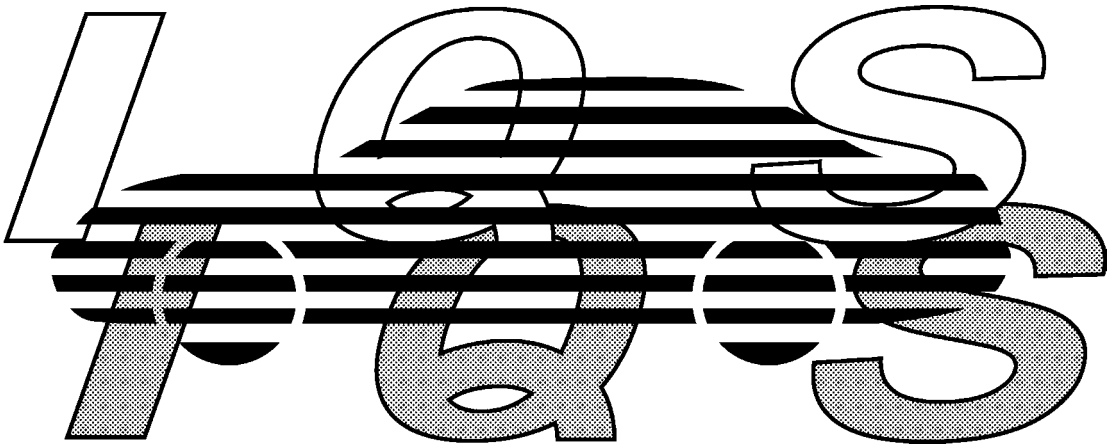
TOYOTA

Vehicle Delivery Quality Improvement

EFFECTIVE USE OF IQS RESULTS



TOYOTA MOTOR CORPORATION

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I. OUTLINE OF INITIAL QUALITY SURVEY (IQS)

1. Initial Quality Survey (IQS)

IQS is the survey to gather the information from customers on vehicle delivery quality. Usually it is conducted by Distributor three weeks after the new vehicle is delivered to the customer.

Sample of the questionnaire is shown here. The 24 component items are listed.
Out of these 24 component items, the component items related to Electrical & Accessories, Exterior, Interior and Paint can be effectively improved by implementing "Prevention of Deterioration and Damage" and "Thorough Inspections and Repairs" at each vehicle delivery process in VDQI (Vehicle Delivery Quality Improvement) activities. The above 4 items should be highlighted as the target of VDQI activities.

IQS Questionnaire

[Extract from page 20 of CSI manual]

VI. About your New TOYOTA
(Only new TOYOTA vehicle purchasers.)

(8) Since taking delivery of your new TOYOTA, have there been problems with the below listed components? If so, please check.

MECHANICAL FEATURES
1 ☐ Engine
2 ☐ Engine electrical
3 ☐ Fuel
4 ☐ Automatic transmission
5 ☐ Manual transmission
6 ☐ Driveline
7 ☐ Steering
8 ☐ Suspension
9 ☐ Brakes

INTERIOR FEATURES
14 ☐ Interior trim
15 ☐ Seats
16 ☐ Air conditioning/heater
17 ☐ Audio system
18 ☐ Interior switches
19 ☐ Instrument panel
20 ☐ Accessories

EXTERIOR FEATURES
10 ☐ Body fit
11 ☐ Paint finish
12 ☐ Windows
13 ☐ Exterior trim

GENERAL
21 ☐ Water leaks
22 ☐ Wind noise
23 ☐ Squeaks/Rattles
24 ☐ Others

Specify condition(s) checked above: _____

4 items targeted for VDQI activities	Related Component Items
Electrical & Accessories	Engine electrical, Audio system, Interior switches, Instrument panel, Accessories
Exterior	Body fit, Windows, Exterior trim
Interior	Interior trim, Seats
Paint	Paint finish

2. Usage of IQS

(1) Find out Problem Areas
Use IQS results as index for finding areas where you should concentrate your efforts for VDQI.
① Items which customers are dissatisfied with / Items which have many customer complaints
② Items which continue to get worse / Items which got unexpectedly worse
③ Dealer which has many customer complaints compared to other Dealers

(2) Motivate the Persons Concerned in Distributors/Dealers for VDQI
① Indicate a need for VDQI activities by showing the current situation objectively.
② Measure the effectiveness of VDQI activities for rewarding the effort. Award program based on IQS results may be one of the good rewards.

(3) Utilize the Results for PDCA (Plan-Do-Check-Action) Cycle
Measure the effectiveness of VDQI activities and check whether you get the expected results, in order to further improve the activities.

II. STEPS FOR EFFECTIVE USE OF IQS RESULTS

The recommended steps for effective use of IQS results are shown in this chapter. The following are mainly about effective use of IQS results in Dealers.

DISTRIBUTOR

Step 1. Conduct Initial Quality Survey (IQS)

Conduct IQS to learn customer evaluation of the vehicle delivery quality.
(Refer to CSI manual issued by TMC.)

⇩

Step 2. Analyze IQS Results

Analyze the IQS results and make a summary report.

⇩

Step 3. Set Improvement Target

Set improvement target for VDQI activities based on IQS analysis results.

⇩

Step 4. Feed Back the IQS Analysis Results to Dealers

Provide all dealers with the IQS analysis results and each customer's response etc. to improve vehicle delivery quality.

⇩

DEALER

Step 5. Confirm the problem

Confirm the problems based on IQS analysis results and each customer's response.

Step 6. Communicate with Customer

Communicate with customer who had complaint based on each customer's response to promptly settle the problem.

Step 7. Feed Back Problem Information

Sort the problems into "Problems on Dealer" and "Problems on Distributor and Plant", and then provide Dealer's delivery processes and Distributor with feedback.

DEALER

Step 8. Improve Dealer's Delivery Processes

Improve Dealer's delivery processes involved in the "Problems on Dealer" to prevent the same problems from recurring.

DISTRIBUTOR

Step 9. Summarize and Provide Problem Information

Summarize problem information and sort it into "Problems on Distributor" and "Problems on Plant", then provide Distributor's delivery processes and TMC/Local Plants with feedback.

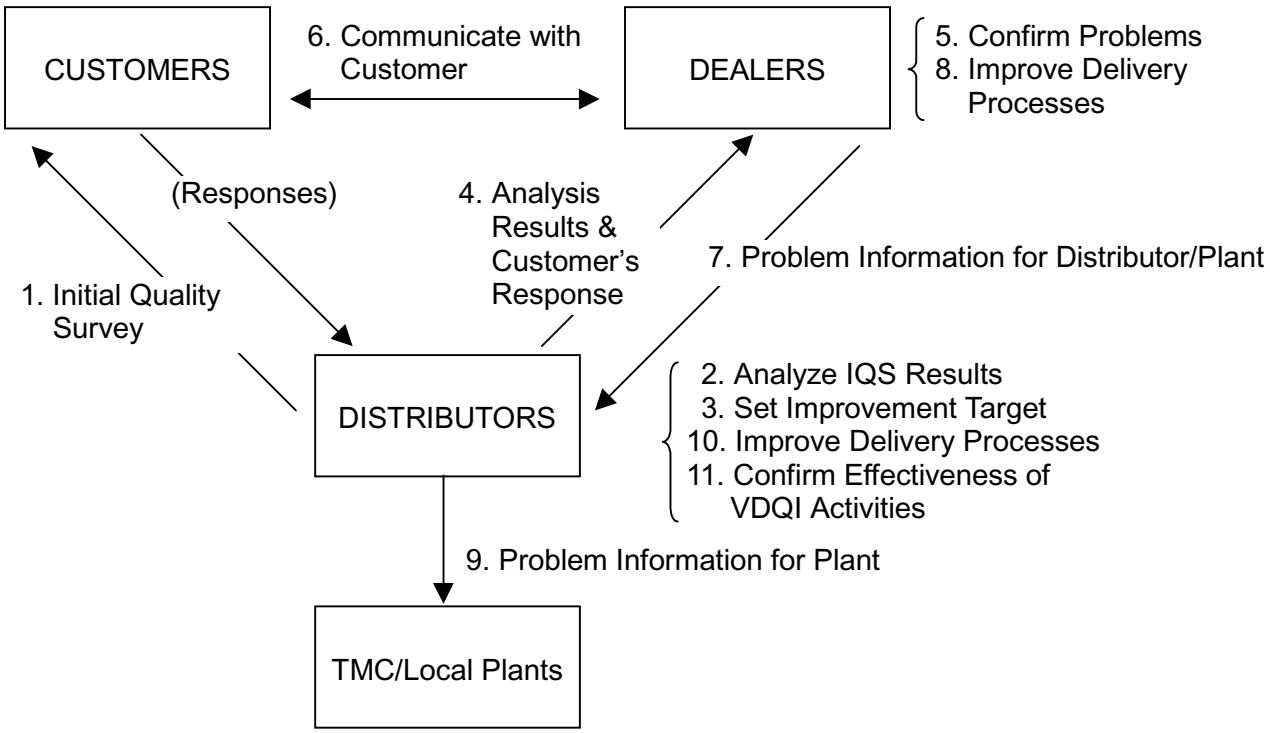
Step 10. Improve Distributor's Delivery Processes

Distributor checks and improves own delivery processes based on the "Problems on Distributor" to prevent the same problems from recurring.

Step 11. Confirm Effectiveness of VDQI Activities

Confirm the effectiveness of VDQI activities on the basis of the IQS analysis results, and promote VDQI activities further.

Feedback Cycle of IQS Results



III. CONTENTS OF EACH STEP

The contents of each step in the aforementioned "II. STEPS FOR EFFECTIVE USE OF IQS RESULTS" are as follows:

1. At Distributor (Step 1 – Step 4)

Step 1: Conduct Initial Quality Survey (IQS)

Conduct the Initial Quality Survey to improve the Vehicle Delivery Quality based on the customer's expectations. (Refer to CSI manual issued by TMC.)

Step 2: Analyze IQS Results

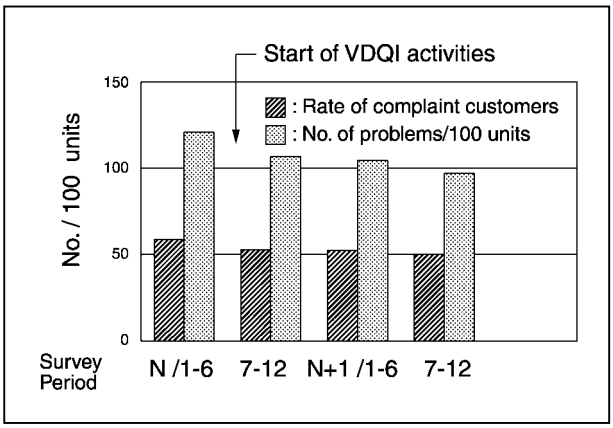
Analyze the IQS results in order to achieve the following objectives and make a summary report.

Analysis Objective	Example of Analysis Item	Recommended Frequency
(1) Visualizing VDQI activities for Distributor & Dealer's managers	• No. of problems for all component items (Fig. 1)	Every 6 months
	• Rate of complaint customers (Fig. 1)	
	• No. of problems for 4 component items targeted in VDQI (Fig. 2)	
(2) Identifying priority improvement items in VDQI activities	• No. of problems by component item (Fig. 3)	Every month
	• No. of problems for each of 4 component items (Fig. 4)	
	• No. of problems for each specific sub-item (Fig. 5)	
(3) Identifying Dealer which needs priority guidance	• No. of problems for all component items by Dealer (Fig. 6)	Every 6 months

Examples of IQS Analysis Results

(1) Visualizing VDQI activities for Distributor & Dealer's managers

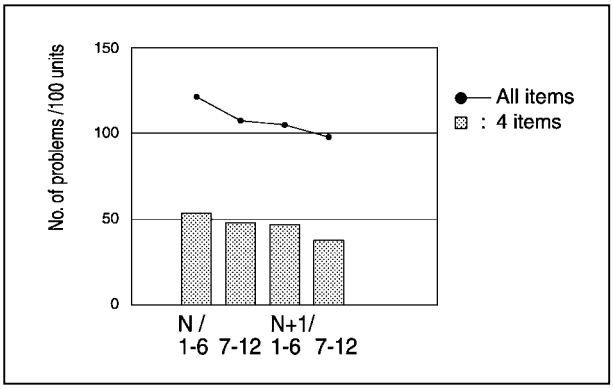
1. No. of problems for all component items & rate of complaint customers (Fig. 1)



This example shows that the no. of problems and the no. of complaint customers have decreased gradually after VDQI activities started.

So customer satisfaction has been improved gradually.

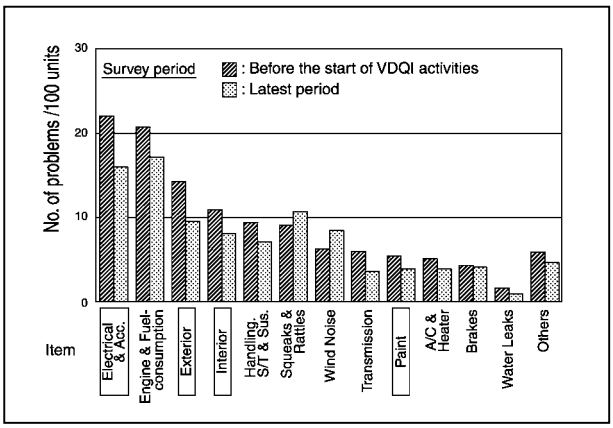
2. No. of problems for 4 component items targeted in VDQI (Fig. 2)



The no. of problems for 4 component items targeted in VDQI is an index for confirming the effectiveness of VDQI activities because these problems can be improved by "Prevention of Deterioration and Damage" and "Thorough Inspections and Repairs" in VDQI activities at Distributor/ Dealers.

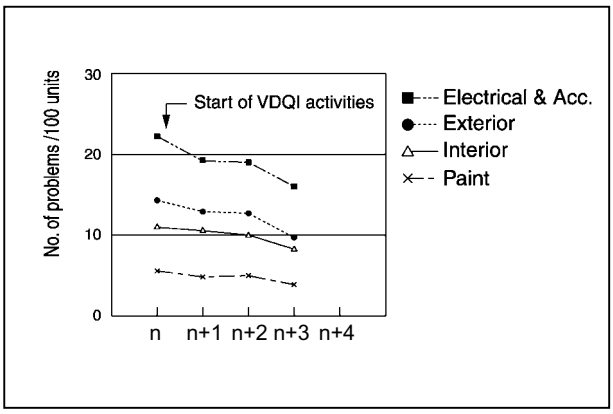
(2) Identifying priority improvement items in VDQI activities

1. No. of problems by component item (Fig. 3)



This example shows:
① Change in no. of problems by component item before and after the start of VDQI activities.
② Ranking of the 4 component items surrounded by a black border (☐).
③ High ranked items that should be given priority to improvement.

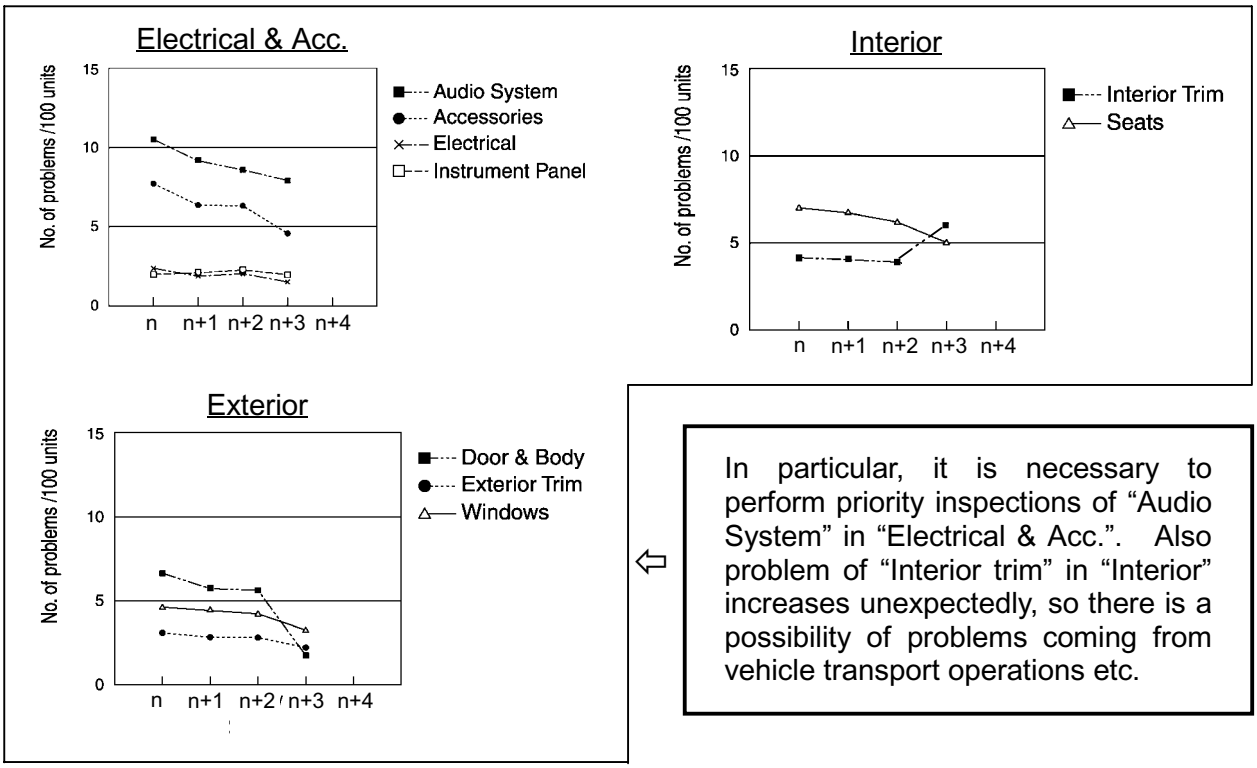
2. No. of problems for each of 4 component items (Fig. 4)



This example shows that the no. of problems for each of 4 component items has decreased gradually.
However, there are still a lot of problems in "Electrical & Acc." compared with other problems.

So "Electrical & Acc should be given priority to inspection and improvement.

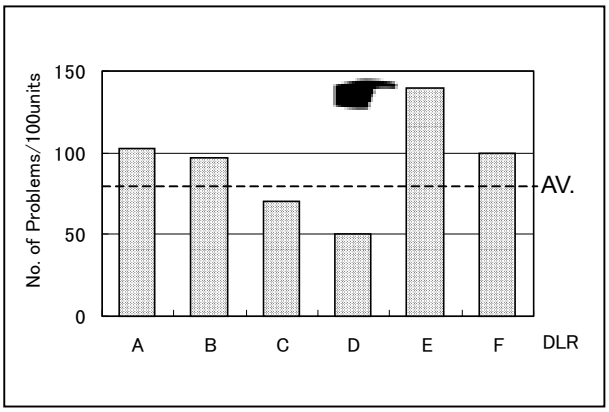
3. No. of problems for each specific sub-item (Fig. 5)



In particular, it is necessary to perform priority inspections of "Audio System" in "Electrical & Acc.". Also problem of "Interior trim" in "Interior" increases unexpectedly, so there is a possibility of problems coming from vehicle transport operations etc.

(3) Identifying Dealer which needs priority guidance

1. No. of problems for all component items by Dealer (Fig. 6)

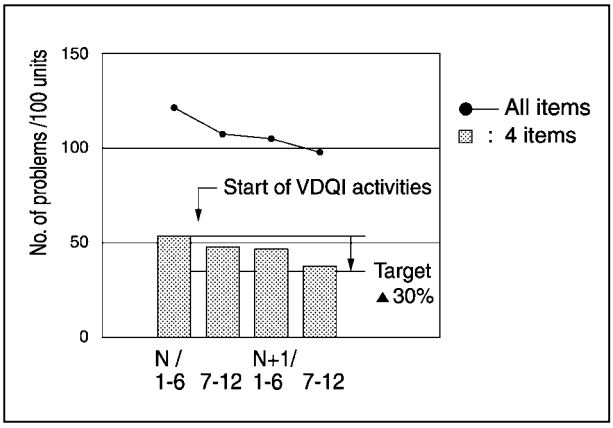


In dealer "E", the no. of problems/100 units is high compared with other dealers. There may be a problem with operations. So this dealer should be given priority guidance by field rep. or consultant etc.

Step 3: Set Improvement Target

Set improvement target for National (Regional) and Dealers using the no. of problems for 4 component items.

Improvement target



This is an example of setting the national improvement target.

HINT: The recommended target is a 30 % - 50 % reduction compared with before VDQI activities started.

Step 4: Feed Back the IQS Analysis Results to Dealers

The Distributor provides each Dealer's top management with the following information to help them understand their IQS status and for their use in improving their vehicle delivery quality.

Information	Classification	Frequency	Objectives
(1) Monthly IQS report for each Dealer (Please refer to Example 1.)	Each Dealer	Every Month	• Provide each Dealer with IQS analysis results to take timely action.
(2) Each customer's response (Raw data; Please refer to Example 2.)	Each Dealer	At any time	• Quickly provide each Dealer with the response to contact customer.

For summary report on IQS analysis results in each Dealer, refer to the step 2.

Example 1: Monthly IQS Report for Each Dealer

This is an example of the Monthly Report to inform each Dealer of its own IQS results.

In this example, the Dealer will find out that a lot of paint finish problems occurred in September (see ①) compared with other months, so priority inspections and improvements should be quickly performed.
Also the Dealer will notice that its score in interior is significantly worse than other Dealers (National Average) (indicated by ②). It means that there may be a lot of room for improvement at the Dealer.

DELIVERY QUALITY REPORT
YEAR - TO - DATE SEPTEMBER

DEALER :

SEATS	JAN	FEB		AUG	SEP	OCT	NOV	DEC	TOTALS	No.of problems /100units	National Av.
ENGINE ELECTRICAL		1			1				4	0.9	0.8
AUDIO SYSTEM	3				2				9	2.0	2.1
INTERIOR SWITCH	1	1			2				5	1.1	1.0
INSTRUMENT PANEL		1							2	0.4	0.5
ACCESSORIES					1				4	0.9	1.0
Electrical & Acc	4	3	0	0	6				24	5.3	[redacted]
BODY FIT	1	3	1		3				11	2.4	2.0
WINDOWS	1	2	2		1				9	2.0	1.9
EXTERIOR TRIM		1			2				3	0.7	0.8
Exterior	2	6		0	6				23	5.1	[redacted]
INTERIOR TRIM	1	2			1				9	2.0	1.0
SEATS		3			2				16	3.6	1.5
Interior	1	5		0	3				25	5.6	[redacted]
Paint Finish	2	4		1	7				22	4.9	②
ENGINE	1	1		1	1				8	1.8	1.8
FUEL	1					①			1	0.2	0.2
AUTOMATIC TRANS.		1							2	0.4	0.4
MANUAL TRANS.		1			1				6	1.3	1.2
DRIVELINE									1	0.2	0.2
SUSPENSION		2							5	1.1	1.0
STEERING		1	1	1	1				7	1.6	1.7
BRAKES		1		1	1				9	2.0	2.0
AIR CONDITIONING									7	1.6	1.5
WATER LEAKS									1	0.2	0.2
WIND NOISE	2	2							10	2.2	2.1
SQUEAKS/RATTLES	1	2			1				15	3.3	3.2
OTHERS	2	1			1				11	2.4	2.5
TOTALS	16	30		4	28				177	39.3	35.4
Customer's Response	48	59		30	65				450		

Example 2: Each Customer's Response (raw data)

This is an example for feeding back each customer's response (raw data) to each applicable Dealer. Question 8 surrounded by a black border in the following chart gives the results of IQS.

This example shows that the customer has experienced a few problems with the components (indicated by ①, ② and ③), so it is recommended to contact the customer for confirming the details of the problems and the customer's expectations based on this data.

(SP 1272N) NEW VEHICLE SALES AND DELIVERY SURVEY PAGE: 15
VIN: JT2EL45U6P0138970 DETAIL OF VALID #### RETURNED SURVEYS SENT DATE: ##/##/##
CUSTOMER: KATHY RUN DATE: ##/##/## RETURNED DATE: ##/##/##
H PHONE: ( ) INDEX: 90.8 IRN: 48507
W PHONE:( )
DEALER: SALESMAN SSN: ###-##-#### RETAIL DATE: ##/##/## PRODUCTION DATE:##/##

QUESTIONS:	CUSTOMER'S RESPONSE:
WAS THE VEHICLE YOU WERE PREVIOUSLY DRIVING A TOYOTA?	
1. WHEN YOU PURCHASED YOUR NEW TOYOTA, HOW SATISFIED WERE YOU WITH THE PERFORMANCE OF THE DEALER'S SALES STAFF ON EACH OF THE FOLLOWING ITEMS?	
COURTESY AND FRIENDLINESS	VERY SATISFIED
KNOWLEDGE OF TOYOTA PRODUCTS	VERY SATISFIED
PROFESSIONALISM	VERY SATISFIED
FULFILLMENT TO COMMITMENTS MADE DURING SALE	SOMEWHAT SATISFIED
OVERALL HANDLING OF SALE BY SALESPERSON	VERY SATISFIED
2. AT THE TIME OF DELIVERY, DID SOMEONE AT THE DEALERSHIP…	
EXPLAIN THE VEHICLE SERVICE MAINTENANCE SCHEDULE	YES
EXPLAIN THE NEW VEHICLE WARRANTY	YES
PROVIDE INFORMATION ABOUT SERVICE AND PARTS DEPARTMENT	YES
OFFER TO DEMONSTRATE VEHICLE FEATURES AND CONTROLS	YES
GIVE YOU A COPY OF THE NEW VEHICLE DELIVERY CHECKSHEET	YES
3. HOW SATISFIED WERE YOU WITH THE CONDITION OF YOUR NEW TOYOTA AT THE TIME OF DELIVERY ON EACH OF THE FOLLOWING ITEMS?	
CLEANLINESS OF THE EXTERIOR	SOMEWHAT DISSATISFIED
CLEANLINESS OF THE INTERIOR	SOMEWHAT SATISFIED
4. DID YOUR SALESPERSON OR A DEALERSHIP REPRESENTATIVE FOLLOW-UP BY CONTACTING YOU	
__ IN PERSON _X_ BY PHONE __ IN WRITING __ A CARD __ NO CONTACT	
5. WOULD YOU RECOMMEND THIS DEALER TO A FRIEND AS A PLACE TO BUY A NEW TOYOTA?	PROBABLY RECOMMEND
6. A. WOULD YOU HAVE YOUR TOYOTA SERVICED AT THIS DEALER, IF FOR ANY REASON YOU HAD TO?	PROBABLY
B. IF FOR ANY REASON YOU HAD TO REPLACE YOUR TOYOTA, WOULD YOU BUY ANOTHER TOYOTA?	PROBABLY
7. DID YOU HAVE ANY PROBLEMS WITH YOUR NEW TOYOTA AT THE TIME OF DELIVERY?	

8. PLEASE IDENTIFY COMPONENT PROBLEMS YOU EXPERIENCED

CONPONENTS	COMPONENTS	COMPONENTS
__ ENGINE	__ BRAKES	__ AUDIO SYSTEM
① _X_ ENGINE ELECTRICAL	__ BODY FIT	③ _X_ INTERIOR SWITCHES
__ FUEL	_X_ PAINT FINISH	__ INSTRUMENT PANEL
__ AUTOMATIC TRANSMISSION	__ WINDOWS	__ ACCESSORIES
__ MANUAL TRANSMISSI ②	_X_ EXTERIOR TRIM	__ WATER LEAKS
__ DRIVELINE	__ INTERIOR TRIM	__ WIND NOISE
__ STEERING	_X_ SEATS	__ SQUEAKS/RATTLES
__ SUSPENSION	__ AIR CONDITIONING	__ OTHER

9. HOW SATISFIED WERE YOU WITH THE VEHICLE FINANCE, SERVICE AGREEMENT OR INSURANCE?

10. HAVE YOU CONTACTED THE CUSTOMER ASSISTANCE CENTER REGARDING THIS SALES & DELIVERY?

COMMENTS:
WOULD RECOMMEND:
OVERALL COMMENTS: AIR BAG LIGHT STAYS ON/RIGHT INTERIOR LIGHT NOT WORKING/SEVERAL SURFACE PAINT SCRATCHES AND CHIPS/SEATS ARE UNCOMFORTABLE.

2. At Dealer (Step 5 – Step 8)

Step 5: Confirm the Problem

Confirm the problems based on IQS analysis results and each customer's response.

(1) If necessary, contact customer to confirm the details of the problems pointed out by customer.

(2) Confirm whether the same problems reoccur or not with person responsible of PDS/ vehicle delivery inspection, and check repair record.

Step 6: Communicate with Customer

Information of the customer complaint is an opportunity to regain customer's satisfaction/trust or even get better satisfaction than no trouble case, if the complaint is solved properly.

Communicate with customer who has problem and settle the problems.

(1) The Dealer service manager selects customers to contact based on each customer's response after referring to the repair record etc. and make an appointment with the selected customers.

(2) When the customer comes to the Dealer with his/her vehicle, the Dealer's service manager carefully confirms the symptoms of the problem with the sales manager and the customer to repair the problem.

Step 7: Feed Back Problem Information

The Dealer service manager sorts the results of priority inspections and customer contact as follows:

(1) Concerning "Problems on Dealer", the Dealer service manager feeds back data on Dealer Problems to the Dealer's delivery processes which may have caused the problems, and also reports to the Dealer's top management.

(2) Concerning "Problems on Distributor and Plant", the Dealer service manager prepares problem information which includes Distributor and Plant Problems, and sends the report to the Distributor/TMC.

Step 8: Improve Dealer's Delivery Processes

For "Problems on Dealer", the Dealer's delivery processes should be checked and the poor conditions which may have caused the problems should be improved.

The Dealer service manager follows up the improvement status, and also confirms the effectiveness.

3. At Distributor (Step 9 – Step 11)

Step 9: Summarize Problem Information and Provide Feedback

The Distributor's service department sorts problem information sent from Dealers as follows:

(1) Problems on Distributor
The service department summarizes the reports and provides the Distributor's delivery processes with feedback.

(2) Problems on Plant
The service department prepares the "Field Technical Report" for feedback to TMC/Local plants.

Step 10: Improve Distributor's Delivery Processes

(1) Based on the "Problem on Distributor" data, the consultant from the Distributor visits and checks the Distributor's delivery processes, and requests them to improve poor conditions which may have caused the problems.

(2) The consultant also follows up the improvement status.

Step 11: Confirm Effectiveness of VDQI Activities

(1) Evaluate the effectivenss of VDQI activities at Distributor/Dealers by the IQS analysis results.

(2) Compared the IQS analysis results to the target and continue to promote VDQI activities according to PDCA (Plan-Do-Check-Action) cycle

----- MEMO -----

----- MEMO -----

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TOYOTA MOTOR CORPORATION

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