excel Form.
Please make sure that all lines must be checked for errors before placement.
(More details can be found on the following page)

LOCATION : [nMGN] - [Order] - [Order Placement]

Order Creation



SCREEN OPERATION PROCEDURE

Inquiry	Enter order number and click inquiry
Order Save & Edit	New order creation - Mandatory Input Fields : Order No., Dist. code, Order type, Ship mode, Part No., Quantity - Input order then click 'Check' for order validation - Click 'Save' to finalize order
	Order edit - Mandatory input fields : Order No. - Order edit is only possible when order process code is blank.
Order Registration	Order process status change : Auto received order : "A" / Manual received order : "$"
Order Deletion	Deletion only possible when order process field is blank.

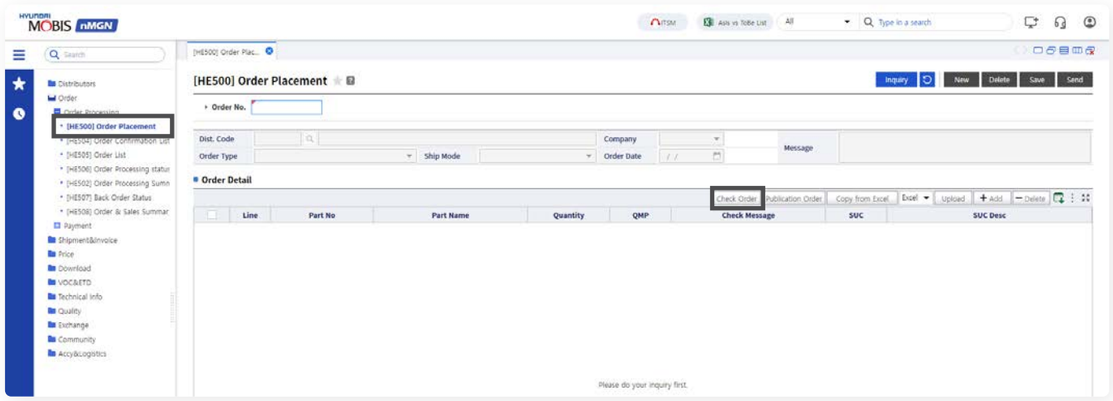
03.
ORDER PLACEMENT RESULT

ORDER CHECK RESULT

Once all information is entered on Order Placement, you can choose to perform order line validation by clicking "Check Order" button. On order validation you can also see undeliverable parts (faulty part numbers or discontinued parts).

LOCATION : [nMGN] - [Order] - [Order Placement] - [Order Creation] - [Check Order]

Order Check Result



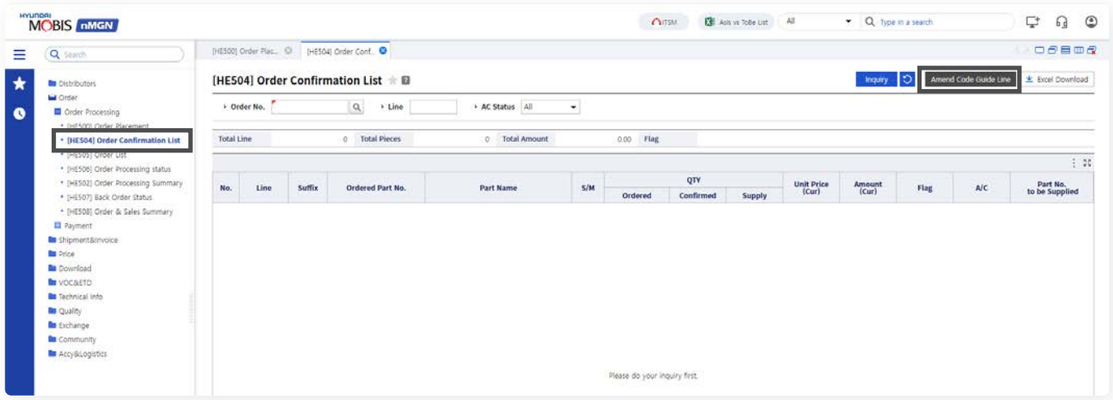
04.
ORDER CONFIRMATION

ORDER CONFIRMATION LIST

Once the orders are confirmed, order status and its history can be checked via screen below. User is requested to check amend code and replace it or discuss with regional manager for items cannot be supplied.

LOCATION : [nMGN] - [Order] - [Order processing] - [Order Confirmation List]

Order Confirmation List



SCREEN OPERATION PROCEDURE

Inquiry	- Input Order No. then click 'SEARCH'. - Input Line and A/C status if neededOrder process status change

INPUT FIELD / SEARCH CONDITION DETAILS

Order No.	Order number
Line	Order line
AC Status	Amend code status / Default : Blank Value : Amend / No Amend Amend : Only last amend code is shown No Amend : Only shown if there is no last amend code

AMENDMENT CODE

With some amendment codes, the parts will not be supplied and the order lines will be cancelled automatically. Please make sure to check the status of your order after order confirmation. Please see below for more details.

No.	Code	Description	Error Code	Supply Rule
1	3B	MBR INMETRO ERROR PART	ER	N
2	5B	MBR INMETRO ERROR PART	ER	N
3	5C	MBR INMETRO Order cancelled by the Distributor	ER	N
4	5D	MBR INMETRO Order cancelled by Mobis HQ	ER	N
5	AA	Supplied only as assembly part	ER	N
6	AC	Supplied only as components	ER	N
7	AD	Quality issue (Only superseded part is supplied)	OK	N
8	AF	Items that have been changed as compatibility 'M'	ER	N
9	AJ	Spec. Deletion Part	ER	N
10	AK	KIT part is supplied.	ER	N
11	AM	Local purchased part for all region	ER	Y
12	AO	SET replacement part is supplied.	ER	Y
13	AQ	Ordered QTY >= AMD12 X 12	OK	Y
14	AR	Air order restriction	ER	Y
15	AY	Part has the ITE "Y"	ER	N
16	BA	SOC 30% Upper Battery Part	OK	N
17	BD	Large RESERVE CROSS-DOCK QTY	OK	N
18	BH	UN Report not exist	ER	N
19	BI	MBR INMETRO PART	OK	Y
20	CO	Duplicated order check	ER	Y
21	CQ	A packing unit of confirmed quantity (small / big packing)	OK	Y
22	DA	Amend by distributor	OK	Y
23	DG	One Time Order	ER	N
24	DX	Cancelled by distributor	ER	Y
25	EC	Empty ECU no supply part	ER	N
26	EN	Supply to Distributor's country is not available	ER	Y
27	EQ	Subsidiary Order Filtering (Manual)	OK	N
28	FB	Discontinued Part : Part no longer supplied	ER	Y
29	FE	Discontinued Part : Final stock is allocated	OK	Y
30	FQ	Subsidiary Orde Filtering (System)	OK	Y
31	HK	Hong Kong C.O. Part with issue bound for U.S.	ER	N
32	HP	Re-check by distributor is needed for confirmation or replacement	OK	Y
33	IN	Intermediary trade part	OK	Y
34	IR	Non-Intermediary trade part	ER	Y
35	JP	AM Special Order (Algeria CKD)	OK	Y
36	LF	Lithium-ion part Filtering (AIR, VOR)	ER	N
37	MC	MPA Non-Compliance part	ER	Y
38	ME	Vehicle launching date is afetr order received date	ER	Y
39	MO	SET, KIT part	ER	N
40	MS	Size information not found	ER	N
41	MU	Multi part check	ER	N

No.	Code	Description	Error Code	Supply Rule
42	MX	Mixed Order Check (Pulication, P/C, Dangerous Part)	ER	Y
43	MZ	Net Weight information missing	ER	Y
44	NA	Part does not apply in a vehicle.	ER	N
45	NB	There is no apply now. However, part will be applied in the future.	ER	N
46	NC	Temporary	ER	N
47	NF	Part number information missing	ER	N
48	NL	No loner available	ER	N
49	NO	NA/NB/OP/AJ/AD confirm error by region	ER	N
50	NP	Conversion from NP to NL (NP means the same as NL)	ER	Y
51	NS	Part supply restricted due to long term B/O	ER	Y
52	NT	Not supplied (No special price)	ER	N
53	OA	MPAU SEA order filtered quarantine parts	ER	N
54	OC	Subject to Emergency SEA Order	ER	N
55	OP	Produced in Overseas plant	ER	Y
56	OR	Country of origin is Israel (Reference for Dubai and Egypt)	ER	Y
57	OS	Over Size	ER	Y
58	OU	Supplied only as service part (Under over size, CHRCD = 'J/K')	ER	N
59	PJ	AM Special Reserve Order	OK	Y
60	PM	Local purchased part for some region	ER	Y
61	PO	Promotion limit reached (Promotion Budget Usage Over 95%)	ER	N
62	PP	It's applied standard of Passanger and Commercial Vehicle uncommon part.	ER	Y
63	QA	Allocation blocked.	OK	Y
64	QL	Campaign target part 100% supply	ER	N
65	QN	Ordered QTY = 0	ER	N
66	QO	Pre-inspection - Target QTY 100% supply	OK	N
67	QP	Pre-inspection - Pending closure	OK	N
68	QQ	Pre-inspection - Closed	ER	N
69	QR	Textile part order check	ER	Y
70	QX	Campaing targert part no supply	OK	N
71	RC	Restrict Accessory Order for Russian Distributor	ER	N
72	RN	Region model type isn't managed.	ER	Y
73	SB	Old part is supplied.	ER	Y
74	SE	Part option check	OK	Y
75	SG	Chargeable Subcontracting for RDC (Not for PDC)	ER	N
76	SH	Order on hold by Labor Union Strike	ER	N
77	SI	Superssession code of confirmed about order part	OK	Y
78	SQ	Abnormal order	OK	Y
79	SR	Spec. Reconfirm of VIN	ER	N
80	SS	Short Strike	OK	Y
81	UC	MPAU SEA Order ISO no-input quarantine part	ER	N
82	UI	New model parts (Temporary price)	ER	N
83	UP	Price information missing	ER	Y
84	UV	Vendor code missing	ER	N
85	ZC	EOP over 15-year policy related part (Possible to Supply)	OK	N
86	ZX	EOP over 15-year policy related part (NOT Possible to Supply)	ER	N
87	ZZ	EOP over 15-year policy related part (NOT Possible to Supply)	ER	N

05.
PAYMENT REQUEST

PROFORMA INVOICE

Mobis provides proforma invoice to distributors who may need it to arrange payment.

Order details (items, pieces, amount) are written based on initial order confirmation list and once the proforma invoice is issued, details can not be changed unless there are explainable reasons such as supersession or changed supply unit.

Proforma Invoice

PROFORMA INVOICE

HYUNDAI MOBIS

203, Teheran-ro, Gangnam-gu, Seoul Korea(05141)
E-mail : mobis@mobis.com / Tel : 82-2-1234-5678

To.	MOBIS(A99AAX)	Ref. No	A99AAX-20240620	Date	2024-06-20
Content	Dear Sir, We are pleased to make an offer under the following terms and conditions.				
Commodity	Automobile Serivce Parts(Specifications and descriptons as shown on the attached sheet)				

Order Number	Line	Pieces	Amount(CUR)
A99AAX4EFX	5	100	1,000.00
Freight	-	-	0.00
Insurance	-	-	0.00
Total	5	100	1,000.00

Payment	TT IN ADVANCE		
TT Accont No.	(950000011111) KEB HANA BANK, HYUNDAI MOTOR BANKING 137-938 12 HEONREUNG-RO SEOCHO-GU SEOUL KOREA		
Shipment	Automobile Serivce Parts(Specifications and descriptons as shown on the attached sheet)		
Shipping Port	Any Korean Port(s)	Discharging Port	Any port in XXX
Trade Terms	FOB		
Inspection	Hyundai MOBIS's Inspection to be final	Validity	1 Month
Remaks	The parts prices may be adjusted without notice.		

MOBIS KIM / Regional Manager
Hyundai Mobis

1/1

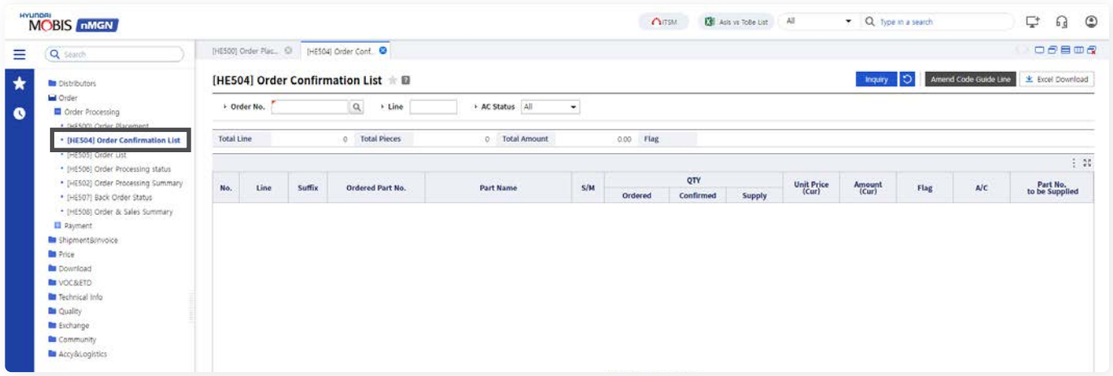
06.
PAYMENT ARRANGEMENT

ORDER CONFIRMATION SHEET

The distributor can check Order Confirmation list as Excel format to arrange its payment.
Or distributor can request Proforma invoice to regional manager for certain order list.
However, it is highly recommended to keep sufficient balance to prevent any delay of parts supply as explained.

LOCATION : [nMGN] - [Order] - [Order processing] - [Order Confirmation List]

Order Confirmation Sheet



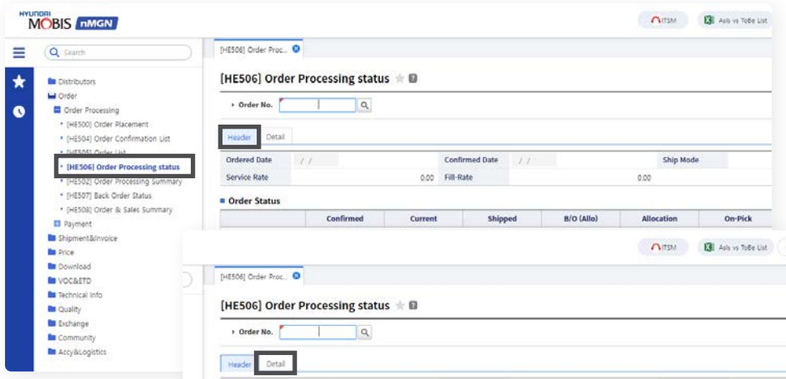
07.
ORDER PROCESSING

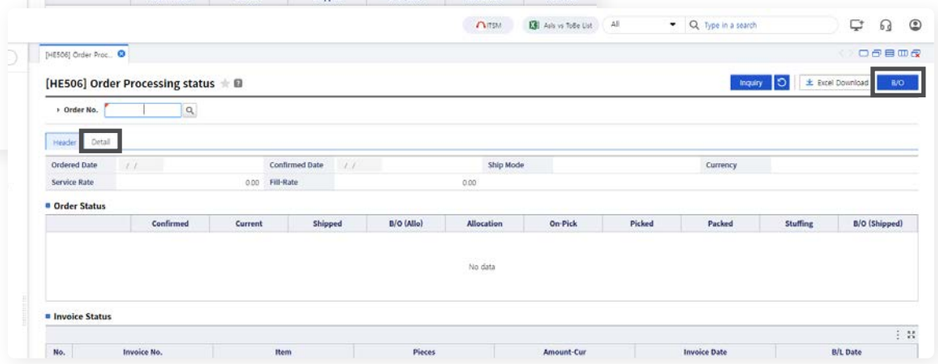
ORDER PROCESSING STATUS

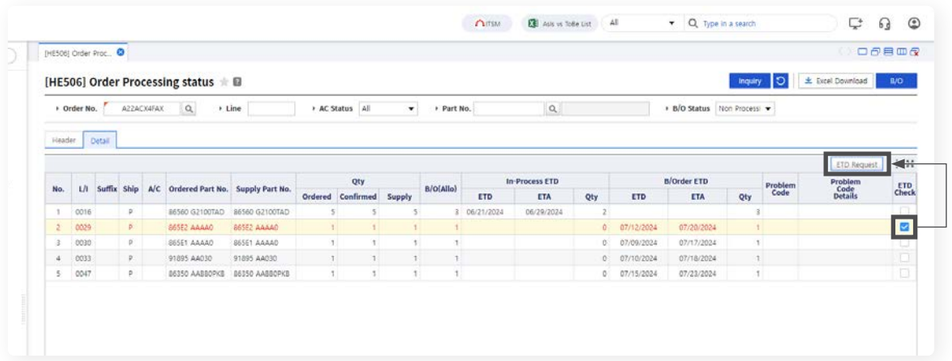
Order processing status can be searched with “Order No.”. User can find summary of order status from ‘Header’ screen. Likewise, detailed status by order line could be searchable on ‘Detail’ screen. Download for summary of current B/O status and ETD inquiry is available on this screen.

LOCATION : [nMGN] - [Order] - [Order Processing] - [Order Processing Status]

Order Processing Status







ALLOCATION

① Mobis' system allocates available inventory to confirmed order lines automatically in order to proceed with the next steps (Picking and packing)
② Allocation process is executed based on allocation priority rule and lines without inventory allocation will remain as back order.

Once allocation is executed to the specific order line, allocated inventory is bound to that line and can not be transferred to any other lines.

③ Factors for allocation priority : Order type, ship mode, order date, payment recieval

Priority	Order type
1	VXR (XVOR)
2	VOR
3	AIR (Claim, Campaign)
4	AIR
5	SEA
6	SEA (Final Buy)

PICKING AND PACKING

① Once an order line is allocated, it will go through picking-packing-stuffing stage.
"Picking" is to get the part out from its storage area.
"Packing" is to pack the picked parts in the delivery box.
"Stuffing" is to put packed boxes into the container.
② Once stuffing is completed and containers are sealed, invoicing process will begin for shipment.

08.
INVOICING & SHIPPING

SEQUENCE OF INVOICE NUMBER

Invoice number is automatically assigned by the system after packing & stuffing. The invoice number consists of 8 digits numbers and letters as the following format.



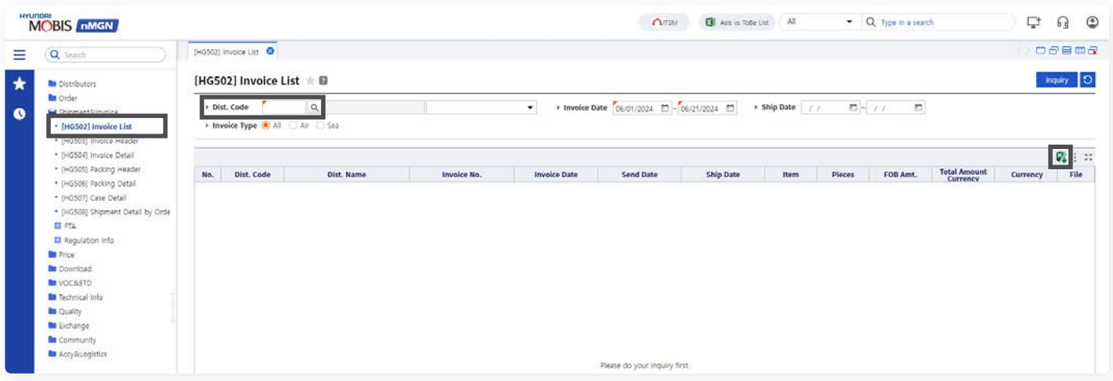
Ship Mode	S	Overseas shipment by vessel
	A	Overseas shipment by air and courier service
Year Code	Numerical sequence "0" through "9" e.g. 2024 → 4, 2025 → 5, 2026 → 6, ... , 2029 → 9	
Month & Serial Number	Alphabetical sequence for each order type in each month Serial number is assigned by system automatically. e.g. S4A00001 (1st sea invoice in Jan, 2024) A4B00002 (2nd air invoice in Feb, 2024)	

INVOICE NO. LIST

In order to search invoice list, the users are requested to input Dist. Code, Invoice Type and Invoice Date.
Users can also download invoice list by clicking ‘Excel’ button.

LOCATION : [nMGN] - [Shipment & Invoice] - [Invoice List]

Invoice No. List



BUTTONS AND FIELD DETAILS

① **Processing Buttons**
- Query information corresponding to query conditions.
- Convert the inquired information into an Excel file.

② **Filtering Fields**
- Dist. Code : Distributor Code
- Invoice Type : Invoice type - All / Air / Sea (required)
- Invoice date : Invoice date (required)

③ **Table Fields**
- Invoice No. : If you click Invoice No., it moves to ‘Invoice header’ screen.
- Invoice Date : Invoice date
- Ship Date : Date of shipment
- Item : Number of items on the invoice
- Piece : Total quantity of all items on the invoice
- Amount : Total amount on the invoice (based on trade term)

INVOICE DETAIL

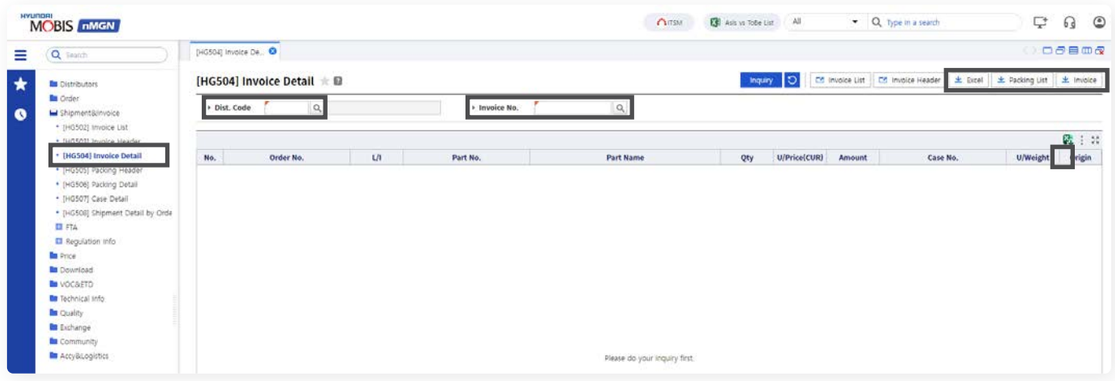
Users can check invoice details as below.

- Invoice list / Invoice header / Packing list

When users click any case number, it is linked to ‘Case Detail’ screen. Users can also download commercial invoice list by clicking ‘Invoice’ button.

LOCATION : [nMGN] - [Shipment & Invoice] - [Invoice Detail]

Invoice List



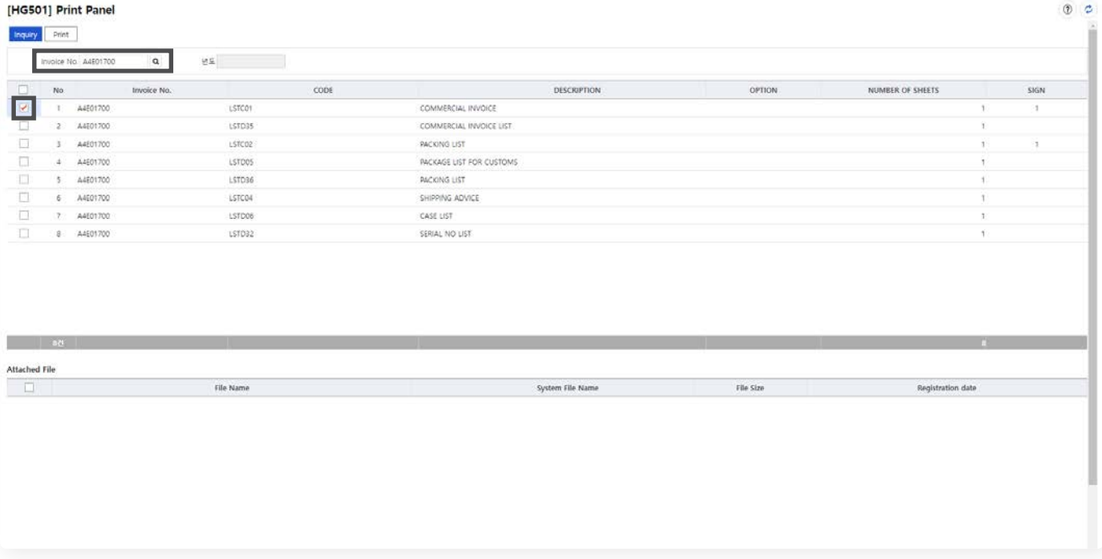
PRINT PANEL (SHIPMENT DOCUMENTS)

In order to view and print out shipping documents on this menu, users are required to access “Print Panel” screen and input invoice number. Then, user can check file list and click ‘Print’ button to print out document distributor needs for.

LOCATION : [nMGN] - [Download] - [Print Panel]

① Shipping Document Cover : Commercial invoice / Packing list / Shipping advice / etc.
② Shipping Document Detail : Package list for customs / Case list / Container list
③ Form : FTA Certificate of origin - Cover (For countries with FTA with Korea)

Print Panel



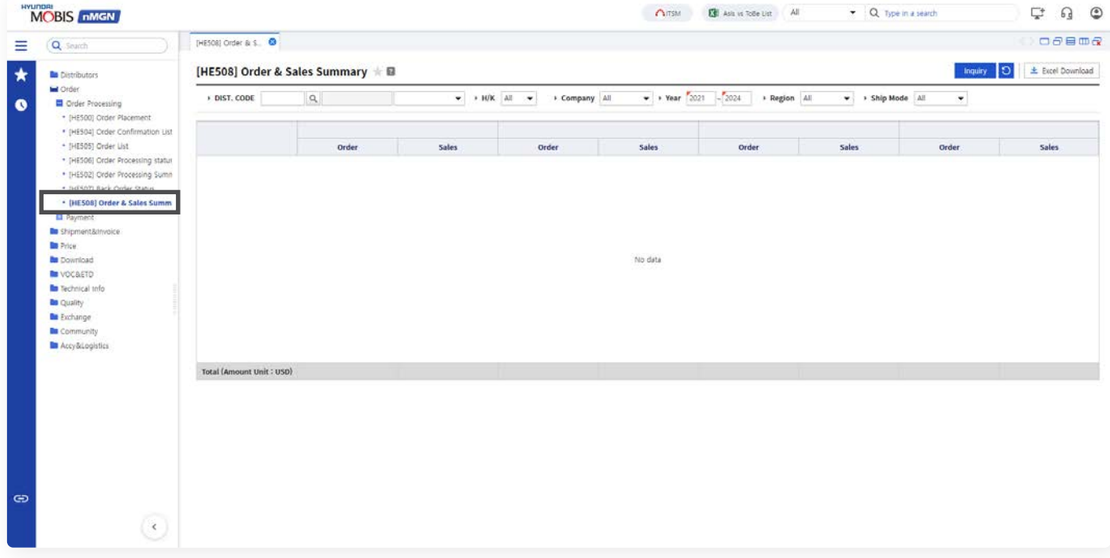
09.
ORDER & SALES SUMMARY STATUS

ORDER & SALES SUMMARY STATUS

Users can find out ordered amount and shipped amount (to / from Mobis) on this screen. All values on this page are FOB, excluding freight, insurance and any other cost related to shipment process.
Users can adjust the result by inputting period (by year) and filtering by ship mode (Air/VOR/VXR/Sea/All).

LOCATION : [nMGN] - [Order] - [Order Processing] - [Order & Sales Summary]

Order & Sales Summary Status



PART 6.

ETD & VOC

01. IMPORTANCE OF ETD & VOC REQUEST

02. ETD REQUEST

03. ETD REQUEST PLACEMENT

04. ETD DETAIL LIST

05. VOC REQUEST

06. VOC REQUEST PLACEMENT

07. VOC REQUEST DETAIL

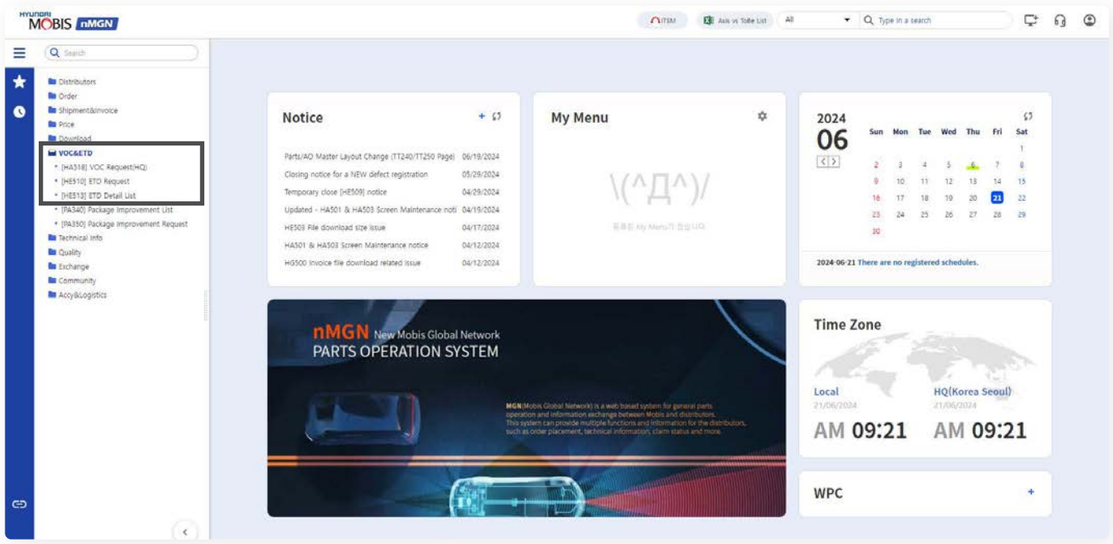
01.
IMPORTANCE OF ETD & VOC REQUEST

IMPORTANCE OF ETD & VOC

“ETD & VOC” menu is to systematize request of the customer across all categories including supply schedule, order issue (cancel / change) and price review, e.g.
“ETD” section is able to respond to ETD request by the system, not by e-mail correspondence as in the past.
“VOC” section is also available to react directly and fast to the voice of customer in various fields.

LOCATION : ❶ ETD : [nMGN] - [VOC & ETD] - [ETD Request or ETD Detail List]
❷ VOC : [nMGN] - [VOC & ETD] - [VOC Request (HQ)]

ETD / VOC Menu



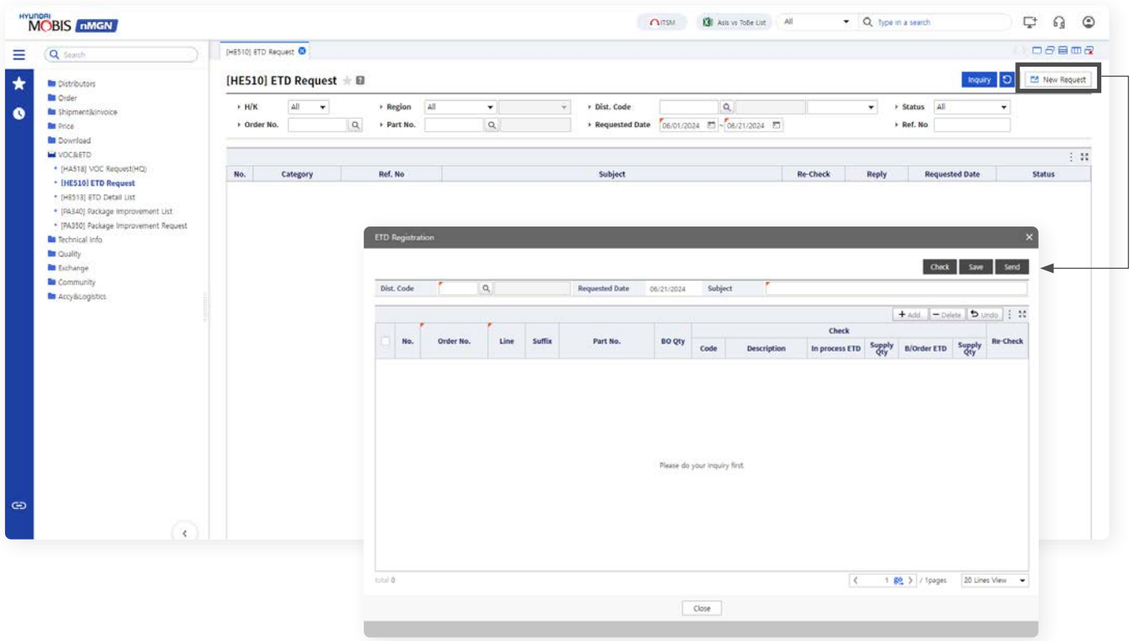
02.
ETD REQUEST

ETD REQUEST

**To make a new “ETD Request”, click “New Request” button on this screen.
User can also check the status of ETD request already placed.**

LOCATION : [nMGN] - [VOC & ETD] - [ETD Request]

ETD Request



① **Processing Buttons**
- Inquire ETD reply status with selected filtering fields.
- Click “New Request” button and move to ‘ETD Registration’ screen.
- Category, Ref. No. or Subject : Move to “ETD Request Detail” screen.

② **Filtering Fields**
- Date : Find the list of ETD requests placed during a selected period.
- Status : Find the list of ETD requests under selected processing status.
- Order No. : Find the list of ETD requests for a typed order number.
- Part No. : Find the list of ETD requests for a typed part number.

③ **Table Fields**
- Category : “ETD Request” will be shown.
- Ref. No. : “Ref. No.” will be automatically generated as you create an ETD request.
- Subject : Subject of your ETD request.
- Re-check : A check mark will be shown when you select “ETD Re-check” box on “ETD Request Add” screen.
- Request date : Date of ETD request placement.
- Processing status

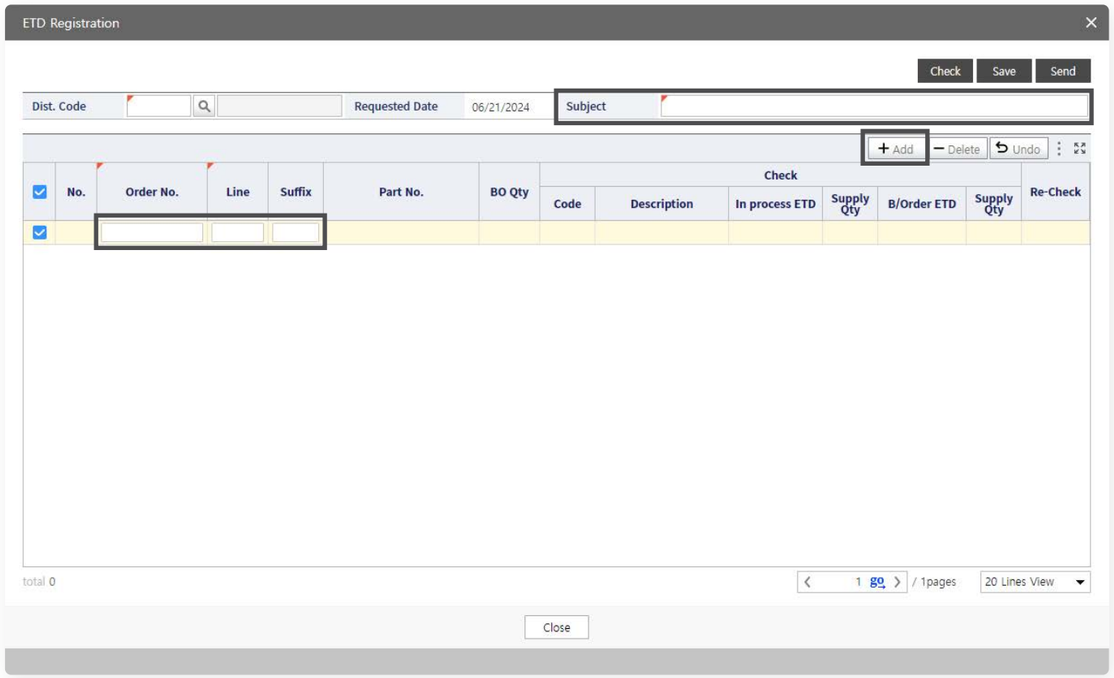
Code	Descript.
Saved	When your ETD request is saved, but not been “send’ (Please note that your ETD request will not be sent to Mobis HQ unless you click “Send” button)
To be received	Waiting for HQ to receive (not in use) (1 working day is required for Recieval)
Processing	In process to check ETD
Replied	Your ETD request was replied by Mobis HQ

03.
ETD REQUEST PLACEMENT

ETD REQUEST ADD

User can create ETD Request clicking “Add” button in ‘ETD Registration’ screen.
Dist Code, Subject, Line Extension and Order Information should be filled out manually.

ETD Request Add



BUTTONS AND FIELD DETAILS

① **Processing Buttons**
- ‘Check’ : Check for errors on typed information (Order No., Order Line, Part No.).
- ‘Save’ : Saved the type information
- ‘Sent’ : Send ETD request to Mobis HQ

② **Filtering Fields**
- Line Extension : You can extend the lines by clicking ‘Add’ button.
- Subject : Subject of your ETD request.
- Order No. : Order numbers that you want to request ETD for.
- Order Line : Order line numbers that you want to request ETD for.
- Part No. : Part numbers that you want to request ETD for.

③ **Table Fields**
- BO QTY : Current back order quantity of requested order line.
- Code / Description : The code and description will be shown if errors are found from typed information. (When you click “Check” button)
- In Process ETD : ETD for allocated and on-pack quantities.
- Supply QTY (In Process ETD) : Allocated and on-pack quantities.
- B/Order ETD : ETD for not allocated quantities.
- Supply QTY (B/Order ETD) : Not allocated quantities.
- ETD Re-Check : Check the box if you like to receive an updated ETD. (This will not guarantee earlier ETD)

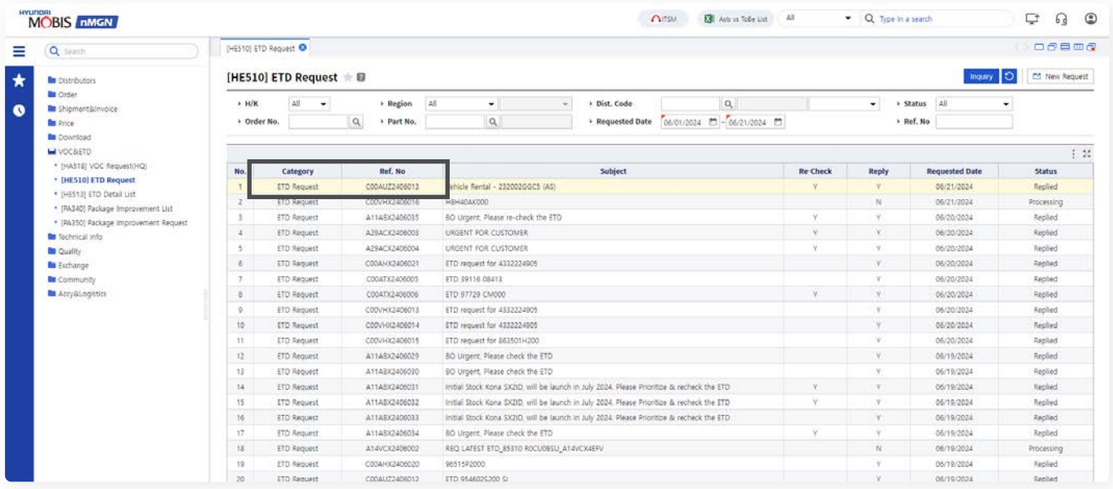
Code	Description	Remark
O	Success	No errors
F	Shipped	Need to be deleted
C	Cancelled	Need to be deleted
S	P/N Changed	Will be proceeded
W	Wrong Info.	Need to be deleted or corrected
D	Duplicated	Same ETD was requested today need to be deleted
N	Order not confirmed	Need to be deleted
P	ETD Provided	Check on ETD Re-check if provided ETD needs an update; otherwise, it needs to be deleted. Your ETD will be shown on 'Check Result'

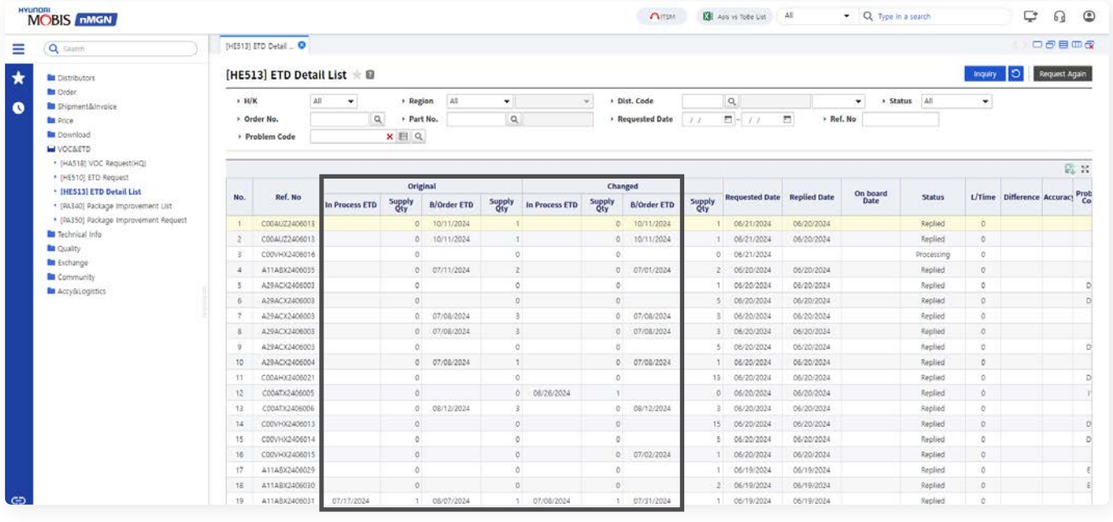
04.
ETD DETAIL LIST

ETD DETAIL LIST

It is to review the details of ETD request processing status by clicking “Category”, “Ref. No.” or “Subject” in “ETD Request” screen. Then, it moves to “ETD Detail List” screen and user can understand detailed status of ETD request.

ETD Request Add





BUTTONS AND FIELD DETAILS

① **Processing Buttons**
- ‘Inquiry’ : Inquire ETD request processing status with selected filtering fields.
- ‘Request again’ : After you check on ‘ETD Re-check’ box and this button will be activated to request ETD again.

② **Filtering Fields**
- Ref. No. : Generated reference number.
- Part No. : Find the list of ETD requests placed during a selected period.
- Order No. : Find the list of ETD requests for a typed order number.
- Processing : Find the list of ETD requests under selected processing status.

③ **Table Fields**
- Order No. : Order numbers that you want to request ETD for.
- Order Line : Order line numbers that you want to request ETD for.
- Part No. : Part numbers that you want to request ETD for.
- BO QTY : Current back-order quantity of requested order line.
- Re-Check : A check mark will be shown, if your request was for ETD re-check.
- Original ETD : Originally provided ETD information.
- Changed ETD : Rechecked ETD information.
- In Process ETD : ETD for allocated and on-pack quantities.
- Supply QTY (In Process ETD) : Allocated and on-pack quantities.
- B/Order ETD : ETD for not allocated quantities.
- Supply QTY (B/Order ETD) : Not allocated quantities.
- On Board Date : Date of the shipment from Korea.
- Replied Date : Date of reply from Mobis HQ.
- Processing Status

Code	Description
Saved	When your ETD request is saved, but not been “send” (Please note that your ETD request will not be sent to Mobis HQ unless you click “Send” button)
To be received	Your ETD request has not been received yet. (1 working day is required for receipt)
Processing	Your ETD request is being reviewed by Mobis HQ
Replied	Your ETD request was replied by Mobis HQ

- Problem Code : Problem code will be provided when there are supply issues and ETD can not be provided on time.

Code	Problem Code Description
On Due	Before promised delivery date
Mold / Facility Delay	Mold / Facility under repair
	Mold / Facility on production
	Mold / Facility under transfer
	Mold / Facility under stabilization
Production Capacity	Insufficient production capacity
	Insufficient production capacity (Abnormal increase in demand)
	Quality Deficiency
	Insufficient production capacity (Campaign)
	Supplier on strike
LOT / Pricing Delay	LOT being negotiated
	Unit price being negotiated
	FBO being negotiated
Specification Dealy	Specification being checked
	Minimum purchase QTY being negotiated
Raw Material Dela	Insufficient production capacity (Outsourced raw material)
	Mold / Facility under repair (Outsourced raw material)
	Mold / Facility on production (Outsourced raw material)
	Mold / Facility under transfer (Outsourced raw material)
	LOT being negotiated (Outsourced raw material)
	Unit price increase being negotiated (Outsourced raw material)
	Delay in raw material procurement
	Delay in imported raw material procurement

Code	Problem Code Description
Mold / Facility Issue	Mold / Facility not operable
	Mold / Facility repair cost required
	Mold / Facility not transferred
	Supplier bankrupt
LOT / Pricing Required	LOT requested
	Unit price increase requested
	FBO requested
Specification Issue	Specification error (Supplier Error)
	Specification not found
	Minimum purchase QTY error
	Item no longer applicable
Raw Material Not Available	Mold / Facility not operable (Outsourced raw material)
	Mold / Facility repair cost required (Outsourced raw material)
	Mold / Facility not transferred (Outsourced raw material)
	Supplier bankrupt (Outsourced raw material)
	LOT requested (Outsourced raw material)
	Unit price increase requested (Outsourced raw material)
	Imported raw material unprocurable
Picking Hold	Picking process on hold
Allocation Hol	Allocation process on hold

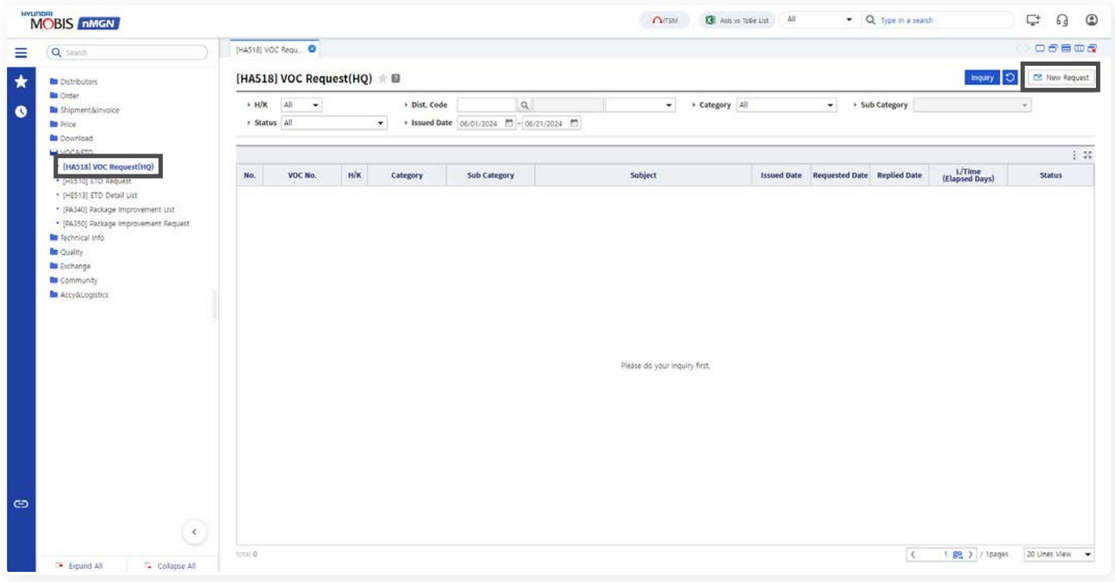
05.
VOC REQUEST

VOC REQUEST (HQ)

You can generate a new "VOC Request" by clicking “New Request" button or check the status of already generated VOC request.

LOCATION : [nMGN] - [VOC & ETD] - [VOC Request (HQ)]

VOC Request(HQ)



BUTTONS AND FIELD DETAILS

① **Processing Buttons**
- ‘Inquiry’ : Inquire VOC processing status with selected filtering fields.
- ‘New Request’ : Move to “VOC Registration” screen.
- VOC No., Category, Sub Category or Subject : Move to “VOC Detail” screen.

② **Filtering Fields**
- Issued Date : Find the list of VOC requests placed during a selected period.
- Category : Find the list of VOC requests under selected category.
- Sub Category : Find the list of VOC requests for a selected sub category.
- Status : Find the list of VOC requests for a selected status.

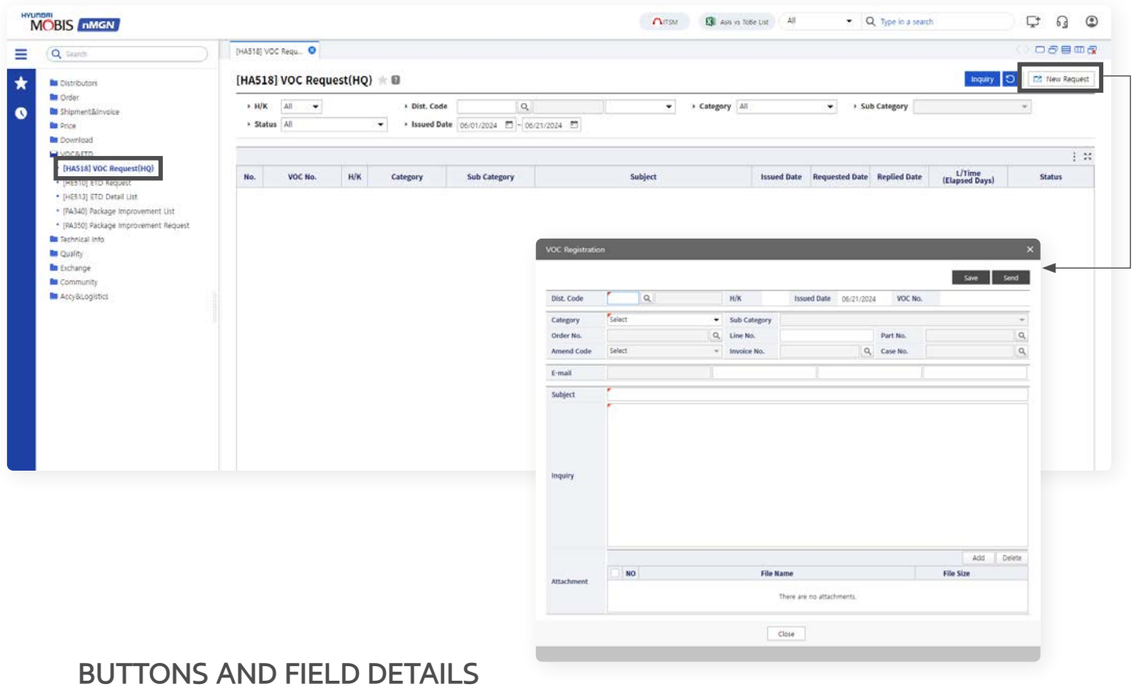
Category	Sub Category	Request Detail
Technical Information	Part Number Check	Inquiry for pno. for users' demand
	ITC/Alternative Part Check	Inquiry for pno. alternatively applied
	Part Spec.	Inquiry for part spec. info.
	Part Weight Info.	Inquiry for part weight info.
Price Review	Price Review	Inquiry for adequacy for pricing
	List Price Register Request	Request for registraton of list price
Claim Issue	Claim Issue	Inquiry for part weight info.
Order Issue	Amend Code Issues	Inquiry for amend code
	Order Change/Cancel	Request for order change or cancel
	Order Others	Inquiry for any parts related issues

06.
VOC REQUEST PLACEMENT

VOC REQUEST ADD

You can generate “VOC Request” by clicking “New Request” button next to “Inquiry”.

VOC Request



BUTTONS AND FIELD DETAILS

① **Processing Buttons**
- ‘Save’ : Save the typed information.
- ‘Send’ : Send VOC request to Mobis HQ.

② **Filtering Fields**
- Category / Sub Category : You can select categories for your VOC request.
- Order No. : Order number that you want to request VOC for.
- Order Line : Order line number that you want to request VOC for.
- Part No. : Part number that you want to request VOC for.
- Amend Code : You can select amend code that you want to request VOC for.
- Invoice No. : Invoice No. that you want to request VOC for.
- Subject : Subject of your VOC request.
- Content : You can write your VOC request in detail on this field.

※ Input fields in red must be filled : otherwise your VOC request won’t be sent.

PART 7.

PARTS CLAIM

01. ABOUT PARTS CLAIM

02. CLAIM PROCEDURE

03. SETTLEMENT OF CLAIMS : nMGN MANUAL

04. GUIDELINE FOR CLAIM EVIDENCE

05. FREQUENT CLAIM ERROR

01.
ABOUT PARTS CLAIM

DEFINITION

A claim is a request to compensate for loss incurred to distributors due to the quality of parts supplied by Mobis.

1) Distributors can file claims when problems in quality of supplied parts are found (including accessories) before installation in the vehicle.

2) Claim categories are classified as the table below. Detailed claim codes (that are in use) are on the next page.

Type (Name)	Definition
Wrong	When a part is different from its drawings. (Parts are different in shape, color and size from a correct one.)
Defect	When a part has a manufacturing defect. (Not molding / Burr / Bubble etc.) ※Malfunction and functional defect should be submitted to warranty claim system provided by Hyundai / Kia.
Damage	Supplied part with external damage by poor handling. (Broken / Dented / Scratched··· etc.)
Not Received (Shortage)	Quantity of supplied parts is smaller than what was invoiced.
Excess (Overage)	Quantity of supplied parts is larger than what was invoiced.
Not Ordered	Distributor received parts which were not ordered.
Obsolete Parts	Parts with official NCR (Non Conformity Report) (QA)
Other	Other (Packing spec. etc.)

※ Detail Claim Type

Type (Name)	Code	Definition
Wrong	WA	FR/RR, LH/RH wrong
	WB	Wrong color
	WC	Wrong Item
	WD	Component error/missing
Defect	DA	Not molding/Burr
	DB	Peel off/Bubble/Rust/Dirt/Stain/Color
	DC	Dimension_Gap, Clearance, Size
	DD	Assembly error
	DE	Painting, Plating, Welding, Machining
Damage	EA	Scratch/Curved/Dent/Nick
	EB	Broken/Crack
	EC	Dirt, Stain, Packing damage
Obsolete parts	JA	NCR from Vendor
	JB	NCR from Hyundai and Kia
	JC	NCR from MOBIS MIP
	JD	NCR from MOBIS HQ Quality
	JE	NCR from MOBIS Subsidiary
Quantity Discrepancy	SA	Shortage
	SB	Overage
	SC	Not Ordered
Other	OT	Other(Packing spec. etc.)

3) Following cases are not reasons for a valid claim

① Warranty claim : Should be submitted to warranty claim system provided by HMC / Kia.
② Transportation claim after shipment : Should be handled by insurance company and transportation company.
③ Damage due to improper handling by distributor, dealer or customer.
④ Claim after limited expired date.

CLAIM FILING / JUDGMENT

Distributor can submit claims in the event of following claim types.
Distributor can only file claim through nMGN.

1) A distributor has to attach the following material to prove the validity of each claim.

Evidence type		Definition			
		Wrong	Damage / Defect	QTY Discrepancy	Obsolete Parts
Photo	Box Label Photo	Mandatory	Mandatory	Recommend	Mandatory
	Parts & Parts QTY Photo	Mandatory	Mandatory	Recommend	Mandatory
	Packing Box Photo	Recommend	Mandatory	Recommend	Recommend
Other Evidences		Recommend	Recommend	Recommend	Mandatory

2) If claim evidence is not sufficient, Mobis QC will reject it. Distributor will have to file a new claim with the requested evidence, if they want to pursue the case.

3) A distributor can raise objection for the claim result within 15 days after judgment.

Please re-submit the claim with additional data and reasons or use ‘Quality Correspondence’ for an objection.
If there is no objection within 15 days after judgment, distributor shall be deemed to have acknowledged Mobis’ claim judgment result.

CLAIM COMPENSATION

Mobis will compensate for distributor loss that is caused by quality problem of the parts Mobis supplied. There are 3 ways of Mobis compensation : Refund, Replacement, Absorb (Relabeling).

In case of “Refund”, Mobis compensates for FOB + M/up and for “Replacement”, Mobis supplies the parts with the same transportation mode as the original claimed parts. But if the parts are available in the distributor region, Mobis will request “Absorb” or other actions such as “Relabeling”.

① FOB : Part price
② M/up : Compensation ratio which is agreed between a distributor and Mobis
③ Extra Payment : Distributor can request for compensation of price difference in case of relabeling.

CLAIMED PARTS DISPOSAL

Distributor has to follow disposal methods by Mobis claim judgment. There are 7 ways of disposal methods : Scrap, Relabeling, Absorb, Retain, Return, Rework and None. Most frequently used methods are Scrap, Relabeling, Absorb and Retain.

1) Scrap

Distributor has to scrap claimed parts periodically. When scrapping distributor has to make a “Scrap Report” and keep it for at least 3 years. The distributor has to submit it to Mobis upon request.

※ “Scrap Report” has to include part photos, scrapped part photos and must be confirmed by the signature of the responsible person. For a sample scrap report, please refer to the end of paragraph 4 Judgment in Claim Procedures.

2) Relabeling : e.g. Wrong part

If the claimed part was wrong but in use in distributor region, distributor can relabel the part to a correct one and use it.

3) Absorb : e.g. Excess shipment

If the claimed part was excess shipment, distributor can absorb the claimed part and use it as normal inventory.

4) Retain

Distributor has to retain claimed parts for 2 months. After 2 months, distributor can scrap the retained parts without Mobis’ permission. In this case, the distributor also has to make a “Scrap Report”.

5) Return & Rework

Distributor has to return the claimed parts back to Mobis or rework them. In this event, Mobis will send you individual guideline for how to proceed each case.

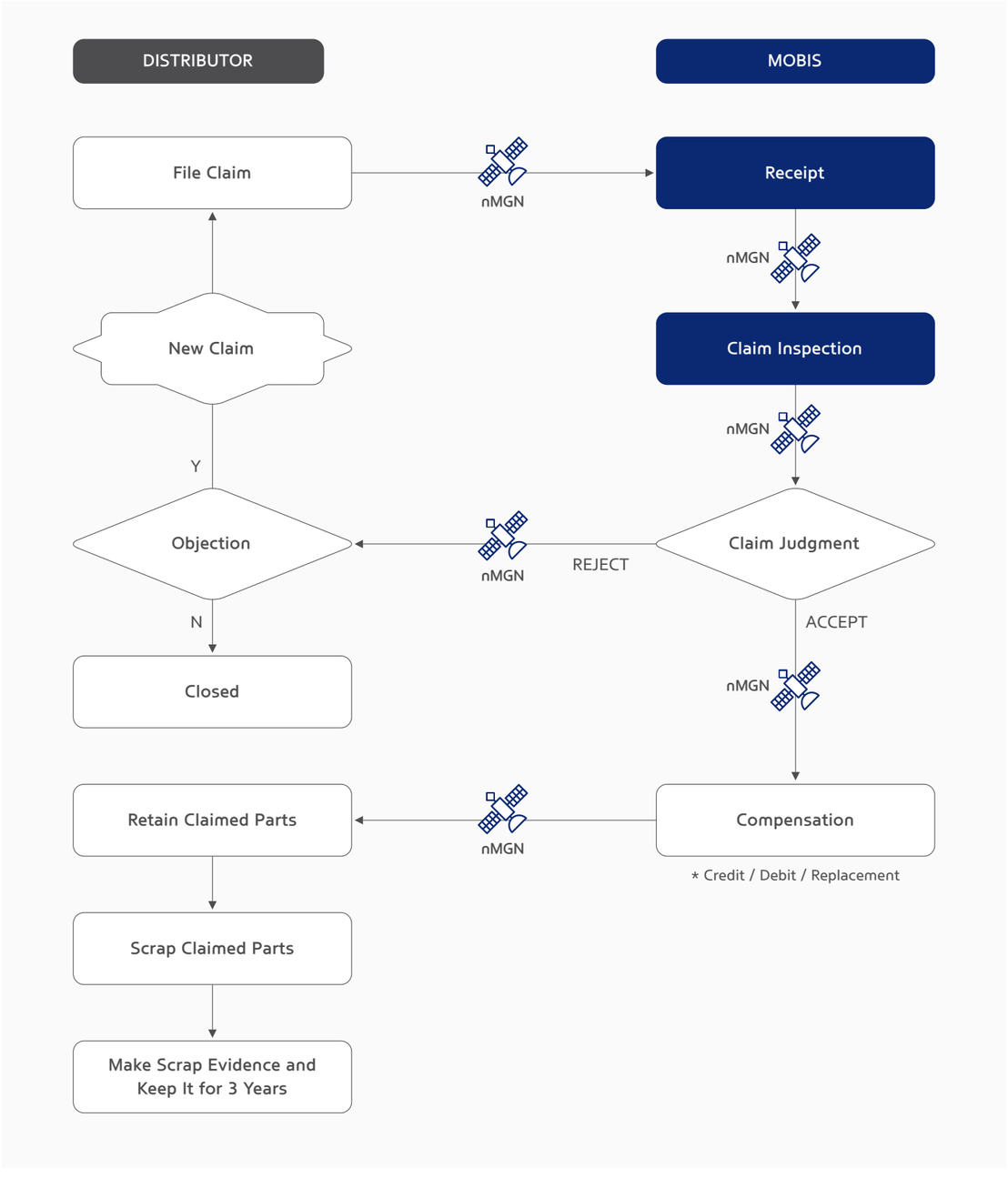
CLAIM DEADLINE

For each claim type, different claim deadlines are adopted.

Claim Category	Claim Deadline
Wrong	12 months after shipment
Defect	12 months after shipment
Damage	6 months after shipment
QTY Discrepancy	3 months after shipment
Obsolete Parts (QA)	Anytime (but recommended within 3 month after announcement
Other	12 months after shipment

If the claim deadline expires, nMGN cannot be registered for the claim request.

02.
CLAIM PROCEDURE

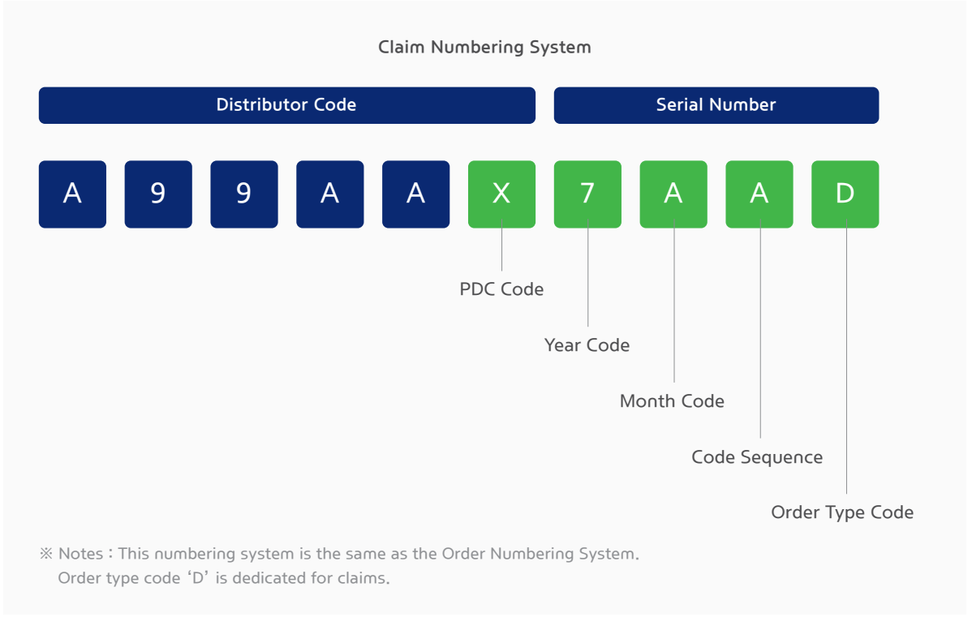


SUBMITTING CLAIM

All claims must be filed only through nMGN and distributors must follow the basic rules as below.

1) How to assign claim number

Claim numbers are the important key in the claim process. nMGN will create you a claim number automatically using the claim numbering system below.



※ Notes : This numbering system is the same as the Order Numbering System.
Order type code 'D' is dedicated for claims.

2) Maximum Lines per Claim

Maximum lines per claim is changed on nMGN. There is no limit to make lines per claim.

3) How to Submit Claims

There are two different ways to file claims. One is to submit a claim after selecting each line manually. The other is to copy and paste from a prepared spreadsheet table in excel. When receiving data from excel, the nMGN system will create every 7 lines automatically and new claim numbers as there are more than 7 lines of claims.

4) Importance of Evidence

When you file a claim, you must attach the proper evidence. You can attach up to 3 photos per claim. But if you want to attach more evidence, you can use "Other attachment". (Attachment in PPT or EXCEL (version 2007 or later) cannot be recognized by nMGN. Please use file format .ppt or .xls, NOT .pptx or .xlsx)

5) Action Code

You can request compensation method by "Action Code" when you file claims. Here is the "Action Code"

Type (Name)	Code	Definition
Refund	C	Mobis will refund for part FOB and its M/UP.
Absorb	A	Distributor will review expected demand and if parts are available, put that part into distributor storage.
Mobis Instruction	I	Mobis will provide compensation method.
Replacement	R	Mobis will supply an equitable quantity of correct parts free of charge.

RECEIPT INSPECTION

When a claim is submitted through nMGN, Mobis receives it.
For better work efficiency, please input “Claim Type” correctly.

Here is how Mobis proceeds to find out how each claim was caused.

1) QTY Discrepancy

Mobis will investigate QTY discrepancy (Not Received / Excess / Not Ordered) claims.
There are 2 ways to investigate QTY discrepancy claims.

① Stock Checking – Always
Mobis checks its physical inventory and compare it with its inventory in the system.

② Simulation – If needed / If possible
If claimed parts are heavy enough, simulation will be conducted. PDC repacks the same box for the claimed case and checks weight and volume again. Mobis has lists of weight for every box when they were shipped. So, comparing the repacked box’s weight with its history, Mobis can find that some parts were missing or not when it was shipped.

※ If it seems quantity discrepancy problem occurred, please make sure to go through carefully each and every box to see if there’s any missing or additional items / quantities before filing a claim.

2) Wrong Part

Each claimed parts will be investigated with its drawings.

3) Damage / Defect

Part production process, Distributing route, packaging spec. and packing status will be investigated.

4) In case of Wrong / Damage / Defect claim, its information is sent to Mobis PDC if it is needed. With that information, Mobis can check and correct stocks.

JUDGEMENT

1) Claims are judged based on standardized guidelines and compensated in a fair and proper way.

2) Verifying Judgment and Objections

Distributors can check the judgment of each claim line on nMGN. Objections can be made by submitting a new claim with same information within 15 days after the final judgment of the original claim. Please review the data and reasons affecting the decision before submitting a new claim.

3) Mobis will instruct disposal method of the claimed parts.

Type (Name)	Disposal Instruction
Absorb	① Absorb to Distributor’s stock.
Return	① Return to Mobis. ② Mobis will pay the cost of return freight (Air or Sea).
Scrap	① Scrap parts at distributor’s ② Distributor should submit the scrap evidences to Mobis.
Retain	① Retain parts for further instruction by Mobis. ② Distributor should keep the claimed parts for 2 months after Mobis’ judgment. After 2 months, distributor can scrap them without Mobis’ instruction.
Rework	① Rework supplied parts to recover marketability. ② Mobis decides rework costs after mutual agreement between Mobis and distributor.
Relabeling	① Relabel to the correct Part No.

※ For “Scrap” and “Retain” cases, distributor must make “Scrap Evidence” and keep it for 3 years. When requested, distributors have to submit the scrap evidence to Mobis.

※ Example of Scrap Evidence

Scrap List for Parts Claim

Distributor Code :
PDC Name :
Parts Manager Name : _____ Scrapped Date : _____

Seq	Claim No	Part No	QTY	Compen. Date	Scrapped Date	Photo		Scrapped Person	Sign.
						Before	After		
1									
2									
3									
4									
5									

I confirmed that we have scrapped upper items in our stock.

Date : _____

The Responsible Person : _____ sign

COMPENSATION

1) Mobis compensates distributors by providing a refund or by replacing parts.

2) There are 3 compensation methods for a claim.

① Refund
This is the basic compensation method. Mobis will compensate in credit note.

② Replacement
Mobis will send new correct parts for the accepted claims. The parts will be shipped in the same ship mode that the claimed parts were shipped. In other words, if the claimed part were shipped by sea freight, replacement parts will also be shipped via sea freight. If the claimed part were shipped by air freight, replacement parts will be shipped by air freight. Mobis will cover the freight cost.
※ If you want the parts replaced, please input “Replacement” in the action code when filing a claim.

③ Absorb (Relabeling)
When a claimed part is applicable to in the distributor’s region, Mobis requests relabeling or absorption for the claimed part.

03.
SETTLEMENT OF CLAIMS : nMGN MANUAL

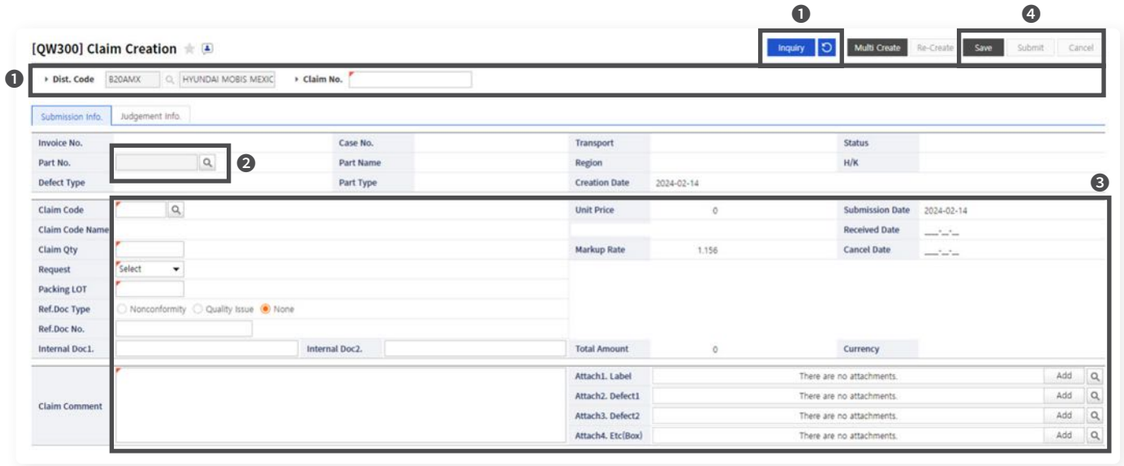
FILING A CLAIM

1) Filling Claims through nMGN only

All parts claims should be submitted through nMGN. Any other methods of claims cannot be accepted.
To file a claim, Invoice No. and Case No. of claimed parts are needed.

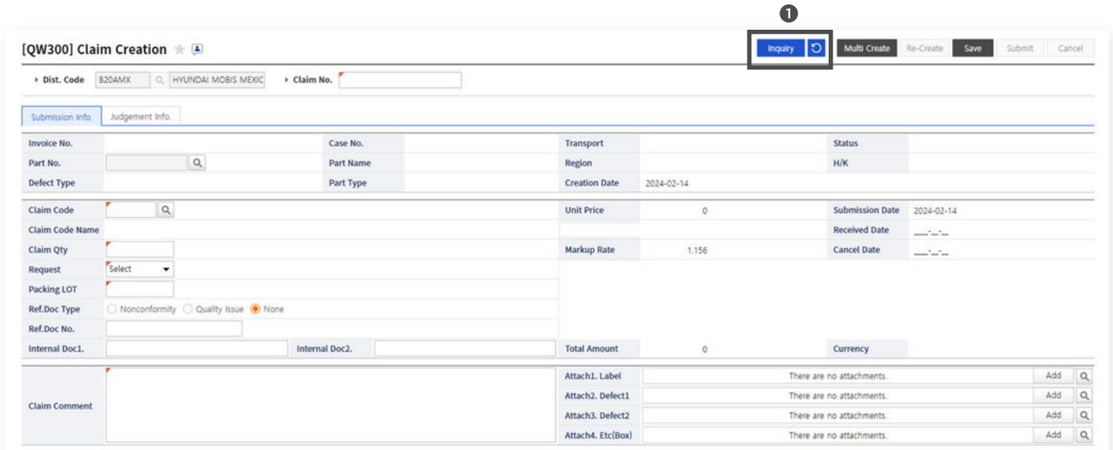
2) Filing Claims Methods

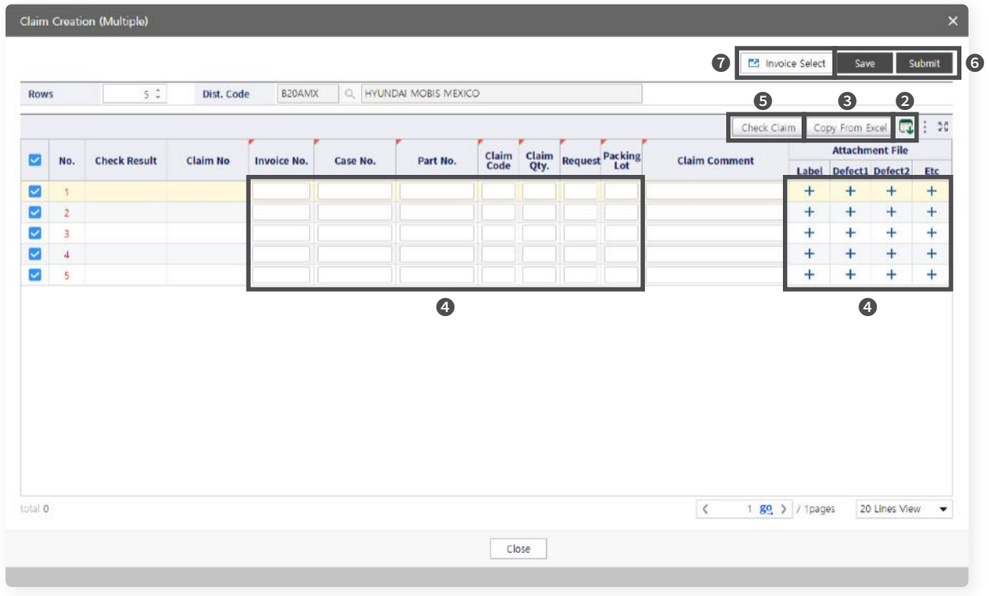
① Input claim information manually like below picture.



Step	Procedure	Description
❶	Inquiry	· Input Dist. Code (This will be a default value) · Input a Claim No. when you need to inquiry.
❷	Select Part No., Invoice No. Case No.	· You can not directly input a Part No. · You have to use ‘Find’ button to input Part No., Invoice No. and Case No.
❸	Input Claim Information	· Orange Triangle means necessary fields to submit a claim. · Please fill out the blank fields. (Non-orange triangle fields are optional.) · Attach1 ~ 4 are changeable depends on Claim Code. (When you use ‘Save’, Necessary attachments will be automatically checked with an alarm message.)
❹	Save Submit Cancel	· Save : It will create a ‘Claim No.’ or Update information a claim not submitted. · Submit : Submit a claim after fill out all the information. · Cancel : After submit a claim, you can cancel it until MHQ doesn’t receive it.

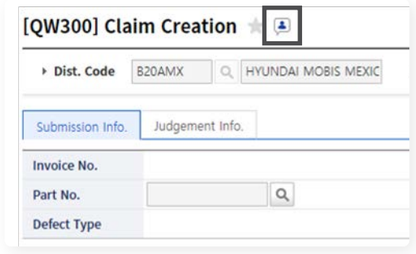
② You can submit multi claims using Multi Create.





Step	Procedure	Description
❶	Multi-create	· Open the ‘Claim Creation (Multiple) pop-up’
❷	Download format	· To use ‘Copy From Excel’, please use this first.
❸	Copy From Excel	· First, fill out the information (Excel column ‘D’ to ‘K’) and ctrl+c on the excel file with selecting area. · Put the cursor on ‘Invoice No.’field in the pop-up. · Ctrl+v
❹	Information	· Attach1 ~ 4 are changeable depends on Claim Code
❺	Check Claim	· Error check logic will be executed.
❻	Save, Submit	· Save : A Claim will be created. · Submit : A claim will be submitted.
❼	Invoice Select	· You can input the information with using ‘Invoice select’. If you will submit several claims (under 2 to 3 claims, Using Invoice Select will be easier than using Excel Download.)

③ If you want to download the manual for each screen, you can download the manual by clicking the box next to the screen number.



04.
GUIDELINE FOR CLAIM EVIDENCE

Here are the basic evidence guidelines for each type of claim.

TYPE : WRONG

Claim type Wrong refers to parts that are different in shape, color, pattern, size and label from what distributor had ordered. To submit this claim, distributors should send following information with the specific explanation. Evidence needed are as follows

① **Invoice and Case No. for the wrong part**
- Invoice No. and Case No. must match.

② **Photo of Wrong Parts**
- If there are more than 2 pcs wrong parts, make sure you show all quantity in one photo.
- Comparison photo between ‘Correct / Wrong’ and mark different points on photos.

※ Using photos from a former claim is not permitted.

③ **Label Photos for Wrong Parts**
- Label photo must be clear and readable.
- If there are more than 2 kinds of packing labels, please attach every kind of label photos.

④ **Detailed Description (Should be described on nMGN)**
- Explain different points from a correct part. (Color / Size / Shape)

* EXAMPLE : WRONG PARTS

Parts Photo
(Mark wrong / correct on the photo)



Label Photo



Parts Photo with Full QTY



Additional Attachment
(Describe wrong point)



* When you file wrong parts claim, part photo, label photo, and photo with full QTY are necessary.

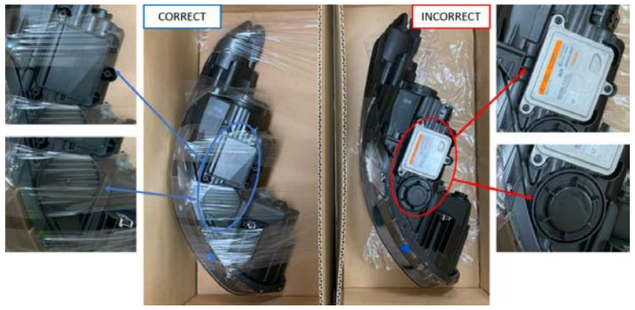
* EXAMPLE : WRONG PARTS

Different Shape

EXAMPLE ①



EXAMPLE ②



* EXAMPLE ① : Indicate wrong point on the part photo.
* EXAMPLE ② : Compare correct and wrong part in the photo.

Different Size

EXAMPLE ③



EXAMPLE ④



* EXAMPLE ③ : Measure the part size with a proper tool.
* EXAMPLE ④ : Indicate precise part size.

* EXAMPLE : WRONG PARTS

When color or pattern is different

EXAMPLE ⑤



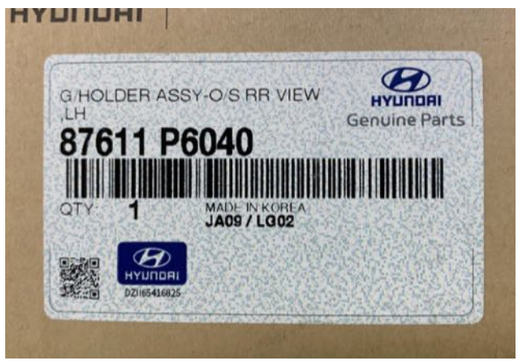
EXAMPLE ⑥



* EXAMPLE ⑤ : Indicate supplied part's color or pattern.
* EXAMPLE ⑥ : Please attach photo of original part. (Original part : A part which is regarded as correct from your side.)

Labels are very important evidence

EXAMPLE ⑦



EXAMPLE ⑧



* EXAMPLE ⑦ : Label must be clear and readable.
* EXAMPLE ⑧ : If we consider the evidence "Not Acceptable", Mobis will not accept the claim.

TYPE : DAMAGE

Claim type Damage is used when distributors receive parts with external damage. There are several types of damage such as dent, bent, scratched, broken or rusted. To submit a damage claim, distributors should send the evidence of damaged parts with detailed explanation.

① **Photo of Damaged Parts**
- If there are more than 2 PCS of damaged parts, parts photos for each damaged part are necessary.
- The photo needs to show the whole damaged part.
- Please attach a close-up photo to clearly show the damage.

※ Using photos from a former claim is not permitted.

② **Label and Package Photos**
→ A label photo must be clear and readable.

③ Photos of package condition (Package papers, package vinyl and box)

④ Detailed description (Should be described on nMGN)

TYPE : DEFECT

Claim type Defect means manufacturing defects.
There are only defects such as defective machining, improper assembly, poor coating, etc., but functional defects cannot be claimed.

① Photos of the received parts (Should be attached)

② Photos of the label on the received parts (Should be attached)

③ Detailed description (Should be described on nMGN)

※ Note : Submit warranty claim when functional defects.

* EXAMPLE : DAMAGE / DEFECT

Parts Photo (Photo for damaged part)



Parts Photo (Indicate damaged point)



Label Photo



Parts QTY Photo

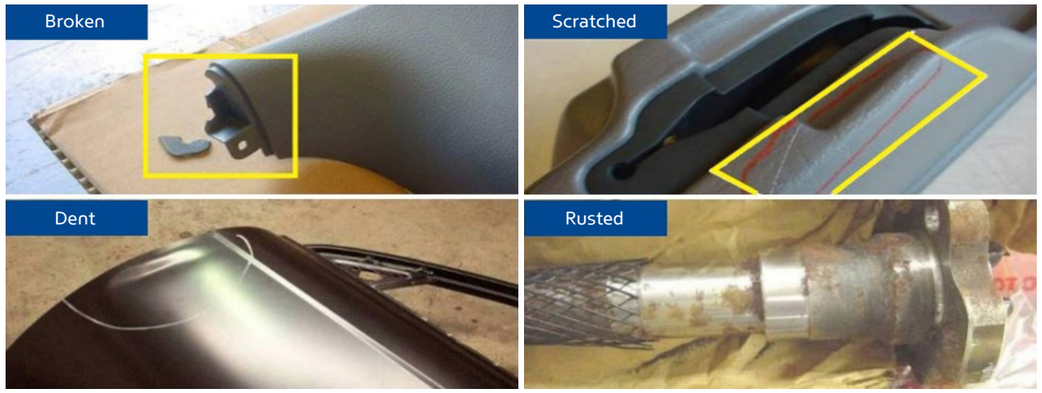


* When you file damage/defect parts claim, whole part photo, label photo, part photo for damaged point and photo with full quantity are necessary.

* EXAMPLE : DAMAGE / DEFECT

Parts Damage Claims

EXAMPLE ①



* Whole part photo and photo for damaged point are needed.
* If there are more than 2 PCS of damaged parts, each damaged part photo is needed. (Or photo with full part quantity is necessary.)

Box and Packing Material

EXAMPLE ②



EXAMPLE ③



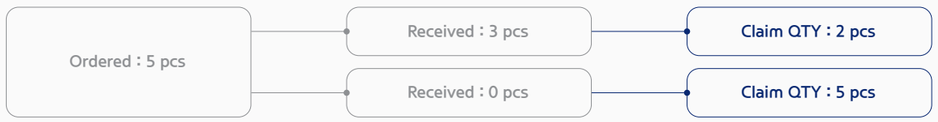
* Photo for outer packing box condition.
* When packing box was damaged too, please mention it when you file a claim.

TYPE : NOT RECEIVED (SHORTAGE)

Shortage refers to not received or insufficient (partial or not at all) parts delivery compared with the original order quantity.

① Ordered quantity and received quantity should be described on nMGN

(EXAMPLE)

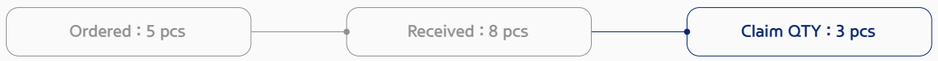


TYPE : EXCESS (OVERAGE)

Excess refers to receiving more than ordered.

① Ordered quantity and received quantity should be described on nMGN

(EXAMPLE)

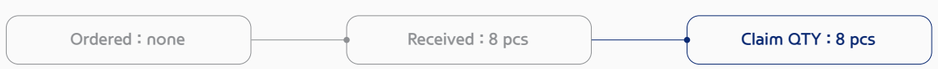


TYPE : NOT ORDERED

Not ordered refers to receiving parts not ordered.

① Photos of the received parts (should be attached)
② Photos of the label on the received parts (should be attached)
③ Case No. should be described on nMGN

(EXAMPLE)



TYPE : OBSOLETE PARTS (QA)

For this type of claims, distributors can make claims on parts that cannot be sold due to official quality issues (Quality Announcement). When this occurs, Hyundai / Kia will inform Mobis and we will provide distributors with a set of instructions.

① **Scrap Acknowledgement Form**
- Complete the “Scrap Acknowledgment Form” and attach it.

※ Parts Manager’s signature is necessary.

② **Parts and Label Photos**
- Photos of production LOT on the part or the distinguished code on the part.
- Label photos.
- If there are more than 2 kinds of packing labels (manufacturing LOT), please attach every types of label photos.

③ **Scrapped Parts Photos**
- Scrapped parts photos for all obsolete parts.
- QTY of scrapped part would be noticeable with the attached scrap photo.

* EXAMPLE : OBSOLETE PARTS (QA)

Scrap Acknowledgement Form


Scrap Acknowledgement

From : Distributor Code : B28VAA
Distributor Name : Kia Motors America, Inc.
Parts Manager Name : Dawn Beckler

To : Yoo Jin - Hyundai Mobis, Parts Quality Control Dept.

Re : Scrap Acknowledgement - Claim B28VAA6JED, Front Inquiri Sensor Assy

We confirm you that we have scrapped the following item in our stock

Seq	Part no.	Scrapped Q'ty	Remarks
1	95910 2E000	81	Per email request from D.C. Kim

Signature : Dawn Beckler

Name / Title : Dawn Beckler, Parts Inventory Control Manager

Part Photo (Check production LOT No. if needed.)



Label Photo



Scrapped Parts Photo



* When you file an obsolete parts claim, Scrap Acknowledgement Form, Part photo, Label photo, and Scrapped parts photo (Before / After) are necessary.

※ How to read part label in order to recognize target parts for QA action is on following page.

* LABEL EXPLANATION

The label on the parts or boxes indicate the packing date. Thus, parts managers should double check the packing date to make sure it matches with the current claim. This should decrease reoccurring claims.



J	D	18
YEAR	MONTH	DAY
...	A : Jan.	01 : 1st
Z : 2014	B : Feb.	02 : 2nd
A : 2015	C : Mar.	03 : 3rd
B : 2016	**D : Apr.**	04 : 4th
C : 2017	E : May.	05 : 5th
D : 2018	F : Jun.	↓
E : 2019	G : Jul.	**18 : 18th**
F : 2020	H : Aug.	↓
G : 2021	I : Sep.	30 : 30th
H : 2022	J : Oct.	31 : 31st
I : 2023	K : Nov.	
J : 2024	L : Dec.	

※ Change of Packing Lot Marking : After Nov. 7th. 2016
- Old : Mark of Year/Month inform. (e.g. BK : Nov. 2016)
- New : Mark of Year/Month + Day (e.g. BK27 : Nov. 27th. 2016)

05.
FREQUENT CLAIM ERROR

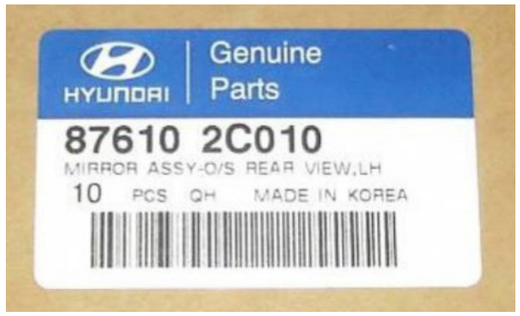
Here are a few examples of frequently occurring claim errors.

DUPLICATED CLAIMS

· Region : **America**
· Claim Type : **Wrong**

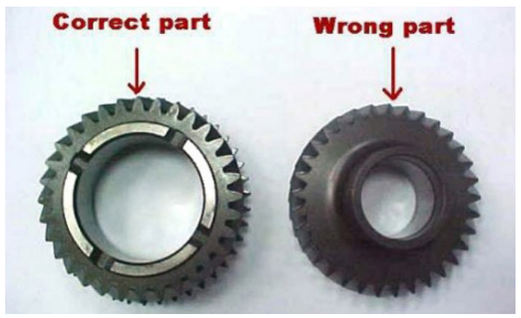


· P/No. : **87610 2C010(MIRROR ASSY-O/S REAR VIEW, LH)**
· QTY : **18 PCS**



* Remark : Claim is a duplication, it has already been claimed and compensated.
  - A claim which is filed in March 13, 2016 is the same as a claim which was already reimbursed in March 28, 2016.

· Region : **Middle East**
· Claim Type : **Wrong**



· P/No. : **43280 23039 (GEAR ASSY-4TH SPEED / VERNA)**
· QTY : **1 PCS**



* Remark : Claim is a duplication, it has already been claimed and compensated.
  - MOBIS reimbursed it on March 13, 2016.
  - But the same claim was filed again on March 28, 2016.

CLAIM INFORMATION (ATTACHED FILE/RELATED INFORMATION) ERROR

· Region : **Asia**
· Claim Type : **Wrong**

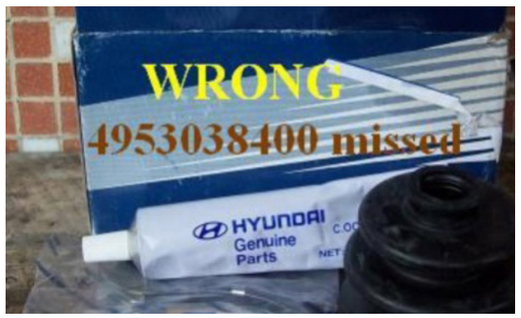


· P/No. : **86519 2W000 (CAP-FRONT HOOK)**
· QTY : **1 PCS**



* Remark : Claimed P/No. and label photo do not match.
  - Claimed P/No. : 86519 2W000 / P/No. ≠ Label photo : 86516 2D700

· Region : **Asia**
· Claim Type : **Wrong**



· P/No. : **49505 2CA70 (JOINT KIT-FR AXLE DIFF SIDE / XD)**
· QTY : **1 PCS**



* Remark : Claimed P/No. and label photo do not match.
  - Claimed P/No. : 49505 2CA70 / P/No. ≠ Label photo : 49505 2CA50

INSUFFICIENT EVIDENCE

· Region : **America**
· Claim Type : **Defect**



· P/No. : **86430 4Z000(W/STRIP-HOOD)**
· QTY : **1 PCS**



* Remark : Claim investigation was impossible due to insufficient evidence.
  - There was no damaged part photo. → Impossible to investigate the case.
  - Whole part photo, label photo, part photo for damaged point and photo with full quantity.

· Region : **Middle East**
· Claim Type : **Damage**

· P/No. : **0K049 70611 (PANEL-ROOF / SPORTAGE)**
· QTY : **14 PCS**



* Remark : Claim investigation was impossible due to insufficient evidence.
  - There was no damaged part photo. → Impossible to investigate the case.
  - Whole part photo, label photo, part photo for damaged point and photo with full quantity.

PART 8.

PARTS PRICING

01. BASIC PRICING POLICY
02. SEVEN STEP PROCEDURE FOR PRICING
03. IDENTIFYNG PRICING OBJECTIVES
04. DETERMINE COST, VOLUME AND PROFIT RELATIONSHIPS
05. ANALYZE COMPETITOR'S PRICES AND OFFERS
06. DETERMINE PRICE
07. ADJUST PRICE
08. SELECT PRICING METHOD
09. PRICE ADJUSTMENT CYCLE AND NOTIFICATION
10. MOBIS PRICING FLOW
11. AUTO PARTS PRICE SURVEY
12. ATTACHMENT

01.
BASIC PRICING POLICY

In order to enhance customer satisfaction, Mobis constantly seeks to maximize service at all levels of parts distribution. One of the key fundamentals is to establish a competitive pricing strategy which ensures profit and reinforces Hyundai's brand image.

Parts pricing is consistent with the overall corporate objective of providing high value parts.

IMPORTANCE OF PARTS PRICING

1) Proper parts pricing is vital because it is the fastest and most effective way for companies to grow profits.

2) At the same time, an effective pricing policy provides customers with an acceptable level of reliability.

3) Competitive parts pricing helps to attract customers to repair their vehicles at authorized dealership. Combined with qualified service, competitive parts pricing increases customer loyalty, thereby contributing to boosted profits.

PARTS PRICING DECISION-MAKING

Mobis maintains price consistency by applying the 4 rules below :

1) Model Pricing

As a general rule, parts for the Accent should be less expensive than comparable parts for the Sonata. There is generally a relationships between prices of parts for each model and the cost of the vehicle.

2) Line Pricing

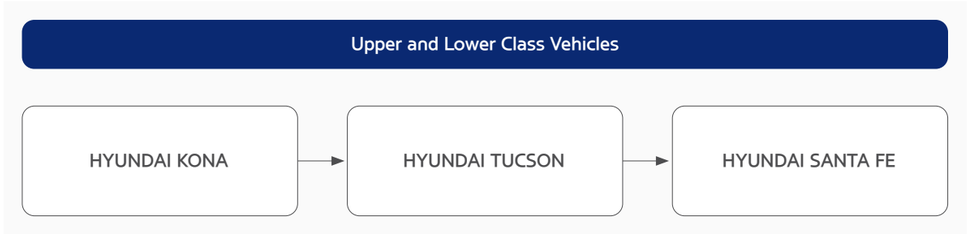
There should be a reasonable relationship among the same components for various vehicles. For example, brake pads for all vehicles should have similar pricing. However, similar parts might have different prices due to differences in specifications, sourcing, manual manufacturing process, etc.

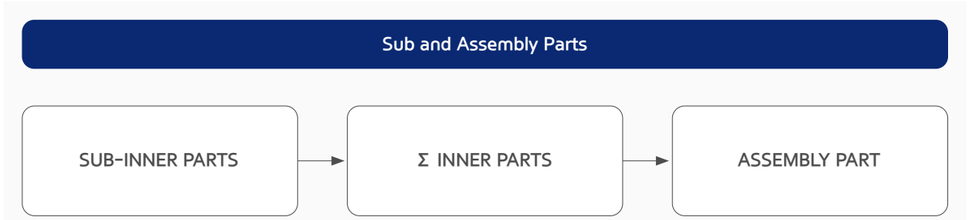
3) Component Relationships

A component part has to be cheaper than an assembly or a kit.

4) Mirror Image

More often than not, symmetrical parts are expected to have similar pricing.





02.
SEVEN STEP PROCEDURE FOR PRICING

Parts pricing is important because it is the only element in the marketing mix that produces revenue; the other elements produce costs. Now that we have concluded that pricing is an integral part of our operations, how do we conduct proper pricing?

Essentially, there is a seven-step process for price setting :



03.
IDENTIFYNG PRICING OBJECTIVES

Distributors have to decide what it wants to accomplish with a particular product. If the target market and market positioning has been determined, then the marketing-mix strategy, including pricing, will be fairly straightforward. Then the company can pursue any of six major objectives through its pricing.

SURVIVE	When companies are threatened by overproduction, intense competition and changes in consumer behavior, their survival becomes the highest priority than profit.
MAXIMIZE CURRENT REVENUE	Many companies try to set prices which will maximize current profits. They estimate the demand and costs associated with alternative prices and choose prices that maximizes current profits, cash flow, or return on investment (ROI)
MAXIMIZE CURRENT REVENUE	Some companies will set prices to maximize sales revenue.
MAXIMIZE SALES GROWTH	Other companies want to maximize unit sales. This is called "market-penetration pricing".
MAXIMIZE MARKET SKIMMING	Many companies favor setting high prices to "skim" the market. It is called "market-skimming pricing". These companies tend to set higher prices when introducing new products, then gradually introduce simpler, lower-price models to draw in new segments.
PRODUCT-QUALITY LEADER	A company might also aim at capturing the high quality products segment.

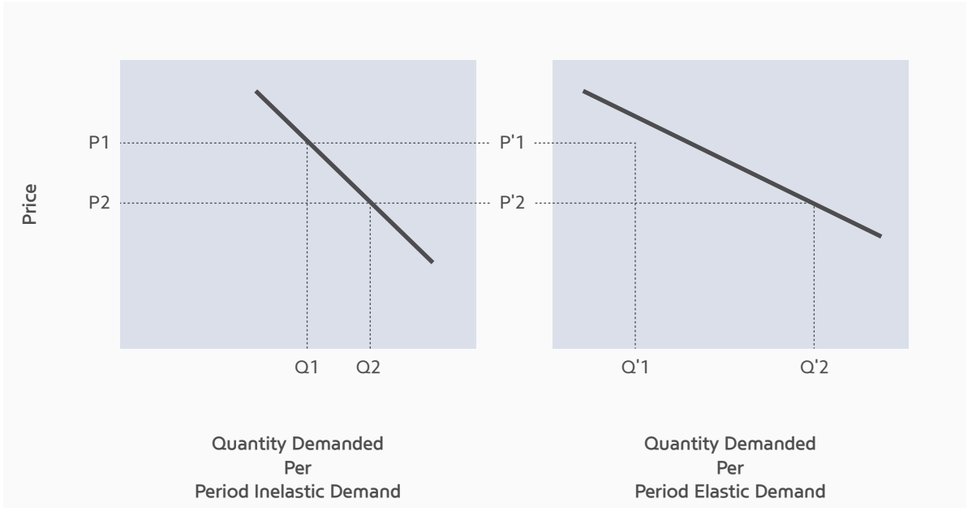
Price, Revenue, Market Share and Profit Relationship.

04.
DETERMINE COST, VOLUME AND PROFIT RELATIONSHIPS

The relation between price and demand is clearly shown in the familiar “demand schedule”.
It shows the number of units the market will buy in a given time period at alternative prices. Normally, demand and price are inversely related, that is, the higher the price, the lower the demand (and conversely).

Inelastic and Elastic Demand

The elasticity parameter accounts for the effect price changes may have on sales volume. Raising prices can reduce volumes and vice-versa.



Demand usually dictates a ceiling for price, whereas the company can set the floor. Companies determines a price that covers its production, distribution, and selling cost,including a fair return for its effort and risk.

TYPE OF COST

1) Fixed Costs (Also known as overhead)

are costs that do not vary with production or sales revenue. Thus a company must pay bills each month for rent, heat, interest, executive salaries, and so on, whatever the company's output. Fixed costs go on irrespective of the production levels.

2) Variable Costs

are in direct correlation with the level of production. If activities increase or decrease by 20%, your total variable cost increases or decreases as well. They are called variable costs because it varies with the number of units produced.

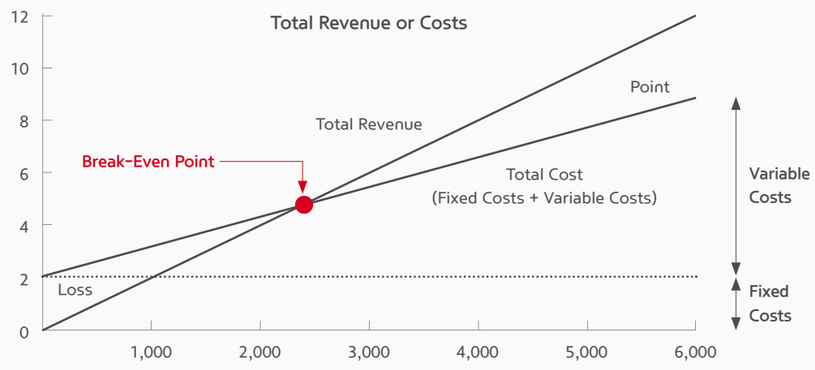
3) Total Cost

consists of the sum of the fixed and variable costs for any given level of production. Management wants to set prices that will at least cover the total production costs at a given level of production.

4) BEP (Break-Even Point) Analysis

BEP analysis is a technique that analyzes the relationship between total revenues and total costs to determine profitability at various levels of output.

$$\text{BEP Quantity :} \quad \frac{\text{Fixed Costs}}{\text{Unit Price -Unit Variable Costs}}$$



05.
ANALYZE COMPETITOR'S PRICES AND OFFERS

While market demand might set a ceiling, costs set a floor to pricing and competitors' prices and possible price reactions help the company establish where its prices might be set. The company needs to learn prices and qualities of each competitor's offer. That can be done in several ways. The company can send out comparison shoppers to price and compare competitors' offers. The company can acquire competitors' price lists and buy competitors' equipment and take it apart. Finally, the company can ask buyers how they perceive the price and quality of each competitor's offer.

06.
DETERMINE PRICE

The company determines prices in line with marketing-mix elements, making sure that it follows company pricing policies, and that they are reasonably priced for distributors, dealers and the company's sales-force.

07.
ADJUST PRICE

Prices sometimes need to be adjusted due to sudden purchase price changes, market situation changes or because of customer inquiries. When companies consider price changes, it must carefully consider customers' and competitors' reaction. Customers' reactions will be influenced by what customers actually see in the price change. Competitors' response should be monitored carefully to keep company's pricing competitive continuously. The company initiating the price change should also anticipate the probable reactions of suppliers, middlemen, and related authorities.

08.
SELECT PRICING METHOD

Prices are set anywhere between the break-even point and the point at which no more demand is generated.

COST-PLUS PRICING (BOTTOM-UP)

1) Total Cost Pricing Formula

Cost-plus pricing uses total cost as the basis for pricing products or service.
The reasons generally given for this tendency are as follows:

① In the long run, the price must cover all costs and a normal profit margin.
② This formula provides a justifiable price that tends to be perceived as equitable by all parties.
③ When a company's competitors have similar operations and cost structures, cost-plus pricing based on full costs gives management an idea of how competitors may set prices. The primary disadvantage of total cost pricing formulas is that they obscure the cost behavior pattern of the firm. Since total cost data include allocated fixed costs, it is not clear how the firm's total costs will change as volume changes.

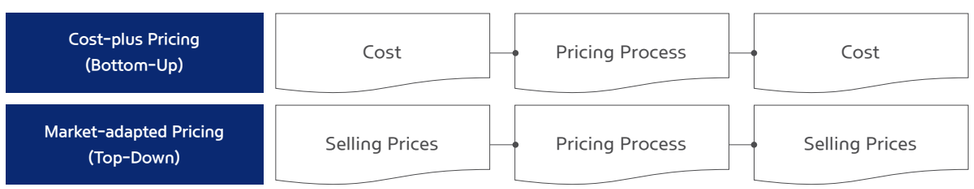
2) Variable Cost Pricing Formula

To avoid blurring the effects of cost behavior on profit, some managers prefer to use cost-plus pricing formulas based on either variable manufacturing costs or total variable costs. Following advantages and disadvantages are attributed to this pricing approach:

① Variable-cost data do not obscure the cost behavior pattern by unitizing fixed costs and making them appear variable.
② Variable-cost data do not require allocation of common fixed costs to individual product lines.
③ Variable-cost data are exactly the type of information managers need when facing certain decisions, such as whether to accept a special order. The primary disadvantage of the variable-cost pricing formula could be if managers perceive the variable cost of a product or service as the floor for the price, they may tend to set the price too low for the firm to cover its fixed cost. Therefore, managers must understand the need for higher mark-ups to ensure that all costs are covered.

MARKET-ADAPTED PRICING (TOP-DOWN)

In market adapted pricing, the company bases its price largely on competitors' prices, with less attention paid to its own cost or demand. The company might charge the same, more, or less than its major competitors.



09. PRICE ADJUSTMENT CYCLE AND NOTIFICATION

ANNUAL ADJUSTMENT (REGULAR)

Mobis maintains price stability by taking a large scale of pricing actions on an annual basis.
These parts price adjustments are done once a year with different purposes.
Major parts price adjustment : Jan. 1st (Apply date can be different by regions)

Here are some factors to consider when adjusting prices :

- Exchange Rate Fluctuations (Local Currency vs. US Dollar)
- Economic Environment
- Profit Margin
- Competitiveness
- Cost Changes

MONTHLY ADJUSTMENT (IRREGULAR)

In order to sustain customers' satisfaction and offer reasonable prices, Mobis adjusts pricing even during the year for following case :

- Customer Inquiry
- Cost Change (i.e. cost of material)
- Price Competitiveness Issue
- Etc.

Irregular parts price adjustment : Effective 1st day of each month
(Price change will be uploaded on to nMGN in advance and can be downloaded, under supersession menu.)

PARTS PRICE LIST (FULL DATA)

A price list will be provided when requested.
(nMGN → Download → Price File → [MP500] List Price → Add & Save)

Then you can access nMGN and download the file after batch.
(nMGN → Download → Price File → [MP500] List Price → File download)

This price list provides genuine parts information for all vehicles exported by HMC.

PRICE ADJUSTMENT LIST (ONLY ADJUSTED DATA)

You can download nMGN supersession files of adjusted parts for both annual and monthly price adjustments. Parts with changing prices can also be found on the same file. Therefore, it is recommended to verify if there are new created supersession files at least once a month.
(nMGN → Download → Price File → [MP501] List Price Adjustment)

PRICE LIST LAYOUT

File layout for price lists (including supersession list) is as below.

L/I	Field Name	Length	Remarks
1	Part Number	18	
2	Part Name	30	
3	QFP	3	
4	Current List Price (USD)	9+2	Last 2 digits are decimals
5	After List Price (USD)	9+2	Last 2 digits are decimals
6	Effective Date	8	

(EXAMPLE)

Part Number

Part Name

Current List Price
List prices before adjustments.

Effective Date
Blank when you download parts price list (Full data)

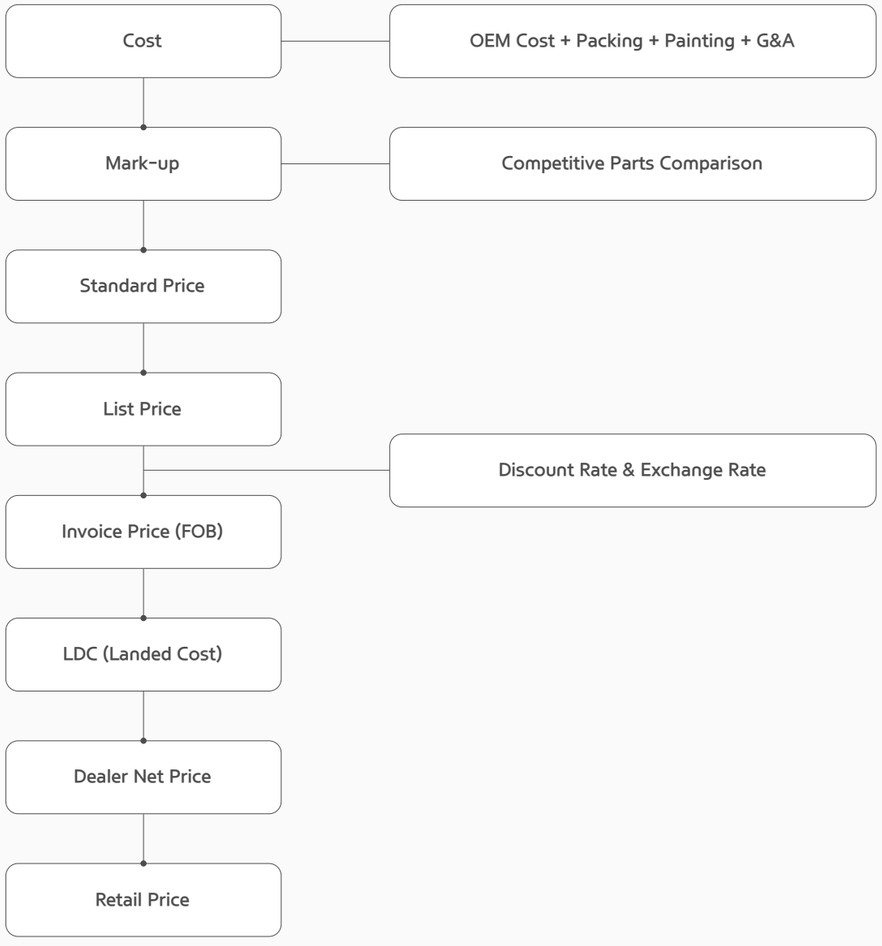
819053J030	KEY&CYLINDERSET-LOCK	000	00000011111	00000001111	20070901
824013J000	REGULATORASSY-FRDRP/ WDOLH	000	00000002222	00000022222	20070901
854101E40QS	HEADLININGASSY	000	00000003333	00000003333	20070901

QFP
Quantity Factory Packed
QFP means the quantity packed in an individual package unit.
Blank QFP field means quantity is 1.

After List Price
List prices after adjustments.
Blank when you download parts price list (Full data)

10.
MOBIS PRICING FLOW

PRICING FLOW



※ G&A : General & Administration
※ OEM : Original Equipment Manufacturer
※ Mark-up : Unit price / Unit cost
※ Monetary Unit : US Dollars
※ Discount Rate: Varies by distributors

11.
AUTO PARTS PRICE SURVEY

Annually, Mobis conducts regular pricing survey with professional investigation agency by Continent. With those survey results we apply Market adapted Pricing Policy (Top-Down) which is the basic principle for fixing and adjusting parts prices and maintaining the target price.

Mobis maintains a price structure which will provide a fair and stable profit contribution for distributors.

Mobis tries to provide competitive prices which allows for adequate distributor profits and higher customer satisfaction levels. Mobis surveys different markets and identifies existing problems and also studies pricing practices of competitors.
However, it is impossible for Mobis to obtain complete price information from every country.

Therefore, we need each distributors' full cooperation, especially with regards to price surveys, price complaints, etc. This information will be beneficial in establishing individual price structures suitable in each market.



12. ATTACHMENT

SEGMENT

Overview of Segment Utilization

Mobis uses a set of parts segment code in order to efficiently analyze a number of parts. There are 5 types of part segment code, and they are classified parts characteristics, level of competition and customers' demand pattern.

Classification	Parts Segment			Market Segment	
	LAC	MAC	SAC	CAC	PCC
Definition	Large Analysis Code	Middle Analysis Code	Small Analysis Code	Characteristic Analysis Code	Parts Category Code
Number of Categories	11	32	562	3	5

1) Parts Segment

- Classified by parts' functions and specifications
- Differentiate pricing strategies considering each segment's characteristic

LAC (11 Large Categories)	
0	NON PART
1	HARDWARE
2	ENGINE
4	TRANSMISSION
5	CHASSIS
6	BODY
8	TRIM
9	ELECTRONIC
E	ECO
J	AUTONOMOUS
A	ACCESSORY

MAC (32 Middle Categories)	
5	LABEL
9	SPECIAL TOOLS
10	HARD WARE
20	ENGINE
25	COOLING
28	INTAKE & EXHAUST
31	FUEL SYSTEM
39	ENGINE ELECTRONIC
41	CLUTCH
43	TRANSMISSION
50	POWER TRAIN
54	SUSPENSION
56	STEERING

SAC (562 Small Categories)	
01Z	PARTS CATALOG
042	OIL-ENGINE
045	OIL-TRANSMISSION
046	OIL-AXLE
047	OIL-P/STRG
048	OIL-BRAKE
200	ENGINE ASSY-SUB
201	ENGINE ASSY-SHORT
202	ENGINE COMPLETE
203	GASKET-ENG OVER
210	BLOCK ASSY-CYL
211	HEAD ASSY-CYLINDER
212	GASKET-CYL HEA

2) Market Segment

① Characteristic Analysis Code (CAC) : Classify market by parts' demand type

Category		Description
A	**Maintenance**	Parts which need to be replaced regularly ex.) Filters, Pads ,Belts, Spark Plugs, Wiper etc.
B	**Collision**	Parts which is damageable when accidents occur ex.) Bumper, Lamp, Door, Fender etc.
C	**Mechanical**	Parts replaced due to malfunction by getting older (All parts except for Maintenance and Collision parts) ex.) Starter, Low arm, Power steering gear etc.

② Parts Category Code (PCC) : Classified by the level of market competition level

Category		Description
A	**Accessories**	Additional options set by dealer or customer ex.) Air conditioner, Radio, Mat etc.
B	**Competitive**	Maintenance parts which need regular replacement Highly competitive market (competition with non-genuine parts) ex.) Oil Filter, Spark plug, Belt, Air cleaner etc.
C	**Semi-captive**	Semi-competitive parts as UIOs increases ex.) Starter, Water-pump, Head lamp etc.
D	**Captive**	Unique parts in rarely competitive market ex.) Wirings, Hoses etc.
E	**Non-part**	Items do not have effect on vehicle performance ex.) Service Tools, Manuals etc.
F	**Hardware**	Standard Parts ex.) Bolt, Nut, Screw etc.

DEALER NET PRICING EXAMPLES USING DIFFERENT MARK-UPS

<table>
<tr><th>Dist</th><th>Dealer Net Pricing</th></tr>
<tr><td>A</td><td>
Model and Source
<table>
<tr><th>Vehicles</th><th>IP (Imported Parts)</th><th>LP (Local Parts)</th></tr>
<tr><td>Accent</td><td>1.20</td><td>1.35</td></tr>
<tr><td>Elantra</td><td>1.25</td><td>1.40</td></tr>
<tr><td>Sonata</td><td>1.30</td><td>1.45</td></tr>
</table>
</td></tr>
<tr><td>B</td><td>
Vehicle Type
<table>
<tr><th></th><th>Hyundai</th></tr>
<tr><td>P (Passenger)</td><td>1.30</td></tr>
<tr><td>C (Common)</td><td>1.27</td></tr>
<tr><td>V (Commercial)</td><td>1.25</td></tr>
</table>
</td></tr>
<tr><td>C</td><td>
Model and Parts Classification
<table>
<tr><th>Vehicles</th><th>K
(Fast Moving)</th><th>M
(Slow Moving)</th><th>G
(Wiring)</th><th>C
(Panel)</th></tr>
<tr><td>Accent</td><td>1.20</td><td>1.40</td><td>1.50</td><td>1.30</td></tr>
<tr><td>Elantra</td><td>1.20</td><td>1.45</td><td>1.50</td><td>1.30</td></tr>
<tr><td>Sonata</td><td>1.30</td><td>1.50</td><td>1.55</td><td>1.40</td></tr>
<tr><td>Santa Fe</td><td>1.30</td><td>1.50</td><td>1.55</td><td>1.50</td></tr>
</table>
</td></tr>
</table>

PARTS PRICE MARKET SURVEY

Class	Details	Remark
Area	Asia Pacific (Australia / China) North America (U.S.A. / Canada) Europe Russia Middle East South America (Brazil / Mexico) India	Hyundai Uio Over 100,000
Model	Top Models In Operation (Passenger 3, Rv 2 Models)	Different By Regions
Item	75-100 Items	80% of Total Sales
Selecting Parts	Main Maintenance Parts Insurance Parts Top Selling Parts Eco-friendly Parts	
Frequency	Once A Year (Annual)	

PART 9.

INVENTORY MANAGEMENT

01. INVENTORY MANGEMENT THEORY

02. DEMAND FORECASTING

03. PURCHASE ORDER

04. PRACTICAL INVENTORY MANAGEMENT

01. INVENTORY MANGEMENT THEORY

WHAT IS INVENTORY MANAGEMENT?

1) Definition

A series of actions to keep proper inventory levels by purchasing right parts at the right time along with right quantities in order to meet certain service levels at lowest possible costs

2) Objectives

① Improve customer service level by rapid supply of parts
② Earn more profits by minimizing stock holding costs, ordering costs and avoiding sold-out stock

3) Functions

① Prevent excess stock and sold-out stock
② Achieve highest service levels with the lowest possible stock

PARTS MANAGER MAJOR ROLES

1) Efficiency

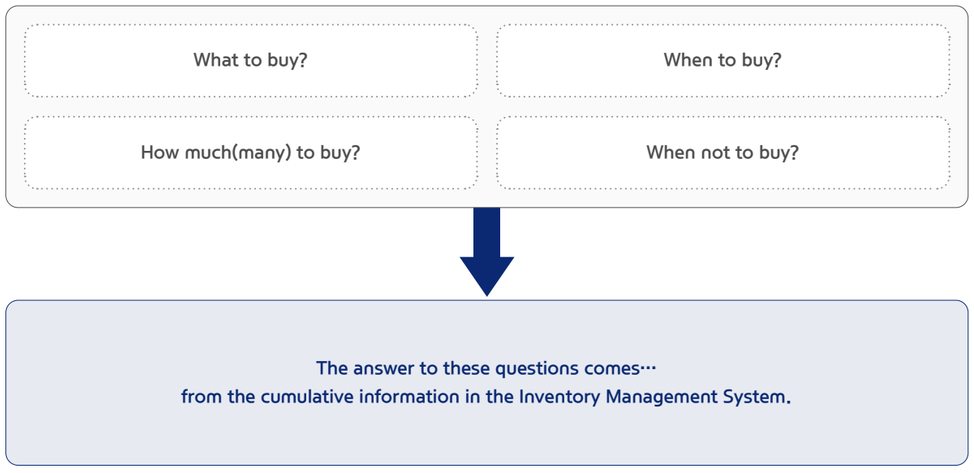
Focus on Scientific Management for Simple Operations

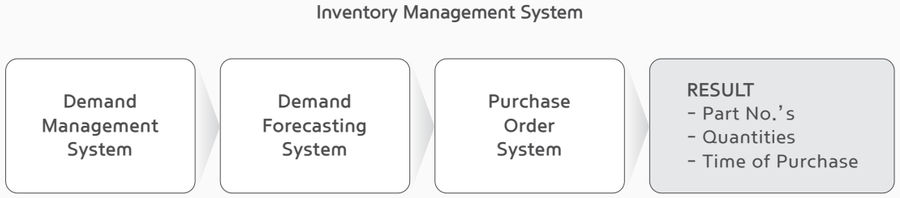
2) Economic

Focus on Economic Management for Cost Reduction

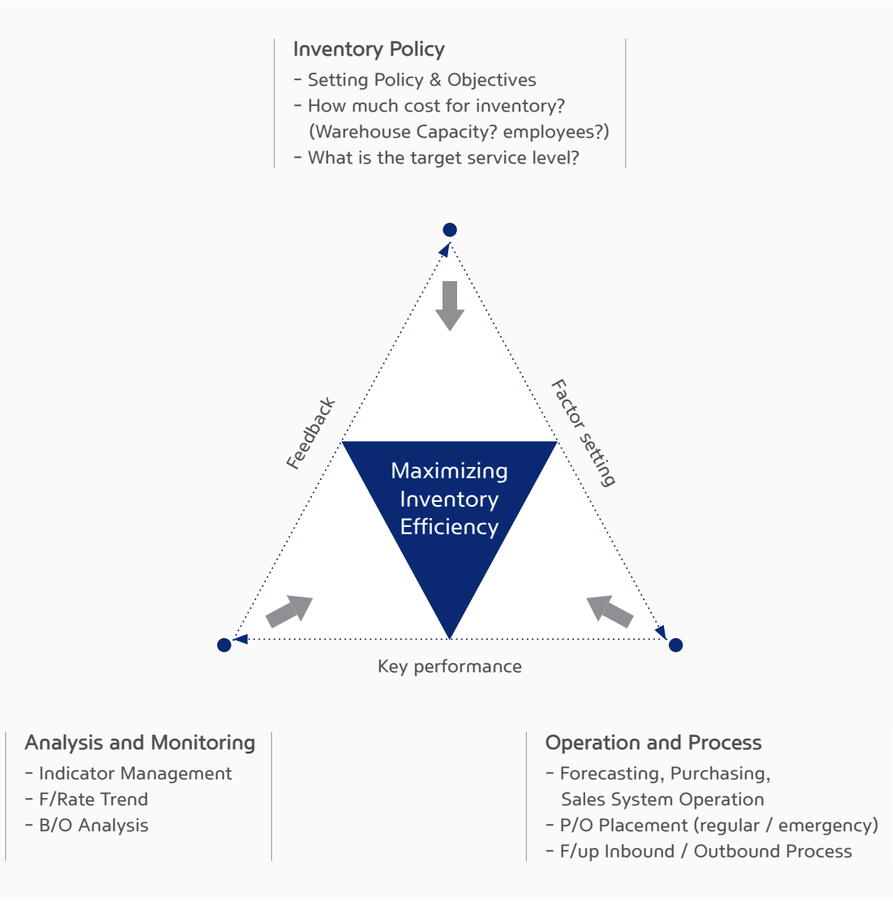
3) Effectiveness

Focus on Effective Management for Customer Satisfaction





INVENTORY MANAGEMENT PROCESS



INVENTORY COST

Costs related with inventory management

1) Holding Cost
① Arises with amount of holding stock
② Varies with quantity of items being held
③ Result from parts handling, damage, etc.

2) Ordering Cost
① Arises with frequency of purchase order
② Does not change with the order quantity

3) Sold-out Stock Cost
① Hard to estimate
② Result in customer dissatisfaction, lost sales, etc.

High Level of Stock
High Frequency of Purchase Order
Sold-out Stock
→ HIGH COST

INDICATOR IN INVENTORY MANAGEMENT

Indicator	Description	Formula
MOS (Months of supply)	Shows how many months can be operated without buying more stock.	$\frac{\text{Total stock}}{\text{3 Months Average CoGS}}$
Turnover	Shows how many times the inventory turns over in a year - High turnover equals more sales	$\frac{\text{Annual sales}}{\text{Average inventory}}$
Fill Rate	Shows customer satisfaction at the time of order - Instantly allocated lines over requested lines	$\frac{\sum \frac{\text{First Allocated QTY in line}}{\text{Order Confirmed QTY in line}}}{\text{Total order lines}} \times 100$
B/O Rate	Shows how many of order lines are on back order. - B/O Rate indicators are also measures of customer satisfaction	Month-end B/O lines

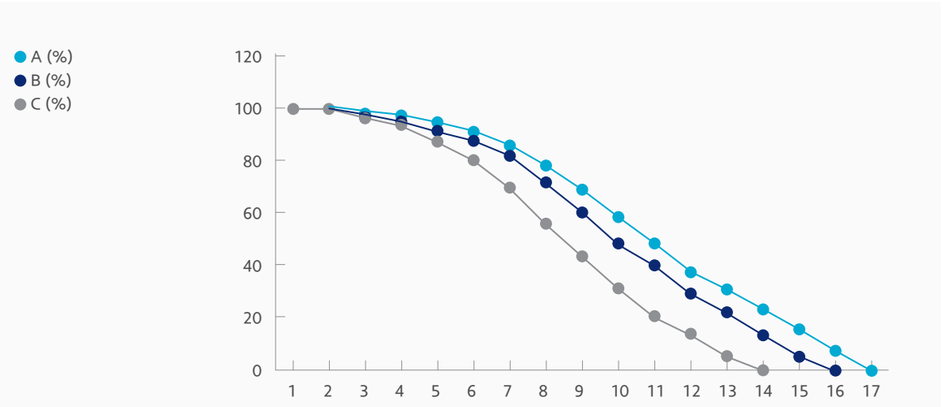
U.I.O

1) Units in Operation
UIO is a number of vehicles operating on the roads in each country. It is one of the most important factors to determine the size of A/S market. It is normally available from government statistics agency & vehicle registration office. A medium or long term parts operation can be based on the parts sales per UIO.
It is recommended that distributors consider the parts sales per UIO in future inventory plan, warehouse expansion plan, etc.

2) Vehicle Scrap Rate as per Vehicle Age
Scrap rates show an upward trend according to the increase in vehicle age.
Scrap rates vary in every country due to differences in consumers' behavior, road and weather conditions, national gross income, etc. The concept of UIO is opposite to that of scrap rate which is how many vehicles operate on the roads as time elapses.

VEHICLE SURVIVAL RATE

Survival rates vary in every country due to differences in consumers' behavior, road & weather conditions, national gross income, etc.



Type	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A (%)	100	99	98	97	95	91	86	78	69	58	48	38	31	23	16	8	0
B (%)	100	99	97	95	92	88	82	72	60	49	40	30	22	14	6	0	
C (%)	100	99	97	94	88	80	69	56	44	32	21	14	6	0			

KEY INVENTORY TERMS

1) **Lead Time**
   Interval between ordering and receiving order

2) **Fill Rate**
   Percent of parts filled by the depot upon request via a stock order

3) **Operating Stock**
   Inventory level required for normal sale during purchasing order L/T

4) **Safety Stock**
   Inventory kept on the shelf as a “security blanket” in order to absorb erratic or unexpected sales demand within a reasonable factor

5) **On-Hand (Stock)**
   Number of pieces on the shelf

6) **Back Order**
   An order which will be late in delivery because of temporary stock out

7) **Obsolete (Part)**
   Part with no demand for certain number of years (period different for product type)

8) **VOR (Vehicle-Off-Road)**
   Term applied to emergency purchase

9) **AMD (Average Monthly Demand)**

10) **EOQ (Economic Order Quantity)**

11) **ROP (Reorder Point)**

12) **SOQ (Suggested Order Quantity)**

13) **MOS (Months of Supply)**

14) **IRL (Initial Recommendation Parts List)**

15) **SPL (Service Parts List)**

02.
DEMAND FORECASTING

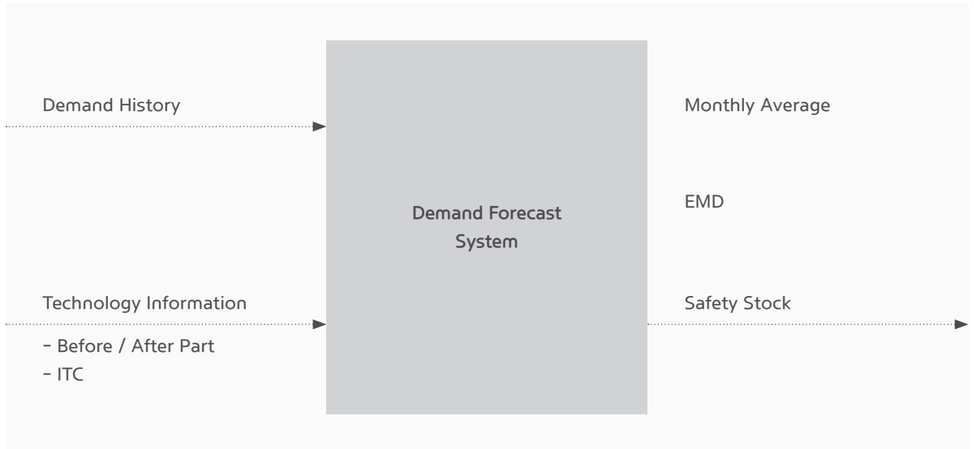
WHAT IS DEMAND FORECASTING?

1) **Definition**
   Calculating the future demand in advance by using scientific and statistical method based on demand history data

2) **Characteristics**
   ① Forecasting methods assume that the causal relations in the past continue to exist in the future
   ② There can be always errors in forecasting
   ③ Group basis forecast is more accurate than individual forecast
   ④ Accuracy of forecast lowers as forecasting term increases
   ⑤ There is no forecasting method that predicts exact random variation

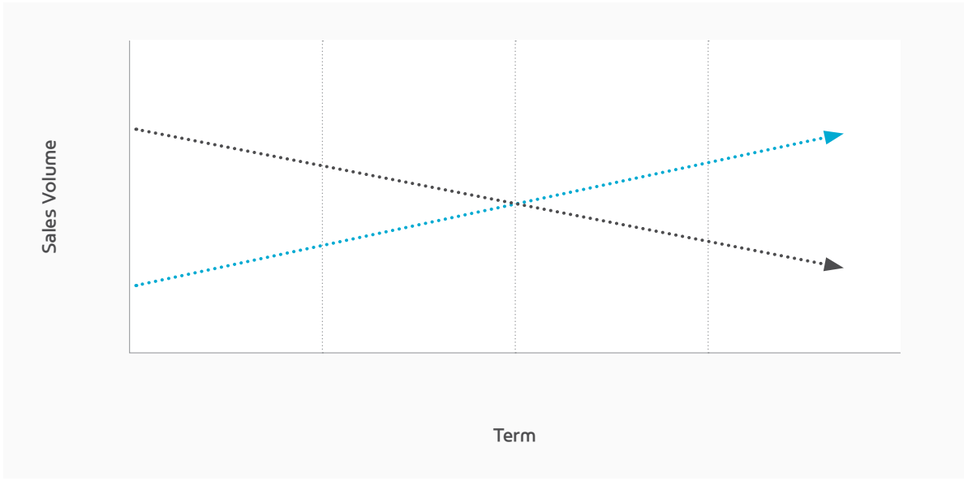
3) **Variation Factors of Forecast**
   ① Trend
   ② Consistent incline or decline over time
   ③ Seasonality
   ④ Repeated high demand in a specific season annually
   ⑤ Cyclical Variation
   ⑥ Show a repetitive demand pattern at a certain period
   ⑦ Random Variation (Unpredictable)
   ⑧ Caused by unknown or random factor

INPUTS & OUTPUTS



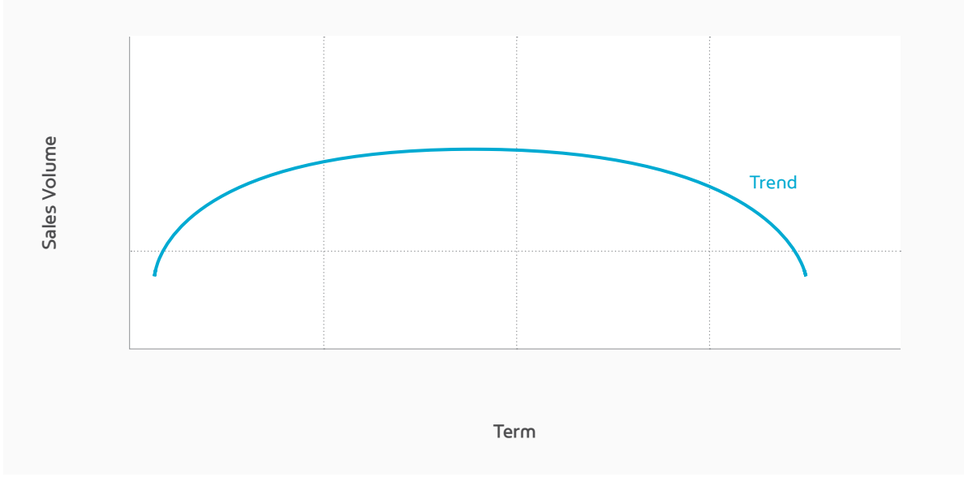
TRENDS COMPONENT

Cyclic and long term variation which shows increases or decreases in trend continuously.



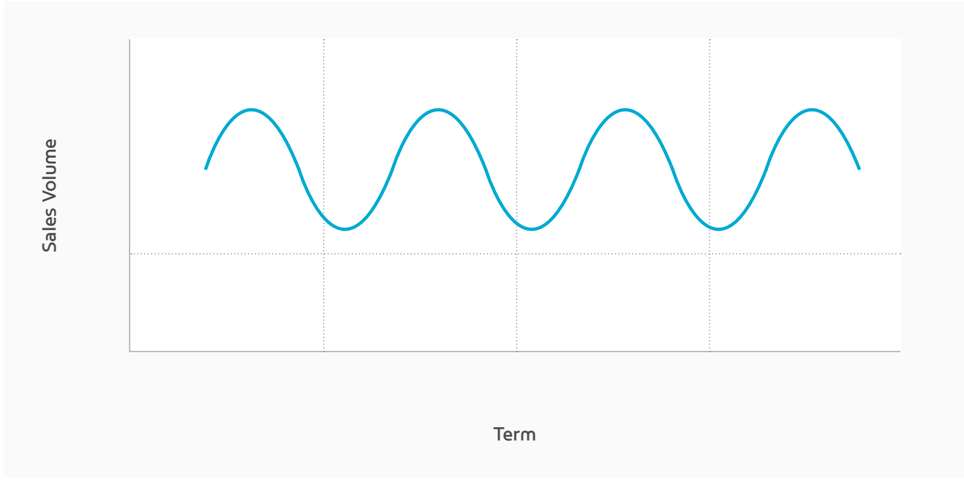
CYCLICAL COMPONENT

Difficult to forecast because of irregularity of the cycle and amplitude. Need to check and forecast at which point the present phase is in the cycle.



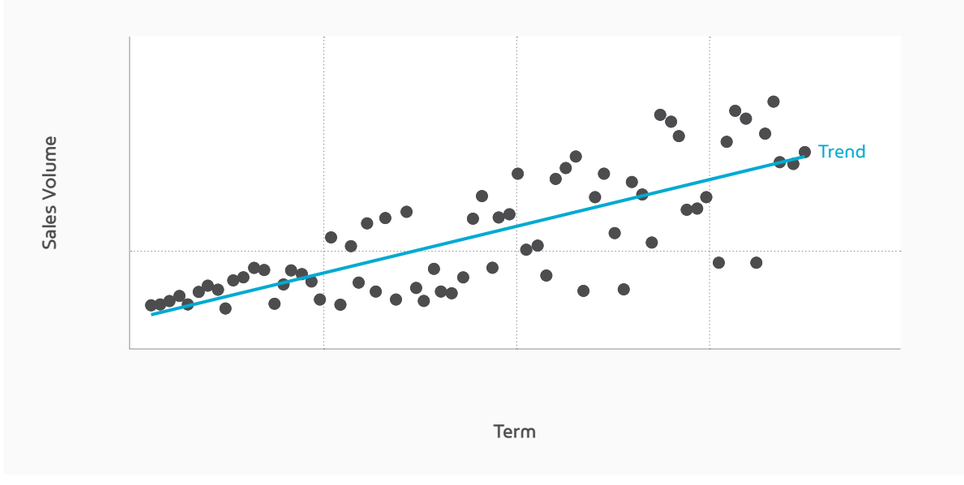
SEASONAL COMPONENT

Variation of demand regularly occurs during the year, and is caused by the systematic and natural factors like weather, traditions, customs, etc.



RANDOM VARIATION

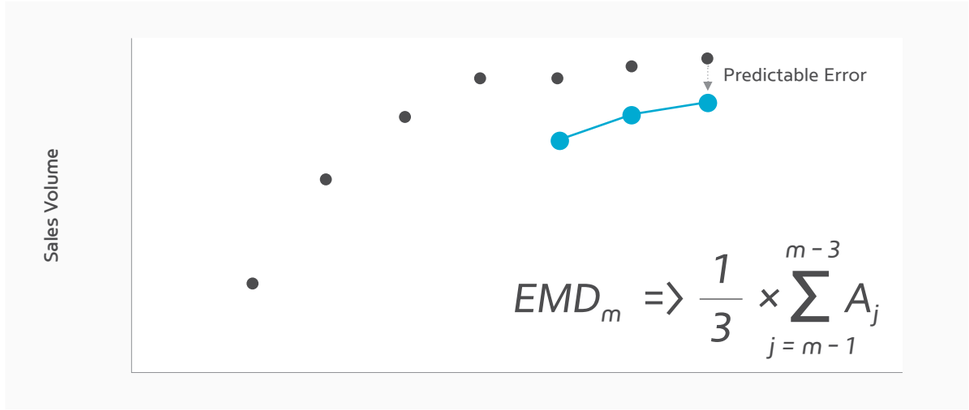
Shows no fixed forms (unpredictable)



DEMAND FORECASTING MODELS

1) 3 Months Moving Average

- Simplest Model
- Suitable for short term forecasting for stable demand



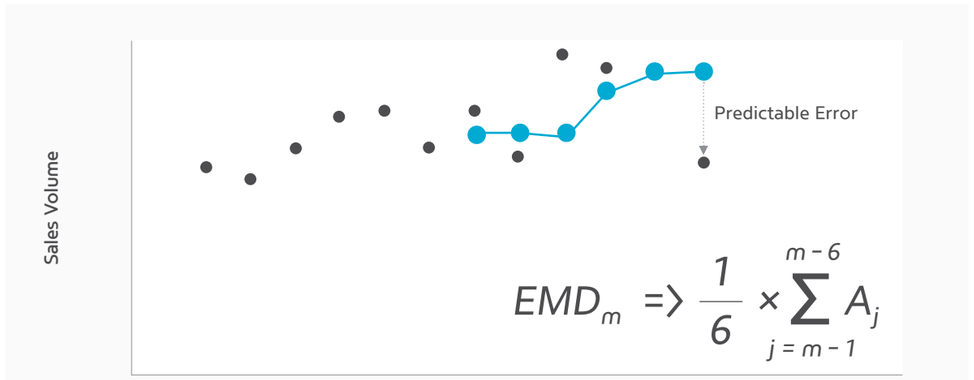
Applicability : Demand displays no trend or seasonality

e.g.

Month	Jan.	Feb.	Mar.	Apr.	May.	Jun.
Demand	3	4	5	**4**	**6**	**5**

EMD of July = (4 + 6 + 5) / 3 = 5

2) 6 Months Moving Average



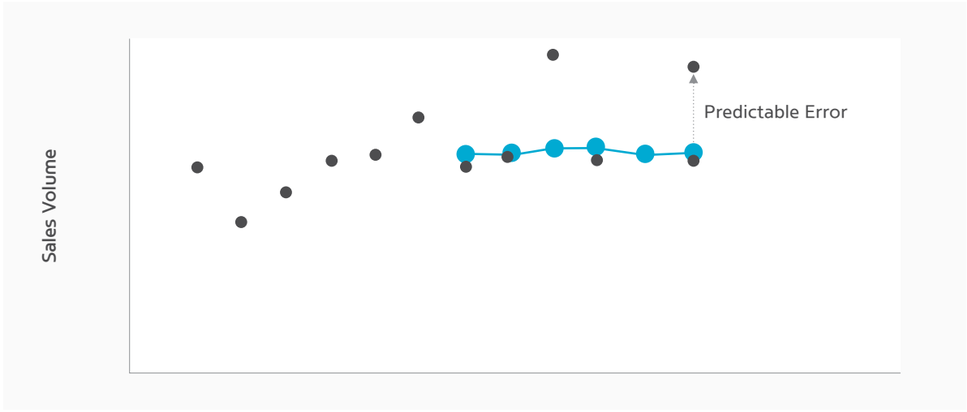
Applicability : Demand displays no trend or seasonality

e.g.

Month	Jan.	Feb.	Mar.	Apr.	May.	Jun.
Demand	5	4	5	**3**	**6**	**5**

EMD of July = (5 + 4 + 7 + 3 + 6 + 5) / 6 = 5

3) 6 Months Median



$$EMD_m \Rightarrow A_{(n+1)/2} \qquad \text{if } n \text{ is odd}$$

$$EMD_m \Rightarrow \frac{1}{2} \times (A_{n/2} + A_{(n/2)+1}) \qquad \text{if } n \text{ is even}$$

Applicability : Demand displays no trend or seasonality

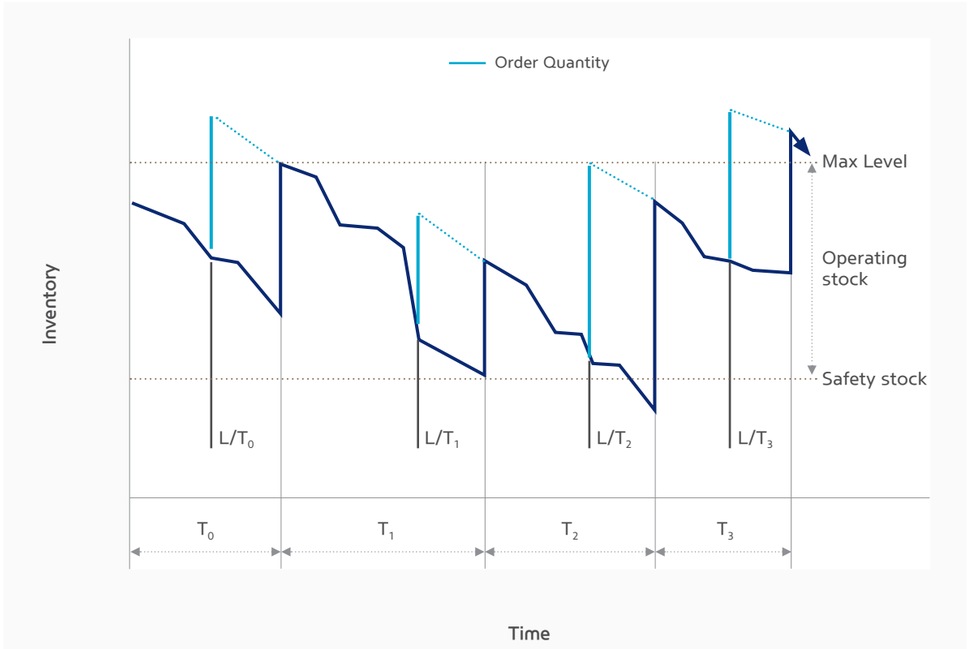
e.g.

Month	Jan.	Feb.	Mar.	Apr.	May.	Jun.
Demand	6	4	8	5	10	9

EMD of July = Median(4, 5, 6, 8, 9, 10) = (6 + 8) / 2 = 7

03.
PURCHASE ORDER

MOVEMENT OF INVENTORY



1) Safety Stock

① Secured stock level for prevention of sold-out stock resulting in lost sales and opportunity cost due to customer dissatisfaction

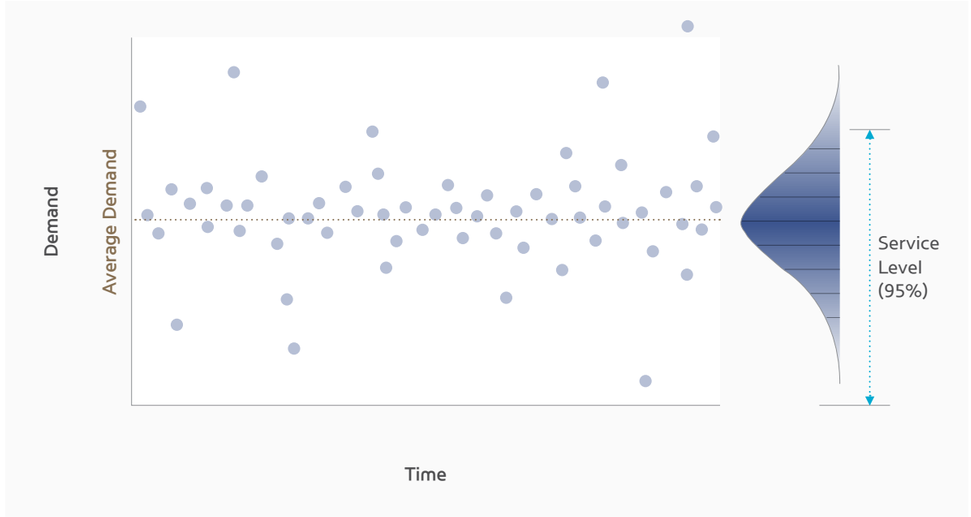
② Caused by uncertainty of Demand, Lead time and Supply

2) Operating Stock

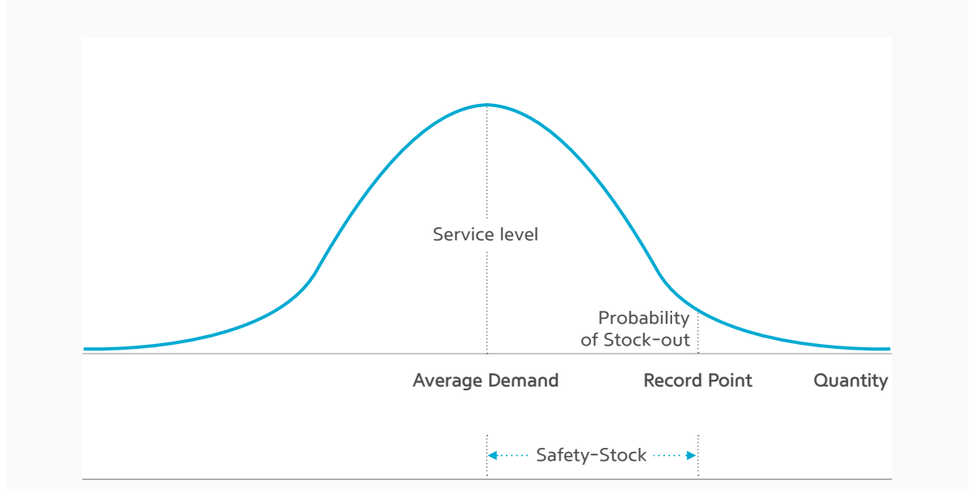
Secured level of stock to respond to demands for periods between deliveries

3) Max Inventory = Operating Stock + Safety Stock

SAFETY STOCK



Presumption : Distribution of demand quantity observes the normal distribution.

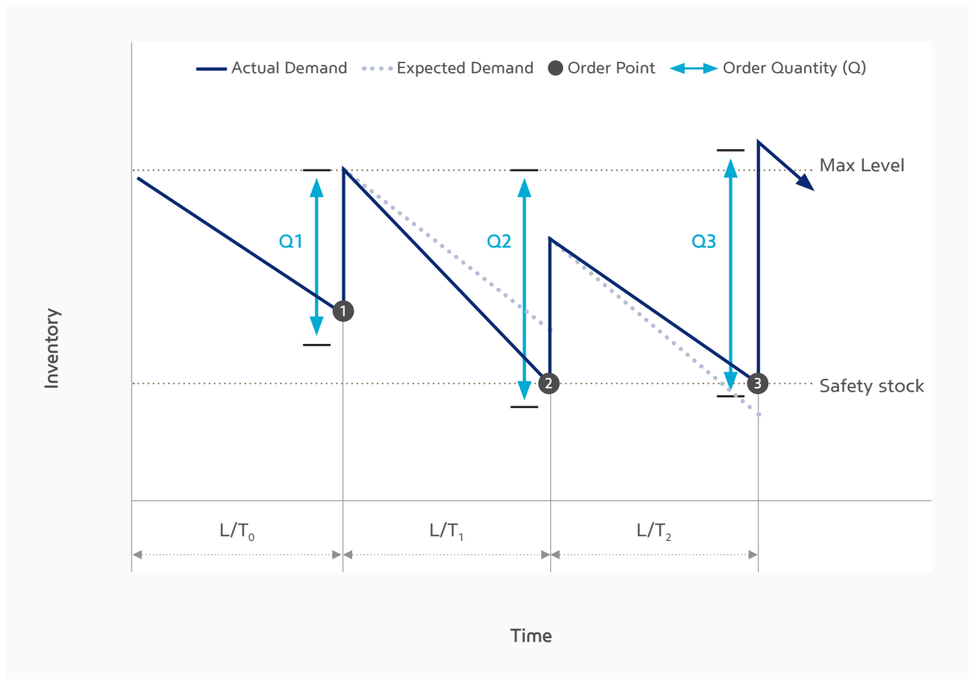


As higher service levels are required, safety stock will naturally increase.

PURCHASE ORDER METHODS

1) Periodic Ordering Method (P system)

For parts that need high accuracy of ordering, periodic ordering is executed with variable quantity.

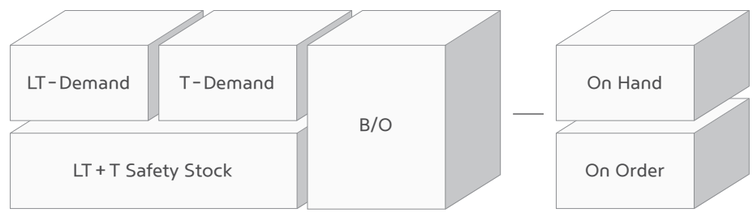


※ At order point ①, ②a nd ③, the required quantity to fulfill inventory target level should be ordered. (Q1≠Q2≠Q3)

2) Order Quantity Calculation

$$SOQ = EMD \times (LT + T) + S/S - (O/H + O/O) + B/O$$

SOQ : Suggested Order Quantity
EMD : Estimated Monthly Demand
LT : Lead Time
O/O : On Order
B/O : Back Order
T : Order Period
S/S : Safety Stock
O/H : On Hand



3) Fixed Order Quantity Method (Q system)



※ When inventory levels reach the ROP, pre-determined order quantity (EOQ) will be placed

COMPARISON OF ORDERING METHODS

	P system	Q system
Timing of Order	Periodic	Not periodic
Order Quantity	Variable	Fixed (EOQ)
Safety Stock	Covers the demand variation for L/T and order period	For L/T only
Parts Characteristics	Very Important Parts - High price, large demand, high sales value	Less Important Parts - Low price, rare demand, low sales value
Applicable Class	A, partly B.	C, partly B.
Automation	Non-Applicable	Applicable

04. PRACTICAL INVENTORY MANAGEMENT

PARTS CLASSIFICATION

1) Characteristics of Inventory

① **Huge Amount of Items**
- It is very difficult to manage all items with the same care

② **All Items Have Different Demand and Value**
- Majority of sales value is recorded by certain parts

2) ABC analysis

① Classify all parts in A,B,C groups by level of importance

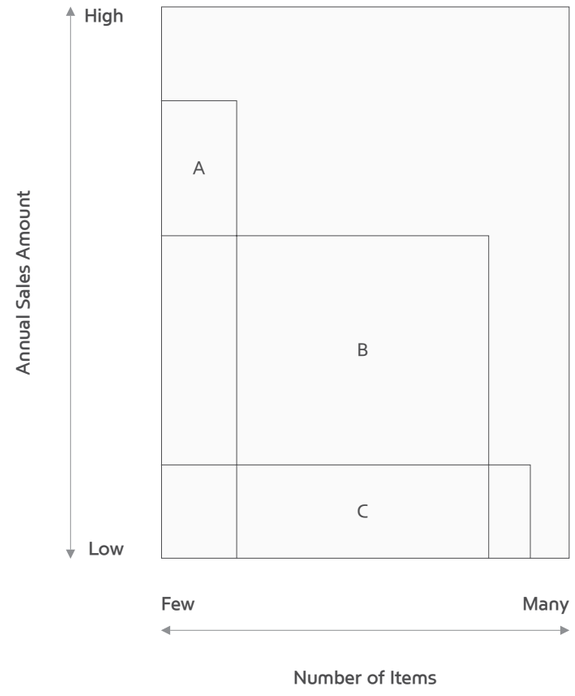
② Enables strategic investment in inventory

3) Characteristics of each group

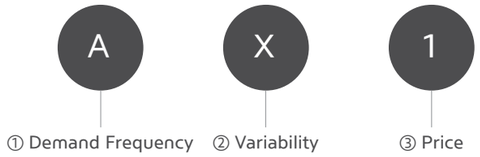
① **A Group**
High Sales
Low Volume Items

② **B Group**
Medium Sales
Mid Volume Items

③ **C Group**
Low Sales
High Volume Items



4) ABC Classification by Mobis : 3-byte class classification



Byte	Code	Description	Factor	Factor Definition
1st byte	A	Fast Moving	F_6 >= 42	F_6 = Σ(6 months Frequency) F_{12}= Σ(12 months Frequency)
	B	Medium Moving	F_6 >= 17 & F_6 < 42	
	C	Slow Moving	F_6 < 17 & F_{12} > 0	
	D	Non Moving	F_{12} =< 0	
	E	New Parts	Less then 12 months After part registeration	
2nd byte	X	Low Variability	Cv > 0 & Cv =< 50	Cv = STDEV (12 months DMD) / AMD12 ※ AMD12 = 12months moving avg.
	Y	Medium Variability	Cv > 50 & Cv =< 150	
	Z	High Variability	Cv > 150	
	1~5	Non moving Period for D CLS	Year of non-moving period	
3rd byte	0	Low Price	0 \	(Currency : KRW)
	1		~1,000 \	
	2		1,000 \ ~3,000 \	
	3		3,000 \ ~5,000 \	
	4		5,000 \ ~10,000 \	
	5		10,000 \ ~30,000 \	
	6		30,000 \ ~50,000 \	
	7		50,000 \ ~100,000 \	
	8		100,000 \ ~300,000 \	
	9	High Price	300,000 \ ~	

5) Management of A,B,C Classes

① A Class parts
- Inventory levels should be recognized, recorded and analyzed continuously.
- Order quantities should be reviewed thoroughly.
- Ordering intervals should be shortened as much as possible.

② B Class parts
- Intervals are longer compared to A class parts.

③ C Class parts
- Simple ordering methods are recommended.
- Longer ordering intervals are also recommended.
- Investment in manpower should be minimized.

F/RATE MANAGEMENT

$$\text{Fill Rate} = \frac{\Sigma \dfrac{\text{Filled Pieces of Each Order Line}}{\text{Ordered Pieces of Each Order Line}}}{\text{Total Order Line}}$$

※ Except Invalid Order Lines

e.g.

Line	Ordered Pieces	Filled Pieces	Rate (Ordered Pieces ÷ Filled Pieces)
1	100	100	1
2	50	45	0.9
3	100	0	0
4	30	27	0.9
5	35	55	1

$$\text{Fill Rate} = \frac{\Sigma \dfrac{\text{Filled Pieces of Each Order Line}}{\text{Ordered Pieces of Each Order Line}}}{\text{Total Order Line}} = \frac{1 + 0.9 + 0 + 0.9 + 1}{5} = 76\%$$

MOS MANAGEMENT

Deriving MOS & Turnover Rate

$$\text{MOS} = \frac{\text{Month End Inventory}}{\text{Last 3 Months Average Cost of Sales}} \qquad \text{Turnover Rate} = \frac{12}{\text{Mos}}$$

F/RATE & MOS MANAGEMENT

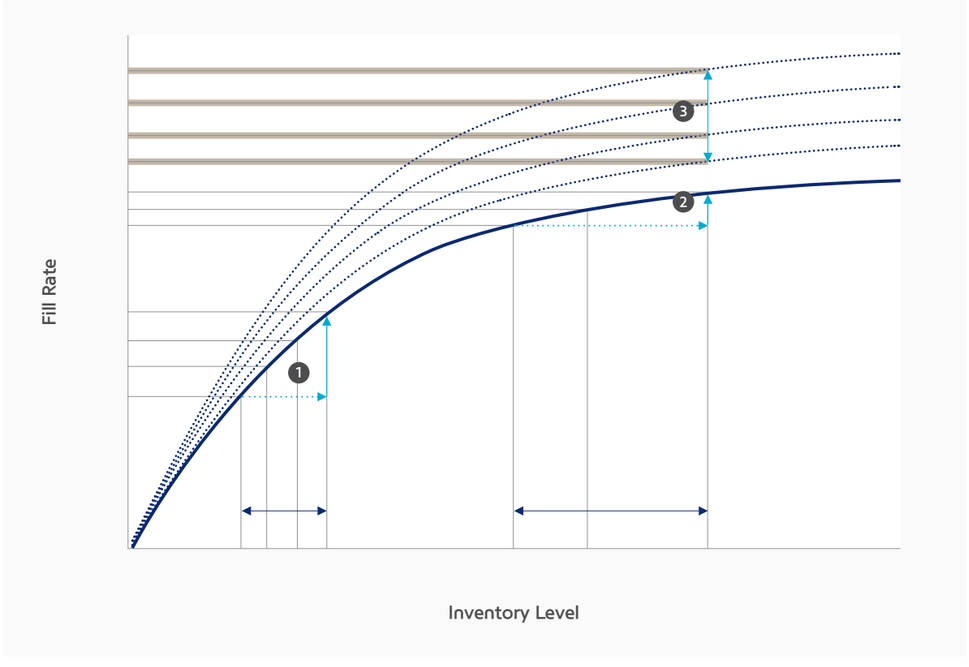
Relationship Between Inventory and Service
- In order to improve service level, you

- **Method 1 : Increase level of inventory (items and quantities).**

Limitations : Warehouse Space, Operation Policy, Inventory Cost, etc. (Graph ❶)
Effect : Effective at initial stage of business but less effective at stabilized stage. (Graph ❷)

- **Method 2 : Improve curve profile (Graph ❸)**

Factors : ① Forecast Accuracy
② In Time Delivery
③ Efficient Distribution
④ Supply Chain Management
Effect : More effective at stabilized stage of business instead of initial stage



INITIAL ORDER

1) Difficulty of Initial Order

- There is no demand history for new parts
- It is difficult to forecast the order quantity
- Inventory planner's experience is important

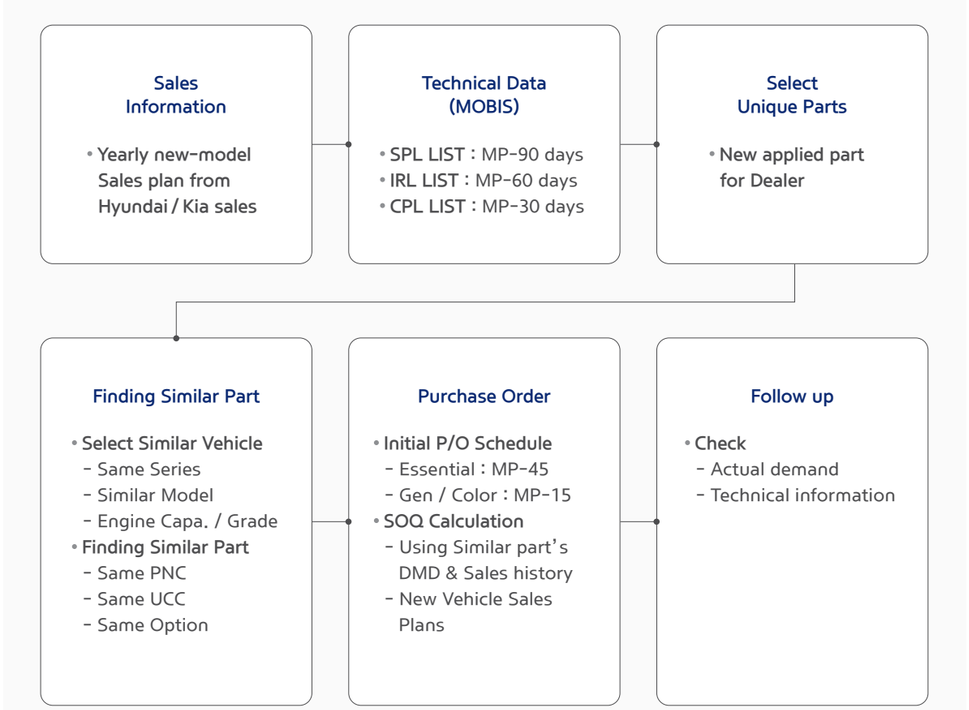
2) Initial Order Classification

Classification		Initial PO Schedule	Group of Parts	Detail
Pre-Launch	Essential Parts	SOP - 45 days	IRL List	
	General / Color Parts	SOP - 15 days	SPL&CPL parts └ Not included in IRL	
Post-Launch	Proportional Quantity Model	SOP + 30 days	Wiring, Seats	• Generally having a wide range of spec. • Frequent specification changes • Calculated based on Sales QTY
	Net Order Model		Battery, Seat Assy, Sunroof Assy, Floor Panel etc.	• HQ do not operate stock in advance • The initial P/O for these items is placed after HQ receive order from dealers

3) Methods to Determine Initial Order Quantity

- Use similar part to recognize a demand pattern
- Use PNC based Order Trend Analysis
  - Find similar function parts via PNC (Part Name Code)
  - Check UCC, Option and Interior Color
- Take into account the sales estimates of the new vehicle

4) Initial Order Procedure



5) Proportional Quantity Model Order Guideline

In regards to WIRING/SEAT that has a wide range of specification and frequent specification changes, initial PO is placed a month after SOP (quantity proportional to No. of vehicles applied)

Classification		Sales QTY			
		1,000~2,500	~5,000	~10,000	10,001~
SEAT	TRACK	0	1	1	2
	COVERING				
	CUSHION				
	BACK				1
	ARMREST				
	FRAME				
	HEADREST				
WIRING	CONTROL	0	1	1	2
	FRONT				
	FLOOR				
	MAIN				
	DOOR				
	TRUNK / TAILGATE				

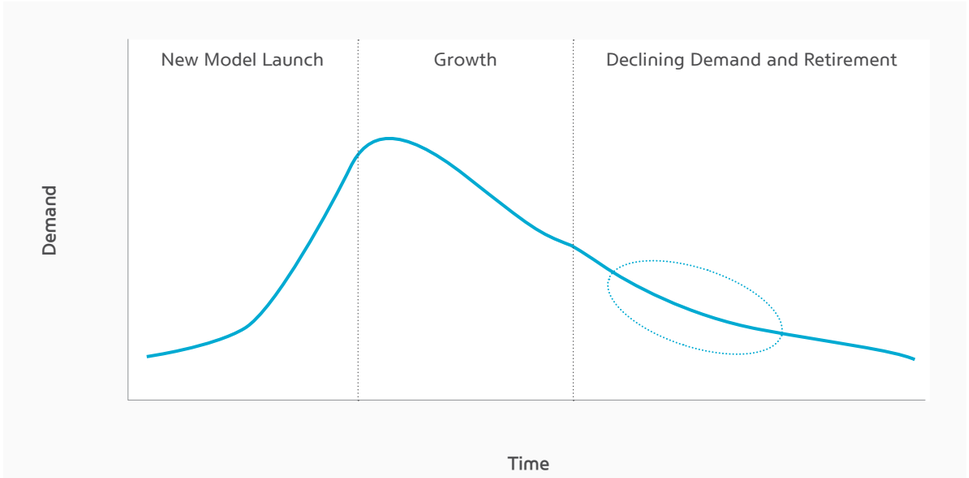
※ This guideline is applied to WIRING/SEAT with no past demand. Once demand occurs, it is considered as a normal part.

DISPOSAL OF NON MOVING PARTS

1) Objectives of Parts Disposal

- Increase effectiveness of warehouse management
- Increase profits by increasing turnover rate

2) Demand profile of UIO from new model launch to retirement



Slow Moving & Demand Declining Parts

Assigned to C Class in part classification slow moving & declining demand parts

Non Moving & Obsolete Parts

Non Moving Parts	Obsolete parts
Assigned to D Class (No sales for 12 months)	Part with no demand for certain period (period different for product type)

PHYSICAL INVENTORY INSPECTION

1) Objective

- Matching quantities between ledger and actual stock
- Check discrepancies between inventory in accounting system and on shelf
- Assure accurate asset control and validity of parts

2) Types of Physical Inventory Inspection

- Execution Time
  - Regular Cycle Counting : Executed according to annual plan
  - Irregular Cycle Counting : Executed when stock problems occur
- Warehouse Operation
  - Complete Shut-down : Executed after warehouse is closed. (All in/outbound processes stopped)
  - Open type : Executed with daily operations

3) Physical Inventory Inspection Process

Cycle Inventory Counting Plan (Set Monthly Inspection Target)

↓

Select Daily Target Parts by Inventory Management Dept.

↓

Conduct Physical Inventory Inspection & Update Results in System

↓

When Discrepancies Occur, Recount Parts (if necessary)

↓

Reflect Discrepancies in Ledger as Abnormal Profit or Cost

Excess : Abnormal Profit	Shortage : Abnormal Cost

PART 10-1.

WAREHOUSING

01. REQUIRED WAREHOUSE AREA CALCULATION

02. LOCATION NUMBERING SYSTEM

03. LOGISTICS INFORMATION SYSTEM - BAR CODE

04. LOCATION MANAGEMENT

05. NEW WAREHOUSE CONSTRUCTION

06. WAREHOUSE MANAGEMENT

01. REQUIRED WAREHOUSE AREA CALCULATION

WAREHOUSE AREA CALCULATION

1) Warehouse floor space and storage capacity should be measured in square meters.

We recommend a warehouse height of 6 meters to maximize storage capacity and increase storage efficiency.

2) Calculations should be based on an estimated sales projection of five years.

Because it will take 12 to 18 months from the planning phase to the completion of construction and another 12 to 18 months after construction to evaluate the efficiency of the warehouse.

3) Required warehouse floor space can be calculated with the information below:

① Units in Service (UIS)

② Parts Sales (Amount)

UIS × (Parts Sales per unit)

③ Average Parts Inventory Volume

Parts Sales × (1 / Turnover Rate)

④ Required Space for Storage

Inventory Volume / Inventory Volume By Square Meter

※ Parts sales per unit, parts sales and inventory volume must be based on the moving average cost.

WAREHOUSE SPACE RATIO

1) Warehouse Site

In order to achieve proper balance, you must consider the entire site area, building area, as well as the floor space and storage area.

① **Building-to-Land Ratio**

$$\frac{\text{Area Occupied by Building}}{\text{Entire Site}} \times 100\%$$

The building-to-land ratio is specified in each country by local construction law (eg. the Building Standards Act). For example, in Korea, building-to-land ratio is generally 40%.

②

$$\frac{\text{Storage Area}}{\text{Floor Space}} \times 100\%$$

③

$$\text{Storage Area} \times \frac{1}{\text{Storage Area-to-Building Ratio (75\%)}}$$

WAREHOUSE FLOOR SPACE LAYOUT

The classification of parts categories by shapes or sizes is important for an effective warehouse Layout.

Description	Ratio (%)	Applicability
Small Parts Area	15	Hardware parts, bulbs, plugs, rings, etc
Medium Parts Area	30	Radiator grills, lamps, etc
Large Parts Area	30	Mainly heavy & large parts such as panels & engines
Receiving & Shipping	20	Unloading-unpacking and packing-loading areas (Inbound / Outbound)
Open Sale, Office	5	Temporary space for unpacked parts
Total	**100**	

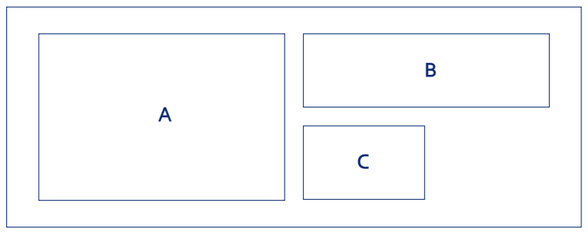
※ The storage amount is calculated based on the storage amount per square meter of the warehouse because each has different items and capacity.

02.
LOCATION NUMBERING SYSTEM

LOCATION NUMBERING METHOD

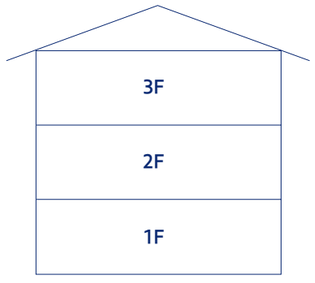
1) Numbering by Building

When two or more warehouses are used.



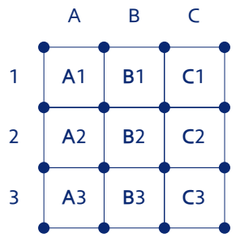
2) Numbering by Floor

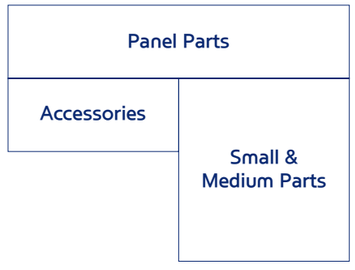
When a warehouse has more than two stories.



3) Numbering by Floor Section

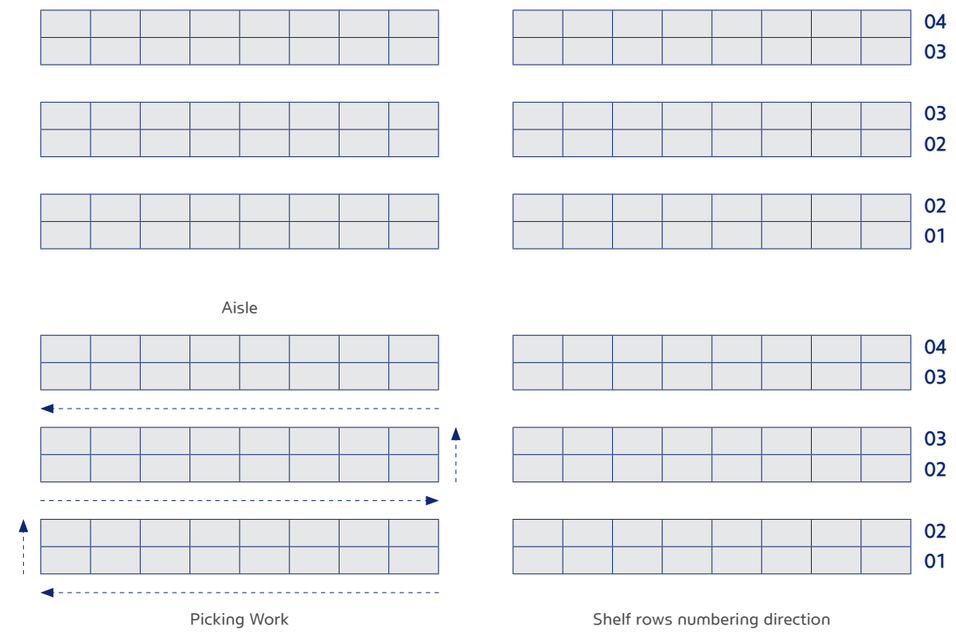
Storage should be divided by pillar span, passage or type of parts, and the sections should be assigned location numbers.





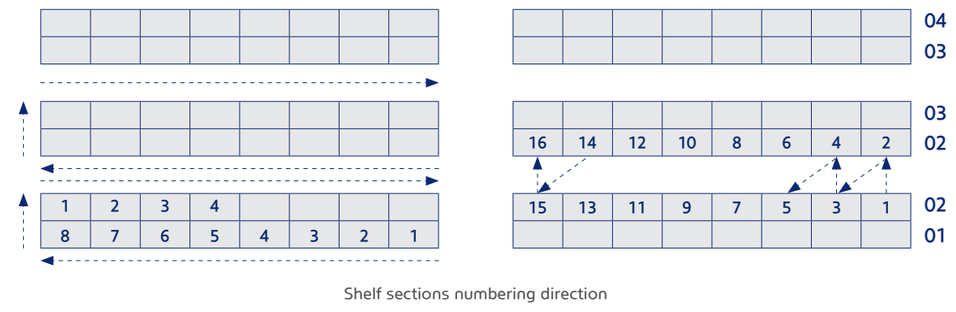
4) Numbering by Shelf Rows

The shelf rows in each division should be in shelf arrangement order.

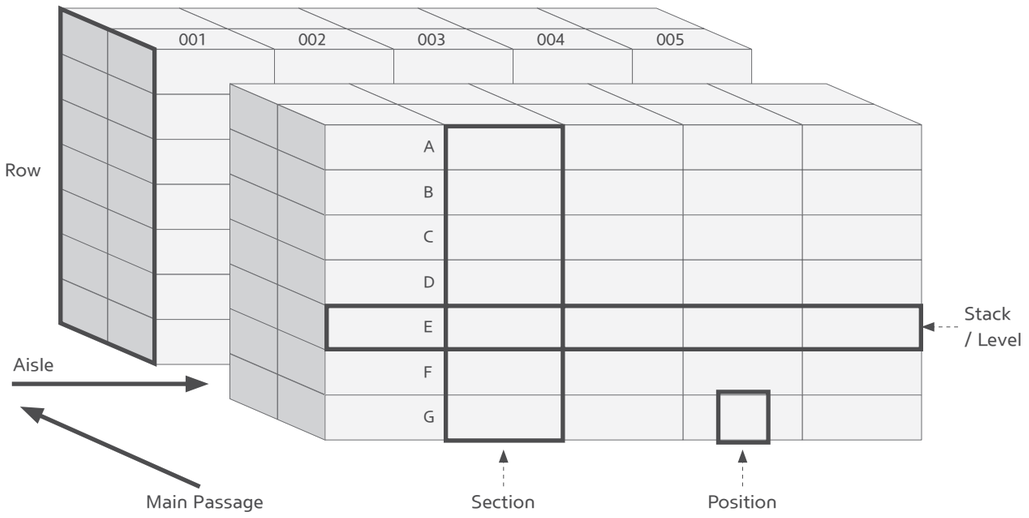


4) Numbering of Shelf Sections

Usually, the sections in each shelf row are numbered in the same direction.
However, it is possible to number them in the picking order as indicated in the following diagram.



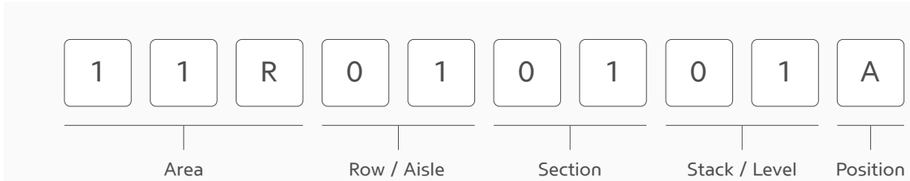
LOCATION STRUCTURE



LOCATION NUMBER STRUCTURE

1) Location numbers are alphanumeric and consist of 10 bytes.

2) Location number structure facilitates inventory stock-keeping. The structure is shown below:



3) Bins, racks, and floor stacking sections have to be numbered in sequence. Identification tags should be visible on each location.

4) Location Numbering System and Code

Division	Constitution	Explanation
Area	1 or 3 bytes (alphanumeric)	• For bins, racks & floor stacks, etc. • 1st and 2nd digits are optional 1st Digit : Building 2nd Digit : Story (Floor) 3rd Digit : Type • Type 1. Bin area : B (Bin), K (Kit), S(Small part) 2. Rack area : R (Rack) , M, L (Medium or Large part) 3. Floor stack : F (Floor), G (Ground), U (Unit) : Large part
Row / Aisle	2 bytes (numeral)	• For rows of racks, aisles of bins and floor stacks (aisle).
Section	2 bytes (numeral)	• Horizontal bins, racks and floor stacks structure.
Stack / Level	2 bytes (numeral)	• Vertical bins, racks and floor stacks structure.
Position	1 bytes (alpha)	• Code where the part is placed inside the cell on a shelf.

03.
LOGISTICS INFORMATION SYSTEM - BAR CODE

IMPORTANCE OF LOGISTICS INFORMATION SYSTEM

Distributors can manage parts operation effectively by using logistics information system which collects and organize information by each logistics process.

※ e.g., receiving, picking, stock arrangement, etc.

EFFECTS OF LOGISTICS INFORMATION SYSTEM

Logistics information systems provide operation accuracy, documentations unification and code standardization. As a result, it enables the exchange of logistics information of the products with related parties.

1) Increases efficiency of office work processes.

2) Integrates logistics process from production to sales including procurement.

3) Makes it possible to use JIT system.

4) Business expansion is easier by sharing information between enterprises and nations.

5) Prevents misuse of the funds invested for information system.

STANDARD BAR CODE SYSTEM STRUCTURE

1) Each product should have a standard barcode in order to be managed in the logistics information system.

2) Simply scanning barcodes attached to boxes or cases with fixed scanners or handy scanners will automatically translate into the process of moving, storing and sorting.

3) The barcode information is scanned and sent to the main computer or auxiliary storage unit.

4) Information for sorting operations can easily be obtained from main computer.

① All the information needed for inventory management is automatically updated on the computer and the master file

② Standard barcode structure can be used everywhere as it is set by international bar code rules

BAR CODE SYSTEM ADVANTAGES

1) Data Capture Simplification

Data is directly captured by the barcode scanner without having a worker manually enter the data

2) Data Capture Accuracy

Manual captures are prone to errors and the result may vary from worker to worker. Bar code systems identify each value automatically. As a result, less errors occur

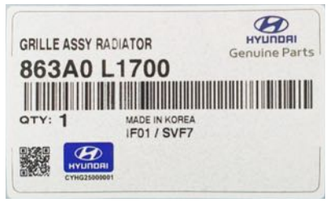
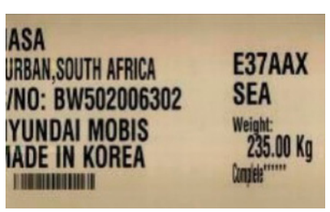
3) Data Processing Safety

Even if 95% of the bar code is damaged (heightwise), data processing is not affected and the worker can still use the barcode reader to capture the information

4) Printers Flexibility

Bar codes can be printed by almost all printers

EXPORT WAREHOUSE - BAR CODES SAMPLES

	Bar Code Application	Information contained
Part Label		• Part Number • Quantity • Packaging LOT • Packaging company
Supplier Card		• Purchase Order Number • Quantity
Worksheet for Direct Picking or Storing		• Part Number • Location Number • Order Number • Quantity
Worksheet for Picking		• Part Number • Location Number • Order Number • Quantity
Packed Box Label		• Packed Box Number

04.
LOCATION MANAGEMENT

TYPES OF LOCATION

Fixed location, free location and free/fixed location are the 3 types of parts location management techniques.

1) Fixed Location

① Used for small- or medium-scale distributors
② All parts have semi-permanently fixed locations
③ Stored parts location should be adjusted when new quantity is received
④ Poor storage efficiency because of the potential vacant locations

2) Free Location

① Increases storage efficiency because it can assign location numbers for vacant space at anytime
② Location data should be managed automatically by computers

3) Fixed and Free Location

① Fixed location management is used for locations of parts with frequent moving
② Free location management is used for new or big volume parts

PARTS CLASSIFICATION

1) Grouping and storing parts of similar features is very important in the warehouse processes because automotive parts vary in shapes, sizes and weights.

Group	Subgroup	Applicable Parts
Small Parts	Smallest Parts	Bolts, Nuts, Washers, etc.
	Small Parts	Emblem, Spark Plug, Bearing, etc.
Medium Parts	Accessory	Radio, Air Conditioner, Aluminum Wheel, etc.
Large Parts	Heavy Parts	Engine, Transmission, Axles, etc.
	Body Parts	Hood, Fender, Door, Roof, etc.
	Large Parts	Seat, Bumper, Muffler, etc.
	Specially Shaped Parts	Glass, Door, Trim, Molding, Tube, etc.
Inflammable Parts		Oil, Paint, etc.

※ Distributors must observe their own national regulations in classifying and storing parts, e.g. storing inflammables or explosives in a closed area for inflammables or explosives.

2) Location Management Principles

① Heavy parts should be stored on lower shelves near the entrance/exit and light parts should be stored on upper shelves located further from the entrance/exit
② Fast moving parts should be stored on lower shelves near the entrance/exit and slow moving parts should be stored on upper shelves located further from the entrance/exit
③ Valuable parts should be stored and locked in a special area for safety
④ Hazardous parts (explosive or gas containing parts) should be stored in a special area for safety
⑤ A location map should be prepared and posted at the entrance of the warehouse for new employees
⑥ Parts identification information in each storage space will help storing and picking operations
⑦ Vacant locations should be prepared and available for excess (secondary location) and new parts
⑧ Relocation should be carried out periodically to increase storage, picking and space efficiency

STORAGE RULE PER PART TYPE

Part Type	Detailed Type	Storage Location	Consideration	Storage Method
Panel	Door, Hood, Trunk, Fender, Roof, Pillar, Other Body Panel	Indoor / Outdoor	Chemical Change / Strong Wind / Humidity	• Secure enough space or use protective material to prevent deformation. • Use fasteners to secure parts from scattering due to strong wind, handling, etc. • Fragile goods or unpacked parts have to be kept under awning or indoors. • Goods kept outdoors over 6 months have to be relocated under awning or indoors. • Secure enough space for large goods that require handling by two people. • Do not pile up more than 3 stacks to prevent fall of parts or pallets. • Regularly adjust parts location for easy • “First-in /First-out” (FIFO). Pick older parts first. • Remove rust from parts.
MIP	Engine, T/M, etc.	Indoor	Equipment usage / Humidity	• To prevent safety accident, racks should have less than 2 shelves. • Assign location next to an aisle and consider transfer distance and equipment usage. • If oversupplied, provide secondary storage location. • Labels should face the aisle.

Part Type	Detailed Type	Storage Location	Consideration	Storage Method
Filter	Oil, Air Filter	Indoor	Equipment Usage / Double Storage	• Based on equipment accessibility and in/out frequency, keep parts in rack or place on floor area. • Secure secondary storage space based on inventory level. • Stock parts using a pallet or support to protect from humidity.
Oil	Engine, T/M, Brake Oil & Antifreeze solution	Indoor	Cleanliness / safety	• Prevent exposure to heat and direct sunray. • Store separately to protect from fire damage. • Maintain perpendicularity and levelness, and check for leaks and cleanliness.
Woven Goods	Trim, Mat, Head Lining	Indoor	Humidity	• Store in low humidity environment with good ventilation. • Store with enough space that would not interfere with other parts when handling.
Plastics	Crash Pad, Under Cover, Console, Pad Grille	Indoor		• Prevent deformation, store in a place where it has a low temperature variance. • Prevent from falling parts, store parts with enough handling space. • Reduce interference and do not blend heavy items with light items.
Small Parts	PINL, Gear, S/W, Bolt, Nut	Indoor	Shipping & Receiving, Productivity	• Store in appropriate location at proper height. • Prevent accidental shipment of similar parts by storing separately.
Rubber/ Molding	Molding, Protector	Indoor	Parts Deformation	• Prevent deformation from pressing and folding. • Prevent accidental shipment of similar parts by storing separately. • Use plastic packaging to protect from humidity
Common Parts	All Items	Indoor / Outdoor	Management Efficiency	• Regularly adjust parts location for easy “First - in/First - out” (FIFO). Pick older parts first. • Create process in which you have vacant locations available for use

FIRST IN, FIRST OUT CONTROL METHOD

1) **Main items to be managed is battery (Validity : 1.5 year) and liquid gasket (Validity : 1 year).**

2) **Create dedicated area for special parts and attach FIFO sticker in each cell in the area.**

3) **If possible, attach an additional sticker to mark inbound year (Per 4 year).**
e.g., 2014 : red, 2015 : yellow, 2016 : green, 2017 : blue, 2018 : red, 2019 : yellow

How to recognize inbound year



First In First Out

Year	09	10	11	12	13	14	15	16	17	18	19	20
Code	U	V	W	X	Y	Z	A	B	C	D	E	F
Month	1	2	3	4	5	6	7	8	9	10	11	12
Code	A	B	C	D	E	F	G	H	I	J	K	L

1. Year (B : 2016)
2. Month (A : Jan.)
3. Anti-rust package part (Valid period : 28 months)

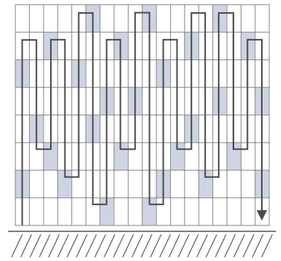
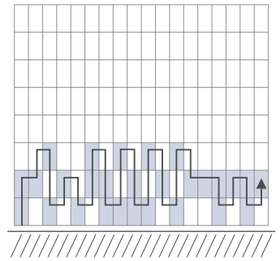
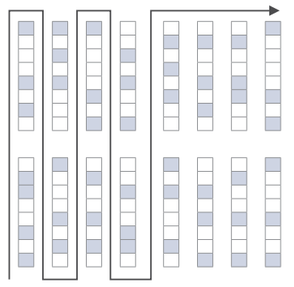
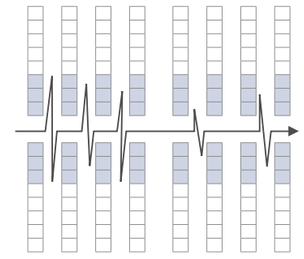
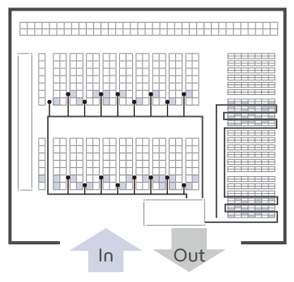
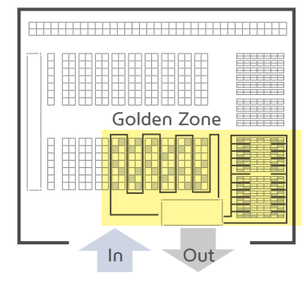
4) **Check valid dates of dedicated area at least once a month.**

5) **In Korea, each warehouse runs a monthly 'Day of Merchantable Quality Improvement'.**

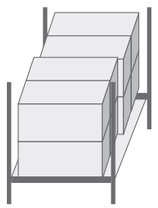
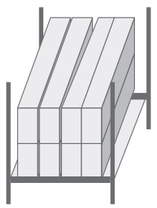
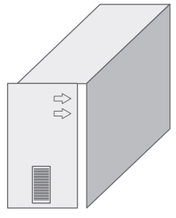
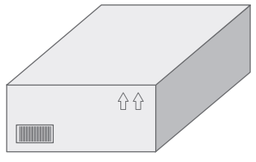
LOCATION REDISTRIBUTION

Store highly sold / picked parts on the easy-to-pick locations to increase productivity.
※ Easy-to-pick locations : located near chest level, passage and outbound

Highly sold / picked item

Category	Wrong	Correct
Level		
Passage		
Outbound		

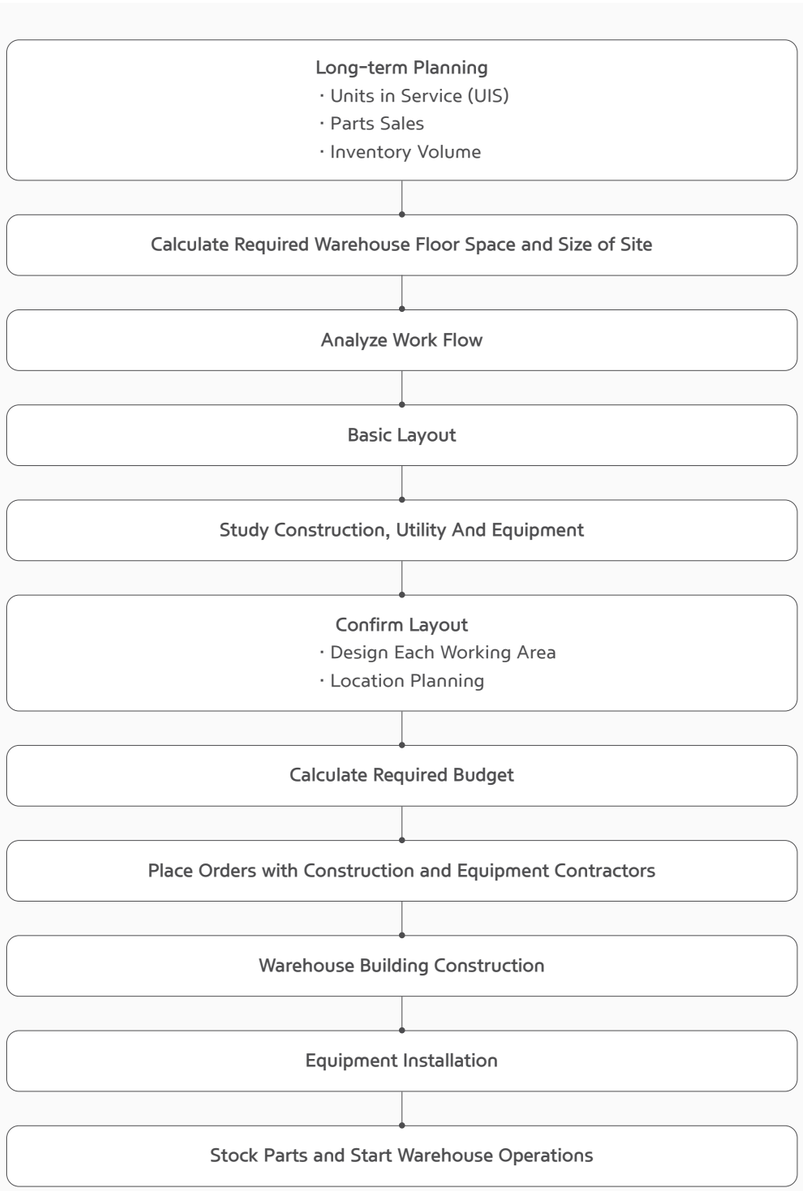
EXAMPLE OF STORAGE

	Wrong	Correct
Example		
		
		
		

	Wrong	Correct
Example		
		
		
		

05.
NEW WAREHOUSE CONSTRUCTION

WAREHOUSE CONSTRUCTION PROCEDURES



WAREHOUSE SITE SELECTION

1) Site Selection Standard

Item	Selection Standards	Note
Location	• Location should be able to cover target area and be close to dealers.	
Land Shape	• 3:2 ratio of rectangular shape land has the maximum efficiency of land usage. • Bearing capacity of soil less than 10 Ton/m2 costs extra for foundation construction.	
Transportation	• Consider accessibility to the airport, harbor, railway, and main highways.	
Infrastructure	• Location that has been confirmed for utilization for distribution operations with an existing basic infrastructure.	
Surroundings	• Avoid locations of surrounding facilities with chemical or fertilizing operations.	
Local Government	• Consider support policies from the local government.	
Building-to-Land Ratio	• Location with a high efficiency of land such as high building-to-land ratio and lots of greens.	
Accessibility	• Location that is adjacent to roads and offers easy access for big trucks like container trailers.	
Development Possibility	• Site with a high possibility for future development that would have higher land value.	

It is best to buy a site that meets all of the above conditions at a low price. However, in reality it is much more complicated because if you would find such sites available, the land would probably be too expensive. Thus, when setting up construction plan, it is best to select a site according to your current priorities.

2) Geographical Considerations

① **Natural Lighting**
Offices and all working areas should be designed to be exposed to sufficient sunshine

② **Wind Direction**
Loading docks should be designed to minimize the impact from the incoming wind

③ **Roads**
Warehouses should be located in close proximity to major access roads and at a location where parts can be easily shipped to and from ports, local cities, etc. Traffic congestion should be relatively mild

④ **Neighboring Structures**
Structures prone to fire hazard should be avoided

⑤ **Flood**
Avoid low lying damp locations which are subject to flooding. Reclaimed low lying land should also be avoided due to the possibility of erosion

⑥ **Utilities**
Select a location with telephone, telex, electricity, water supply and other public utilities

3) Local Construction Regulations

① **Development Plans by Authorities**
An area where warehouse construction is banned or expected to be banned in the future by the authorities should be avoided

② **Fire Regulations**
Verify restrictions on construction from the aspect of fire regulations

4) Expansion Possibilities

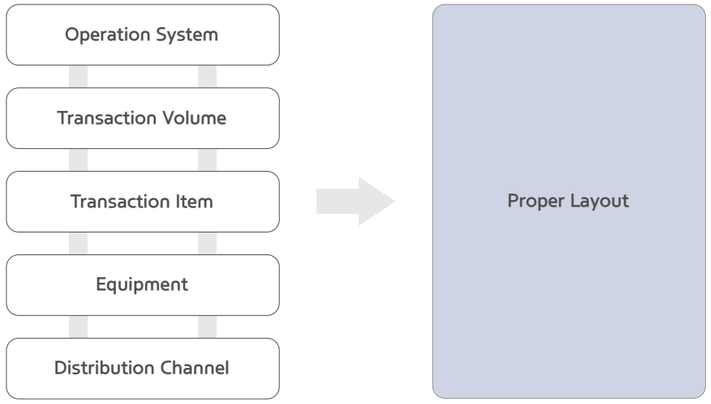
Expansion of parts warehouse space by adding structures to increase business opportunities can result in inconveniences from the viewpoint of management and efficiency. Therefore, warehouse spaces should be secured with a perspective of minimum 10 years long term business plan.

WAREHOUSE LAYOUT PLANNING

1) Warehouse Layout Concept

① The word “Layout” means “arrangement”, Layout is a means of ensuring the rational and effective use of space

② No matter how good the warehouse appears or how well it is equipped, a bad warehouse Layout will result in poor work procedures and lower efficiency, detracting from its strengths



2) Parts Warehouse Layout Basic Principles

① **Efficient Receiving and Shipping Operations**
- Parts must be grouped and stored by shape and size
- Parts must be stored and picked using individual location numbers
- Layout must be designed efficiently

② **Parts Supply Accuracy**
- Location numbers must be created and controlled for each part
- Storage location must be clearly indicated for each part
- Inventory inspection must be performed periodically

③ **Parts Storage Efficiency**
- Shelves must be installed to maximize space-efficiency
- Storage standards must be created for each parts group
- Inventory volumes must be periodically adjusted in line with the parts’ individual demand

3) Basic Layout

① **Receiving and Shipping Area**
- Receiving and shipping areas contain a receiving section for unloading, storing and checking and a shipping area for picking, sorting, packing and loading
- Adjoining receiving and shipping areas : If receiving and shipping areas are in close proximity or simply consolidated, space will be used effectively



※ Temporary Working Area
Used as a temporary working or storage area during the unloading process but this space could be utilized for expansion purposes.

- **Space Requirements Estimation**
Inbound & outbound area should be proportionate with part flow quantities.
As a general estimate, this space should occupy 20 to 25 percent of the warehouse space.

- **Truck Parking**
Ideally trucks are to be loaded indoors protecting the content in variable weather conditions.
If the work must be done outdoors, then it should be performed under the canopy which needs to extend at least 8 meters (3 meters if the work is done manually) outwards from the main building.

② Storage Area

- Warehouse Passage Layout

The Layout of passages in the warehouse effects not only work efficiency of the receiving and shipping processes but also the ventilation and lighting. Therefore, warehouse passages Layout must be considered for planning warehouse construction. As a basic pattern, first arrange the main passage and aisles between shelf rows and then place sub-passages as required.

When arranging passages, be especially careful to avoid creating any dead ends. It is recommended that passages should be located along the walls.

- Passage Width

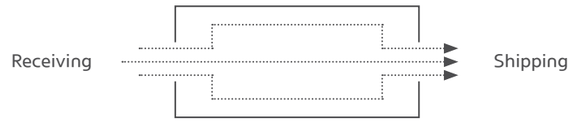
Narrow warehouse passages will result in low work efficiency, and excessively wide ones will have an adverse effect on storage efficiency.

Equipment		Passage Width	Entrance and Exit Gate Height
Handcart		1.5m	3.0m
Forklift	One-way Passage	2.0m	4.0m
	Two-way Passage	3.8m	4.0m
	Rack Passage	4.5m	4.0m
Reach Type Rack Passage		3.2m	4.0m
Humans Only		1.3m	2.0m
Order Picker		1.6m	6.2m

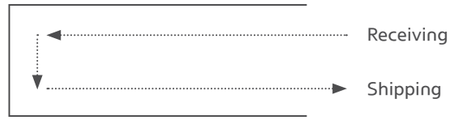
LOGISTICS FLOW IN WAREHOUSE

Logistics flow in warehouse can be divided into three types. Type 'I', type 'U' and type 'L' depending on the location of entrance and exist gates in the warehouse.

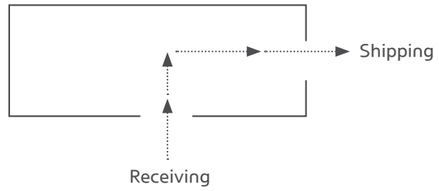
1) Type 'I'

Parts Flow	
Advantages	• This pattern is suitable for warehouses which handle large quantities of parts and as a result, experience large numbers of trucks at both the entrance and exit. • The Layout of parts storage shelves is simple and definite.
Disadvantages	• Work efficiency is poor because the working space is divided into two sections, receiving and shipping on each end. • It is difficult for workers in both areas to share the same facilities. (office, restroom, etc.) • Not easy to collect empty pallets and boxes (bucket) when shipping is complete. • Type 'I' is fairly inconvenient except perhaps when you handle large quantities of parts.

2) Type 'U'

Parts Flow	
Advantages	• Work efficiency is high because the receiving and shipping areas are in proximity of each other. • It is convenient for workers in both areas to share the common facilities. (office, restroom, etc.) • Easy to collect empty pallets and boxes (bucket) when shipping is complete.
Disadvantages	• This pattern is not appropriate for a warehouse which handles large quantities of parts. • The Layout of parts storage shelves is rather complex.

3) Type 'L'

Parts Flow	
Disadvantages	• Type 'L' is a modification of type 'I' and has nearly the same advantages and disadvantages. • This pattern covers a shorter parts flow distance than type 'I', and with higher efficiency.

PARTS WAREHOUSE EQUIPMENT

1) Storage Equipment

The most efficient type of storage equipment for handling designated parts should be selected

① Minimize the number of different storage equipment types
② Equipment must be able to adapt in Layout changes easily. Flexible shelves (not welded) are suitable to meet changes in part shapes and/or temporary increase in volume
③ Storage equipment must be fireproof. Select equipment that is made of steel

2) Handling Equipment

① Select types that are easy to handle
② Select types that are simply constructed and maintenance-free
③ Select types which have potential advantages and that are practical
④ The work volume and method must also be considered in selecting equipment

3) Working Equipment

① Select types that are easy to handle
② Select types that are simply constructed and maintenance-free
③ Select types that are flexible

4) Warehouse Equipment Classification

Applicable Area	Operation	Size Of Warehouse	
		Small	Large
Receiving Unloading	• Unloading trucks or containers • Carrying from receiving area to unpacking area • Carrying heavy objects	Forklifts	Forklifts Hand lifters Dock levelers
Unpacking Checking Sorting	• Unpacking containers • Checking received parts • Sorting and moving part	Unpacking Tool	Unpacking Tool Hand lifters
Storing	• Carrying parts from sorting area to storage area	Forklifts Handcarts	Forklifts Handcarts Conveyors
Storage	• Placing parts into location • Transfer within storage area	Rack & Bin Handcarts Order Picker	Rack & bin Handcarts Order Picker Rack-forker
Picking	• Picking parts • Carrying from storage area to collection area	Forklifts Handcarts Order Picker	Forklifts Handcarts Conveyors
Sorting Packing	• Sorting and moving parts • Packing parts		Hand lifters Packing tool
Shipping	• Carrying from packing area to shipping area • Loading trucks	Forklifts Handcarts	Forklifts

※ Unpacking Tools :
- Crowbars
- Hammers
- Work Knives
- etc.

※ Packing Tools :
- Hammers
- Strapping Machines
- Sealing Machines
- Electric Power Saws
- Staplers
- etc.

5) Warehouse Equipment Characteristics

Picture



Name	Order Picker	Reach truck	Forklift
Source	• Electric charge	• Electric charge	• Electric charge / Diesel
Characteristics	• Load weight : 1.3t • Height of fork : 6m~8m • High productivity	• Load weight : 1.8t • Height of fork : 6m~9m	• Load weight : 2.5t • Height of fork : 4.7m • Electric charge : Indoors • Diesel : Outdoor
Applicable Process	• Storing / Picking	• Storing / Picking	• Unloading / Shipping • Storing / Picking
Applicable Area	• Shelf Rack Area	• Rack & Floor Area	• Floor Area • Unloading / Shipping

Picture



Name	3-WAY	Low level order picker	Stock chaser
Source	• Electric charge	• Electric charge	• Electric charge
Characteristics	• Load weight : 1.5t • Height of fork : 12m • Fork Roationt possible	• Load weight : 1t~2t • Height of fork : 1.8m	• Load weight : 0.5t • Small parts only • Trailer connection
Applicable Process	• Storing / Picking	• Moving indoors • Storing / Picking	• Moving indoors • Storing / Picking
Applicable Area	• High Rack Area	• Low level of Shelf Rack	• Low level of Shelf Rack

Picture





Name	Cleaning cart	Scissor lift
Source	• Electric charge	• Electric charge
Characteristics	• Cleaning warehouse floor	• Load weight : 0.4t • Possible height : 12m
Applicable Process	• Cleaning	• Maintenance - Painting, Lamp change
Applicable Area	• Everywhere	• Wall, Ceiling of Warehouse

EQUIPMENT MANAGEMENT

Regularly check all distribution equipment within warehouse using an Equipment Check-up Sheet and record check up results to manage any break downs.

〈Equipment Check-up List〉

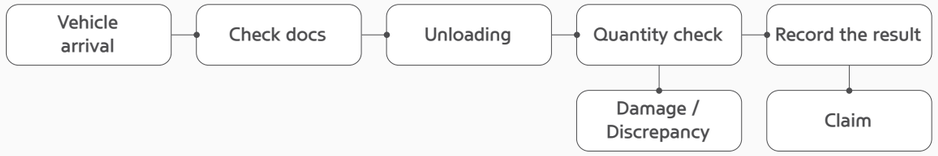
No.	Equipment Exterior Check-up	
	Item	Check-up Item
1	Ext. Damage	Breakage, Bending...
2	Oil Leak	Driving part, Brake, Oil pressure part...
3	Tire	Wear & Tear
4	Fork	Crack, Deformation...
5	Chain	Lubrication, Length, Wear & Tear
6	Battery	Distilled Water Level, Cleanliness, Terminal connections...
7	Engine	Oil level, Water coolant level...
8	Guard	Crack, Deformation...

No.	Equipment Exterior Check-up	
	Item	Check-up Item
1	Lamps	Lighting status, Cleanliness..
2	Horn	Sound
3	Steering	Working Status
4	Brake	Working Status
5	Parking Brake	Working Status
6	Unloading Equipment	Cylinder & Mast Operation, Unusual Noise.
7	Unusual Noise	Driving & Oil Pressure Motor

06.
WAREHOUSE MANAGEMENT

LOGISTICS PROCESS

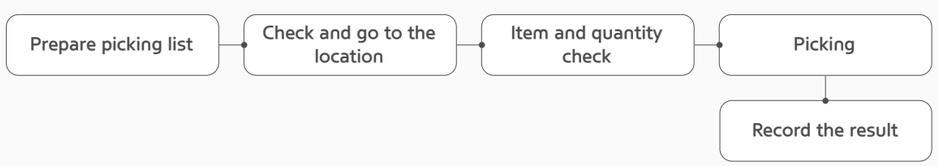
1) Receiving & Unloading



2) Sorting & Storing



3) Picking



4) Packing & Shipping



OS&D

Types of OS&D

Wrong part
Actual part that does not have a matching part number results in losingits value.

Defects
Parts that has lostits original functionality and could cause quality problems.

QTY Error
Quantity of parts does not match with accompanying document.

Handling of OS&D Items

Documentation
Record types, quantity, and reasons on the assigned logsheet.

OS&D Tag & Zone
Place a tag and store it in a separate location.

Handling
Supplier Error : Claim to supplier
Worker Error : Regularly scrap by each jurisdictional unit or distribution center

※ OS&D : Overage, Shortage & Damage

PENDING PARTS MANAGEMENT

It is important to keep track of any delays from overall work processes in the warehouse.

1) Purpose

① Preventing parts loss or damage
② Analyzing current causes of delay to prevent it from reoccurring

2) Pending Parts Management

① Set a pending period limit considering each process capacity
② With respect to parts being over that limit, physically inspect and analyze the causes
➡ This must be done daily
③ Managers should always be aware of the pending parts and should be able to find them whenever they are needed
④ Regularly educate workers to prevent reoccurrence by recording and classifying pending history
⑤ In case of losing parts, consistent part management is necessary

3) Major Errors

Next Process	Case	How to check
Put Away	• Omitting a report in computer after put-away	• Check locations or next process
Picking	• Omitting a report in computer after picking actual parts	• Inventory picking locations or a packing standby site
Packing	• Absence of Actual Parts – Omitting an actual picking after a report – Omitting a packing report after an actual picking • Presence of Actual Parts – Omitting an actual packing after report – actual picking mistake or packing error	• Inventory picking locations • Open a box which is expected to contain actual parts • Open a packing box • Inventory picking locations and check quantity of box
EX-PDC	• Omitting a report after container (Truck) loading	• Inventory cargo ready box

PRODUCTIVITY MANAGEMENT

1) Purpose

Productivity management is about putting parts in place to minimize working hours and warehouse employees so that the company reduces logistics labor cost.

2) Productivity Standard

Generally, Productivity (Lines per hour) = (Total shipped amount/lines) / (Total working hours)

※ There are many different management methods.

For example at MOBIS centers,

① Domestic center = Total (stored + ex-PDC) Amount Lines / Total working hours

② Export center = Total (stored + packed) amount lines / Total working hours

※ Most centers record daily and monthly results.

3) Target Productivity

Depending on the warehouse's size, function, Layout, etc., the targets can be different.
However, it is recommended that every warehouse assesses its productivity and establishes managing targets.
Establishing the most appropriate target productivity is important.

4) Improve Warehouse Productivity

① **Schedule Planning**
The warehouse manager should plan the warehouse's expected handling amount and corresponding working hours on a daily and monthly basis. As a result, the warehouse can minimize the unnecessary overtime hours of workers.

② **Inventory Relocation**
The warehouse manager should regularly analyze the order frequency of every parts stored and relocate the frequently ordered parts to a zone near the working area and obsolete parts to the back of the storage facility. By doing that, the worker's moving distance to pick a part can be greatly reduced.

③ The manager should continuously find out ways to rationalize the warehouse work procedures and reduce the worker's working hours to improve productivity.

LEAD TIME MANAGEMENT

1) Purpose

Managing lead time enhances the level of service to customers and validates the warehouse operations efficiency. By managing and reducing lead time, the warehouse can reduce the field operations and increase the warehouse working area.

2) Target

The warehouse manager should determine which processes are critical to the warehouse operation and worth managing. However, it is recommended to manage following processes as below.

① **Storing** (from receiving to storage)

② **Emergency Order Shipping** (from order reception to shipping)
※ High priority

③ **Regular Order Shipping** (from order reception to shipping)
After deciding which processes to manage for lead time, find out the current lead time level and establish suitable target levels for the current warehouse environment

3) Calculations

① **Inbound**
– Average Lead time : Σ (stored date – receiving date) / Total stored lines
– Process Rate : Lines stored within target date / Total stored lines (× 100%)

② **Outbound**
– Average Lead time : Σ (packed date – pick instruction date) / Total packed lines
– Process Rate : Lines packed within target date / Total packed lines (× 100%)

※ The manager should pre-determine the target days for processing (e.g., 1 day, 2 days..)

4) Reducing Lead Time Process

① **Inventory Relocation**
Inventory relocation based on the order frequency not only enhances the productivity but also the efficiency by reducing lead time

② **Maximize Cross-docking Ratio**
When receiving parts, the parts with customer orders don't have to be stored in the facility
By directly sending these parts to the shipping area, the warehouse can reduce the lead time

WAREHOUSE SAFETY

1) Industrial Disaster

① **What is an industrial disaster?**
A situation where worker at a factory gets injured, disease, or any other working equipment/facility breaks down

② **Industrial Disaster Classification**
- Nature-caused Disaster : Earthquake, Typhoon, Flood, Lightning, Drought etc.
- Man-made Disaster : Industrial Disaster, Traffic Accident etc.

③ **Industrial Disaster Statistics**
In Korea, manufacturing and construction industry accounts for 68% of the total industrial disasters

④ **Prevention**
- Labor : Improve punctuality, assign tasks according to his/her abilities, conduct safety training and regulate uniforms
- Environment : Improve processes and promote an efficient but safe environment

2) Man-made Disaster Prevention

① **Worker's Safety**
- Before work, inspire worker's awareness for safety by conducting safety education on a regular basis
- Prevent worker's musculoskeletal disorders by conducting sufficient stretching and exercise before work
- Workers should wear all necessary safety gears at all times (Safety hat, safety belt, safety shoes)
- When working at a high place, make sure that the pallet or support is fixed firmly to a facility or equipment
- Organize workplace: Electric wire, hose, pipe etc.
- Keep the workplace clean by preventing water or oil spills
- Pay attention to stacked products with possibilities of falling
- Pay attention to fork lifts when it is in contact with racks, bins and others
- Install fire extinguishers and check them regularly
- Prevent electrical fires by checking older wires
- When handling inflammables, avoid fire hazards
- Check battery chargers and circuit breakers regularly
- Prevent electric shocks when facilities are flooded

② **Warehouse Equipment Safety**
- Only designated licensed drivers should operate equipment
- Prevent equipment from rollovers, respect the equipments' limit capacity. Don't overload!
- When driving backwards, activate the rear alarming device. Look behind and make sure the pathway is clear and then drive slowly
- On rainy days, drive equipment even slower since the braking distance is longer. Avoid braking suddenly when you transport material
- Before leaving the equipment, pull the parking brake and remove the keys

3) Natural Disaster Prevention

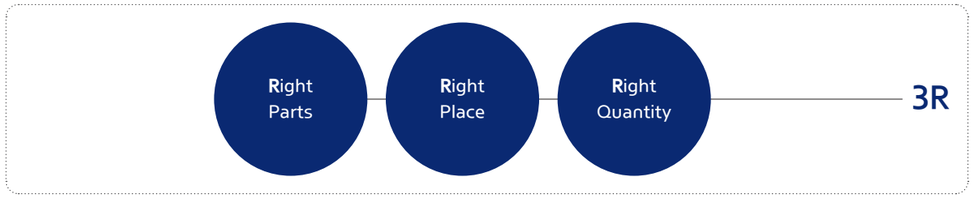
① **Flood**
- Repair weak part facilities which might be destroyed during a flood
- Mend the waterways which are clogged, check stone embankments, install signboards to caution against dangerous areas, objects and equipment, etc...
- Prepare for emergencies by installing a water pump and check it to make sure it works properly
- Prevent products from becoming rusty by planning ahead of time

② **Typhoon**
- Since power failures and water shortages frequently occur during typhoons, prepare additional power supplies, radios, lanterns, batteries etc.
- Reinforce (secure) windows with veneer or plywood
- Bind products stored outside with wire or rope and rearrange stacked items into a single level

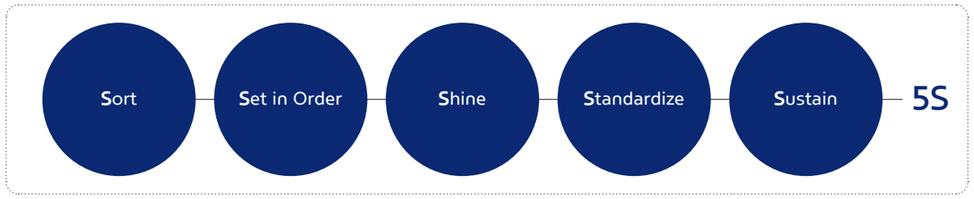
③ **Heavy Snow / Freezing**
- Remove snow stacked on and around the facilities and building
- Pay attention not to slip or rollover equipment when working on a slippery surface (snow and ice)
- Prepare a box with sand and/or calcium chloride and sprinkle over slippery surfaces around the facilities and especially on ramps
- Vehicles and other equipment should have necessary winter commodities such as snow chains and anti-freezing solution

3R 5S

1) What is 3R



2) What is 5S



① **Sort** : Remove unneeded items from working areas
② **Set in order** : Needed Items can be easily found, stored and retrieved
③ **Shine** : Keep everything clean and swept
④ **Standardize** : The creation and use of procedures, practices, policies, and job aids associated with above 5S activities
⑤ **Sustain** : Stay trained, make it a habit and permanent practice

3) Basic Concept of 5S

① The basis of production activity
② Prevent all loss and malfunctions in advance
③ Participation and practice of all personnel is essential for 5S
④ Makes the working space larger
⑤ Improve quality and achieve zero defect
⑥ It enables cost reduction and supply of parts within specified deadlines
⑦ Prevent safety accidents and reduce malfunctions
⑧ To make the relationship smooth and improve the willingness to work
⑨ A small improvement is also followed by a great effect if accumulated steadily

4) 5S Activity - Sort

Separate needed item from unneeded items and removed unneeded items form work area.

- **Separate needed items from unneeded items**
- **Remove unneeded items from working areas**
  - including non-confirmed parts, empty pallet and damaged boxes, etc.
- **Remove all excess items from working areas**
  - including consumables, supplies, personal items, tools, devices, and equipment

  ➡ Target Area : Warehouse, office, PDA cabinet, storage place for consumables, equipment and tools, etc.

5) 5S Activity - Set in Order

Make it easy to find what you need and keep it in place
- Anyone can find & use easily
- Anyone can understand 3R - right part/item, right place, right quantity - easily

- **Signage, identification tag, Labeling**
  - Office, location, process area(inbound, outbound, pigeon hole and etc), zone, safety signage, charging area, consumable storage area, quality control and so on
- **Line marking (Painting Line)**
  - Parts storage area(floor), forklift staging/charging area, waste bin, fire related, pedestrian passage, inbound/outbound area and so on
  - Different color for each area - passage, storage area, working / staging area and so on
- **Following 3R - Right Part/Item, Right Place, Right Quantity**
  - Part, consumables(including package material), PDA, cart and other tools and equipment
- **Visible Management**
  - Enhancing visualization and transparency, which allow anyone to see the abnormalities and changes at a glance and to take countermeasures quickly
- **Easy to understand and clear**

6) 5S Activity – Shine

Create a working environment free from any trash and dirt, by sweeping, cleaning, and removing dirt, dust and debris from the floor, equipment, fixtures, tools, etc. of the whole warehouse.

- Designate workers in charge of cleaning, by warehouse area and items to be cleaned
  - Attach “Designated worker” tag to each cleaning area
- Keep cleaning tools in operation
  - Place tools near cleaning area neat and tidy
- Managing cleaning schedule and Check list
  - Daily cleaning is basic, but by running “Clean day” a week, focus on detailed checking and improving
- Fix problems that are found while cleaning facilities, floors and equipment

7) 5S Activity – Standardize

Keep it clean by repeating "Sort", "Set in Order" and "Shine”.

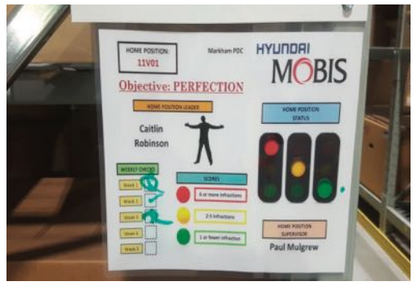
- The creation and use of procedures, practices, policies, and job aids associated with the first 3 of the 5S activities
- Promotion - newsletters, posts, slogans, badges etc.
- Motivation - ideas contests, 5S days, warehouse tours, snap shots
- Evaluation - issue warning tickets, top managers visits, check sheets, public recognition
- Always check with eyes, find loss (defects) easily, and keep clean

8) 5S Activity – Sustain

Stay trained about “Standardize”, make it a habit and permanent practice.

- Create and maintain favorable 5S atmosphere in the workplace
- Create 5S culture
- Make workers well-disciplined and familiar with manuals and how to work, let them act & improve on their own
- Evaluate periodically with a check sheet and proceed with improvement activities
- Point out the disruption of 5S on the spot and induce improvement

9) Example of 3S 5S



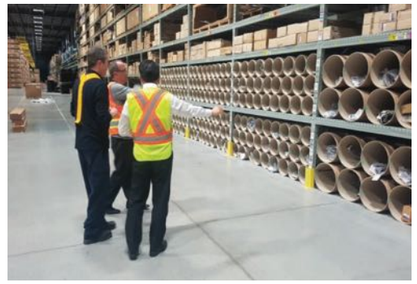
Assign designated workers to each area



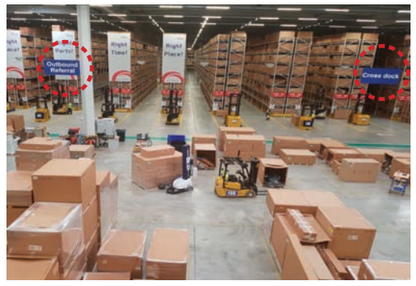
Daily training for workers



Daily 3R 5S activity after training



Periodical inspection by top management



Signage for each area



Signage for inbound area



Pedestrian Passage in different color



Inbound sorting area (for pallets)



Forklift parking area



Charging area



Small steel parts storage using divider



Molding / Hose parts using paper tube



"Yellow Zone" for shelf-life parts with FIFO sticker



Attaching colored stickers based on receiving year



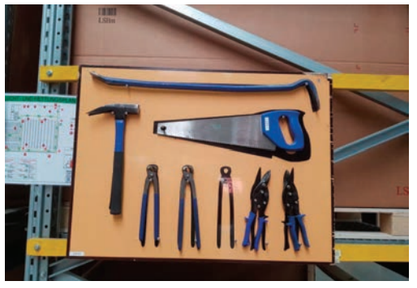
Secured Area with lock for valuable Parts



"Picking Error" sticker for parts with frequent error



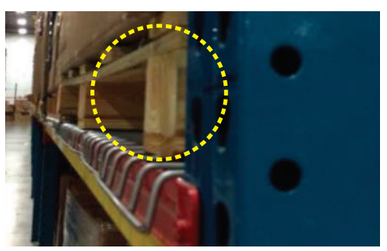
Plastic Location label in floor area

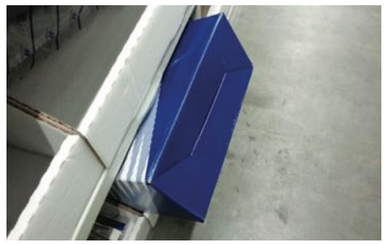


Set in order for tools

10) Example of Improvement

	Before	After
Example		
		
		
		

	Before	After
Example		
		
		
		

	Before	After
Example		
		
		
		

PART 10-2.

WAREHOUSING
(ECO-FRIENDLY PARTS)

07. ECO-FRIENDLY PARTS WAREHOUSE MANAGEMENT

07.
ECO-FRIENDLY PARTS WAREHOUSE MANAGEMENT

INSTALLATION EQUIPMENTSTANDARD OF ECO-FRIENDLY PARTS WAREHOUSE

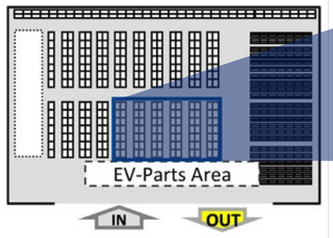
1) Eco-friendly Parts Warehouse Standard

As there are no establishment of domestic and overseas EV battery related storage laws (as of August 2021), referred to similar standards and recommendations from the fire department. MOBIS established its own standards.

- Administrative rules or recommendations from firefighting authorities/insurance companies stated in the above related laws
- Consulting results from HQ relevant departments (electrification BU and Safety Dept.)
- On-site inspections (e.g. Eco-friendly warehouses, packaging companies, etc.)

Type			List
Warehouse Conditions		Mandatory	• Temperature below **35℃** (EV battery) Temperature between **0℃ ~ 35℃** (Fuel cell) • Installation of thermo-hygrometers
Safety Facilities, Equipment		Mandatory	• Fire blanket and fire extinguisher • Fire-fighting facility(fire detector, sprinkler, tacks) • Smoke-ventilation facility for worker
		Recommend	• Cooling facility(ex. Ceiling fan)
Storage Location		Mandatory	• If stored in a separate area of the warehouse, mark the area and separate it 3 m from the rest
		Recommend	• EV Batteries: Defined as Dangerous Goods (in some countries) - Store in EV-dedicated warehouse or at segregated storage area near by exit - Comply with **"Separated area"** regulations if authorities have rules ※ Fuel cell : not classified as "dangerous goods"
Storage Rules	Floor	Mandatory	• Stacking level : **4 or less** (if necessary, temporarily 6 floors, If overloading is continued more than 6 months, make an alternative plan
		Recommend	• layout : Place below **4 rows** • Calculation for required area (4 levels) standard: Parts size (WXD) x 0.62 Multi-row: Parts size (WXD) x 0.5
	Rack	Recommend	• Load spec: 1.2ton per cell / Stack 1 level in a cell

① Warehouse Facility

Name	Picture
Establishment/rental of an EV-parts Dedicated warehouse	 HQ's EV-parts dedicated WH
Operation in existing warehouse	  Example

② Equipment

Name			
 Thermo-hygrometers	 Fire blanket	 Fire extinguisher (A-C)	 Fire detector
 Exhaust fan	 Ceiling fan	 water tank	

2) Warehouse Facility

The following equipment specifications refer to provisions by the fire departments and insurer of various countries.

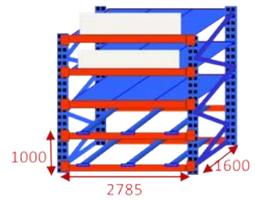
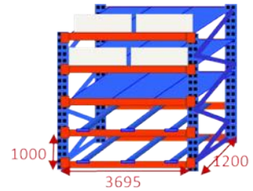
- In case of rental/setting up new warehouse, please comply with the recommended specifications and check the following standards.

Type	Item	Usage	Checklist	Photo
Mandatory (Installation) Recommend (Specification)	Fire-fighting facility (Fire detector + Sprinkler)	Automatically spray water on fire	• M) Install fire detectors in warehouse • Installing sprinklers apart from 2-3m between them ※ Install sprinklers in case of self-construction	
Mandatory (Installation Recommend (Specification)	Smoking-ventilation facility (Exhaust fan, Ventilation duct)	Exhaust smoke inside the warehouse in case of fire	• M) Install exhaust fan and ventilation duct	
Recommend	Cooling facility (circulating fan, cooling duct, air-conditioner)	Manipulate temperature	• R) Use of air conditioners in hot and humid countries • R) Install when the annual highest temperature is more that the current temperature standard (35℃)	 

3) Storage Facility

The following specifications is recommendation and can be modified among your own warehouse environment.

- But please check the fire authorities rule before installation of Rack facilities.

Type	Spec	Usage	Checklist
Recommend	 	• The rack specification - It is a “recommended” and can be changed depending on the case. - However, It is “necessary” to observe the loadable weight per cell : 1.2ton Reference) Load/Tie Beam Spec. **Beam Type / Pcs/cell / Remarks** Load Beam (Front Beam) — 2ea — W : more than 100m Tie Beam — 3ea — - Install the rack after checking law, regulations : whether sprinklers is mandatory, etc. - Install the rack after checking the floor loading capacity	Stack one part per cell

4) Safety Equipment

The below equipment are “Mandatory”

- But the specifications for each equipment are "recommended” specifications, and laws and regulations of each country take precedence (refer to the fire fighting laws of each country for the spacing of fire extinguishers, etc.)

Type	Item	Usage	Checklist	Photo
Mandatory	Thermo-hygrometers	Temperature and humidity measurement	• M) Locate near the EV-parts storage area • R) Measure both the top and bottom of the rack (If necessary, locate it in several places)	
Mandatory	Fire extinguisher (A-C)	Initial firefighting in warehouse	• Required to have all A-C-class specifications or integrated fire extinguishers • 2 fire extinguisher specifications (2 each per spec.) per equipped location (see the photo on the right) • Gaps of equipment (domestic standard, selected from the following conditions) - Place per 20m walking distance (2 types, 4ea) - Place per 200m^{2}area (2 types 4ea) • Recommended the total weight of the fire extinguisher is 7 kg or less to respond to fire timely ※ Based on NFSC, NFPA	
Mandatory	Fire blanket	Initial fire, external isolation, complete combustion	• M) Prepare at least 2 types of blanket Use Blanket that is wide enough to cover the product ① 3m × 2m : It is essential to be equipped in logistics equipment, is placed in all equipment, and 1ea is placed near the storage area and the entrance door, respectively ② 5m × 5m : For complete fire extinguishing (using yards), equipped with 1ea each near the storage area and the entrance door - Fiberglass : minimum thickness of 800 g/m^2 (jet flame protection) ※ Usage : refer to Fire Evacuation procedures ※ Quantity : the number of EV-Parts logistic equipment +1	 

5) Personal Protective Equipment For Fire Fighting

The equipment is “required” to be equipped with all logistics equipment operated at all times
(“Recommendation” to work with safety protective equipment and insulating materials if necessary)

- Equipment specifications must be equipped with additional equipment that meets both the “recommended” specifications and essential specifications in accordance with laws and regulations of each country.

Item	Usage	Contents	Photo
Fire fighting helmet	Hair protection	• To prevent battery impact, fall, or injury in case of electric shock when responding to fire • Use of products certified UL 2	
Protective clothing	Physical protection	• A fire-fighting special fireproof suit which is usually yellow (different from regular fireproof suit) • In the case of a battery fire, toxic substances that can penetrate the skin occur (HF), so skin protection with fireproof clothing is essential • Use of products certified UL 2	
Air respirator	Respiratory protection	• Respiratory protection from toxic gases generated in the event of a fire. • It consists of a high-pressure air container, a face body, a supply valve, an exhaust valve, a pressure reducing valve, a back burner, a pressure gauge, an alarm device, and an air supply hose. • When wearing a face body, preventing the inflow of fire and protecting the face. • Use of products certified UL 2	
Heat-dissipating gloves	Hand protection	• Protection of workers' hands and wrists from high heat and harmful substances in response to fire • Recommended to use as thick as possible • Use of products certified UL 2	
Fire safety shoes	To prevent electric shock	• Protection of the operator's foot, foot, and ankle area in response to a fire • Reduction of the risk of electric shock that may occur when responding to a battery fire by using an aqueous fire extinguishing method • Use of products certified UL 2	

6) Logistics Equipment

All Specifications are recommended. It is possible to use branches' own logistic equipment

- But It is necessary to use that can safely handle the weight of the part and fork extensions are not recommended because of thickness.

Type	Item	Checklist	Remark
Recommend (Partially)	Fork-Lift 	• Place of use: in/outbound area, Floor • Equipment Specifications – Power type (loadable weight) : Electric (2.5t), Diesel (3.5t) – Fork : 1) Length : **more than 1800mm** 2) width : **less than 130mm** 3) thickness : **less than 90mm** (Based on the thickest part of the fork)	The fork must be long and wide enough to withstand the weight of item. **The forklift fork extensions are not recommended because of thickness.** The thickness must be thin thinner the fork tube(100mm).
Recommend (Partially)	Reach Truck 	• Place of use: Floor/Shelf rack area • Equipment Specifications – Power type (loadable weight) : Electric (1.8t, 2.0t, 2.5t) – Fork : 1) Length : **more than 1800mm** 2) width : **less than 130mm** 3) thickness : **less than 90mm** (Based on the thickest part of the fork)	
Recommend (Partially)	VNA(3 WAY) 		

Type	Back camera	Safety light	Headlights	Rear light	Backward alarm	Warning light	Speed limit
Forklift (Sitting type) 	●	●	●	●	●	●	●
Forklift (Sitting type) 	–	●	●	●	●	●	●
Forklift (Sitting type) 	–	●	●	●	●	●	●

Back detector	Safety light	Safety device (speed)
• Detection/alarm at close distance to prevent collisions between logistics equipment and workers	• Visualize "caution" by recognizing the location of logistics equipment to nearby workers	• Complies with the speed of operation of equipment in the workplace
	 Line light	
• Person recognition camera (AI) 1) Possible to check the back 2) Watch out for the driver of the display and sound alarm when the rear camera recognizes a person	• Installation of safety lights at the front and rear : A light of 2,000 lux or higher, a lamp LED type, etc. • For indoor work logistics equipment (excluding outdoor use)	• Installation of a speed limiter (recommended) 1) Indoor work logistics equipment : 8km. 2) Outdoor work logistics equipment : 10km (8km for both indoor and outdoor use, reinforced)
※Recognition of installation of equivalent or higher performance safety devices suitable for the purpose	**※The color of safety lighting can be changed by workplace in consideration of the color of the floor of the site.** **※Recognition of installation of equivalent or higher performance safety devices suitable for the purpose (e.g., rear → line light installation and operation)**	**※As a recommended installation device, non-installation and operation workplaces continue to comply with the relevant worker's driving speed regulations / strengthen safety marker**

ECO-FRIENDLY PARTS HANDLING

1) Fire Related Laws

There is no firefighting law related to EV battery : Refer to standards for similar items (dangerous goods) and overseas firefighting regulations, etc.

- South Korea : Refer to the Research Report on Fire Safety Measures for Energy Storage Systems
  - Place all classes of extinguishers
    (A: ordinary combustible materials, B: flammable liquids, C: electrical equipment)
- International :
  - Should Comply with the standards for extinguishing electricity storage facilities and the management regulations of dangerous goods in the standard test (UL9540A) of safety test methods
  - Storage/response laws and recommendations from fire authorities related to dangerous goods in each country should be prioritized

2) MOBIS Standard

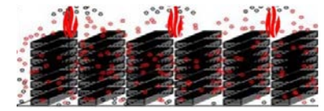
- Create a Fire Emergency Procedures(Action plan)
- Share fire extinguishers and fire extinguishing equipment standards
- Make a separated space (water tank, yard) for fire response (At least one option must be secured)
  Option1) **Water Tank** : The headquarters produces and distributes standard specifications (’22)
  Option2) **Yard** : A flat space of 10m X 10m or more must be secured in the warehouse site, and floors must be marked, and emergency response areas must be marked in the relevant area

3) Fire Fighting Process

- W/ Water Tank

① **Recognize the fire**
- Alert building occupants a fire
- Press the emergency bell to spread it to the entire area

※ Report the fire to authority



② **Take safety gears**
- Who are in charge of fire-fighting wear personal protective equipment



③ **Initial fire-fighting**
- First-aid fire extinguishing ASAP
  (Act in groups of two)



④ **Delay the flame**
- Cover the item with fire blanket
- In case of thermal runaway, cover it with blanket after fire extinguishing.



⑤ **Move the part to tank**
- Move to the water tank.



⑥ **Battery completely discharged**
- Put the item in the tank and wait the battery completely discharged

※ The salt-water temperature rises to 90℃
※ 12hr. or longer confirmation required

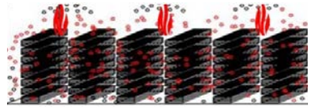


※ In order to comply with the fire evacuation procedures, it is necessary to prepare a water tank
※ Please refer to the page “Safety/Emergency Response Precautions “, create Emergency Task Force and rehearse all procedures

- W/O Water Tank

① **Recognize the fire**
- Alert building occupants a fire
- Press the emergency bell to spread it to the entire area

※ Report the fire to authority



② **Take safety gears**
- Who are in charge of fire-fighting wear personal protective equipment



③ **Initial fire-fighting**
- First-aid fire extinguishing ASAP (Act in groups of two)



④ **Delay the flame**
- Cover the item with fire blanket
- In case of thermal runaway, cover it with blanket after fire extinguishing.



⑤ **Move the fire extinguish zone**
- Move to the fire extinguish zone

※ Pre-designation of quarantine area is a must



⑥ **Battery completely discharged**
- When accessible, cover the part with fire blanket and wait for combustion



※ Before preparing the water tank, make a fire extinguish zone and move damaged part to the zone(yard)
※ Stand by until natural discharge and combustion completely. If accessible, cover with large firearms
※ By configuring an emergency response task force (see details), prior understanding of the above process and simulation training are essential

4) Fire Prevention Inspection Checklist

Check your own fire authorities' checklist, first-All the lists must be checked periodically (e.g. monthly)

Contents	Checklist	Adequate	Inadequate	Remarks
Warehouse Check	• Is the EV-battery & Fuel Cells are stored separately in the isolated place? • Are ventilation, fire-fighting facilities operating normally? • Are fire blankets and fire extinguishers located at the place as good condition? • Are there any traces of leaks or a risk of fire? • Are there any combustibles around the storage area?			
Stocks Check	• Do periodic inventory checks and is there any damaged parts? • Are there any over-loaded parts? • Are there any EV-batteries mixed with general parts? • Are there any EV-batteries stacked different size parts?			
Firefighting Facilities	• Are the fire extinguisher pressure gauges in the normal range? • Is there any external damage of fire extinguisher(handle/ safety pin)? • Are the indoor fire hydrant cabinet, hoses, valves in good condition? • Is there no burden in front of the fire hydrant? • Is the automatic re-demagnetizer number/transmitter on? • Is there any damage to the exterior of the sprinkler head? • Are the Emergency(Escape) Lighting always on? • Are the fire doors always closed? • Are there any obstacles in the evacuation stair/way?			

5) Safety/Emergency Response Precautions

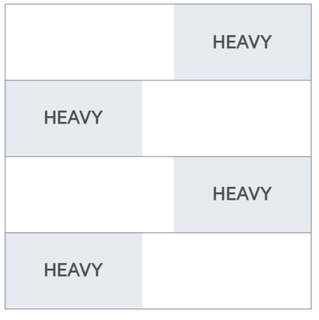
It is essential to establish an evacuation plan for each base (including the location, route, and evacuation guidelines for evacuation facilities) and conduct education and training once a quarter of implementation.

- **Safety Precautions**
  ① Cautions for safety
  - Certificate logistic equipment worker and periodically educate safety provisions of OSHA
  - Prepare and check the location of personal safety equipment
  - Prepare the fire-fighting facilities and equipment
  - Periodically educate and rehearse fire evacuation procedures regularly, Create Emergency Task Force

  ② A Fire Emergency Procedures(Action plan) -details are in the procedure page
  - In case of damage of parts due to collision accidents (exposure to electrolyte, damage to separator, etc.), put fire blankets on the item and remove it to the prepared area(water tank, yard)
  - Periodically check and update authorities' laws and regulations
- **Emergency Task Force**

Group	Roles & Responsibilities	#of members	Name
Alertness	• Announce "Fire" in a loud voice • Press the emergency alarm and notify everyone in the warehouse • Report the fire to authority	2	
Evacuation	• Execute the existing evacuation procedures • Operate the emergency contact network and confirm the number of people • Make sure everyone has evacuated	4	
Fire-extinguishing	• Wear personal Protective Equipment (PPE) • Use fire extinguisher on a fire and throw a fire blanket on the part • If accessible, move the part with a forklift to yard or water tan	2	
Completion	• Wear personal Protective Equipment (PPE) • Stand by at the fire extinguish zone/water tank • If accessible, cover a fire blanket on the fire • Wait in the safe area until the fire station arrives	2	

6) Floor Storage

Details	Examples
Stacking • Stacking level : 4 or less (if necessary, temporarily 6 floors, If overloading is continued more than 6 months, make an alternative plan • Calculation for required area (4 levels) ① Standard: Parts size (W × D × 0.62) ② Multi-row: Parts size (W × D × 0.5) • Stack only with same part packed with same package material • Load by aligning the slot of pallets	 Correct  Wrong
Stack up by changing directions • Weight biased risk due to battery shape • Stack up boxes with weight balance (Change the direction of the boxes stacking up) ※ It is weight biased toward the side with the HEAVY label attached 	HEAVY   Weight biased  Example of stacking

7) Forklift Handling

Details	Examples
Stacking • The center of gravity is shifted to one side because of the weight biased shape • Handling with multi level of parts might be caused the danger of weight bias	
Handle the forklift by pushing the fork all the way to the innermost part of the pallet. • Especially, when forking in the longitudinal direction, the heavy side should come toward the machine	

8) Load in the Vehicle

Details	Examples
Do not stack different kinds of parts when shipping or waiting shipment. • Especially, the small/heavy parts might cause weight concentration on the upper side of the box • Recommendation of fixing and separation to prevent movement of parts within the vehicle	
For small cargo truck(w/o cover) • Fix the parts well and use the waterproof cover. (even if it doesn't rain)	 Correct  Wrong

WAREHOUSE ENVIRONMENT CHECKLIST

1) Eco-Friendly parts warehouse environment checklist

Contents		M/R	Checklist	Check	Remarks
Insurance		M	Insurance for EV-parts		Be different according to insurers
Warehouse Conditions	Security	R	CCTV & Smoke control system		
	Temp.	M	Temperature below 35℃ in warehouse		※ For fuel-cells : 0℃ ~35℃
	Ventilation	R	Installation of ceiling (or inside building) exhaust system		Check the proper exhaust capacity
	Fire-fighting	M	Mark firefighting facilities and organize surroundings		
		M	Management of fire extinguishers (Placement, Operation check)		
		R	Checking coverage of fire hose (If necessary, connect 2 or more)		
		R	Installation of sprinklers		
Safety management	Equipment	M	Safety gears, fire blankets		
	Emergency Process	M	Creating/training/implementation of Fire evacuation procedures		
		M	Creating/training/implementation of working process		
	Facilities	M	Periodical inspection of electrical facilities and cleaning up the surroundings		
		M	Management of inflammable substances in designated areas		
Operation management	In / out-bound	M	Truck / forklift safety management (planning / training / implementation)		
		M	Forklift driver qualification management and regular training		
		M	Installation of forklift safety devices (rear camera, safety lighting, etc.)		
		M	Handling just with a piece		
		M	Stacking level in transportation: 4 or less (inland delivery)		
	Storage	M	Compliance with storage standards (loading less than 4levels, etc.)		For storing on floor
		M	FIFO management		

PART 11.

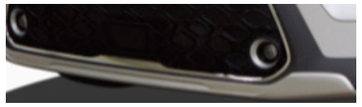
ACCESSORIES

01. GENUINE ACCESSORIES
02. ACCESSORIES PART NUMBERING SYSTEM
03. ORDER PROCESS, PRICE AND PAYMENT
04. ACCESSORIES INFORMATION
05. MOBIS ACCESSORY DEVELOPMENT STRUCTURE
06. ACCESSORY OPPORTUNTIES & CHALLENGES
07. ACCESSORIES MARKETING SCHEDULE
08. ACCESSORY MARKETING
09. ACCESSORY ACRONYMS
10. ACCESSORY INVENTORY

01.
GENUINE ACCESSORIES

Genuine Accessories are those uniquely developed by MOBIS or OE options developed by Hyundai. Unlike aftermarket accessories, Genuine Accessories meet OE quality standards and testing requirements of Hyundai. Genuine Accessories are designed and developed in conjunction with distributors to satisfy the needs of Hyundai customers.

Styling Package (Special Edition)


Front Skid


Rear Skid


Alloy Wheel


Side Molding


Mirror Cover


Radiator Grille

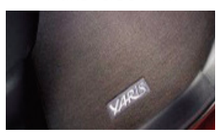
Interior & Exterior


Transverse Trim


Roof Cross Bar


Side Step


Tow Bar



Carpet/Rubber Mat

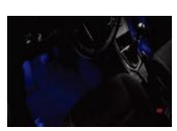

Wheel Lock

Elec.


Wireless Charger


Glovebox Light


Puddle Light


Interior Light


Remote Start

02.
ACCESSORIES PART NUMBERING SYSTEM

PART NO. BREAKDOWN

1	2	3	4	5	6
3	X	F	4	6	A	C	0	0	0	X	X

1. Vehicle No.
2. Accessory Category 1
3. Item Code
4. Accessory Category 2
5. Accessory Specification
6. Color Code



DESCRIPTION

1) Vehicle No.

E.g. 2H : Elantra (HD)
2B : Santa Fe (CM)
2E : Tucson (JM)

2) & 4) Accessory Category

Category		AB	AC	AK	AQ
Engineering Order (X)	H	Customizing AS	Mobis Development AS	Parts Kit (Component :1EA)	Buy & Sell
Engineering Order (O)	F	Customizing	Mobis Development	Parts Kit	Original Design Manufacturing

3) Item Code : Details in the following page.

5) Accessory Specification

e.g. A9F40 AK400 : Alloy Wheel KIT (17 inch)
A9F40 AK600 : Alloy Wheel KIT (18 inch)
A9F40 AK710 : Alloy Wheel KIT (19 inch)

6) Color Code

e.g. A9F14AC000WK : Carpet Mat (Black)
A9F14AC000BQ : Carpet Mat (Gray)

ITEM CODE

E.g. 46 → Mud Guard

Category		Second Digit				
		0	1	2	3	4
First Digit	0		Interior Garnish	S/Absorber	Door Trim	
	1		Cargo Screen Luggage Box Steering Wheel	Cargo Mat / Net / Tray Frunk Tray	Rubber Floor Mat	Carpet Floor Mat
	2	Body Decal Emblem	Roof Rack & Carrier	Door Visor	Deflector	Tail Gate Garnish
	3	Body Kit	Bumper Molding	Waist Line Molding		RR Spoiler
	4	Alloy Wheel Wheel Lock Temporary Kit	Wheel Cap		Mirror Cover	
	5				Wireless Fog Lamp Kit	RR Combi Lamp Puddle Lamp
	6	Warning System		Changer	GPS	Map
	7			Brainwave Ear Set		Washer Heater EV Bike
	8	Alternator	Starter			
	9	Brake Pad	Muffler	Belt	Drive Shaft	Oil Filter
		5	6	7	8	9
First Digit	0	Sports Pedals		Strut Bar	Tow Hitch	Wiper
	1		Console Armrest Air Purifier	Interior Liner Kit		TGS Knob
	2	Pillar Garnish		Bumper Protector	Bed Extenders / Rack / Rail	
	3			Side Step Side Sill Molding	Radiator Grille	Lamp MLDG Eye Line
	4	Door Scuff	Mud Guard Wheel Arch Garnish	Fuel Lid Cover		Performance Brake
	5	Interior Lamp Exterior Lamp		Remote Starter Smart / Bring Key	RSE	
	6		Glove Box Stopper Light	Tow Hitch Controller		
	7	EV Charger	Wireless Phone Charger	Phone Holder		Air Conditional Filter
	8					
	9	Weather Strip	Air Cleaner Filter	Brake Disc		

03.
ORDER PROCESS, PRICE AND PAYMENT

Accessories follow the same order process as standard parts orders.
However, there are 2 differences with accessory orders that should be noted.

- Order Type : B
  - Accessory ↔ Character Code A ↔ Order Type B
    - If you order accessory with other order code, system does not receive your order

EX) C00AAX 7GAB

Character Code	Order No.	Part No.	Part Name	QTY	Result
A	D06AAX9APC	0894024000	COOLANT	826	Wrong Order Code (Error)
A	B07ABX9BAC	D3H15AK000TRY	CARGO SCREEN	20	
A	B07VAX9BCC	P87902K000A	AIRCON FILTER	9	
A	B07VAX9BOX	P87902K000A	AIRCON FILTER	6	
A	A18VDX9AQE	A9H37AQ000	COMPLETE ASSY-SIDE STEP	1	
A	A18VDX9BAE	2PF37AC500	COMPLETE ASSY-SIDE STEP	1	
A	A19VDX9ACE	0860745005	BRAND KIT	1	
A	A08VHX9AAB	C5H37AQ000	COMPLETE ASSY-SIDE STEP	3	Correct Order Code (Received)
A	A18VDX9AGB	D9875AB000	SIDE STEP	20	

- Ship Mode : SEA & AIR only (No VOR)

04.
MOBIS ACCESSORY DEVELOPMENT STRUCTURE

GLOBAL NETWORK

- MOBIS are developing products for each region. It could be different by models, but basically, each MOBIS subsidiaries develop products that match the origin of the vehicle
  (e.g. Models produced in Korea : mainly by H.Q. / Models produced in U.S.A. : mainly by MPA)
- Non region-specific Genuine Accessories are developed by MOBIS H.Q. and MPSH
- Region specific Genuine Accessories are designed & developed in local markets by MOBIS subsidiaries



ACCESSORIES DEVELOPMENT MASTER SCHEDULE

1. Product Plan	M-5 ~ M+4	• Acc.Tech.Com • Advanced Quality Plan • Design fix
2. Product Design	M+0 ~ M+12	• Design approval • Problem list of past projec
3. Development / Verification	M+2 ~ M+11	• Select suppliers • Quality improvement • Proto product evaluation
4. Process Design	M+8 ~ M+17	Reliability test • Process audit • I.S.I.R
5. Production	M+18 ~ M+20	• Mass production • F.P.S.C

※ Acc. Tech. Com : Accessory Technical Committee
※ Proto : Prototype
※ I.S.I.R : Initial Sample Inspection Review
※ F.P.S.C : First Production Sample Certification

05.
WHY GENUINE ACCESSORY

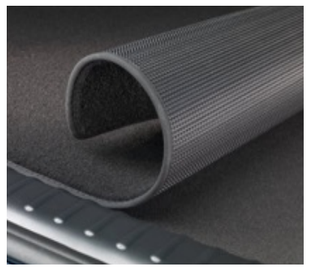
WHY GENUINE ACCESSORY

- **High Quality and Reliability**
  - Amounts of reliability tests are conducted based on real driving conditions, using the worst-case scenario among multiple tests
- **Luxurious Look and Perfect Fitment for each car models**
  - Utilizing OE CAD data : Leveraging In-house Design and Engineering Team
- **Global Distribution Network and Inter-corporate Standardization**
  - By adjusting quality requirements or manufacturing methods between many overseas distribution, it ensures compatibility, interoperability, and efficiency across different countries
  - This aims to streamline the development process, reduce costs, enhance product quality, and improve product competitiveness
- **Utilization of Hyundai Genuine Brand Value**
  - It allows you to offer higher value products to consumers and enhance brand image and credibility

HIGH-QUALITY



PERFECT FIT



LUXURY LOOK



BRAND VALUE



FINEST DESIGN



06.
ACCESSORY OPPORTUNTIES & CHALLENGES

ACCESSORY OPPORTUNITIES

Accessories are a significant source of additional profit for both distributors and dealers.
Enhanced profits come from both the sales of accessories and sales of new vehicles.

Accessories can enhance the image/perception of a new vehicle which becomes a major factor in the sale of new vehicles. Offering accessories as both Port Installed Options and Dealer Installed Options offers distributors flexibility in the pricing of new vehicle as well.



ACCESSORY CHALLENGES

Although accessories are an excellent source for profits and new car sales there are several challenges that face the accessory business. Amongst numerous challenges is bringing new accessories to market concurrent with new vehicle launches. Because genuine accessories must meet OE specifications testing requirements that are far more stringent than aftermarket's.

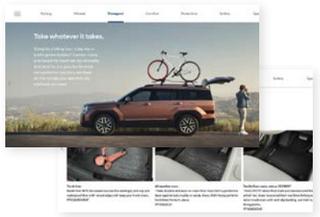
Genuine accessories are sold under the Hyundai brand therefore leaving an impression on the customer.
Market launch for genuine accessories can be delayed in order to assure that OE quality product does not have a negative impact on CSI.

At times the available range of genuine accessories can be limited compared to the aftermarket.
This is mainly due to the aftermarket vendors having less concern over quality and warranty implications.
Focusing on good quality product that meets or exceeds OE standards often makes genuine accessories more expensive than aftermarket and counterfeit accessories.

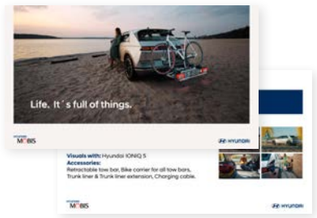
Distributors' and dealers' main focus is on vehicle sales with accessories only as an afterthought.
Because genuine accessories tend to be more expensive than the aftermarket many distributors and dealers tend to gravitate towards other alternatives. This in turn leads to inconsistent margin structures, lack of communication and focus in the genuine accessory business.

07. ACCESSORIES MARKETING SCHEDULE

WHY GENUINE ACCESSORY



Pages in the Vehicle Brochure



Accessory Brochure



Accessory Event



Accessory Showcase and Training



Accessory Website and Online MKT

Launch



Showroom Marketing

Send out MKT Result to MHQ

08. ACCESSORY MARKETING

DEVELOP THE RIGHT PRODUCTS

1) Long Range Product Plan
- Accessory development is a long & tedious process
- Long range product planning is essential to accessory development

2) Coordinate with Product Planning and vehicle specialists
- Each vehicle has a certain image that Product Planning wants to preserve
- Coordinating with Product Planning can lead to PIO opportunities

3) Identify accessories offered by others in the vehicle competitive set
- Know what your competitors are offering and see what sells
- By bench marking competitors more time can be focused on sales of popular items

4) Finalize products to be offered at vehicle launch
- Offering products at vehicle launch is critical for PIO sales

5) Maintain awareness of new trends and products
- Attend trade shows, auto shows, etc··· (e.g. SEMA)

LAUNCH ON TIME

1) Importance of launching on time

Accessory sales are strongest when a new car is introduced to the market. Port installing accessories on time is also critical for diversifying vehicle line up. Sport Edition or Limited Edition vehicles can be developed by simply adding spoilers, sport pedals and even sport knobs.

2) Port Installed Option (PIO)
- Port Installed Options are the best way to secure accessory sales
- PIO accessories can be used to differentiate trim levels (sport/limited edition)
- PIO accessories promote Dealer Installed Option (DIO) accessory sales

3) Target
- Distributors should aim for more than $300 per vehicle for the overall vehicle mix
  - Typical PIO accessories: floor mats, mudguards, spoilers, side steps, etc...
  - SUV's usually provide better financial opportunity compared to sedans

4) Financial Opportunities
- **Distributor**
  - OE Increase by $100 PNV for 1,000 vehicles
  - Gross Sales: $100,000 increase
  - Gross Profit: $35,000 (@ 35% gm)
- **Dealer**
  - Gross Sales: $140,000
  - Gross profit: $56,000 (@ 40% gm)

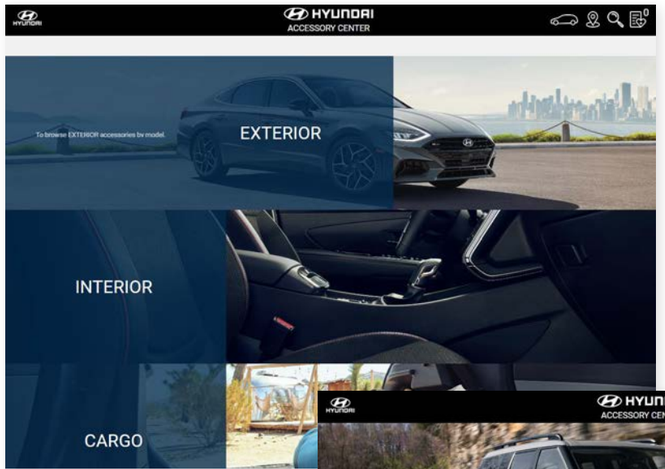
※ PNV : Per New Vehicle

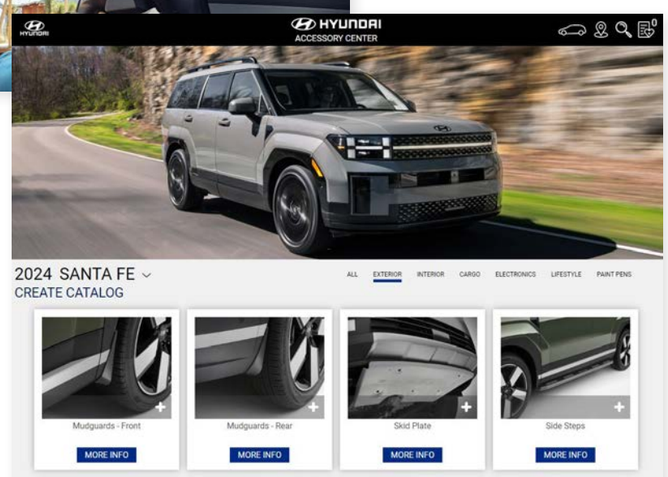
CREATE AWARENESS & INTEREST IN ACCESSORIES

1) E-commerce

- Integrating Accessories into websites is a great method of promotion
- Customers can search and learn about accessories from the comfort of home
- Build and Price is a tremendous advantage to accessory sales

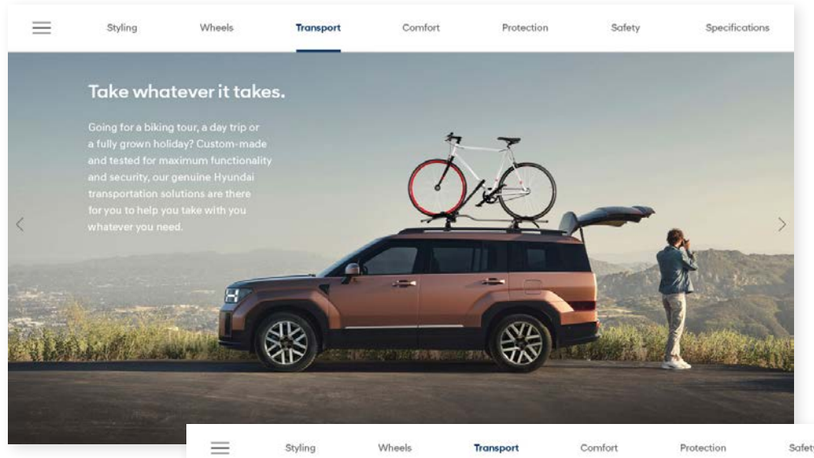
(EXAMPLE) HYUNDAI USA : https://www.hyundaiaccessories.com/
- Parts & Accessories are listed together
- Accessories are divided into Interior & Exterior
- MSRP and product descriptions are clearly available
- Customers can click on accessories for more detailed information including photos

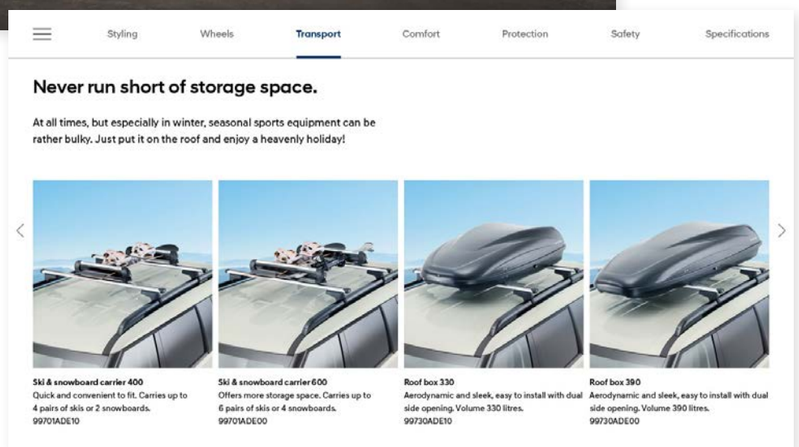




2) Brochures (Catalogs)

- **Vehicle Brochures (Local Publication)**
  Featuring accessories in vehicle brochures is a great marketing method as they fit in with the customers shopping experience. However the timing of accessory availability may not always coincide with a vehicle brochures schedule. Since the vehicle brochures main focus is on the vehicle itself space may be limited for accessories. Vehicle brochures are also costly to produce and reprint.
- **Accessory Brochures (Local Publication)**
  Compared to vehicle brochures accessory brochures tend to be more cost effective in terms of production and reprints. Accessory brochures are also easier to modify by adding and deleting accessories depending upon their availability. Accessory brochures can also be controlled directly by the Parts Department.





2) Point of Sale Material (POSM)

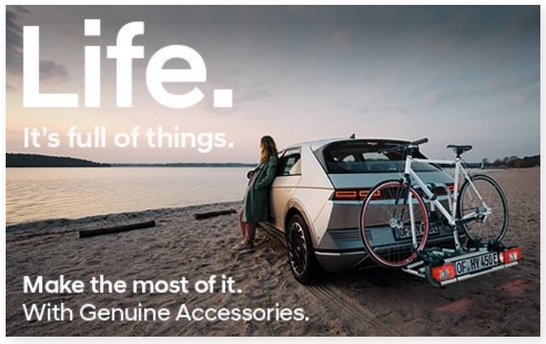
- **Background**
  POSM are designed as special advertising displays, which are found near, on or next to counters. These are meant to attract the customers attention and entice them into buying accessories. Such displays are colorful, to distract the customer while waiting, and to look at the product. POSM are meant to stand out from other items within the dealership or service shop. They can also be related to a special sales events, either on-going or just seasonal.

  The displays are normally covered with designs for the accessories they are trying to promote, and are made out of cardboard, and/or covering over a plastic stand. This makes them easily replaceable and disposable. Some displays are fixed or non-disposable. These may contain lighting to make the display more visible or be actual display racks showcasing accessories.

  POSM is a very proven and cost effective method of accessory promotion. Every dealership should utilize POSM on both the showroom floor and in the service/parts departments.

- **Types of POSM**
  Accessorized Showroom Vehicle, Brochures/Pamphlets, Static clings, X-Banners, Display racks, Slot Wall displays, Renticulars, Danglers.

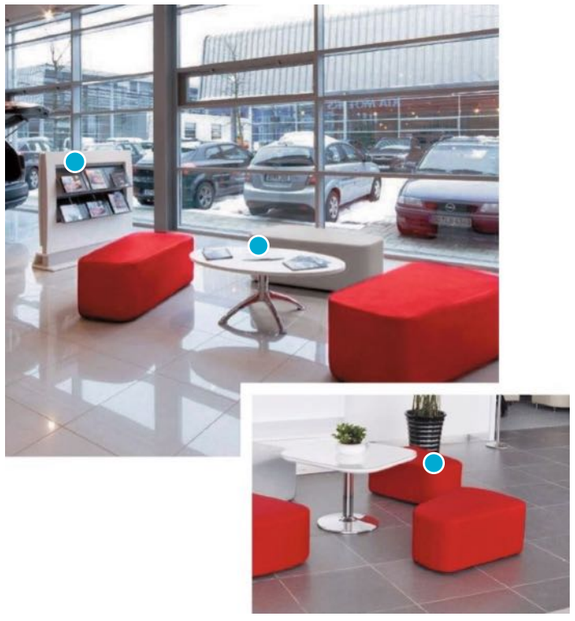
- **POSM Development**
  MOBIS can assist distributors with the design & production of various POSM. Contact your sales representative for specific details.





(EXAMPLE) **Focal Points - Draw customer's attention**
Reception desk, sales consultant desk, waiting area, car display area, car delivery zone





● Point of Sales

MOTIVATE & CREATE INTEREST ON THE PART OF FIELD AND SALES STAFF

1) Objectives

- Meet accessory sales objectives
- Maximize accessory sales opportunity sold on each vehicle
- Reward sales staff for selling genuine accessories
- Increase awareness of Genuine Accessories to customers

2) Reinforce Dealer Principle

Sales staff tend to lose focus and understanding of Genuine Accessories and their advantages. Sales of Accessories are an easy way to increase profit yet the presentation and pitch are not there. There can be many reasons behind this issue but it is up to the distributor to reinforce the dealer principle and show the dealers how to sell accessories. A simple way to get the sales staff interested and wanting to sell accessories is to reward them for meeting accessory sales objectives.

3) Sales Process

Genuine Accessory sales should be performed right after vehicle sales in the sales process.
POSM along with fully accessorized showroom vehicles are critical to have in place to showcase and sell the vehicle along with accessories.

4) Methods of Reward

- **Sales Staff**
  - Reward sales staff with gifts for each accessory sale
  - Designate point values to accessories
  - Points can then be redeemed for either cash prizes or gifts
- **Parts Managers**
  - Rewards based on exceeding their pre-determined monthly APNVS target
  - Incremental gift vouchers as their target is exceeded
- **Customers**
  - Customers can also be included in the reward process
  - Accessory purchases can be used as a raffle
  - Monthly raffles can be held and customers awarded with prizes

PRESENTATION & PROMOTION OF ACCESSORIES

1) Seeing is Believing

Dealership showrooms should take advantage of foot traffic and display fully accessorized vehicles. Accessory equipped vehicles give sales staff an extra tool to sell new vehicles. Aside from showroom vehicles accessories should be displayed separately in the showroom. They can be displayed in showcases or specially designed display racks. In case of electronic accessories they should be operational so that the consumer can interact with the product. Point of Sale Material needs to also be clearly displayed throughout the dealership.

2) Showroom Vehicles

Display vehicles on showroom floors are the ultimate form of POSM. Every vehicle on a showroom floor should be fully fitted with all available accessories. Displaying vehicles with accessories lets the customers see and experience the accessories first hand. Having accessories installed on a vehicle adds another dimension to the sales pitch of the vehicle and is a priceless tool for profitable accessory sales.

e.g.
Showroom Vehicle from European dealer



Bring Genuine accessories into sight and into minds of customers right at the place where purchase decisions are made: the dealer's showroom.

Showroom Car Program brings you tangible benefits. Not only will you profit from the sale of more accessories, also will you raise the perceived value of the cars in your showroom. In addition, custom-made accessories for each Kia model will add your showroom wonderful ambience.

For this reason, moving more accessories through your showroom will obviously increase your turnover. Selling more accessories through your showroom will obviously increase your turnover and profitability. Customer satisfaction will be increased, and new owners will be more pleased with their new car, which in turn will increase customer retention and loyalty.

You can group together different accessories into packs designed to appeal to the different lifestyles of the customers. For instance, a customer may lead a particularly active outdoor lifestyle involving sporting activities. You can make a show room car equipped with all the interior and exterior accessories this customer needs to get more out of life. Another customer is more concerned with enhancing the appearance of his vehicle. You can make a show room car equipped with a styling accessories body decals and body styling kit to meet his needs. Also, protection accessories could provide extra defense against everyday wear and tear for the customer whose car is expected to work as hard as he does.

	Protection	Styling	Transport	Comfort
Package Offer	Rubber floor mats	Integrated side steps	Cross bars aluminum (with roof rail)	Smart card key
	Trunk liner	Entry guards	Roof rack aluminum (w/o roof rail)	Business suit hanger
	Mud guard front	Body decals	Thule ski-/snowboard carrier	Armrest (storage box)
	Mud guard rear	Body Styling Kit	Trunk net	Wind deflectors
	Rear bumper protection foil (trans.)	Wheels	Bike carrier	Ice/suncreen
	Door handle recess protection foil		Cargo separator main frame	Steering wheel table
			Cargo separator sub frame	Parking sensors front
			Tow bar and Tow bar wiring kit	Parking sensors rear
Customer Value	An extra defense against everyday wear and tear.	Enhancing the appearance of his vehicle	For a particularly active outdoor lifestyle involving sporting activities	Everything that makes vehicle-life easier

3) Accessorized Loaner Vehicles

Dealership loaner vehicles should be fully accessorized as well. This is another method in which the customer can see, touch and experience the accessories up close. This is another priceless form of promotion for Genuine Accessories and the advantages to them. Upon returning to the dealerships customers often inquire about the accessories installed on the loaner they used and another accessory sale is accomplished.

4) Seasonal Promotions

Certain accessories are great for seasonal promotions. Door Visors and rubber mats are good for the monsoon season. Alloy wheels and chrome accents can be stylish accessories for the summer season as well.

5) Booking Programs

Booking programs may be better known as a pre-order program. Dealers can pre-order select accessories at discounted prices. By doing so Distributors are given a sense of buying power in purchasing accessories in high volume. High volume purchases can lead to increased accessory sales (pre-booked) and bigger profits.

6) Accessory Packs

Customers love the feeling of getting something for free or for cheap. One way to capture this feeling is in the offering of Accessory Packs. Accessory Packs can be something as simple as a Bumper Guard Pack. Instead of offering front and rear bumper guards separately they can be combined at a reduced cost to the customer. The customer is happy with their Accessory Pack, dealers are happy with profits and distributors are happy with sales.

7) Free Give Away

Consumers love to get something for free. This is why dealerships should provide gifts for their potential customers. Promotional gifts can be anything such as paper bags, key chains, pens, hats, umbrellas, watches, clothes, computer mouse, picture frames, lanyards and the list goes on. These items should be provided by the distributor to dealers as a service. Such gifts and items can be branded with a logo only to provide more promotion for the brand or even accessories. MOBIS offers support in the development of small promotional items for our distributors.

8) Car Shows, Auto Shows, Motor Shows

When and if distributors take part in auto shows each display vehicle should be fully accessorized. Auto shows offer tons of foot traffic that can not be reached at the Dealership level. Auto shows are a great opportunity to promote advertise sport/limited edition vehicles that are accessorized or even DIO accessories.

9) Direct Mailers

Direct mailers are a tool used to target UIO customers and reel them back into the dealership.
Direct Mailers can be divided into several categories such as “new owners”, “loyal owners”, “lapsed owners”. Each group of owners can have specifically designed mailers sent to them directly as another effective tool to bring them back to the dealership. Direct mailers are a great opportunity to include accessory coupons and support Genuine Accessory sales.

Key Points

- Customer retention is a key factor to distributor and dealer profitability
- Info management is the key to any successful marketing program
- Setting customer and dealer expectation is critical to satisfaction
- Exceeding expectations is key to continuing program success
- Program MUST be simple for dealership to administrate
- All program results must be carefully tracked and measured by to assure acceptable ROI results

09.
ACCESSORY ACRONYMS

ACDS	Accessory Development System
PNVS	(Accessory Sales) Per New Vehicle Sale
DIO	Dealer Installation Option
Ext.	Exterior
FPSC	First Production Sample Certification
Int.	Interior
ISIR	Initial Sample Inspection Review
OE	Original Equipment
PEN RATE	Penetration Rate (Installation Rate)
PIO	Port Installation Option
POP(M)	Point of Purchase (Material)
POS(M)	Point of Sale (Material)

10.
ACCESSORY INVENTORY

MOBIS HQ INVENTORY POLICY

Due to Mobis HQ policy, no accessory stock is managed in Hyundai / Kia export PDCs. Therefore all the PO to supplier is made after order is received from our distributors. Due to Zero stock policy, average lead time for Mobis HQ accessories are 30 days. (From PO to our supplier to final delivery to our export PDCs)

We kindly ask our distributors to place initial PO and control inventory at MOS 2 level.

INITIAL PO

For initial PO, please contact your accessory regional manager for accessory list. We will also upload new vehicle accessory information in our web platform and also send Catalogs through email.

FINAL BUY & RUN OUT MANAGEMENT

Accessories are mainly sold to new vehicles. Therefore when vehicle is about to get full model change, distributors need to control accessory inventory more carefully. We recommend to keep stock at MOS 1 level for the last 6 months before full model change to prevent dead stock.

PART 12.

PARTS CATALOG

01. PARTS CATALOG INTRODUCTION

02. EPC (Electronic Parts Catalog, Snap-on)

03. EPC (Electronic Parts Catalog, Infomedia (Microcat))

04. WPC (Web Parts Catalog)

01.
PARTS CATALOG INTRODUCTION

PARTS CATALOG TYPE

Type	Details	Remarks
EPC	 Parts Catalog on WEB/DVDs (PC Installation)	SNAP-ON https://snaponepc.com INFOMEDIA https://www.infomedia.com.au
WPC	 Web Based Parts Catalog (Internet)	https://wpc.mobis.com

※ EPC (Electronic Parts Catalog), WPC (Web Parts Catalog)

Mobis provides parts catalogs in two formats: CD-Rom (MicroCat / Snap-on), and WPC. Updated CD-Rom catalogs are provided weekly, otherwise WPC are updated in real time. WPC and EPC are usually easier and more convenient tools to search for part numbers.

※ Only under limited circumstances, Mobis provides book catalogs. However all distributors are encouraged to use WPC or EPC for their up-to-date information.

FEATURES

Type	Strength	Weakness	Content	User
EPC	• Quick and correct search • Can provide special function for each dist • High Security	• Update frequency : Weekly • Should be installed on PC • Need to pay • Loss or damage due to delivery	• P/No., model, VIN search • Price and additional info is provided • DMS Link function • Check part shape	Dealers paying license fees
WPC	• Real-time Data Update • Free of charge • Can request Technical Inquiry on WPC	• Searching speed is different by Internet environment • Weak Security	• P/No., model, VIN Search • Technical inquiry (Dist / Subsidiary) • Additional Info (Picture, 3D modeling) • High resolution illustration	Internal users / Overseas branches

02.
EPC (Electronic Parts Catalog, Snap-on)

INTRODUCTION TO SNAP-ON

Snap-on Business Solutions designs productivity solutions that provide practical access to actionable information. We design and deliver electronic parts catalogs, accessory tools, warranty process management solutions, and manufacturer network development services.

We see the chance to work with you and your company as an opportunity to enter into a trusted business partnership, one in which we create integrated ways for you to do business. Through collaboration, we can improve your productivity, eliminate wasted time and effort, and increase your sales and your revenues.

Based in Richfield, Ohio, with offices and associates around the world, we are focused on helping vehicle and equipment manufactures and their dealership networks increase sales, reduce structural costs, and improve customer experiences. SBS designs information tools that center on improving productivity in franchised dealerships and the supply chain.

Our Information tools include :

- Electronic parts catalogs
- Diagnostic systems
- Financial and operational reporting services
- Warranty management solutions
- Essential tools and equipment programs

As the leading provider of EPCs, we help your dealers source the right part every time, reliably and accurately. We help you sell more parts by bringing added value to your data, increasing its usability and extending its functionality.

We focus on technician efficiency, dealership performance, and network profitability. We continuously tap new technologies and integrate our processes with those of our manufacturer customers. Through Snap-on EPCs, your parts data ingrains itself into your dealership network.

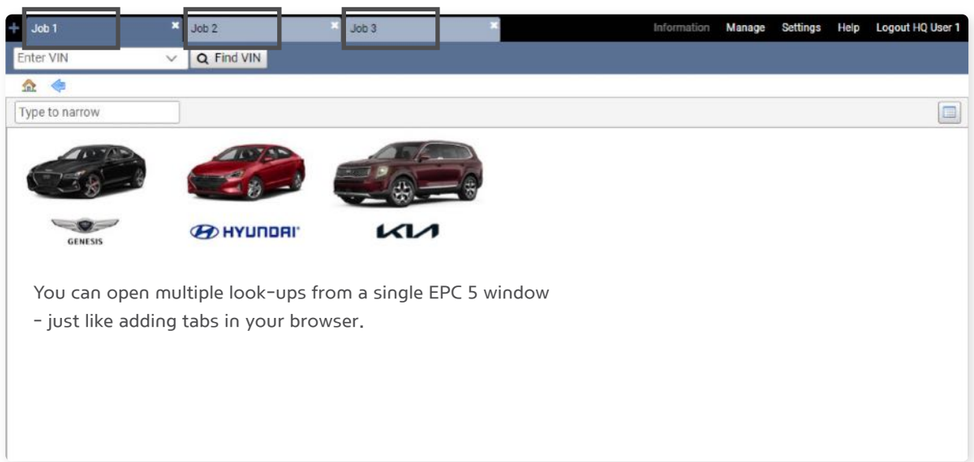
FEATURES AND BENEFITS

EPC 5 includes both classic functionality and new productivity-enhancing features, in a clean, modern interface. It's designed to help parts professionals make an easy transition and get to work fast.

Product features include :

- Web EPC
- Local DVD EPC
- Advances search
- Deeper VIN filtering
- Data updated weekly
- Localization features
- Multiple jobs
- Improves views of illustration
- Convenient e-mail capabilities
- Right-click part number copying

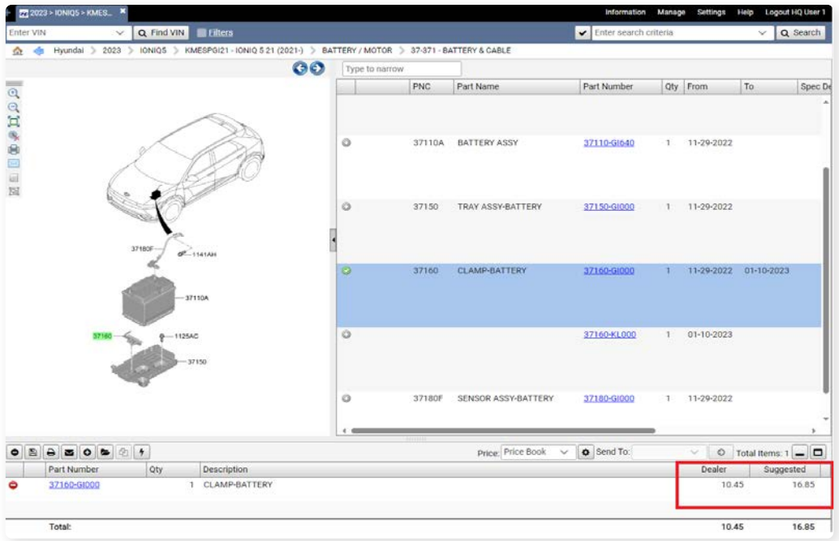
Multiple Jobs



You can open multiple look-ups from a single EPC 5 window - just like adding tabs in your browser.

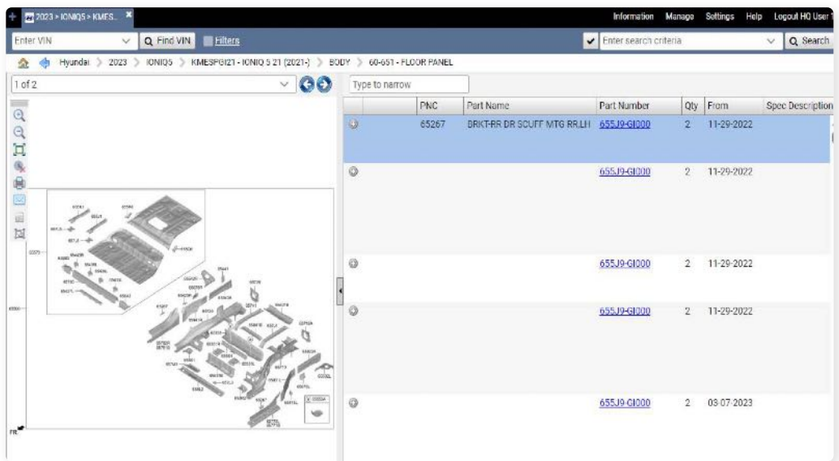
※ Enables you to multi-task without losing your progress on each lookup.

Localization features : Local price / Superssesion on support



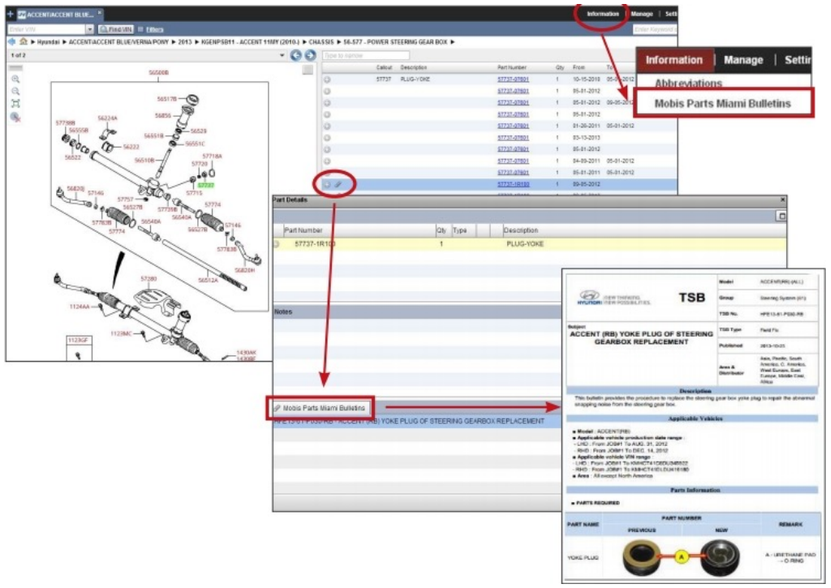
See Local Price data in EPC 5 Shopping Cart View

Improves views of illustration : New 3D image launch

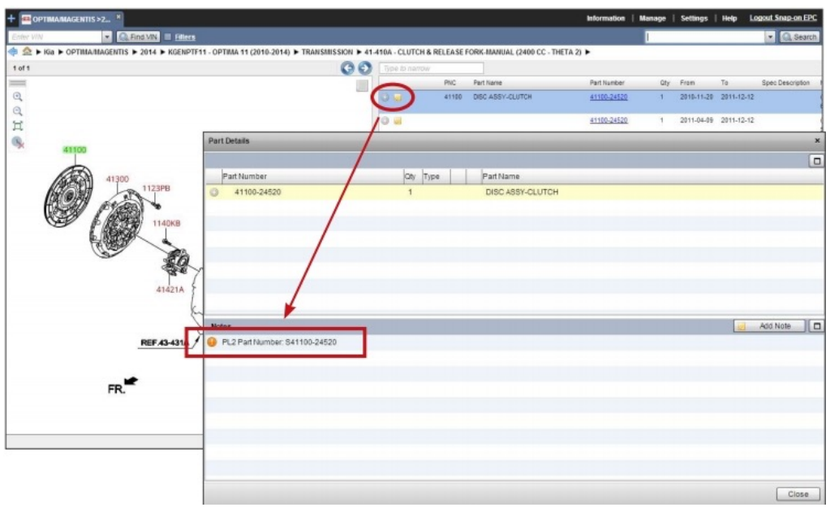


From new Model (ex. IONIQ5)

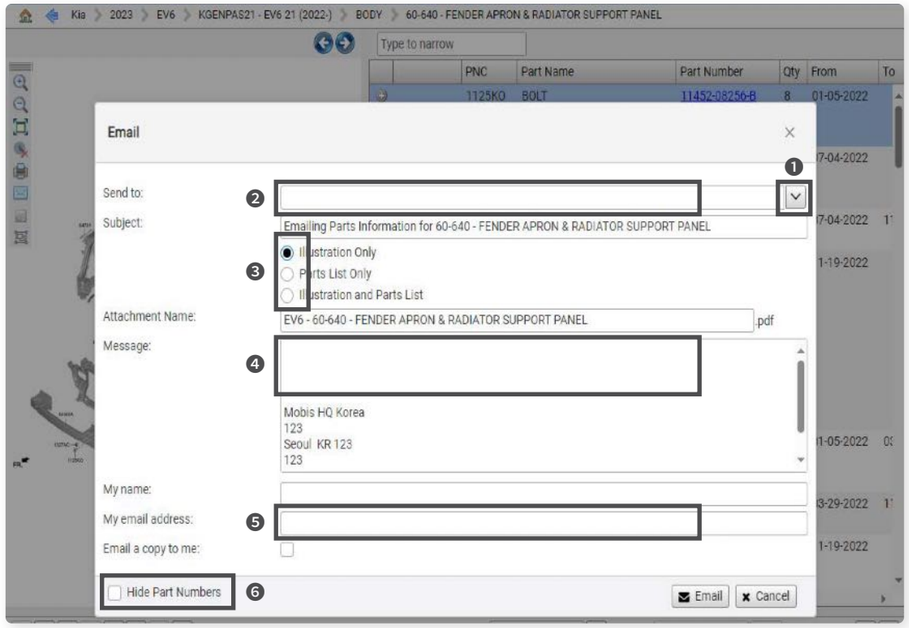
Provide useful Information : TSB (Technical Service Bulletin) Support



Provide useful Information : PL2 (Second Genuine) Support



Convenient e-mail capabilities



❶ Email history
❷ Type ‘to’ email address here
❸ Choose to send illustration or parts or both
❹ Personalized message here
❺ Your email address here
❻ Include part number or not

CONTACT DETAILS

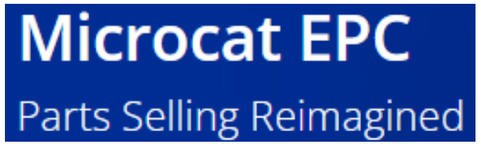
1) Jae Ho Shin, Product Manager, Parts Solutions
Email : jaeho.shin@snapon.com
Phone# : 1-330-659-1775

2) For technical support, Please contact SBS customer support team
Email : SBS_Services@snapon.com
Phone# : 1-330-659-1600

3) For more information
http://sbs.snapon.com/parts/electronic-parts-catalogs

03.
EPC (Electronic Parts Catalog, Infomedia (Microcat))

INTRODUCTION TO MICROCAT



Infomedia Ltd (ASX:IFM) is a leading global provider of DaaS and SaaS solutions that empowers the data-driven automotive ecosystem. Infomedia's solutions help OEMs, NSCs, dealerships and 3rd party partners manage the vehicle and customer lifecycle. They are used by over 250,000 industry professionals, across 50 OEM brands and in 186 countries to create a convenient customer journey, drive dealer efficiencies and grow sales.

Infomedia has led innovation in retail automotive technology within global OEMs and their dealer networks for more than 28 years and continues to expand its reach within the three regions in which it operates. We have initiated a number of firsts in the global market, which have now become standard expectations and the minimum cost of entry for independent and in-house technology providers.

Disruptive mobility services are changing the way consumers view and interact with vehicles, with the demand for a more seamless connected customer journey being the focus for the future of the automotive industry, and Infomedia is perfectly positioned to deliver.

Our core development imperatives consist of expert domain knowledge, product innovation, intuitive use, accuracy, value, and highly personalised customer experiences. Using predictive data across the golden triangle of connected car, vehicle owners and dealer services, we can converge data assets on our SaaS platform, and deliver unprecedented access to analytics and insights for customers.

We are committed to investing in innovation to deliver high-quality, high-performance solutions for OEMs and dealerships around the world. Our attention to detail and control processes generates the accuracy and certainty that contributes to driving customer satisfaction, loyalty, and trust. Our solutions lead to greater efficiency and sales growth across the automotive ecosystem.

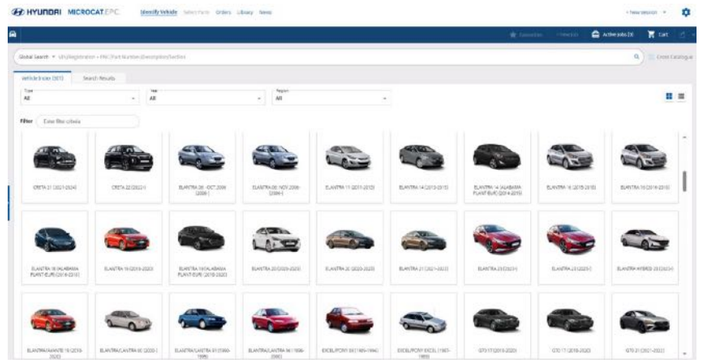


FUNCTIONS & FEATURES OF MICROCAT

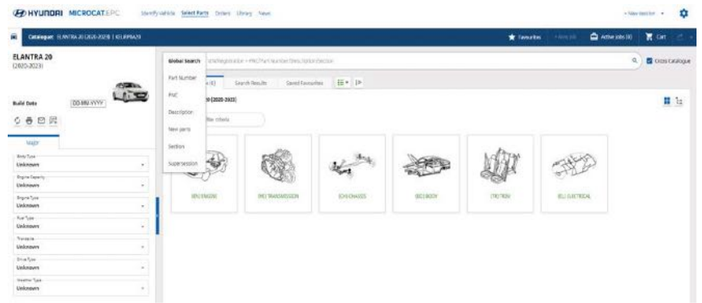
At the heart of Microcat is an artificial intelligence system and sophisticated parts analysis database. Microcat contains part numbers, part illustrations, selected technical notes and also has the capacity to show multiple pricing levels. In addition, many dealers have integrated Microcat with their Dealer Management System so that they can pass information between the two systems and avoid double data entry.

Application Features and Benefits

- All catalog data and images are provided for a full range of models

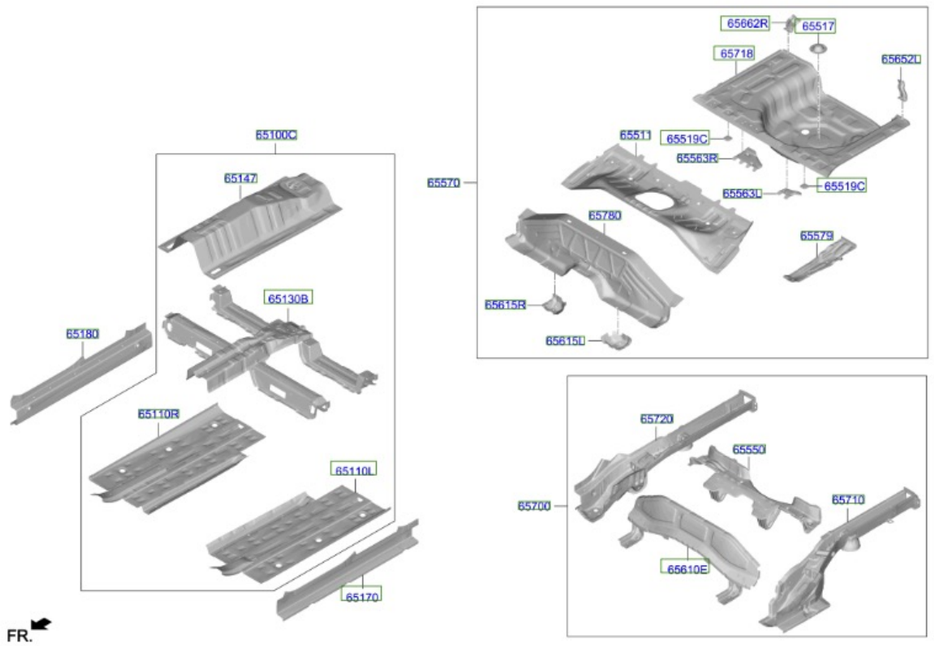


- Simple automatic point and click installation / update procedure
- VIN driven parts interpretation
- Multiple search functions - Microcat allows you to search for parts using the Graphic Index, the Alpha Index, the Search toolbar or the advanced Microcat Search function



- Supersession information - finds the latest catalog part number
- User definable profiles for collisions, PNC or part numbers

- Use keyboard shortcuts, mouse or icons to navigate
- Super Window – super search
- Reduce choices filtering – filter down to the correct part by entering a part description
- Quick part locator
- WorkBench for sending quotes to clients via email
- Point and click user preferences
- High quality images with a range of illustration handling options
- Flexible Dealer Management System connections
- High quality print facility
- On screen colour to aid interpretation
- Illustration hot spots for graphical part selection
- Multilingual facilities
- Full data security
- User notes – adds user notes to parts or sections



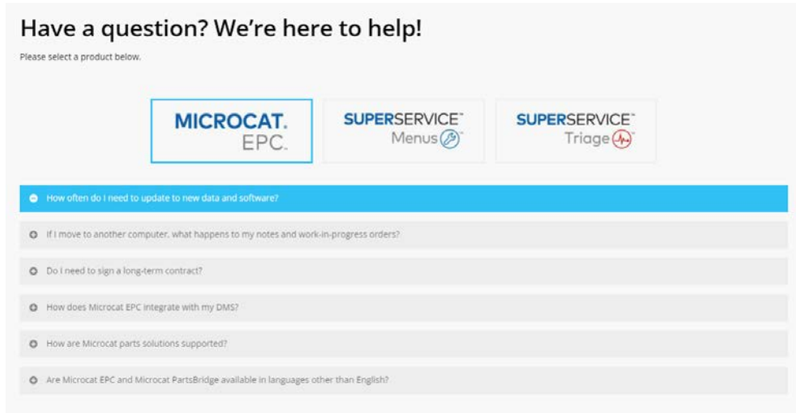
TRAINING

Infomedia's purpose in training is to ensure that clients use the system to the highest level and therefore gain the best value for their investment. Infomedia has many years of experience in providing system training to customers across the globe, and as a result has developed a diverse range of training tools for Microcat that match the needs of a wide variety of competency.

Included in our suite of initial and ongoing training materials are:

1) Frequently Asked Questions

A brief, easy to read document with answers to the most common questions from Microcat users.



2) Installation Guide

Full details on how to install Microcat in the dealership in either a stand alone or networked environment.

3) Quick Start Guide

A concise guide that helps to bring new users to Microcat up to speed with the system.

4) Help Files

Microcat includes fully indexed, searchable help files available in most international languages.

5) Online Shortcut Card

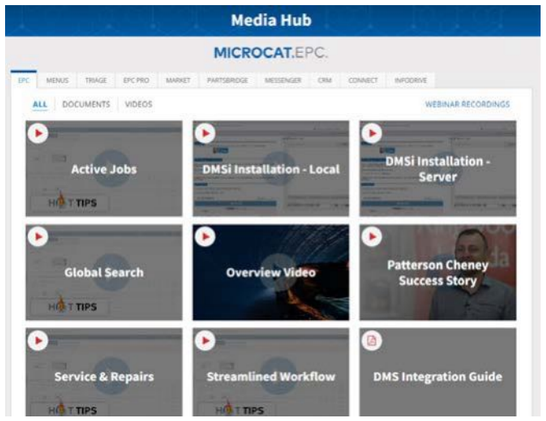
To assist users in learning the keyboard shortcuts, Microcat includes and electronic shortcut card. It contains shortcuts for many common functions in Microcat and like the help files, the shortcut card is multilingual.

6) Computer-Based Training (CBT)

An interactive tutorial designed to help new users experience the Microcat user interface and workflow. It allows staff to learn the system without leaving their desks. Both newcomers and experienced users benefit from the CBT.

7) Dealer Training

Face-to-face dealer training can be conducted either at a central training venue or at dealerships. Material included at dealer training includes a user guide, training agenda, dealer scenario practice activities and completion certificates. Infomedia works with National Sales Companies to provide the best possible training solution.

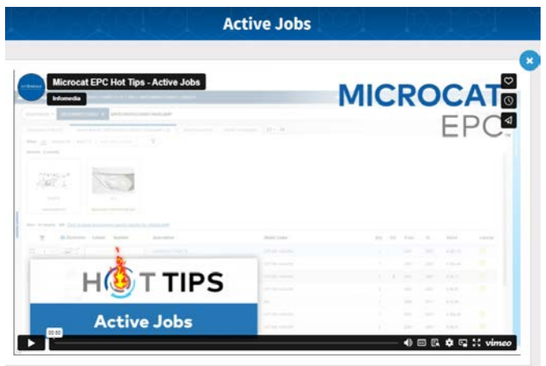


8) Microcat News

Microcat news is accessed within Microcat to inform users of enhancements made to the application.

9) Hot Tips

Hot Tips are a series of FREE training tips distributed and are designed to help users in developing and improving their Microcat skills. The tips are published on the Internet and a notification is distributed by email to all subscribers. The tips keep training at the front of users' minds, while delivering a one-point lesson which users can apply immediately.



CONTACT DETAILS

1) Technical Support

Infomedia provides technical support for Microcat. Simply call or email the Customer Service Center for your country using the contact details provided inthe table below.

2) Order Microcat Subscriptions

To order Microcat subscriptions, please contact us using the table below.

ASIA PACIFIC

Australia	1800 810 103
Asia	+61 3 9552 6300
India(Hyundai)	044 47100000
New Zealand	0800443 901
service@informedia.com.au	

MIDDLEEAST / AFRICA

Middle East / Africa	+44 20 8620 0294
service@informedia.com.au	

NORTH AMERICA

Canada (Hyundai)	1 800 461 1294
Canada (Kia)	1 888 807 1370
help@mirocat.net	

LATIN AMERICA

Argentina	11 4119 2084
Brasil	11 3301 5328
Chile	1230 020 2630
Colombia	01 800 9156 020
La Dominicana	1 888 156 2165
Mexico	001 800 215 7591
Peru	800 52511
Puerto Rico	1 800 798 8320
Others	+1 313 5863608
help@mirocat.net	

EUROPE

Belgigue, België	0800 810 103
Danmark	+61 3 9552 6300
Deutschland	044 47100000
New Zealand	0800443 901
España	900 996 181
France	0800 905 480
Italia	800 780 615
Magyarország	06 800 17240
Nederland	0800 023 2309
Norge	800 13 903
Östereich	0800293 338
Polska	00800 611 12 10
Portugal	800 861 119
Republic of Ireland	1800556 115
Suomi	0800 116 516
Sverige	020 795 870
Schweiz, Suisse, Svizzera	0800 561 230
Türkiye	00800 6190 2915
United Kingdom	0800 0283076
Others	+44 20 8620 0294
service@ifmeurope.com	

ALL OTHERS

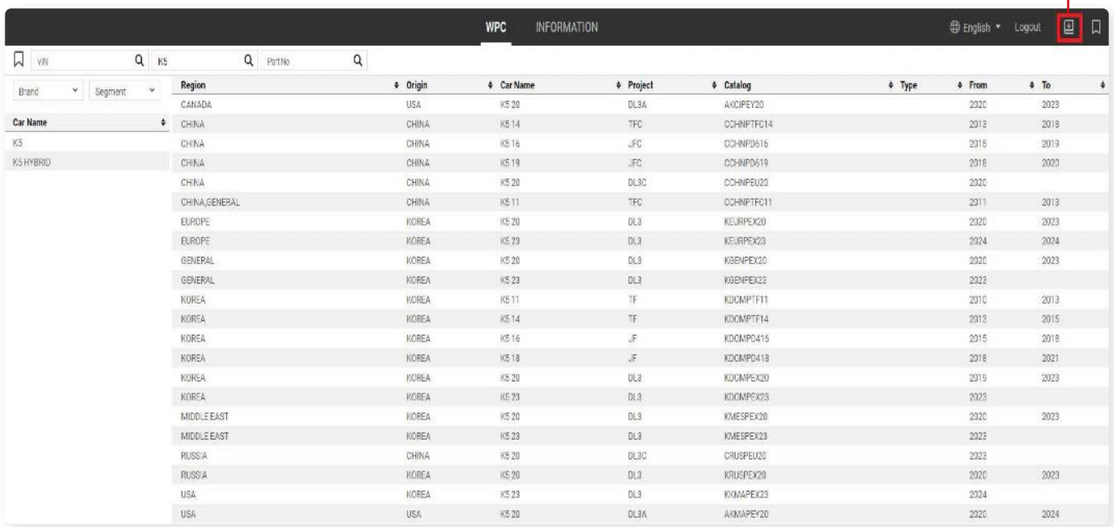
+44 20 8620 0294
service@ifmeurope.com

04.
WPC (Web Parts Catalog)

USER MANUAL

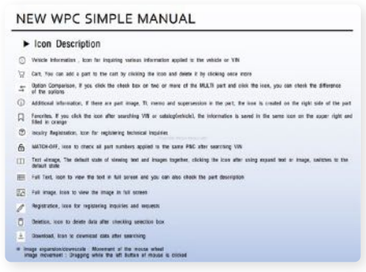
WPC provides User Manual directly on website for easy access by users.

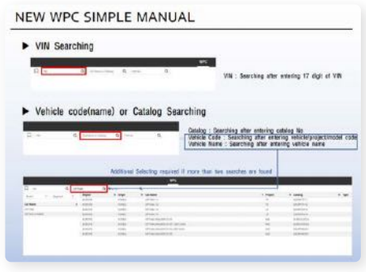
Click this Icon and download PDF file

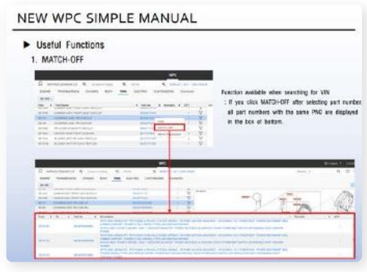


Region	Origin	Car Name	Project	Catalog	Type	From	To
CANADA	USA	K5 20	DL3A	AKCIPEV20		2020	2023
CHINA	CHINA	K5 14	TFC	CCHNPTFC14		2013	2018
CHINA	CHINA	K5 16	JFC	CCHNPD616		2015	2019
CHINA	CHINA	K5 19	JFC	CCHNPD619		2018	2020
CHINA	CHINA	K5 20	DL3C	CCHNPEU20		2020	
CHINA,GENERAL	CHINA	K5 11	TFC	CCHNPTFC11		2011	2013
EUROPE	KOREA	K5 20	DL3	KEURPEX20		2020	2023
EUROPE	KOREA	K5 23	DL3	KEURPEX23		2024	2024
GENERAL	KOREA	K5 20	DL3	KGENPEX20		2020	2023
GENERAL	KOREA	K5 23	DL3	KGENPEX23		2023	
KOREA	KOREA	K5 11	TF	KDOMPTF11		2010	2013
KOREA	KOREA	K5 14	TF	KDOMPTF14		2013	2015
KOREA	KOREA	K5 16	JF	KDOMPD416		2015	2018
KOREA	KOREA	K5 18	JF	KDOMPD418		2018	2021
KOREA	KOREA	K5 20	DL3	KDOMPEX20		2019	2023
KOREA	KOREA	K5 23	DL3	KDOMPEX23		2023	
MIDDLE EAST	KOREA	K5 20	DL3	KMESPEX20		2020	2023
MIDDLE EAST	KOREA	K5 23	DL3	KMESPEX23		2023	
RUSSIA	CHINA	K5 20	DL3C	CRUSPEU20		2023	
RUSSIA	KOREA	K5 20	DL3	KRUSPEX20		2020	2023
USA	KOREA	K5 23	DL3	KKMAPEX23		2024	
USA	USA	K5 20	DL3A	AKMAPEY20		2020	2024

ex) User Manual







PART 13.

FILE LAYOUT

01. OUTLINE

02. HEAD RECORD (FTP)

03. ORDER FILE

04. PRICE LIST

05. TECHNICAL FILE

06. REFERENCE INFORMATION

01. OUTLINE

When both Mobis and Distributor are engaging in parts business in order to minimize the amount of manual work and communication of incorrect data, both Mobis and Distributor should use Data Communication Files.

When these files are used both Mobis and Distributor are able to work more quickly and efficiently.

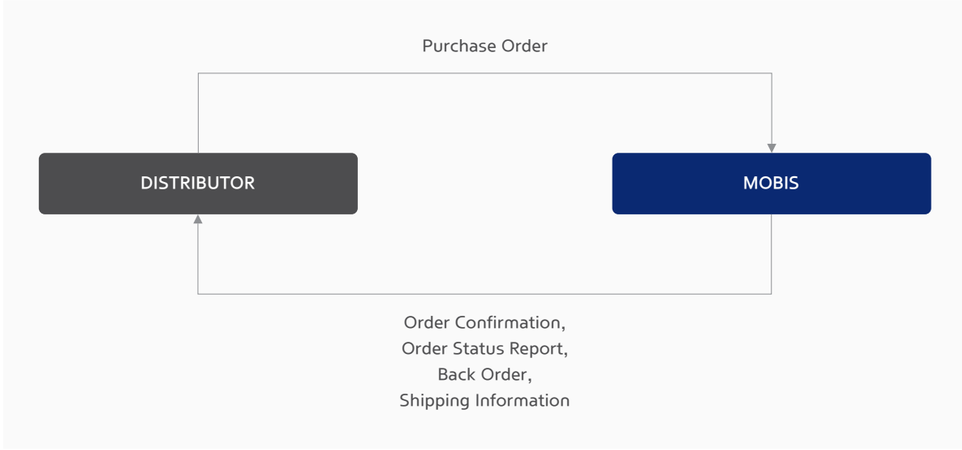
Overseas subsidiaries tend to use FTP (File Transfer Protocol) to send and receive data. General Distributors use nMGN (https://nmgn.mobis.com) system for communication with Mobis.
Even though overseas subsidiaries mostly use the FTP method and at times can also communicate via nMGN.

Data Communication Files are classified into three sections.

- Order Files
- Price Files
- Technical Files

CONTACT DETAILS

Distributors (referring to both Subsidiary and Distributor) send Mobis a purchase order file which includes part numbers and quantity information. After Mobis receives the purchase order file from the Distributors, Mobis proceeds with the order processing operation. Mobis then sends the order processing operation information files to the Distributor. Once the Distributor receives the file from Mobis, order data in the Distributor's system should be updated. At this time Mobis and the Distributor should be sharing the same information.



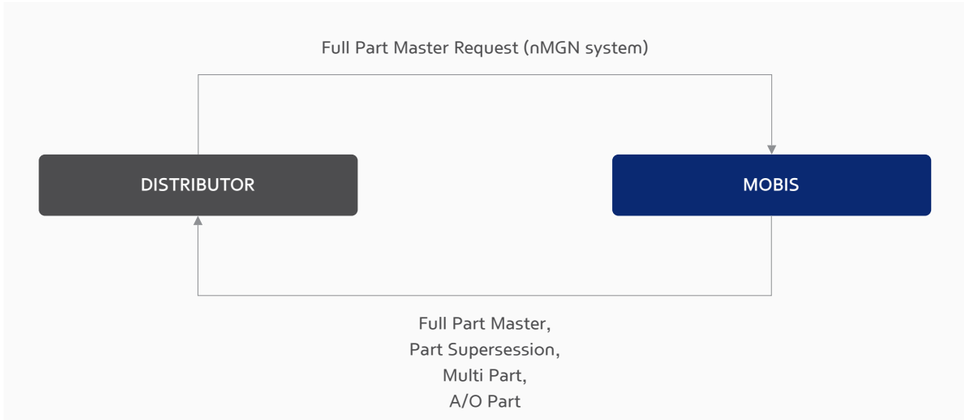
PRICE FILE

Mobis supplies the price information files to distributor. Distributors should update price information periodically and manage the latest price data making sure that no differentiation in pricing information occurs.



TECHNICAL FILE

Mobis supplies the technical information files to distributor. Distributors should update technical information periodically to make sure only latest Information is used.



02.
HEAD RECORD (FTP)

FTP transfer subsidiaries use this information in 1st record of file.

No.	Field Name	Length		Type	Description
1	**Company Code**	1		Char	Company Code H : Hyundai
2	**Member Name**	8		Char	**Member Explanation** ① 1st : System Classification (M : Mobis Parts) ② 2nd ~ 4th : Job Character - OFF : Order Confirmation - OSR : Order Status Report - BOR : Back Order - IAV : Shipping & Invoice (Air Freight) - INV : Shipping & Invoice (Sea Freight) - PRI : List Price - PRS : Price Supersession - PMS : Full Parts Master, Part Supersession - MLT : Multi Master - AOD : AO Master - SKT : Set & Kit Master - RGN : Region Master - INV : Daily Sales & Inventory - KPI : Daily KPI - SER : Serial No. List ③ 5th : Written Month (1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C) ④ 6th ~7th : Written Day (1~3) ⑤ 8th : Sequence Number per Day (1~9) [Example] : MORD7101 First Parts Purchase Order Sent on July 10 th
3	**Distributor Code**	5		Char	Distributor Code (only use 5 bytes : for example A02AA)
4	**Record Count**	8	0	Decimal	Record Count
5	**Sending Date**	8		Char	Sending Date (Year (4) + Month (2) + Day (2))
6	**S/R Flag**	1		Char	Send / Receive Flag (S : Send, R : Receive)

03.
ORDER FILE

PURCHASE ORDER

From : Subsidiary / Distributor **To :** Mobis **Frequency :** By Request

No.	Field Name	Length		Type	Description
1	**Ship Mode**	1		Char	**Ship Mode** P.O S / Mode → Result S / Mode A : Air → A S : Sea → S N : Air & Sea → S P : Courier → A V : VOR → A
2	**Order Number**	10		Char	**Order Number** B28AA ❶ G ❷ 7 ❸ C ❹ A ❺ E ❻ ❶ Distributor Code ❷ PDC ❸ Year (1, 2, 3, ..., 0) ❹ Month (A, B, C, ..., L) ❺ Order Sequence ❻ Order Type (Refer to # 8.7.1)
3	**Line Item Number**	4		Char	Line Item Number
4	**Part Number**	18		Char	Part Number
5	**Order Quantity**	7	0	Decimal	Order Quantity

ORDER CONFIRMATION

From : Mobis **To :** Subsidiary / Distributor **Frequency :** Daily

No.	Field Name	Length		Type	Description
1	Order Number	10		Char	Order Number
2	Proforma Number	8		Char	Proforma Invoice Number
3	Confirmed Date	8		Char	Confirmed Date
4	Total Amount	11	2	Decimal	Total Amount
5	Total Pieces	9	0	Decimal	Total Pieces
6	Total Count of Items	7	0	Decimal	Total Count of Items
7	Volume	7	0	Decimal	Volume (Cubic)
8	Weight	7	0	Decimal	Weight
9	Line Item Number	4		Char	Line Item Number
10	Line Item Number Suffix	1		Char	Line Item Number Suffix
11	Confirmed Part Number	18		Char	Confirmed Part Number
12	Part Name	13		Char	Part Name
13	Normal Quantity	7	0	Decimal	Normal Quantity about OK Item when Confirm
14	Abnormal Quantity	7	0	Decimal	Abnormal Quantity about Error Item when Confirm
15	Unit Price	7	2	Decimal	Unit Price (Local Currency)
16	Amend Code	2		Char	Amend Code (Refer to #8.7.2)
17	Ordered Part Number	18		Char	Ordered Part Number
18	ETD	8		Char	(Not in use)
19	Intermediary Trade	1		Char	**Intermediary Trade** **A :** Dropship **V :** AC Supplier Shipment **blank :** Supply by Mobis (Korea)

ORDER STATUS REPORT

From : Mobis **To :** Subsidiary / Distributor **Frequency :** Daily

No.	Field Name	Length		Type	Description
1	Distributor Code	6		Char	B28AA ❶ Distributor Code / G ❷ PDC
2	Date	8		Char	Creation Date
3	Total Count of Order Number	5	0	Decimal	Total Count of Order Number
4	Total Count of Back Order	7	0	Decimal	Total Count of Back Order Items
5	Total Pieces of Back Order	7	0	Decimal	Total Pieces of Back Order
6	Total Amount of Back Order	11	2	Decimal	Total Amount of Back Order
7	Order Receipt Date	8		Char	Order Receipt Date
8	Order Number	10		Char	Order Number
9	Ship Mode	1		Char	Ship Mode (A : Air Freight, S : Sea Freight)
10	Line Item Number	4		Char	Line Item Number
11	Line Item Number Suffix	1		Char	Line Item Number Suffix
12	Supplied Part Number	18		Char	Supplied Part Number
13	Amend Code	2		Char	Amend Code (Refer to #8.7.2)
14	Part Name	15		Char	Part Name
15	Confirmed Part Number	18		Char	Confirmed Part Number
16	Supplied Plan Quantity	7	0	Decimal	Supplied Plan Quantity
17	ETD	8		Char	(Not in use)
18	Back Order Quantity	7	0	Decimal	Mobis Back Order Quantity (= Supplied Plan Quantity - Processing Quantity - Packed Quantity - Shipped Quantity)
19	Processing Quantity	7	0	Decimal	Allocation Quantity + On Pick Quantity + On Pack Quantity
20	Packed Quantity	7	0	Decimal	Packed Quantity + Stuffing Quantity

No.	Field Name	Length		Type	Description
21	**Shipped Quantity**	7	0	Decimal	Shipped Quantity
22	**Last Shipped Date**	8		Char	Last Shipped Date
23	**Last Invoice Number**	8		Char	Last Invoice Number
24	**Flag Code**	1		Char	**Order Process Status** **blank** : Active part **F** : Completely shipped. **Y** : Canceled after partial shipped by request. **Z** : Canceled without shipped by request.
25	**Intermediary Trade**	1		Char	**Intermediary Trade** **A** : Dropship **V** : AC Supplier Shipment **blank** : Supply by Mobis (Korea)

BACK ORDER

From : Mobis **To :** Subsidiary / Distributor **Frequency :** Daily

No.	Field Name	Length		Type	Description
1	**Order Number**	10		Char	Order Number
2	**Line Item Number**	4		Char	Line Item Number
3	**Line Item Number Suffix**	1		Char	Line Item Number Suffix
4	**Supplied Part Number**	18		Char	Supplied Part Number
5	**Confirmed Quantity**	5	0	Decimal	Confirmed Quantity
6	**Shipped Quantity**	5	0	Decimal	Shipped Quantity
7	**Processing Quantity**	5	0	Decimal	Allocation Quantity + On Pick Quantity + On Pack Quantity + Packed Quantity + Stuffing Quantity
8	**Back Order Quantity**	5	0	Decimal	Mobis Back Order Quantity (= Confirmed Quantity - Processing Quantity - Shipped Quantity)
9	**ETD**	8		Char	Unused
10	**Confirmed Part Number**	18		Char	Confirmed Part Number
11	**Intermediary Trade**	1		Char	**Intermediary Trade** **A** : Dropship **V** : AC Supplier Shipment **blank** : Supply by Mobis (Korea)

SHIPPING INFORMATION

From : Mobis **To :** Subsidiary / Distributor **Frequency :** Daily

No.	Field Name	Length		Type	Description
1	**Invoice Number**	10		Char	**Invoice Number** S 7 E 00001 ❶ ❷ ❸ ❹ ❶ Ship Mode * Hyundai : A (Air), S (Sea) * AM : V (Sea) Only AV : Q (Air), W (Sea) ❷ Year (1, 2, 3, ···, 0) ❸ Month (A, B, C, ···, L) ❹ Sequence
2	**Invoice Date**	8		Char	Invoice Date
3	**Port of Loading**	15		Char	Port of Loading
4	**Final Destination**	15		Char	Final Destination
5	**Ship Mode**	1		Char	Ship Mode (A : Air Freight , S : Sea Freight)
6	**Carrier Name**	20		Char	Carrier Name
7	**Freight / Voyage Number**	6		Char	Freight / Voyage Number
8	**B/L Number**	15		Char	B/L Number
9	**Sailing Date**	8		Char	Sailing Date
10	**Total Count of Out Box**	5	0	Decimal	Total Count of Out Box (per Invoice Number)
11	**Total Count of Items**	5	0	Decimal	Total Count of Items (per Invoice Number)
12	**Total Freight Cost**	11	2	Decimal	Total Freight Cost (per Invoice Number)
13	**Total FOB Price**	11	2	Decimal	Total FOB Price (per Invoice Number) (Local Currency)
14	**Container Number**	20		Char	Container Number
15	**Out Box Number**	11		Char	Out Box Number
16	**Inner Box Number**	11		Char	Inner Box Number
17	**Order Number**	10		Char	Order Number
18	**Line Item Number**	4		Char	Line Item Number
19	**Line Item Number Suffix**	1		Char	Line Item Number Suffix
20	**Ordered Part Number**	18		Char	Ordered Part Number
21	**Confirmed Part Number**	18		Char	Confirmed Part Number
22	**Supplied Part Number**	18		Char	Supplied Part Number
23	**Unit Price**	7	2	Decimal	Unit Price (Local Currency)
24	**Confirmed Quantity**	7	0	Decimal	Confirmed Quantity
25	**Shipped Quantity**	7	0	Decimal	Shipped Quantity by this invoice number
26	**Back Order Quantity**	7	0	Decimal	Back Order Quantity
27	**Canceled Quantity**	7	0	Decimal	Canceled Quantity
28	**Shipped Amount**	9	2	Decimal	Shipped Amount
29	**Total Shipped Quantity**	7	0	Decimal	Total Shipped Quantity
30	**Amend Code**	2		Char	Amend Code (Refer to #8.7.2)
31	**ISO Code**	2		Char	Country of Origin (ISO)
32	**Net Weight (Part)**	7	3	Decimal	Part Net Weight before Packing (unit : kg)
33	**Out Box Gross Weight**	5	0	Decimal	Out Box Gross Weight (unit : kg)
34	**Out Box Net Weight**	5	0	Decimal	Out Box Net Weight (unit : kg)
35	**Out Box Length**	3	0	Decimal	Out Box Length (unit : kg)
36	**Out Box Width**	3	0	Decimal	Out Box Width (unit : kg)
37	**Out Box Height**	3	0	Decimal	Out Box Height (unit : kg)
38	**Inner Box Gross Weight**	5	0	Decimal	Inner Box Gross Weight (unit : kg)
39	**Inner Box Net Weight**	5	0	Decimal	Inner Box Net Weight (unit : kg)
40	**Inner Box Length**	3	0	Decimal	Inner Box Length (unit : kg)
41	**Inner Box Width**	3	0	Decimal	Inner Box Width (unit : kg)
42	**Inner Box Height**	3	0	Decimal	Inner Box Height (unit : kg)
43	**H.S Code**	10		Char	H.S Code
44	**Intermediary Trade**	1		Char	**Intermediary Trade** **A** : Dropship **V** : AC Supplier Shipment **blank** : Supply by Mobis (Korea)
45	**Insurance Cost**	9	2	Decimal	Insurance Cost

04.
PRICE LIST

LIST PRICE

From : Mobis **To :** Subsidiary / Distributor **Frequency :** By Request

PRICE ADJUSTMENT

From : Mobis **To :** Subsidiary / Distributor **Frequency :** When data is updated

No.	Field Name	Length		Type	Description
1	**Part Number**	18		Char	Part Number
2	**Part Name**	30		Char	Part Name
3	**QFP**	3	0	Decimal	Quantity of Factory Package (QFP) Packed Quantities in the Individual Package Unit. Compulsory Order Quantity.
4	**Current List Price (USD)**	11	2	Decimal	Current List Price (USD)
5	**Future List Price (USD)**	11	2	Decimal	Future List Price (USD)
6	**Future Effective Date**	8		Char	Effective Date of Future List Price
7	**Reason Code**	150		Char	Reason Code

05.
TECHNICAL FILE

FULL PART MASTER / MULTI PART

From : Mobis **To :** Subsidiary / Distributor **Frequency :** Daily / By Request

No.	Field Name	Length		Type	Description
1	**Data Type**	1		Char	**Data Type** **F :** Full Part Master
2	**Part Number**	18		Char	Part Number
3	**Part Name**	30		Char	Part Name
4	**KIT Code**	1		Char	**SET / KIT Code** **K :** Kit Part **M :** Assembly Part **S :** Set Part **1 :** Kit/Set Component Part **2 :** Kit/Set Component Part (Supply Code = 'AK')
5	**Production Start Date**	8		Char	Production Start Date
6	**Production End Date**	8		Char	Production End Date
7	**List Price (or FOB)**	7	2	Decimal	List Price (or FOB)
8	**Price Apply Date**	8		Char	Price Apply Date
9	**QFP**	3	0	Decimal	Factory Pack Quantity (QFP) Packed Quantities in the Individual Package Unit. Compulsory Order Quantity.
10	**Control Code**	1		Char	**Contol Code** **1 :** Added parts In part master **2 :** Deleted parts In part master **3 :** Changed parts In part master **4 :** End date closed parts In part master

No.	Field Name	Length		Type	Description
11	**Supply Code**	2		Char	**Supply Code** **AA** : Only assembly part is supplied. **AC** : Only component parts are supplied. **AD** : New part can be supplied because old part have quality problem. **AF** : Part is exchanged as ITC code = 'M' part. **AJ** : Because new part exists and design is different, old part is deleted. **AK** : Only kit or set part is supplied. **AM** : Part is available directly from local source. **AO** : Substitution part with subcomponent part is supplied. **AY** : Part is exchanged as ITC code = 'Y' part. **MO** : AO Multi Part **NA** : Design is deleted. **NB** : Design is deleted. (It's to apply the future.) **NL** : Part is no longer service because retention period closed. Inventory don't exist. **NP** : Part is no longer service because retention period closed. Inventory exist. **NS** : Part is no longer service because supplier don't product more. **OP** : Part is exported from overseas factory to other country. **PM** : Some country purchase the part at local source. **ZX** : Stock exhaust target part before EOP over 15 years policy. **ZY** : Stock exhaust target part because of EOP over 15 years policy. **ZZ** : Part is no longer service because of EOP over 15 years policy. ※ EOP : End of Production
12	**Supplier Code**	4		Char	Mobis Supplier Code
13	**After ITC Code**	1		Char	Interchangeability code between the current part and the after part. **Y** : Interchangeable **N** : Not Interchangeable **M** : After part is applicable both current and after part, but current part is only for current part. **J** : the changed part before mass production (the current part is not available)
14	**After Part Number**	18		Char	After Part Number
15	**Before ITC Code**	1		Char	Interchangeability code between the current part and the after part. **Y** : Interchangeable **N** : Not Interchangeable **M** : Current part is applicable both before and current part, but before part is only for before part. **J** : the changed part before mass production (the current part is not available)

No.	Field Name	Length		Type	Description
16	**Before Part Number**	18		Char	Before Part Number
17	**HS Code**	6		Char	Harmonized System Code
18	**Data Status**	1		Char	**Data Status** **B** : Old part (ITC : N) **E** : Substitution part (ITC : M or Y) **P** : Applied part after P/Catalog. **S** : Part issued SPL. **X** : Deleted part on SPL.
19	**QUP**	5		Decimal	**Unit Pack Quantity (QUP)** Packed quantities in the easy-Handling package unit specially for bulky parts. [Example] : 1 unit pallet for bumper cover 10. Recommended order quantity.
20	**Legal Code**	1		Char	**The code associated with law.** **D** : Dangerous parts (Battery) **K** : Dangerous parts (A/Bag, S/Belt, 9 Class) **M** : Material safety data sheet (MSDS) **L** : Chemical products (Oil, Spray) **R** : Lithium-Ion Battery (High Voltage Battery)
21	**Character Code**	1		Char	**Character Code** **blank** : General part **2** : BESFIT (Second Brand) **3** : Multimedia components **5** : Audio service materials **8** : Genesis Seats **A** : Accessory part **B** : Accessory publication brochure **C** : Campaign part **D** : AM part **E** : Others (It's not registered in part catalog.) **F** : Part for field fix **G** : Bumper pack partM : Publication part **N** : Donor Parts **R** : Radio & cassette component **S** : S.S.T **T** : Mock up & training part **V** : A/V (Video) part **W** : A/M (After Market) part **X** : A/P (Auto Part) part **Y** : Cross Docking
22	**Inventory Class Code**	2		Char	Inventory Class Code
23	**Drive Type**	1		Char	Drive Type (Not used)

No.	Field Name	Length		Type	Description
24	PNC	10		Char	Part Name Code (PNC)
25	ISO	2		Char	Country of Origin (ISO)
26	Package Code	17		Char	Package Code
27	Unit Weight	7	0	Decimal	Part unit weight before packing (unit : g)
28	Width (mm)	5	0	Decimal	Width (unit : mm)
29	Length (mm)	5	0	Decimal	Length (unit : mm)
30	Height (mm)	5	0	Decimal	Height (unit : mm)
31	Color Code	1		Char	Color Code C : Color Part blank : Non color part
32	Intermediary Trade	1		Char	Intermediary Trade A : AP / AV / AM H : HMA trade directly at local source I : Supply by HMI (India) K : Supply to KMA from China M : MAZDA - FCSP S : Supply by HMS (China) V : AC Supplier Shipment blank : Supply by Mobis (Korea)
33	Region Code	21		Char	Region Code AUS : Australia (H, K) BTC : HMA (H) CHN : China (H) DOM : Korea Domestic (H, K) DUT : Germany (H, K) EEL : Europe (LH) (H, K) EER : Europe (RH) (H, K) GEL : General (LH) (H, K) GER : General (RH) (H, K) HAC : HAC (H) HMA : HMA (H) HMB : HMB (H) HMI : India (H) HMJ : HMJ (H) HMT : Turkey (H) JPN : Japan (H) KCI : KCI (K) KMA : KMA (K) KMI : KMI (K) MES : Middle East (H, K) MEX : Mexico (H) MMA : MMSA (H) PUT : Puerto Rico (K) RUS : Russia (H,K)
34	Applied Model	68		Char	Applied Model (Refer to #8.7.3 #8.7.4)
35	Vehicle Type	1		Char	Classification code for passenger and commercial. P : Unique part for passenger car. V : Unique part for commercial car. C : Common parts for both passenger and commercial.

A/O PART

From : Mobis **To :** Subsidiary / Distributor **Frequency :** Daily / By Request

No.	Field Name	Length		Type	Description
1	Sequence	1		Char	Sequence
2	Parent Part Number	18		Char	Parent Part Number
3	Parent Part Name	15		Char	Parent Part Name
4	Parent Part Supply Code	2		Char	Parent Part Supply Code AA : Only assembly part is supplied. AC : Only component parts are supplied. AD : New part can be supplied because old part have quality problem. AF : Part is exchanged as ITC code = 'M' part. AJ : Because new part exists and design is different, old part is deleted. AK : Only kit or set part is supplied. AM : Part is available directly from local source. AO : Substitution part with subcomponent part is supplied. AY : Part is exchanged as ITC code = 'Y' part. MO : AO Multi Part NA : Design is deleted. NB : Design is deleted. (It's to apply the future.) NL : Part is no longer service because retention period closed. Inventory don't exist. NP : Part is no longer service because retention period closed. Inventory exist. NS : Part is no longer service because supplier don't product more. OP : Part is exported from overseas factory to other country. PM : Some country purchase the part at local source. ZX : Stock exhaust target part before EOP over 15 years policy. ZY : Stock exhaust target part because of EOP over 15 years policy. ZZ : Part is no longer service because of EOP over 15 years policy. ※ EOP : End of Production
5	Control Code	1		Char	Inventory Control Code 1 : Stop receiving 2 : Stop issuing 3 : Stop receiving & issuing D : Stop in all
6	Child Part Number	18		Char	Child Part Number
7	Child Part Name	15		Char	Child Part Name
8	Child Part Supply Code	2		Char	Child Part Supply Code (Refer to Parent Part Supply Code)
9	Usage Quantity	3	0	Decimal	Usage Quantity

06.
REFERENCE INFORMATION

ORDER TYPE

No.	Type	Description	Ship Mode
1	1	Auto Stock Order	S, N
2	2	Brazil INMETRO	A, S, N
3	4	Quotation Order	A, S, V, P
4	5	NA, NB part Order	A, S, V, P
5	6	Subsidiary Advance Stockpile Order	S
6	A	SST Order	A, S, P
7	B	Accessory Order	A, S
8	C	Monthly Stock Order	S, N
9	D	Claim Order	A, S, N, P
10	E	Emergency Order	A, P
11	F	Dangerous/Flammable goods	A, S, N
12	G	P/Catalog Order	A, S, N, P
13	H	Genesis Unique Order	A, S, N, P
14	I	New Model Initial Order	A, S, N, P
15	J	A/V	A, S, N, P
16	K	Marketing material	A, S, P
17	L	New Market Initial Order	A, S, N
18	M	A/M	A, S, N, P
19	N	Bumper Package	S
20	O	Emergency SEA Order	S, N
21	P	A/P	A, S, N, P
22	Q	Campaign & Quality	A, S, N, P
23	R	Weekly Supplementary	S, N
24	S	Equus Order	A, V, P
25	T	A/CON	A, S, N, P
26	U	MPA Non-Compliance	A, S
27	V	VOR Order	A
28	W	Promotion Order	A, S, N, P
29	X	VXR Order (Door To Door) SHPMD -->	V, P
30	Y	Special Order	A, S, P
31	Z	Final Buy Order	A, S, N, P

※ SHIP MODE
❶ A : Air ❷ S : Sea ❸ N : Air & Sea ❹ P : Courier ❺ V : DTD (Door to Door)

ORDER AMEND CODE

No.	A/C	ER	Description	Supply Rule
1	5B	ER	Not matched for Brazil INMETRO PART (Order type, parts or legal code)	N
2	AA	ER	It's supplied by an assy part.	N
3	AC	ER	It's supplied by composition part.	N
4	AD	OK	Quality issue (Only superseded part is supplied)	N
5	AF	ER	Items that have been changed as compatibility 'M'	N
6	AJ	ER	Spec. Deletion PART	N
7	AK	ER	Not A/S parts. Sub materials for KIT	N
8	AM	ER	It's puchased local part at all region	N
9	AO	ER	SET replacement part is supplied.	N
10	AQ	OK	Ordered QTY >= AMD12 X 12	N
11	AR	ER	Air order restriction	N
12	AY	ER	Part has the ITC Y""	N
13	BA	OK	SOC 30% Upper Battery Part	N
14	BD	OK	Large RESERVE CROSS-DOCK QTY	N
15	BH	ER	UN Report not exist	Y
16	BI	OK	Brazil INMETRO PART	N
17	CO	ER	Duplicate order check	N
18	CQ	OK	Packing unit is applied (L/M/S packing unit)	N
19	DA	OK	Amened by Distributor	N
20	DG	ER	One Time Order, Inventory=0, Order=0	Y
21	DX	ER	Cancel by distributor's request	N
22	EC	ER	Empty ECU no supply part	N
23	EN	ER	It is impossible to carry in distributor's country.	N
24	FB	ER	Discontinued Part : This part cannot be supplied anymore	N
25	FE	OK	FBO parts but stock is available	N
26	FQ	OK	Subsidiary Order Filtering (System)	N
27	HK	ER	Hong Kong C.O. Part with trade issue bound for U.S.	N
28	IN	OK	Intermediary trade part	N
29	IR	ER	Non-Intermediary trade part	N
30	LF	ER	Lithium-ion part Filtering (AIR, VOR)	N
31	MC	ER	MPA Non-Compliance parts	N

No.	A/C	ER	Description	Supply Rule
32	MO	ER	SET, KIT part	N
33	MS	ER	Size Information not found	Y
34	MU	ER	Multi part check	N
35	MX	ER	Mixed Order Check (publication, p/c, a/c, dangerous part)	N
36	MZ	ER	There is no net weight.	Y
37	NA	ER	Part does not apply in car.	N
38	NB	ER	There is no apply at current. But, Part will be applied at future.	N
39	NC	ER	Temporary	N
40	NE	ER	Launch time is later than order received date.	Y
41	NF	ER	There is no part number.	N
42	NL	ER	No longer service and no stock	N
43	NO	ER	NA/NB/OP/AJ/AD Confirm Error by region	N
44	NP	ER	No longer service but stock left	N
45	NS	ER	Part isn't supplied because of a long term B/Order.	N
46	NT	ER	Not Supplied (No special price)	N
47	OA	ER	MPAU SEA Order Filter Quarantine Part	N
48	OC	ER	It's applicated Standard of Emergency SEA Order	N
49	OP	ER	It's producted at overseas plant.	N
50	OR	ER	Country of origin is Israel (Reference for Dubai and Egypt)	N
51	OS	ER	cannot be supplied via AIR due to OVER SIZE	N
52	OU	ER	Under or over sized parts CHRCD = 'J/K', not standard size	Y (MOQ >=50)
53	PJ	OK	Special ordes for AM parts	N
54	PM	ER	Local purchsed part for some region	N
55	PO	ER	Promotion Over	N
56	PP	ER	It's applicated standard of passenger and commercial part.	N
57	QA	OK	Stop Allocation due to quality problems	Y
58	QL	ER	Campaign target part 100% Supply	N
59	QN	ER	Ordered QTY = 0	N
60	QP	OK	Pre-inspection - Pending Closure	N
61	QX	OK	Campaign part but originally not for ordered distributor	N
62	RC	ER	Restrict Accessory Order for Russian Distributor	N

No.	A/C	ER	Description	Supply Rule
63	RN	ER	Region model type isn't managed.	N
64	SB	ER	Old part is supplied.	N
65	SE	OK	Part option check	N
66	SG	ER	Not A/S parts. Sub materials for vendors	N
67	SH	ER	Order on hold by Labor Union Strike	Y
68	SI	OK	Supersession Code of confirmed about ordered part	N
69	SQ	OK	Abnormal demand	N
70	SR	ER	Spec Reconfirm of VIN	N
71	SS	OK	Pre-ordering for future strike in HQ	N
72	UC	ER	MPAU SEA Order Check ISO no-input Quarantine Part	Y
73	UP	ER	Price is not found.	Y
74	UV	ER	There is no vendor code	Y
75	ZC	OK	EOP Over 15 years policy related part (Supply Possible)	N
76	ZZ	ER	EOP Over 15 years policy related part (Supply not Possible)	N

PASSENGER VEHICLE

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
1	0A	AVANTE(CN7) 20/23	AA0
2	0B	AVANTE/ELANTRA(CN7) USA 21	AB0
3	0R	GV70 21/24	AR0
4	0T	NIRO(SG2) HEV/PHEV 21/25	AT0
5	0Y	BN7(INDIA) 24/26	AY0
6	1C	BL7 MEXICO 23	BC0
7	1E	SX2 23/26	BE0
8	1F	SX2 EV 24 24	BF0
9	1U	AVANTE/ELANTRA(CN7) CHINA 21/24	BU0
10	1V	AVANTE(CN7) HEV 21/23	BY0
11	1Y	SX2 HEV 23/26	DF0
12	2D	OS EV (CZECH) 20/21	DD0
13	5D	TUCSON(NX4) MEXICO 24	HD0
14	5J	SX2 EV INDONESIA CKD 25	SJ0
15	6H	MX5 CHINA 25	GH0
16	6I	IONIQ 5(NE1) INDIA SKD 23/25	II0
17	7A	SANTAFE(TM) HEV F/L USA 22	GA0
18	7B	NIRO PLUS(DE PBV) HEV/PHEV/EV 22	DB0
19	7F	SX2 CZECH EV 23	HF0
20	7I	IONIQ 5(NE1) INDONESIA CKD 22/25	MI0
21	7R	STARIA HEV 24/26	DR0
22	7S	IONIQ 6(CE1) SINGAPORE 24	RS0
23	8G	CL4 24	GG0
24	8I	IONIQ 5(NE1) SINGAPORE SKD 23/25	ZI0
25	8S	KA4 PE HEV 24	ES0
26	8X	SONET (CHINA) 24	IX0
27	9B	MX5 USA HEV 24	HB0
28	9I	IONIQ 5(NE1) N 24	NI0
29	9M	TUCSON(NX4) INDIA 23/25	GM0
30	9T	GV70 EV USA 23/25	IT0
31	9V	EV3(SV1) 24	EV0
32	9Y	GV70 USA 24/25	IY0
33	A0	CRETA 16/18	A00
34	A2	CEED P1/12/16	A20
35	A4	CARENS 11/12/16	A40
36	A5	i30 P1/12/15	A50
37	A6	i30 CZECH P1/12/16	A60
38	A7	K3 12/16	A70
39	A8	K5 HEV_PHEV 16/18	A80
40	A9	GRAND CARNIVAL 13/14/18	A90
41	AA	ACCENT	220
42	AB	SONATA - 3	340
43	AC	ATOZ	020
44	AC0	ACCESSORY	AC0
45	AC1	ACCESSORY	AC1
46	AD	SCOUPE	230
47	AE	SANTRO (INDIA)	050
48	AE	SANTRO INDIA 01/04/06/99	050
49	AG	GRACE	430
50	AH	PORTER (AH TRUCK)	440
51	AJ	ELANTRA	280
52	AK	AVANTE	290
53	AL	IONIQ 6(CE1) 23/25	KL0
54	AMM	AM PART	AMM
55	AMR	AMM PARTS(Kia AMM PARTS)	AMR
56	AP	GRAND CARNIVAL (INDIA) 20	DP0
57	AQ	TIBURON	270
58	AQ	HDC EV 18	T90
59	AR	GV60 EV 21/25	CU0
60	AS	EV6(CV1) 21/24	CV0
61	AU	KX1 (CHINA ONLY) 19	K80
62	AV	SOUL (CHINA) 10	2X0

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
63	AW	LCI-CAR (INDIA)	1A0
64	AW	VERNA INDIA 00	1A0
65	AY	MARCIA	330
66	AZ	EXCEL - 2	240
67	AZ	SQ(LA FESTA) EV 20/23	AZ0
68	B0	PORTE(K3 MEXICO) 16	B00
69	B1	GENESIS 14/16	B10
70	B2	SOUL 13/16	B20
71	B3	MISTRA 14/17	B30
72	B4	GRAND I10 P1/14/17	B40
73	B5	K3 CHINA 13/16	B50
74	B8	MAXCRUZ 13/16	B80
75	B9	I10 P1/14/17	B90
76	BA	VERNA	250
77	BB	SANTAFE	260
78	BC	PICANTO	070
79	BC	MORNING 04/08	070
80	BD	VISTO	060
81	BE	MATRIX - LAVITA	170
82	BE	LAVITA 01/06	170
83	BH	TUCSON	2E0
84	BH	TUCSON 04	2E0
85	BJ	GETZ - CLICK	1C0
86	BJ	CLICK 02/06	1C0
87	BK	CARENS FMC	1D0
88	BK	CARENS 06	1D0
89	BL	VERNA	1E0
90	BL	VERNA 06	1E0
91	BM	CM SANTAFE	2B0
92	BM	SANTAFE(CM) 06/10	2B0
93	BN	PRIDE	1G0

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
94	BN	PRIDE 05	1G0
95	BP	TBI	0B0
96	BP	CLICK INDIA 05/07	0B0
97	BQ	ENCINO 18	O10
98	BR	RIO	0C0
99	BR	PRIDE CHINA 06	0C0
100	BS	CEED	1H0
101	BS	CEE'D 06/10	1H0
102	BU	JS N 18	K90
103	BX	MC CHINA	0M0
104	BX	VERNA CHINA 06	0M0
105	BY	MCT-CAR(TURKEY ONLY)	0N0
106	BY	VERNA TURKEY 06	0N0
107	BZ	MCI	0P0
108	BZ	VERNA INDIA 06	0P0
109	C0	KX7 17	C00
110	C1	SONATA(LF) 14/17	C10
111	C2	SONATA(LF) USA 15/17	C20
112	C3	SONATA(LF) CHINA 15/18	C30
113	C4	HA(EON) FMC 19 19	C40
114	C5	SORENTO 15/18	C50
115	C6	SORENTO USA 15/18	C60
116	C7	I20 INDIA 18	C70
117	C8	I20 TURKEY 15/18	C80
118	C9	IX25 15/17	C90
119	CA	AVANTE-XD (XD-CAR)	2D0
120	CB	TUSCANI	2C0
121	CB	TUSCANI 05/07	2C0
122	CD	CERATO(SPECTRA FMC)	2F0
123	CD	CERATO 03/06	2F0
124	CE	AVANTE CHINA	080

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
125	CE	AVANTE XD CHINA 03	080
126	CF	XD NEW MODEL	2H0
127	CF	AVANTE 06	2H0
128	CH	TUCSON(CHINA)	0L0
129	CH	TUCSON(JM) CHINA 05	0L0
130	CI	IONIQ 5(NE1) ROBO-TAXI SINGAPORE 24	LI0
131	CJ	CERATO	0S0
132	CJ	CERATO CHINA 05/07/16 05/07/16	0S0
133	CM	I10 07/11 07/11	0X0
134	CN	I20 XX/08	1J0
135	CO	BC3 N (TURKEY) 22	CO0
136	CP	SONATA(YF) CHINA 11	4Q0
137	CQ	KC EV 19	O20
138	CR	CMA SANTAFE (USA)	0W0
139	CR	SANTAFE(CM) USA 06/10	0W0
140	CS	SOUL 08/12	2K0
141	CT	CRETA RUSSIA 17	M00
142	CV	CRETA BRAZIL 17	M40
143	CW	I20 TURKEY 10/12	4P0
144	CZ	OS HEV 19/21	CM0
145	D0	REINA (CHINA ONLY) 18	D00
146	D1	K4 15/18	D10
147	D2	EQ900(16)/G90(19) 16/19	D20
148	D3	TUCSON(TL) 15/18	D30
149	D4	K5 16/18	D40
150	D5	K5 USA 16/18	D50
151	D6	K5 CHINA 16/19	D60
152	D7	TUCSON(TL) CZECH 16/18	D70
153	D8	KX3 15	D80
154	D9	SPORTAGE NEW 16/19	D90
155	DA	SONATA - 4 (EF-CAR)	380

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
156	DC	EFC-CAR(CHINA)	090
157	DC	SONATA(EF) CHINA 02/99	090
158	DD	REGAL_OPTIMA	2G0
159	DD	LOTZE 05/09	2G0
160	DE	OPTIMA	0E0
161	DE	OPTIMA CHINA 04	0E0
162	DF	I40 12/15/18	3Z0
163	DG	NEXO FCEV 18/24	M50
164	DH	K9 (B/OUT) 11/15	3T0
165	DJ	K3(BD) 18/21	M60
166	DK	GENESIS COUPE 08/12	2M0
167	DL	FORTE(BDM) 18/21	M70
168	DM	SANTAFE(DM) P1/P3/12/15	2W0
169	DN	VENGA 10	1P0
170	DO	EV9(MV1) 23	DO0
171	DP	SANTAFE(DM) USA P1/P3/12/16	4Z0
172	DQ	NIRO(DE) EV 19	Q40
173	DR	SOLARIS 11/14	4L0
174	DT	SONATA(DN8) CHINA 20/23	L40
175	DU	DU2 20	Q30
176	DV	SONATA(DN8) 19/23	L10
177	DW	SONATA(DN8) USA 20/23	L00
178	DX	K2 DYK 12/15	4X0
179	DY	RIO HMMR 12/15	4Y0
180	DZ	SANTAFE(DM) CHINA 13/16	A10
181	E0	K5 CHINA HEV/PHEV 17	E00
182	E4	PSEV 14	E40
183	E5	SONATA(LF) HEV/PHEV CHINA 16	E50
184	E6	SONATA(LF) HEV/PHEV 16/17	E60
185	EA	EQUUS	3B0
186	EA	EQUUS 01/04/99	3B0

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
187	EB	XG-CAR (MARCIA)	390
188	EC	TRAJET XG	3A0
189	EC	TRAJET XG 04/99	3A0
190	ED	GALLOPER/INNOVATION	M10
191	EF	TERRACAN	H10
192	EG	JOICE	M30
193	EH	OPIRUS F/LIFT	3F0
194	EH	OPIRUS 02/06	3F0
195	EJ	VERACRUZ	3J0
196	EJ	VERACRUZ 07	3J0
197	EK	NF SONATA	3K0
198	EK	SONATA 04/08	3K0
199	EL	GRANDEUR (TG)	3L0
200	EL	TG NEW MODEL 05/99	3L0
201	EM	NF AMERICA	0A0
202	EM	SONATA USA 04/08	0A0
203	EN	MOHAVE 07/16/20	2J0
204	EP	GENESIS (STOP) 07	3M0
205	ER	SONATA INDIA 04/09	0K0
206	ES	NF CHINA	0R0
207	ES	SONATA CHINA 04/09	0R0
208	ET	EQUUS (VI)	3N0
209	EU	K5 CHINA 20/24	L60
210	EV	SONATA(YF) INDIA 11	4K0
211	EW	SANTAFE INDIA 12	400
212	EX	K5 20/23/27	L20
213	EY	K5 USA 20/23	L30
214	EZ	ENANTRA 13	300
215	F0	AVANTE/ELANTRA(AD) CHINA 17/19	F00
216	F1	SPORTAGE SLOVAKIA NEW 16/19	F10
217	F2	AVAMTE(AD) 16/19	F20

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
218	F3	AVANTE/ELANTRA(AD) USA 16/19	F30
219	F6	K7 16/19	F60
220	F7	SANTAFE(DM) INDIA 14	F70
221	F8	TUCSON(TL) CHINA 16/19	F80
222	F9	ACCENT 17/20	F90
223	FA	PRIDE	FA
224	FB	SPECTRA (SEPHIA FMO)	FB
225	FD	RIO	FD
226	FE	CREDOS	FE
227	FH	ALCAZAR(INDIA) 20/24	BV0
228	FI	CARNIVAL CHINA	FI
229	FI	CARNIVAL CHINA 04	FI
230	FJ	CARENS	FJ
231	FK	RETONA	FK
232	FL	CANIVAL	FL
233	FM	SPORTAGE	FM
234	FN	TOWNER	FN
235	FO	SPORTAGE SLOVAKIA 07	0Z0
236	FP	PREGIO	FP
237	FQ	SPORTAGE	1F0
238	FR	WIDE BONGO	FR
239	FS	OPTIMA / MAGENTIS	3C0
240	FU	FRONTIER 1.3, 2.5TON	FU
241	FV	AVELLA	FV
242	FX	SHUMA	FX
243	FY	SORENTO F/LIFT	3E0
244	FY	SORENTO 01/06	3E0
245	FZ	SU2R 21/25	BW0
246	G2	IONIQ(AE) HEV/PHEV 16/19	G20
247	G3	I30 17/20	G30
248	G4	I30 CZECH 17/20/24/26	G40

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
249	G5	NIRO(DE) HEV/PHEV 16/19	G50
250	G6	MORNING 17/20/22	G60
251	G7	IONIQ(AE) EV 16/19	G70
252	G8	GRANDEUR 17/20	G80
253	G9	G70 17/21/23	G90
254	GA	A1 04 SPECIAL VEHICLE	4A0
255	GA	STAREX SPECIAL VEHICLE	4A0
256	GB	NEW CARNIVAL	4D0
257	GB	GRAND CARNIVAL 05	4D0
258	GC	STAREX TURKEY	4G0
259	GC	STAREX TURKEY 02/04	4G0
260	GD	GRAND STAREX 07/15/18	4H0
261	GE	ENTOURAGE	4J0
262	GE	ENTOURAGE 06	4J0
263	GF	SONATA(YF) 10	3S0
264	GG	K8 22/24	L80
265	GH	BR2 19/22	R10
266	GI	IONIQ 5(NE1) 21/24	GI0
267	GK	OS EV 19/21	K40
268	GL	K8 HEV 22/24	N00
269	GM	SORENTO 09/12	2P0
270	GN	GN7 23/26	N10
271	GQ	I10 20/23	K70
272	GR	GN7 HEV 23/27	N60
273	GS	VELOSTER 11/15	2V0
274	GT	TUCSON(NX4) CZECH 22/24	N70
275	GU	CUSTO (CHINA) 20/25	O30
276	GV	TUCSON(NX4) CHINA 21/25	N80
277	GW	TUCSON(NX4) 21/24	N90
278	GX	TUCSON(NX4) HEV/PHEV 21/24	P00
279	GY	SPORTAGE 22/25	P10

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
280	GZ	MQ4 (SORENTO) 20/23	P20
281	H0	RIO 18/21	H00
282	H1	OSC EV 20	CY0
283	H2	K2 17/20	H20
284	H3	SPORTAGE CHINA 16/19	H30
285	H5	SOLARIS 17/20	H50
286	H6	HCI 18/20	H60
287	H7	PEGAS (CHINA ONLY) 18	H70
288	H8	RIO 17/20/25	H80
289	H9	RIO 17/21	H90
290	HA	AU TRUCK (1 t) - PORTER	4B0
291	HB	LIBERO	470
292	HB	LIBERO 00	470
293	HC	SORENTO HEV/PHEV 20/23	P40
294	HD	BONGO-3	4E0
295	HD	BONGO-3 04/17/20/24	4E0
296	HE	PORTER SPECIAL VEHICLE	4F0
297	HE	PORTER-II 04/17/20/24	4F0
298	HG	GRANDEUR 11/15	3V0
299	HH	SANTAFE(MX5) 24	P60
300	HK	MX5 HEV/PHEV (NEW TM) 24	P70
301	HO	OS EV INDIA 19	BO0
302	HP	SANTACRUZ(OPEN BED) 19/21/24	K50
303	HQ	GRAND I10 20/23	K60
304	HR	TUCSON(TL) INDIA 17/20	Q10
305	HS	KA4 (NEW GRAND CARNIVAL) 20/24	R00
306	HT	SONATA(DN8) HEV/PHEV 20/23	L50
307	HU	TUCSON(NX4) USA 21/24	CW0
308	HV	K5 HEV 20/23	L70
309	HW	SPORTAGE SLOVAKIA 22/25	R20
310	HX	SPORTAGE CHINA 21/25	R40

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
311	HY	MQ4A 20/24	R50
312	HZ	SANTAFE(MX5) USA 24/27	R60
313	I3	KONA(PE) N 21	I30
314	I4	KA4 CHINA 22	I40
315	I6	STARGAZER 22/26	I60
316	I7	SU2ID (INDONESIA) 22/25	I70
317	IA	EON 11	4N0
318	IB	AVANTE(CN7) N 21/24	IB0
319	IC	FCT-MATRIX TURKEY	100
320	IC	LAVITA TURKEY 08/09	100
321	ID	AVANTE/ELANTRA(HD) CHINA 08/11	0Q0
322	IH	PRIDE 12/15	1W0
323	IJ	HB20 12/16	1S0
324	IK	Ruinart 10/14	0U0
325	IL	VERNA 11/15	1V0
326	IN	SONATA(YF) USA 10	3Q0
327	IP	FORTE CHINA 09/13	1X0
328	IQ	SPORTAGE CHINA 08	030
329	IR	I30 CZECH 09	2R0
330	IT	TUCSON(LM) CZECH 10/14	2Y0
331	IV	I30 CHINA 10	1Z0
332	IW	SPORTAGE SLOVAKIA 10/14	3U0
333	IX	SORENTO 09/12	1U0
334	IY	SONATA(YF) HEV 11	4R0
335	IZ	IX35 (CHINA) 11/17	2Z0
336	J0	ACCENT (MEXICO) 18/21	J00
337	J1	SQ (LA FESTA) 18/22	J10
338	J2	SOUL(SK3) EV 19	J20
339	J3	VELOSTER(NEW) P1/17	J30
340	J4	CELESTA 17	J40
341	J5	STINGER 17/20	J50

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
342	J6	KH(K9) FMC 18/21	J60
343	J7	CEED 18/21/26/27	J70
344	J9	KONA 18/21	J90
345	JB	SU2B 21/25	BX0
346	JC	IX20 11/16	1K0
347	JD	I30 07	2L0
348	JF	TUCSON(NX4) HEV/PHEV CZECH 21/24	CZ0
349	JG	K7 08/13	3R0
350	JI	RG3 EV 21/25	JI0
351	JJ	RG3 20/23/27	T10
352	JM	CD PHEV 20	CR0
353	JP	HI(G90) FMC 22/26	T40
354	JR	GV80 20/24/27	T60
355	JV	TUCSON(NX4) HEV CHINA 22/25	CF0
356	JW	SPORTAGE HEV/PHEV 22/25	CH0
357	JY	SPORTAGE HEV/PHEV SLOVAKIA 22/25	CJ0
358	JZ	SPORTAGE HEV CHINA 21/25	CK0
359	LS	CERATO SPORTS 06	1L0
360	M2	EV5(OV1) CHINA 23	MB0
361	M6	MUFASA 23	MA0
362	QE	LQE	QE0
363	S0	I30 N (CZECH) 18/20/24	S00
364	S1	SANTAFE(TM) 18/20	S10
365	S2	SANTAFE(TM) USA 18/21	S20
366	S3	SANTAFE(TM) CHINA 19/20	S30
367	S4	FORTE 18	S40
368	S5	AVANTE/ELANTRA(AD) INDIA 17/20	S50
369	S6	NU (IX 35) 18/21	S60
370	S7	AVANTE/ELANTRA(AD) PHEV CHINA 19	S70
371	S8	PALISADE 19/22	S80
372	S9	TELLURIDE(ON) 19/22	S90

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
373	SB	ACCENT 11/15	1R0
374	SC	SANTAFE(TM) HEV/PHEV 20	CL0
375	SD	AVANTE(MD) 11/14	3X0
376	SE	NP CHINA (SPORTAGE) 18/21	Q20
377	SK	SOUL(SK3) 19/22	K01
378	SL	'10/'14: SPORTAGE R, '19: SCOUPE (SLC) 10/14/94	3W0
379	SM	SPORTAGE CHINA 11/15	4T0
380	SN	VENUE 19/22	K21
381	SP	VENUE (INDIA) 19/22	K30
382	SS	GV70 EV 22/25	DS0
383	SU	SU2 (IX25) 20/23	R90
384	SV	I20(GEN), ELITE(INDIA) 20/24	T70
385	SW	I20 21/24	Q00
386	SX	SONET (INDIA) 21/23	CC0
387	SZ	US4(STARIA) 21/26	CG0
388	TA	MORNING 02/11/15	1Y0
389	TB	K5 HEV 11/14	4U0
390	TC	AVANTE/ELANTRA(UD) USA 11/14	3Y0
391	TD	FORTE 08	1M0
392	TE	AVANTE/ELANTRA(MD) CHINA 11	4V0
393	TF	K5 11/14	2T0
394	TG	K5 (CHINA) 11/14	4M0
395	TH	SELTOS (KC NEW) 19/23	Q50
396	TI	SP2i (KC INDIA NEW) 20/23	Q60
397	TJ	SP2c (KC CHINA NEW) 20/23	Q70
398	TK	K5 (USA) 12/14	4C0
399	TL	SANTAFE(TM) F/L INDONESIA CKD 22	EL0
400	TM	TUCSON(LM) 10/14	2S0
401	TN	BDC 19/22	Q80
402	TO	NIRO(SG2) EV 22/25	AO0
403	TP	BDC PHEV 19	Q90

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
404	TP	BESTA	TP
405	TR	BDC EV 20	DQ0
406	TU	DU2 EV (CHINA) 21	Z30
407	TV	LMFC 12	4W0
408	TW	SPORTAGE USA 22/25	DW0
409	TY	INDIA CARENS 22/25	DY0
410	XA	EV9(MV1) USA 25	XA0

COMMERCIAL VEHICLE

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
1	HS	EG 8 TON (UP) TRUCK	7S0
2	HZ	SPECIAL VEHICLE	7S4
3	LA	A/CITY 520,540	830
4	LJ	SUPER AERO CITY	8Z0
5	LJ	SUPER AEROCITY '04 MODEL	8Z1
6	LK	NEW SUPER AEROCITY 08EM	8K0
7	LK	SUPER AEROCITY '08 EM	8K0
8	LP	AEROCITY BARE CHASSIS	8N0
9	LQ	NEW SUPER AEROCITY	8Z1
10	ME	COUNTY VIETNAM	5F0
11	MH	COUNTY '20 F/LIFT EXPORT	5D1
12	MS	EG 8 TON (DOWN)TRUCK	5S0
13	MT	EU BUS/VAN TURKEY	591
14	MZ	SPECIAL VEHICLE (5TON BELOW)	5S4
15	N3	COMBI	N3
16	N4	COSMOS	N4
17	NA	CHORUS	460
18	NB	NEW CHORUS	5A0
19	NB	COUNTY '04 MODEL	5A1
20	NB	COUNTY 04EMSPECIAL	US0
21	NH	AERO TOWN	550
22	NJ	E-AEROTOWN	570
23	NJ	AERO TOWN '04 MODEL	570
24	NQ	E-COUNTY	5A1
25	NY	COUNTY CHINA 14 F/LIFT	5B0
26	NZ	COUNTY '12MY	5A2
27	P3	BUS	P3
28	PJ	AERO SPACE	8A0
29	PJ	A/SPACE LD,LS '04 MODEL	8A0
30	PK	PY SPACE	8D0
31	PK	UNIVERSE SPACE	8D0

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
32	PQ	AERO SPACE '04 F/LIFT	8A1
33	R3	GRANDBIRD	R3
34	R4	GRANBIRD 08EM	R4
35	R4	KIA (GRANBIRD) '08 MODEL	R4
36	RC	AERO QUEEN/EXPRESS	8C0
37	RC	A/EXPRESS LDX,HSX '04 MODEL	8C1
38	RD	PY EXPRESS	8Y0
39	RD	UNIVERSE EXPRESS	8Y0
40	RF	UNIVERSE EXPRESS VIETNAM	8F0
41	RG	KIA (GRANBIRD) 20 F/LIFT	8S0
42	RQ	AERO QUEEN '04 F/LIFT	8C1
43	U1	MIGHTY	450
44	U3	FRONTIER 2.5 TON	U3
45	U4	TRADE	U4
46	U5	PAMAX	560
47	UB	NEW MIGHTY	5H0
48	UD	E-MIGHTY SPECIAL	5K0
49	UD	MIGHTY F/LIFT SVC (04 MY)	5K0
50	UD	MIGHTY '04 F/LIFT	5K0
51	UE	E-MIGHTY 08EM WIDE SPECIAL	5LW
52	UE	MIGHTY SPECIAL WIDE 08EM	5LW
53	UE	MIGHTY WIDE '08 EM	5LW
54	UF	MIGHTY NARROW '08 EM	5LN
55	UG	MIGHTY WIDE '15 MODEL	5M0
56	UG	MIGHTY WIDE SPECIAL '15 MODEL	UG0
57	UH	MIGHTY WIDE '15 MODEL, DERIVATIVE	5M1
58	UI	MIGHTY NARROW, LIGHT WEIGHT CHASSIS	5R0
59	UT	EU TRK TURKEY	592
60	UX	LIGHT MEDIUM-DUTY TRK(WIDE)-CHINA	5P0
61	V3	RHINO	V3
62	VA	5T M TRUCK	620

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
63	VB	5T EG TRUCK	6A0
64	VC	MEGA TRUCK SPECIAL	6B0
65	VC	EG 5TON SVC F/LIFT(04 MY)	6B0
66	VC	MEDIUM-DUTY TRK 04 F/LIFT	6B0
67	VE	LIGHT HEAVY-DUTY TRUCK 19 MODEL (4X2)	6D0
68	VF	LIGHT HEAVY-DUTY TRUCK 19 MODEL (6X2)	6E0
69	W8	8T M TRUCK	690
70	WA	11T M TRUCK (M-TRK)	730
71	WB	8T EG TRUCK (4X2)	7A0
72	WE	11T EG TRUCK(6X4)	7D0
73	WE	11T EG TRUCK(6X4)	7D0
74	WF	23T EG TRUCK(8X4	7G0
75	WG	NEW POWER TRUCK(4X2) SPECIAL	7C0
76	WG	EG 4X2 F/LIFT SVC(04 MY)	7C0
77	WG	HEAVY-DUTY TRK 04 MODEL(4X2)	7C0
78	WI	HEAVY-DUTY TRK FCEV(6X4)	7X2
79	WJ	NEW POWER TRUCK(6X4) SPECIAL	7F0
80	WJ	EG 6X4 F/LIFT SVC(04 MY)	7F0
81	WJ	HEAVY-DUTY TRK 04 MODEL(6X4)	7F0
82	WK	NEW POWER TRUCK(8X4) SPECIAL	7H0
83	WK	EG 8X4,10X4 F/LIFT SVC(04 MY)	7H0
84	WK	HEAVY-DUTY TRK 04 MODEL(8,10X4)	7H0
85	WO	HEAVY-DUTY TRK FCEV(6X2)	7X1
86	WR	QZ 4X2 SPECIAL 13 MODEL	7N0
87	WR	HEAVY-DUTY TRK 13 MODEL (4X2)	7N0
88	WT	QZ 6X4 SPECIAL 13 MODEL	7R0
89	WT	HEAVY-DUTY TRK 13 MODEL (6X4)	7R0
90	WU	HEAVY-DUTY TRK 13 MODEL (8,10X4)	7S1
91	WV	HEAVY-DUTY TRK 14 MODEL (4X2)-CHINA	7T0
92	WV	HEAVY-DUTY TRK SPECIAL 14 MODEL (4X2)-CHINA	WV0
93	WW	HEAVY-DUTY TRK 14 MODEL (6X2)-CHINA	7U0

No.	MDL_CD	CMDL_NM	MBS_CMDL_CD
94	WW	HEAVY-DUTY TRK SPECIAL 14 MODEL (6X2)-CHINA	WW0
95	WX	HEAVY-DUTY TRK 14 MODEL (6X4)-CHINA	7V0
96	WX	HEAVY-DUTY TRK SPECIAL 14 MODEL (6X4)-CHINA	WX0
97	WY	HEAVY-DUTY TRK 14 MODEL (8,10X4)-CHINA	7W0
98	WY	HEAVY-DUTY TRK SPECIAL 14 MODEL (8,10X4)-CHINA	WY0
99	WZ	HEAVY-DUTY TRK FCEV(4X2)	7X0

PART 14.

INTELLECTUAL PROPERTY PROTECTION

01. WHY INTELLECTUAL PROPERTY SHOULD BE PROTECTED
02. WHAT IS PROTECTED
03. GENUINE PARTS PACKAGING & LABEL
04. COMMON COUNTERFEIT
05. COUNTERFEIT SAMPLES
06. SIMPLE PROCEDURE TO DETECT SUSPICIOUS SHIPMENT
07. PROCEDURE FOR IP PROTECTION ACTIVITIES
08. SCOPE OF MOBIS IP PROTECTION

01.
WHY INTELLECTUAL PROPERTY SHOULD BE PROTECTED

Counterfeiting and TM(Trademark) infringement have become an international phenomenon with global impact.
General effects of the counterfeit goods are :

- On individuals with trademark rights
  - Potential legal liability and damaged brand value
  - Less incentive to invest in new products and processes
- On society
  - Safety concerns, consumer confidence
  - Encouraging participation by organized crime
- On economic
  - Negative impacts on innovation and growth
  - Lower tax revenues including import tariffs
  - Loss of employment
  - High cost on governments and industry to combat
  - Reduced Foreign Direct Investment(FDI)

By limiting the use of potentially dangerous counterfeit parts, customer safety and satisfaction can be enhanced.

Non-OEM Part



Genuine Part



Non-OEM Part



Genuine Part



Genuine parts are certified, distributed and guaranteed by the car manufacturer.

02.
WHAT IS PROTECTED

Registered trademark and brand names are protected. Any use of TM logos, brand names and model names against that protection might result in business with Hyundai to be terminated.

- TM sample
  - It might be different based on countries
  - Registered TM should be reviewed at the local PTO (Patent and Trademark Office)

HYUNDAI

HYUNDAI

HYUNDAI

HYUNDAI Genuine Parts

HYUNDAI Genuine Parts

GENESIS

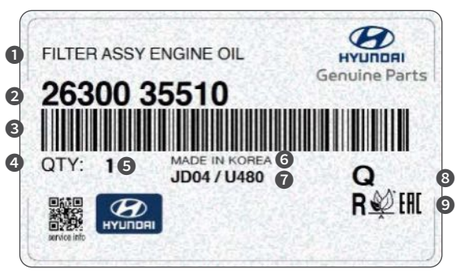
HYUNDAI GENESIS

HYUNDAI models

ACCENT	G60 / G70 / G80 / G90	GV60 / GV70 / GV80
ATOS	H100	SONATA
AZERA	HYUNDAI H1	TERRACAN
CRETA	HYUNDAI COUPE	TRAJET
ELANTRA	HYUNDAI SANTA FE	TUCSON
GETZ	HYUNDAI i10 / i20 / i30 / i40	VELOSTER
GRAND i10	HYUNDAI IONE	IONIQ

03.
GENUINE PARTS PACKAGING & LABEL





1. Part Name
2. Part Number
3. Barcode (Part No. + Pack QTY + Date)
4. Quantity
5. Unit
6. Country
7. Production Year & Month & Day
8. Quality Mark
9. Legal Code (Certification, Import Laws)

04.
COMMON COUNTERFEIT

Fast Moving Service Parts	
Air Filters	
Cabin Air Filters	
Oil Filters	
Fuel Filters	
Timing Belts	
Brake Pads	
Wiper Blades	
Ignition Coils	
Spark Plugs	

Collisions Parts	
Blank Keys	
Air Bag Covers	
Lamps	
Windshield / Windows	
Fenders	
Radiator Grilles	
Bumpers	
Hoods	

Emblems
Hub Caps
Key Rings
Stickers

Side Steps
Key Cases
Floor Mats

05.
COUNTERFEIT SAMPLES

Here are a couple of examples on counterfeit parts.

Chinese Words

EXAMPLE 1



Chinese Letters



W/O Logo



TM Infringement

EXAMPLE 2



W/O Logo



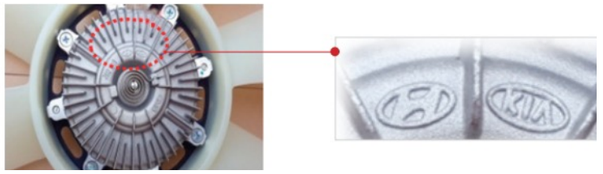


W/O Inner Package

EXAMPLE 2



Using Different Package
And Declare Other Brand



TM Infringement

06.
SIMPLE PROCEDURE TO DETECT SUSPICIOUS SHIPMENT

STEP 1

Logistics

- Genuine parts are sold via Mobis' own global supply channel
- Any HYUNDAI parts shipped from China (Hong Kong) and Taiwan need to be thoroughly inspected

STEP 2

Condition

- Genuine parts from Mobis are never shipped together with other brand (both on the C/I and package)
- Genuine parts are never sent unpackaged

STEP 3

Inspection

- Inspect the actual goods in the shipment
- Package, label, storage and etc.

STEP 4

Contact Mobis

- In suspicious case, to enable a quick and reliable identification, we need the following information
  - Copies of freight documents (C/I, P/List)
  - Clear photos of suspicious parts including package, labels and logos / words on the product

07. PROCEDURE FOR IP PROTECTION ACTIVITIES

Selecting Agency

- Law Firm (or)
- Counterfeit Specialist

Preparation for Survey

- Locating shops supply HYUNDAI Parts
- Training : How to identify genuine

Power of Attorney

- Scope of Empowerment
  - Market Raid
  - Customs Inspection
  - Training
- Structure of Empowerment
  - Hyundai → Mobis → Agency

Market Survey

- Sample test
- Authenticity

Establishing Strategy

- Taking actions against fake (or Gray parts : if parallel import's prohibited)
- Targeting the suspicious shops

Training / TM registration

- Training IP related authorities
- Publish local 'Genuine Parts Identification manual'
- Registration Trademark before Customs

Market Raid / Customs Inspection

- Market Raid
  - Law Enforcement Agency, Media (Local press or TV)
- Customs Inspection
- Parts Expo Raid

08. SCOPE OF MOBIS IP PROTECTION

Customs Enforcement

- Reinforce border protection against illicit imports of IP infringing goods
- Close liaison with local customs authorities for intelligence sharing

Market Investigation and Enforcement

- Conduct market survey to have a better landscape on the visibility of infringing goods in markets
- Identify qualified targets for raid actions and conduct raid actions with Law enforcement authorities

Online Monitoring and Enforcement

- CoMonitoring and enforcement on various online trading platforms via Online monitoring tool worldwide
- Collecting and analyzing intelligence on illicit product supply-chain for more Effective and comprehensive enforcement

Legal Enforcement

- C&D / Warning letter
- Administrative actions
- Civil / Criminal litigations

PART 15.

OUTRO: DEALER PARTS OPERATIONS CHECK LIST

01. FACILITY
02. ADMINISTRATION AND ORGANIZATION
03. PARTS PROCESS

01.
FACILITY

GENUINE ACCESSORY

1) Accessories Display and Advertisement

Are current accessories displayed and advertised and available for purchase in the customer contact area?

- Criteria
  Maximize retail accessory sales via accessory brochures, display racks/cabinets and seasonal accessory promotions.
- Importance
  The customers enter the parts department and must positively perceive the current accessories. Showing off accessories will create a demand, a wish for the customer to possess them. It is essential to feature cabinets and displays of accessories which the customer can choose to have added to their vehicle. Along with the many exterior accessories, there are also many interior accessories which should be on display system such as AVN (Audio/Video/Navigation). The customer contact area is the ideal surrounding for such a display as the customer can appealingly in the parts department, as well as in the sales area. There are many simple and effective ways to present accessories to customers that result in immediate sales by displaying your promotions.
- Refine
  The customer's eye influences buying decisions, most of which are based on the visual impression that a customer receives of a display. Be sure to have working AVN (Audio/Video/Navigation) units on display that will allow the customer to physically touch and interact with the product in your showroom.
- Verify
  Browse the parts department and evaluate if current accessories are nicely presented and if brochures are available.



2) Sales Department Coordination

Do you offer special accessory items or packages coordinated with the sales departments, and are sales personnel incentivized to promote accessory sales?

- Criteria
  Introduce accessories in collaboration with vehicle sales to maximize both accessory and parts sales.
- Importance
  For all the accessories available these days for vehicles, the up-sell opportunities can be enormous for the dealership. Accessories are a great area of opportunity for the parts and service departments looking to increase sales and can be an easy up- sell opportunity for the sales department. Inform the sales department about accessory packages, special promotions and supply material which they can use during the sales process. Incentives for successful part sales by sales personnel will increase the motivation to sell for your department.
- Refine
  Collaborate with the sales department! Coordinate periodic meetings between the sales and parts departments and establish a good communication channel. Provide brochures and materials for sales and inform them about seasonal promotions. You could coordinate them with new product launches. Do not forget, sales personnel are encouraged to sell more accessories when they are incentivized!
- Verify
  Look for programs including direct mail, co-op advertising, and participate in advertising campaigns.



FACILITY

1) Maintaining Cleanliness and Safety in the Parts Facility

Is the Parts department, including the warehouse, maintained in a clean, neat, and orderly manner?

- Criteria
  Maintaining a clean and orderly parts department portrays high quality and professionalism to your customers and improves the overall productivity.
- Importance
  A clean parts department is more efficient, and more importantly it is safer. Take care of the facilities and equipment within the department to help ensure that your employees and customers are cared for in a pleasant, clean and safe environment. All surfaces such as floors, walls, ceilings, fixtures, furnishings and so on must be clean.
- Refine
  Maintaining cleanliness not only builds a spotless reputation but also enhances the customer experience. Both cleanliness and safety require a daily team effort.
- Verify
  Observe all areas of the facility to assess cleanliness. In the warehouse, periodically advise employees to clear aisles and passageways and keep areas clean with materials properly stacked. Remember, it costs time and money if people cannot find what they are looking for! In the customer area, keep counters and display racks/cabinets clean and tidy.



2) Parts Department Illumination

Are all areas of the parts department and storage area well lit?

- Criteria
  All working areas shall be provided with either natural or artificial illumination which is adequate and suitable to provide a reasonable safe place of employment.
- Importance
  In general, lighting is crucial in the work environment for several reasons: it enhances efficient and accurate performance of visual tasks—considering that 80% of information about surroundings is processed through the eyes—ensures worker safety and health, boosts productivity, and promotes a general feeling of well-being. Proper lighting is particularly essential in speeding up parts processing and reducing staff fatigue and mistakes. Fetching the wrong part and having to return for the correct one consumes valuable time and undermines efficiency. Moreover, a dimly lit parts department increases the risk of vehicle damage, potentially leading to accidents involving parts staff or customers.
- In addition
  Dark surfaces absorb light and light-colored surfaces reflect light. White paint reflects about 80% of the light that strikes it, while concrete or wood may reflect only 20-40%. The simple step of specifying light-colored ceiling surfaces and structural elements will vastly improve both lighting efficiency and lighting quality.
- Refine
  Install adequate illumination type and intensity in the warehouse (200 *Lux) and the office space (300 *Lux) areas. Metal Halides (bluish white) are recommended. For example, parallel lighting with parts shelving to make sure that all parts numbers and items can be identified easily.
  ※ Lux is measured using a lux meter.
- Verify
  Make sure the overhead lighting runs parallel with parts shelving. Ask the parts personnel if they are comfortable with the amount of illumination in their respective working areas.



PARTS STORAGE

1) Individual Location for Each Part Number

Does each part number has a separate storage location?

- Criteria
  Each part should be stored or located in a separate bin or area for easy identification and retrieval.
- Importance
  Separate locations are very important to maintain fast access to the needed spare parts. It guarantees a maximum utilization of the available storage space and an optimal visual stock control. It also minimizes searching time and increases your parts department productivity.
- In addition
  Design a layout (location) which will optimize the tracking and control of spare parts. Some parts look very similar and may be mispicked if stored in the same bin or shelf as other parts.
- Refine
  Label each space with its part number and create a layout (location). Parts should not be stored in a parts number sequence. All employees, even new employees, should be able to retrieved parts without difficulty.
- Verify
  Visually inspect your storage area and run some tests. Take various parts out of their bins without the part personnel noticing it and ask them to bring them back where they belong.



2) Stored by Type and Shape

Are parts of the same type and same shape stored together?

- Criteria
  Storing parts by type and shape is fundamental to improve safety, quality, and operations efficiency.
- Importance
  To ensure a maximum utilization of time and space and to decrease a possible damage to parts, an appropriate arrangement of your storage space is necessary. Introducing this storage technique in your parts warehouse will undoubtedly enhance your picking and binning operations. Moreover, parts may be stored vertically, other parts horizontally to exploit limited space.
- In addition
  Locate similar units close to each other in order to avoid wasting stock space. Parts have to be located in unique positions to establish fast, easy and safe access. Use special carriers or racks for these parts.
- Refine
  Parts from different shape like trim panels and oil filters should not be stored within the same vicinity. The dissimilar shape of these parts creates wasted spaces. Body panels should be stored vertically to minimize time to retrieve them. Mufflers, hood and glass must be stored vertically. They maybe hung from above or can be stored on a rack. Any other parts that could be damaged by lying flat on top of other parts must be stored vertically.
- Verify
  Visually inspect your storage area and look at different ways in which you can optimize space and binning/ picking operations. Work closely with your distributor as they may propose and recommend new storing techniques based on type and shape.



02. ADMINISTRATION AND ORGANIZATION

GENERAL MANAGEMENT & ADMINISTRATION

1) Job Description Documentation

Are job descriptions provided for the parts manager and other parts personnel in the parts department?

- **Criteria**
  The dealership has updated written documents which details the roles and responsibilities for each position in the organization.
- **Importance**
  The job description is the basic instrument used to define and measure the level of work being performed by any given employee. A job description should clearly summarize the major duties and responsibilities performed on the job as they relate to the four major factors - skills, responsibility, effort and working conditions. A good job description is also imperative to facilitate new employee orientation.
- **In addition**
  A complete job description :
  - Contains the job title, basic qualifications required, age and preferred experience.
  - Details the primary, secondary and tertiary responsibilities.
  - Outlines the mandatory and optional skill sets and competencies required.
  - Throws light on performance evaluation parameters, career path and compensation and benefits inclusive of fixed and variable pay and non- monetary compensation.
- **Refine**
  Management must put in writing a detailed job description and confirm with the matching staff member if it corresponds with their roles and responsibilities. If any categories have been overlooked the job description must be updated. Depending on the size of the dealership, multiple functions could be handled by one person.
- **Verify**
  Review existing job descriptions and collaborate with employees to assess the accuracy and reliability of the documents.

2) Part Sales Target and Reporting

Does the dealership have yearly and monthly objectives for parts and accessory sales, fill rate, inventory status and MOS (months of sales)?

- **Criteria**
  The objective is to define the responsibilities of after-sales management in the daily operations of the dealership's after-sales business through recording and monitoring business performance.
- **Importance**
  Tracking your sales target is the basic for a good management. It gives you a clear picture of your business activities and more importantly, it can help you plan your future activities. Dealerships should make business improvement decision based on opportunities identified in the analysis of the business performance indicators. It is important that all parts staffs are aware of the department's objective and that they make efforts to achieve the targets and monitor progress.
- **In addition**
  Most managers/supervisors set objectives, but not with equal skill. An objective/target is simply a statement of what is done and should be stated in terms of results. Objective should be SMART (Specific, Measurable, Attainable, Result-Oriented, and Time-Limited).
- **Refine**
  Arrange regular, periodical discussions about targets and current status. Tracking figures will allow you to motivate people. When you find good results, make sure to recognize those who are responsible for those results. Tracking may also lead you to areas which may need improvement. You may still need further analysis to find out the cause of the problems in the dealership. For example, there are many reasons for sales decrease, low fill rate and high inventory, MOS. You'll need to find out the exact cause and take corrective actions.
- **Verify**
  The parts manager should be dedicated to improving customer satisfaction and dealership parts sales and profitability. Set sales objective, prepare an action plan and keep track of actual business figures (sales, fill rate, inventory level, MOS) daily, monthly, and annually.

3) Part Sales by Category

Does the parts department track sales by category?

- Criteria
  Parts sales should be broken down by warranty parts sales, customer paid parts, wholesale, accessories, etc. This will enable you to look at how you are doing, percentage wise, for each of the categories in comparison to your total parts sales.
- Importance
  Tracking and analyzing sales is essential for a profitable parts operation. It can help you implement new marketing strategies. Analyzing parts sales categories allows you to analyze your strengths and weaknesses. For example, your total parts sales may be in line with your objectives mainly because of your strong customer-paid parts sales, but you may be weaker in other categories which may have growth opportunities, such as wholesale.
- In addition
  Business performance indicators allow management to monitor progress toward achieving targets on a daily basis. Having accurate information enables management to take corrective action if performance falls behind expectations.
- Refine
  Identify categories which have greater growth potential and put together a team that will concentrate on coming up with ideas to implement corrective actions which will grow sales in that specific category. This may include special parts promotions, volume discounts, increase parts availability and so on.
- Verify
  Segregate total sales by sales category and analyze statistics regularly.

4) Support Tools

Does the parts staff have all necessary tools?
(EPC or WPC, parts bulletin, dealer system terminal ···)

- Criteria
  Support tools such as parts catalogs (eg. paper booklet, EPC, WPC), parts bulletin, and information technology (eg. systems, networks, and software) are very powerful tools that should be used to optimize your parts business.
- Importance
  Parts catalogs support the dealer parts staff in running the daily business. They help technicians identify which parts are needed for a repair and/or parts managers for which parts need to be ordered.
- In addition
  Below are list of catalogs type and main systems that can be used in the business.
  - Parts Catalogs : Paper booklet, CD-ROM (EPC), Internet (WPC)
  - DMS (Dealer Management System) :
    It is a software package that supports dealers with the daily running of their business. This system typically covers parts ordering to distributors, dealer warehouse administration, and dealer parts pricing and accounting.
  - RIM (Retail Inventory Management) :
    RIM systems are a development that some manufacturers offer to their dealers. RIM systems connect to distributors and allow distributors to manage dealer inventory by suggesting orders. For dealers this means that most inventory ordering will be automatic resulting in higher dealer off-the-shelf fill rates, lower inventory and more parts manager time available.
- Refine
  It is recommended that dealers encourage the use of computers and systems as a tool in their business. Ensure that all items are usable and in working condition. Updated parts information has to be available anytime for the staff to ensure accurate parts are being stocked and delivered to service department and to customers. This is also important for "Fix it right the first time."
- Verify
  Make sure the parts staff is using the latest hardcopy and software as well as parts catalog in order to guarantee the best and fastest service to your customers.

5) Tracking Lost Sales

Are Lost Sales documented and considered when adjusting the range and depth of your stock?

- **Criteria**
  All counter personnel consistently register lost sales and the parts manager tracks them to make sure stock range and depth reflects the demand.
- **Importance**
  Lost sales can be defined as a customer request for a part that the parts department can not supply from inventory. Thus, the parts department has lost a sale. Not tracking lost sales will result in the right parts not being phased-in and if the parts department does not stock the right parts.
- **Hints**
  Most dealer management systems (DMS) record demand for a part when it is sold; that usually means a repair order or an invoice. Since demand is what is analyzed by the DMS for future stocking considerations, you also have to record instances when the sale is not made, or the part is not ordered. Consider adjusting stock range and depth to increase turnover. Stock range (number of parts to be stocked) and depth (parts quantity to be stocked) should always reflect the demand. Lost sales data can be recorded through the dealer parts system or by using a lost sales sheet. Once you know the frequency of request, you can match it against your phase-in policy.
- **Refine**
  If the parts manager, in reviewing a lost sales or Emergency Purchase Report notices an increased demand, the parts manager may then wish to take action and convert the part number to an active stock number based on other information not available to the computer. The parts manager also wishes, in the case of active stocking parts, to increase the stocking level. Most computer system will consider lost sales as if they were actual sales in the calculation of the buying guide.In any event, a lost sales report should be reviewed at the production of every stock order.
- **How to check?**
  Lost sales occur because of availability or cost. A lost due to availability is a sign that you need to track repetitive demand of lost sales and respond at the appropriate time by physically stocking the part. A lost due to cost usually signifies a potential problem with the price of the part. Most DMS have a report that will tell you who is posting lost sales and how many, as well as the part numbers involved. You probably want to run this report at least monthly, if not weekly. If you do not have a DMS, you should do the same process manually.

INVENTORY MANAGEMENT

1) Inventory Count

Are job descriptions provided for the parts manager and other parts personnel? Does the dealership conduct periodic inventory count (cycle count) to ensure that stock quantities match the inventory management system?

- **Criteria**
  Periodic inventory count (cycle count) should be performed to ensure inventory integrity.
- **Importance**
  Periodic inventory counting offers the ability to perform periodic physical counts on small portions of your inventory. This allows the dealer to count your inventory several times per year, giving you more confidence in the shelf quantity accuracy. Moreover, annual physical inventory counting is absolutely essential to allow the dealership to reconcile of the inventory stocked versus the inventory shown in the general ledger. However, an annual inventory counting alone is not satisfactory. A cycle count allowing the parts manager to get through all of the parts on the shelf at least twice a year is recommended and is preferred.
- **In addition**
  The parts department receives many benefits from accurate on-hand counts:
  - Fewer unexpected variances at the time of the physical inventory (count vs. the general ledger)
  - The inventory management system (Dealership Management System) will stock better inventory (higher turns and better fill rate)
  - Counter person confidence and productivity will increase. The counter person will trust the system and will not have to verify the bins.
  - Misplacements, damaged items, theft, etc. can be noticed earlier and addressed throughout the year rather than trying to address shortage issues once a year.
- **Refine**
  A comprehensive cycle counting program is a valuable tool for ensuring that the quantities in your computer system match with what is physically in the warehouse. By performing cycle counts, inspecting and verifying adjustments, and making the physical inventory adjustments to both the physical inventory and general ledger, the annual physical adjustment with the general ledger should be minimal. An added benefit is that the annual physical count will be quicker if systematic and consistent cycle counting is used in the parts department. Cycle counting provides the dealership many operational and accounting benefits. Order accuracy, fill-rate, inventory turns, customer satisfaction, and employee productivity can all significantly improve.
- **How to check?**
  To ensure that stock levels remain accurate over time, you must investigate significant stock discrepancies and take corrective action to prevent similar problems from reoccurring in the future. Validate inventory reports and randomly pick parts from different parts class to examine how the system fairs against your physical inventory.

2) Non-Moving and Obsolete Parts

Does the dealership control the percentage of non-moving parts and obsolete parts?

- Criteria
  In a typical inventory, non-moving parts and obsolete parts should be less than 10% of the total inventory value. Non-moving parts are parts with no sales for more than 12 months.
- Importance
  Parts managers must keep track of the aging of parts within the inventory so that they can use this information in determining parts obsolescence and scrap. They must also identify and control profitable parts to achieve a good stock order which will refill the shelves to current calculated buying guides based on total demand.
- In addition
  To maximize space efficiency, standards must be created to determine which parts will be scrapped or returned.
- Refine
  Having some non-moving parts in stock is unavoidable, but regularly monitor parts classification (fast moving, medium moving, slow moving and new parts) and change the supply rule when you notice there is a big change in parts demand. Economize storage space for fast moving parts. Non-moving parts should be monitored and registered. Try to limit your fixed capital in those parts on 10% or less of your total inventory.
- Verify
  Non-moving parts have a high possibility of becoming obsolete. Obsolete parts are not desired, but it's natural and it happens. It is the parts manager's job to look at the aging status of each part. The part numbers with oldest history and no demand should be converted to a Dealer Phase-out status. Before any parts are placed on the shelf or entered into the system, conditions should be predetermined and placed as program rules within the system.

3) Inventory Update

Is on-hand quantity updated soon after parts arrival and binning?

- Criteria
  Stock orders should be received, binned and on-hand quantity updates on the dealer system should be registered quickly to make those parts available for sale.
- Importance
  It is imperative that system updates be made on all shipping, receiving and returning procedures for inventory integrity. Without a prompt submission of the current input, the parts will not be available for sale or service.
- In addition
  VOR, dealer non-stock items and back ordered items should be received and binned in the special order bin or delivered to the service department immediately upon arrival.
- Refine
  Here are a few suggestions used by many dealers for receiving orders and getting parts into stock.
  - Monitor the unloading of boxes and check the condition of boxes as it is brought in.
  - Look for any visible damage. Always open fragile boxes to make sure that nothing is broken, and carefully examine sheet metal for dents.
  - Check the bill of lading to make sure all boxes have been delivered. Note any discrepancies before signing the bill of lading.
  - Immediately update your dealer system on hand quantity so that the parts are available for sale.
- Verify
  It is recommended that stock orders are received, binned and ready to sell within two hours of arrival at the dealer. An efficient parts update system is important to maintain accurate and up-to-date stock information.

KEY PERFORMANCE INDICATOR

1) Service Supply Factor

Does the parts department monitor repair order service rate?

- **Criteria**
  Repair order fill rate measures the percentage of repair orders for parts which were supplied immediately from stock. The service rate should be monitored at least monthly and by customer type (i.e., service rate for counter customer, internal service workshop).
- **Importance**
  Repair order service rate is one way of measuring the satisfaction of serviced customers, because it indicates the percentage of repair orders that were not delayed due to parts non-availability.

$$\text{R/O Base Service Rate} = \frac{\text{Number of Repair Orders requiring parts where all the required parts were in stock}}{\text{Total number of Repair Orders requiring parts}}$$

Tracking the figures will allow you to motivate the people. When you find a good result, make sure to recognize those who are responsible for those results. Tracking may lead you to areas which need improvement. You may still need further analysis to find out the cause of problems in the dealership. Since there could be many reasons you may have a low service rate you will need to find out the exact cause of and take corrective actions.

- **In addition**
  Parts availability is critical because it dictates how quickly technicians can complete a repair job on a vehicle. Furthermore, a higher order fill rate is an important measure of customer satisfaction.
- **Refine**
  Monitor service parts fill rate that the parts system generates. This improves the dealer fill rate, a measure of whether the dealer is likely to have the parts in stock to carry out a repair or routine maintenance on a vehicle.
- **Verify**
  The service department is the parts department's most important customer. Therefore, it is important that the dealership's inventory consistently provides technicians with the parts they need. The total recommended fill rate to the service department should be at least 90% and monitored at least monthly.

2) ETA Changes

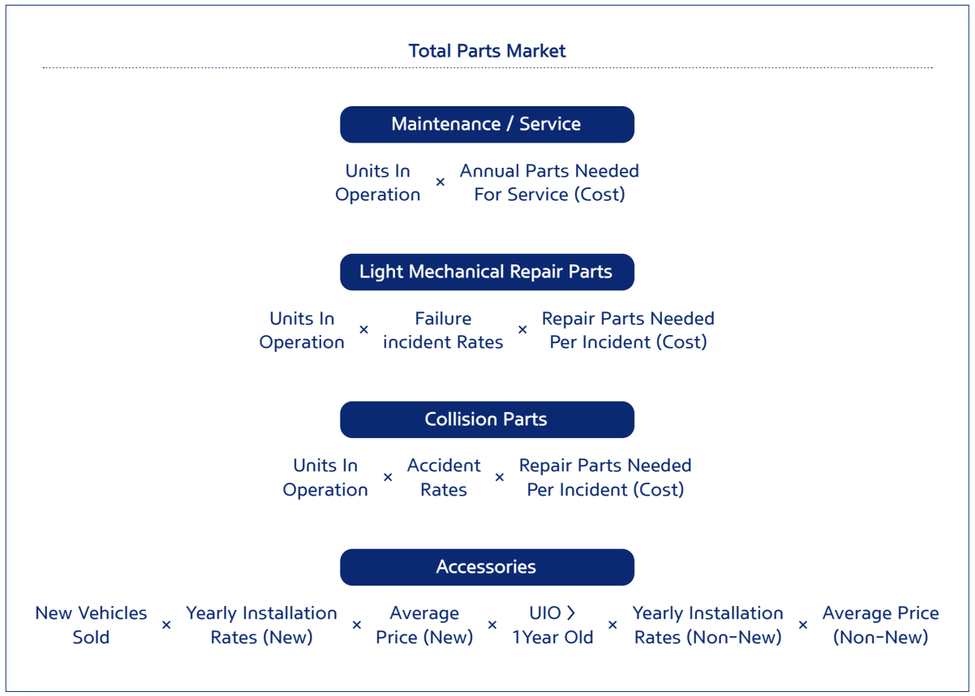
Does your parts staff inform the service department of parts ETA changes to allow appointment rescheduling?

- **Criteria**
  Establish standards for providing ETA information to the service department quickly and accurately in cases when additional parts are needed during a repair, and deliver parts to the service shop once these items become available.
- **Importance**
  Parts and Service synchronization aims at reducing idle time for technicians, increasing service shop and parts department productivity, and enhancing customer convenience and satisfaction. To maximize customer satisfaction, it is essential that serviced vehicles are delivered back to the customer according to the dealer's commitment.
- **In addition**
  When a required part is not available from dealer stock, the faster it can be obtained the better for the customer and the service department. The parts department will monitor the back order report daily and act promptly on any back ordered or special orders. The service advisor must be notified immediately of any status changes.
- **Refine**
  The parts department should re-confirm parts availability for the next day's appointments by double-checking parts received against repair order copies or by actually pre-pulling parts for the next day's appointments and placing them into the pre-pull rack while confirming 100% availability. The parts and service departments should establish a mutual improvement plan which has clear and unified objectives. Then organize monthly meetings between the two departments to discuss parts supply and ideas for further improvements of synchronization
- **Verify**
  Keep the service department informed on the status of special order parts on a daily basis, especially changes in parts ETA, so that customer appointments can be changed if necessary.

3) Parts per Unit

Does the parts department track parts sales per assigned UIO?

- Criteria
  Total parts sales divided by UIO (unit in operation) count should be performed in order to measure yearly sales objective and market retention.
- Importance
  Sales forecasting and tracking is a key factor in any company's success. Accurate sales forecasting allows a dealer to effectively control inventory level and logistics and it provides for a smoother running operation. Measurable operating figures like yearly sales objective and market retention are an indication of your strengths and weaknesses.
- In addition
  Market size estimation should be done at a product or commodity level. For example, if you wish to develop market size estimates at a commodity level then broadly divide total parts population into 4 major commodity segments.
- Refine
  Calculate parts market size for each individual segment such as; maintenance/ service parts, light mechanical repair parts, collision parts, accessories and calculate your share.



- Verify
  Collect data which will improve your parts operations. For example, calculate dealer share of the overall parts market periodically. Use these reports to ascertain your business volume on each vehicle in your data file and take actions to increase parts sales.

PARTS MARKETING AND CUSTOMER RETENTION

1) Marketing Program Support and Participation

Does the dealership support and participate in appropriate distributor-sponsored marketing programs?

- Criteria
  Support and participate in marketing programs such as direct mail, newspaper advertising and other distributor-sponsored program such as exhaust program, tire program, oil program, etc.
- Importance
  Customers are generally passive participants in the marketing programs and the reality is that you are more interested in selling to them. Your challenge is to make the customers interested and satisfied so that they become active participants and grow parts sales. Direct mail, newspaper advertising or other distributor-sponsored co-op program needs dealership participation, without it, marketing programs can not be successful.
- In addition
  The communication between you and your customers are becoming more critical as the customer has more choices and a high quality personal service is often the catalyst for most decision making. Record and maintain highly visible marketing programs that feel personal to the customer. In a highly competitive environment of parity products and parity performance, your active participation is invaluable to set yourselves apart with respect to efficiency in servicing your customers.
- Refine
  The maintenance reminder system for example is probably the single most important tool you can implement. Many dealership computer systems can produce customer lists with this information. Use this in conjunction with direct mail or service reminder to increase service traffic and your parts business.
- Verify
  Organize existing marketing programs and evaluate the effectiveness of your participation or support in these programs.

2) Service and Marketing

Are the service department's customer history files used to create marketing mailing list?

- Criteria
  Many dealerships' management systems can easily produce customer lists. It is important to use this information to increase service traffic and parts sales in conjunction with direct mail or service reminders.
- Importance
  Customers are the lifeblood of any dealership, and their expectations of your dealership are changing. The objective of each dealer should be to modify the customer's behavior by turning a one-time purchasing encounter into a long-term relationship. Marketing strategies in combination with service customer data will help to increase customer loyalty and service traffic. It will enhance the business volume and consequently parts profitability.
- In addition
  First impressions are especially important in direct mail. Make good use of your customer history and print customized promotional materials that will increase your response rates.
- Refine
  Consider regular mailings with promotional offers. Try to tie a theme selection into something the customer would like, understand, or be interested in.
  - Seasonal or holiday promotion (winter, summer, New Year's…).
  - Dealer related promotion (anniversary, new model year introduction…)
  - Safety Campaigns (Safety Awareness Month…)
  - Sports (Motor sports, World Cups...)
  Get total dealership involvement and participation in marketing activities. Be creative and adapt the theme to the local community. If your customers can relate to you as a part of the community and feel that you understand and like the same things they do, they will look at you more like a neighbor and trust can be established.
- Verify
  Initiate different marketing programs to improve your transaction volume. Point out high demand items and try to increase their sales volume. Use your in-house knowledge and put attractive packages together with the service department to attract customers to your workshop.

3) POP Material

Does the dealer use POP (Point-Of-Purchase) materials to promote genuine parts sales - like banners and posters?

- Criteria
  Updated genuine parts POP material is displayed in the showroom, service and parts areas.
- Importance
  Genuine parts display at the Point-of-Purchase in the showroom, service and parts areas is a critical element to raise consumer awareness of the benefits (fit, finish, quality) of genuine parts and re-enforce the importance of fitting genuine parts to the vehicle. POP material must draw attention and provide information on parts and incentives. Promotion materials such as pictures, posters, brochures and incentives are also key elements for brand recognition. By increasing consumer awareness about and preference for genuine parts, there is a high probability that those parts will be purchased from dealers, the only source of genuine parts. Overall stay clean and arranged properly.
- Refine
  The customer's eye influences buying decisions, most of which are based on the visual impression that a customer receives of a display. Decorate your showroom by adding recommended POP materials, which will evoke customer needs and desires.
- Verify
  Begin with a visual assessment of your showroom and parts & service area. Then proceed by contacting your distributor to determine whether they have additional POP material (posters, banners, brochures etc.) that you can use in your showroom or service and parts areas. If the POP material is not available from the distributor or the manufacturer, consider developing and producing these items yourself.





4) Periodical Market Price Research

Does the dealership conduct a periodical market price research for major selected parts to keep parts pricing competitive?

- Criteria
  Get accurate and specific competitors (other OEM, non-genuine parts, etc) pricing information in order to enhance your price positioning.
- Importance
  The market impacts and directs all aspects of the dealership's activities and ultimately will lead to success or failure of the business. The dealership has to remain competitive and pricing is a key factor in the product mix that is highly visible to customers. It is an important driver of end customer satisfaction. Therefore, it is very important to conduct regular market research and monitor the competitiveness of parts price. The competitive parts pricing helps to retain customers to maintain and repair their vehicles in the authorized dealership. Hence, it contributes to increase parts division profit through selling more genuine parts and providing better service.
- In addition
  The pricing strategy should begin with a thorough understanding of the market and competitive price level. Conduct market price research considering various elements of the parts business such as other OEM parts (e.g. a comparable Toyota, Ford, Peugeot part), independent aftermarket, alternative sources of parts (remanufactured parts, salvage), alternative channels (gray market) and so on.
- Refine
  There are several means in which you can conduct market price research :
  - Work with a market price research company and acquire competitors' price lists.
  - Purchase ready-made reports with market pricing by major product segments (usually available from a variety of independent research companies).
  - Send out comparison shoppers to price and compare competitor's offers.
  - Ask buyers how they perceive the price and quality of each competitor's offer.
- Verify
  Generate random samples for major selected parts in periodical intervals. Compare pricing and draw an appropriate conclusion. Observe neighboring dealerships, free workshops and the retail industry. Find your price strategy within regional competition. Make use of attractive packages and prices.

03.
PARTS PROCESS

GENUINE PART LOYALTY

1) Genuine Parts for Sale

Are genuine OE parts sold and used in the parts and service department for vehicle repairs?

- **Criteria**
  Dealership has to offer and use genuine parts, but batteries, chemicals, fluids and some accessories which the manufacturer does not offer are excluded.
- **Importance**
  OE products ensure the highest quality, safety and long product life. Non-genuine parts makers do not guarantee their products appropriately. While imitation parts are cheaper, they could cost the customer a lot more in the long run.



- **In addition**
  Only order and use genuine parts since they are designed to optimize the vehicles' performance. Imagine what could happen if the brake pads you just put on a customer's vehicle were made from compressed wood chips - on second thought, don't !
- **Refine**
  Utilize genuine parts material at your disposition to increase consumer awareness. Sensitize your consumers about safe car maintenance options that are available to them. Clearly state the risks associated with buying imitation parts. They typically don't last as long as genuine parts, making it necessary to replace them more frequently, which ends up costing the owner more money. Considering these parts typically aren't built according to the vehicle's specification, they can lead to other mechanical problems and system breakdowns. Furthermore, fakes are often produced from substandard materials that don't hold up or perform like genuine parts. They could cause major safety problems for vehicle owners and their families.



- **Verify**
  Encourage consumers to only purchase parts from authorized retailers and demand genuine parts. Setup a "Genuine VS Non Genuine" parts display in the customer area and offer genuine parts brochures.

ORDERING

1) System Pre-Ordering

Does the dealership have a defined stocking policy and are automatically calculated stock replenishment orders verified for irregularities?

- **Criteria**
  In order to ensure maximum inventory efficiency, the system must be allowed to strictly apply proper ordering parameters (criteria).
  ※ This only applies to general control parts. Special orders must be carefully examined before submission.
- **Importance**
  Having a clearly defined stocking policy (phase-in and phase out parameters) prevents sudden large irregular orders from depleting stock of a specific part. The decision to stock, or phase-in, a part is made when demand reaches a predetermined level in a predetermined length of time in the computer (the industry standard is 3 demands within 12 months). When sales fall below a certain level, then the part is phased-out and placed back into non-stock status. The system won't suggest reorders unless the part phases-in again.
- **Hints**
  Before any parts are placed on the shelf or entered into the system, parameters must be pre-determined and placed as program rules within the system. It is absolutely critical that part managers understand those parameters.
- **Refine**
  Demand on some parts numbers can suddenly accelerate and show erratic movement within a period of time, such as one month which is not indicative of normal demand patterns. Some of these occurrences are; warranty parts sales, parts changed by superseding parts numbers, seasonality, parts in quality problem and so on. These irregularities should be monitored with special attention. If a part shows a new pattern of sales after being phased-out, parts manager or the system should always have the ability to reinstate the part into an active category.



- **How to check?**
  Stocking parameters can be changed according to the parts demand fluctuation. Periodical review of stocking parameter is needed for better ordering and inventory management.

2) Order Types

Does the dealer order the following type of parts with separate order types?
1-Stock Order, 2-VOR / Emergency Order, 3-Special Orders

- Criteria
  These orders may be placed at different or same time but they must be separated in order to minimize fluctuations in the stock replenishment cycle.
- Importance
  Ideally, you would like to have all needed parts in stock before they become urgent, but we can't truly predict future demand. But VOR parts are extremely urgent parts, and they directly impact customer satisfaction. The faster you get the part, the quicker the customer will have their car back on the roads and the delay in which this process occurs will determine your customers' level of satisfaction.
- In addition
  VOR and special orders (parts campaign, seasonal parts, promotion parts…) should be separated from stock replenishment orders in order to keep dealer stock levels lean.
- Refine
  In order to decrease the frequency of VOR demands, stock orders have to be pre-ordered early enough to establish a timely delivery to parts and service. Try not to release emergency / VOR type parts orders too frequently. VOR items and back ordered items should be received and binned in a special order bin or delivered to the service department immediately upon arrival.
- Verify
  VOR orders are what they are, and should not include trim parts, sun visors, and other parts which do not prevent the car from being on the roads. Check VOR orders' percentage versus stock orders' percentage. If the VOR orders' percentage is higher than the previous year or significantly high, you should double check your inventory level and ordering system.

© Copyright: All right reserved. All intellectual property rights, including copyrights, trademarks rights and database rights with respect to the information, texts, images, logos, photographs and illustrations on the Manual with respect to the layout and design of this Manual are protected by intellectual property rights and belong to Hyundai Mobis, Overseas Parts Business Team or entitled third parties. The reproduction or making available in any way or form of the contents of the Manual without prior written consent from Hyundai Mobis, Overseas Parts Business Team is not allowed.