

Attachment #Q8

Document 1 QIS SCWA-030618-04

HONDA

The power of dreams

CONFIDENTIAL

DB: Supplier Design

QUALITY IMPROVEMENT SHEET (Q.I.S.)

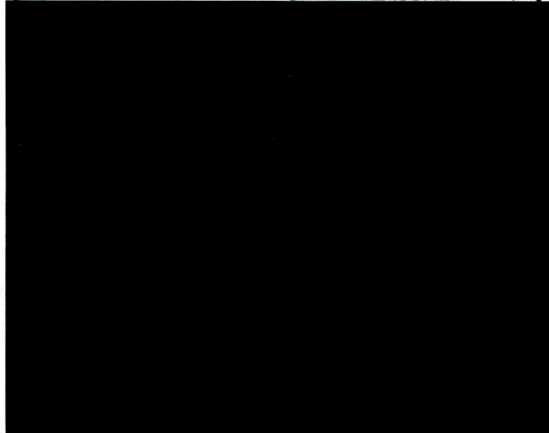
Issued by:

HAM M.Q.

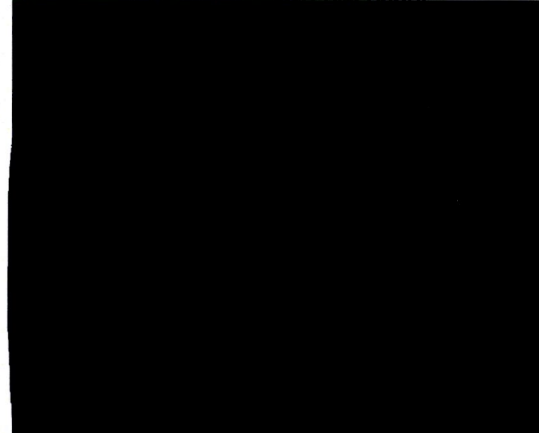
Page 1

COUNTERMEASURE CONTROL # SCWA-030618-04		RESPONSIBLE PLANT AND DEPARTMENT Marysville Auto Plant 6150 AQG: PLANNING		RANK A
INFO ID WAR-208059-376241		A. H. NUMBER 1		INFORMATION SOURCE Warranty Claim
ODOMETER 1460 mi		SUPPLIER HL-A CO. INC.		VIN [REDACTED]
MARKET INFORMATION ISSUER [REDACTED]		MARKET QUALITY ISSUER [REDACTED]		ENGINE NUMBER [REDACTED]
TRANSMISSION NUMBER [REDACTED]		RELATED A.H. TECHLINE CODE 2590: SHIFT CABLE/INTERLOCK		
PRIMARY FAILED PART NUMBER AND DESCRIPTION 35100-SCVA LOCK ASSY., STEERING		PRIMARY RELATED WARRANTY CLASS Ign/Key Cylinder Ignition Switch Inoperative/Inop		
DEALER/STATE 208059 CA		TITLE 03M Element, Accord, Civic Ignition Switch Assembly Inop		
PRODUCTION DATE 03/02/26		OCCURRENCE DESCRIPTION Customer stated the key can be removed from the ignition switch when not in park. Dealer fixed problem by replacing the ignition switch assembly.		
SALES DATE 03/03/14		MARKET INFORMATION INVESTIGATION [REDACTED]		
OCCURRENCE DATE 03/04/21				
MQ RECEIVE DATE 03/05/05				
THRU UP DATE 03/06/18				
ANALYSIS RECEIVE DATE 03/06/18		MARKET QUALITY CAUSE ANALYSIS MQ has analyzed 1 claim with the above contention. As a result of MQ and HL-A investigation, a deformed edge on the interlock lever was determined to be the cause of malfunction. The function of this lever is to prevent the key from being turned to the off position and removed while the vehicle is not in park. With this deformed edge, the inner joint of the key cylinder is able slide pass the interlock lever while it is engaged. MQ determines this is a supplier design and usage concern issue.		
CAUSE ANALYSIS APPROVAL DATE 04/08/04				
RESPONSIBLE DPT ISSUE DATE 04/08/04				
COUNTERMEASURE REPLY DATE 05/08/09				
1st COUNTERMEASURE APPLICATION DATE 03/08/14				
Finish Date 05/08/09				

VIEW BEFORE COUNTERMEASURE



VIEW AFTER COUNTERMEASURE



HONDA
The power of dreams

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QUALITY IMPROVEMENT SHEET (Q.I.S.)

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Page 2

RESPONSIBLE DEPARTMENT CAUSE ANALYSIS					COUNTERMEASURE BY
Driver Sequence: 1)Driver tries to turn the ignition off while the car is not in P, inner joint digs into the lever. 2)Inner joint stays engaged. Spring doesn't release lever. 3)After driver realizes the car is not in P, the driver shifts the car into P. 4)The driver will then turn the ignition to the O position. 5)Partial disengagement of lever, allows inner joint to deformed the lever. Result of Failure: Once the tab is damaged from customer usage, its locking strength is reduced and may fail					03/10/29
COUNTERMEASURE CONTENTS					COUNTERMEASURE CONTROL #
Interlock lever style change to SEA style. SEA lever strength is 1.6 times stronger. Lever strength increased from 9Nm to 15Nm.					SCWA-030618-04
Civic: 04M start up Accord: 04M start up Element: AF Date 11/22/04					SOLD PRODUCT TREATMENT
					AH: NORMAL WARRANTY
					CH: NORMAL WARRANTY
					JH: NORMAL WARRANTY
					EH: NORMAL WARRANTY
					OTHERS: NORMAL WARRANTY
					STOCKED PRODUCT TREATMENT
					NO TREATMENT
					PART STOCK CHANGE
					AFTER SERVICE PART NUMBER
					SERVICE BULLETIN NUMBER
					DESIGN CHANGE NUMBER
COUNTERMEASURE APPLICATION INFORMATION					
C/M TYPE	VEHICLE IDENTIFICATION NUMBER	C/M APPLICATION DATE	ENGINE NUMBER	TRANSMISSION NUMBER	NOTES
HARD		04/12/02			04 Element Advance Supp
HARD		04/11/24			04 Element Advance Supp
HARD		03/09/18			04 Civic 2Dr KC
HARD		03/09/16			04 Accord 2Dr L4 KC
HARD		03/09/10			04 Accord 2Dr V6 KC
HARD		03/09/08			04 Civic 2Dr
HARD		03/09/06			04 Civic 4Dr
HARD		03/09/04			04 Accord 2Dr
HARD		03/09/03			04 Accord 2Dr
HARD		03/08/21			04 Accord 4Dr V6 KC
HARD		03/08/14			04 Accord 4Dr L4 KC
HARD		03/08/14			04 Accord 4Dr
RECOMMENDED FIELD ACTION Due to low growth rate, repair under normal warranty.					
COUNTERMEASURE EFFECTIVENESS C/M parts show over 10x toughness increase with 0 After C/M occurrences.					
RECOGNITION SIGNATURES					
CHIEF ENGINEER	MQ MANAGER	MQ STAFF ENGINEER		RESPONSIBLE DEPT. MANAGER	
		REPLY	ISSUE		

Attachment #Q8

**Document #2
QIS MV20040426180508**

Original Document (Japanese)

Entire original document (Japanese) is included with English translated document, which is being submitted under a Request for Confidentiality.

Attachment #Q8

Document #2
QIS MV20040426180508

English Translation

CONFIDENTIAL BUSINESS INFORMATION

EVENT FLOW
RESPONSIBLE DEPARTMENT AND PERSON
COMPLETION DATE

COUNTERMEASURE
REQUEST

ADDRESSEE		RECEPTION	RECEPTION		
		RECEPTION	RECEPTION		

RANK
A

DATE:		
APPROVAL	CHECK	CREATOR

RECEPTION

MODEL CODE YM/MODEL NAME	TITLE	QIS CONTROL #
CG6	KEY COMES OUT OF IGNITION SWITCH WHILE IN GEAR	MV20040426180508
02/ACCORD		
OCCURRENCE DESCRIPTION		
Key comes out of the Ignition Switch while the transmission is in gear		

INFORMATION INVESTIGATION

INVESTIGATION AND ANALYSIS

2004/05/19

REPLY	REPLY TO	H Yonrin Hinkai Goto	VIA	BY	May 19
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COUNTERMEASURE REQUEST

[REDACTED]

2004/04/28

Place of occurrence: US market
Subject Part: Key Cylinder (35100-S84-A33)

Market Returned Part Examination Results


- When 12V is applied to interlock solenoid and the key is turned to LOCK with the lever blocked, although a little "catching" was felt, it was possible to turn and remove the key, exhibiting customer's contention.
- Confirmed a deformation at the blocking area of interlock lever end. (visual confirmation)

Requested HONDA LOCK to investigate the occurrence mechanism of the reported symptom.

Detailed Analysis Results

- 1) Function test
 - Interlock function and lever blocking condition were tested with QA tester and

Recreation Test



Engagement margin

The investigation into part variance revealed that some parts had contact margin below required initial margin of 1.2mm.

*Based on the above results,
It is presumed that parts with initial contact margin below 1.2mm were subject to repeated hard operation of the key while interlock is activated, causing the deformation of the lever, leading to the claimed symptom.

INTERMEDIATE REPLY

COUNTERMEASURE REPLY
2005/03/14

COUNTERMEASURE ISSUED

COUNTERMEASURE APPLICATION

COMPLETED

2005/04/06

DATE	REPLY DEPARTMENT (IN-HOUSE)	APPROVAL	CHECK	CREATOR	DATE	REPLY DEPARTMENT (IN-HOUSE)	APPROVAL	CHECK	CREATOR	DATE	REPLY DEPARTMENT (OUTSIDE)	APPROVAL	CHECK	CREATOR
03/14														

CAUSE ANALYSIS

COUNTERMEASURE

**TREATMENT FOR STOCK & SOLD
UNITS & PARTS**

COUNTERMEASURE EFFECTIVENESS

FEED BACK TO THE SOURCE

Contact margin of some interlock lever were below initial requirement, which led to damage in the course of use in the North American market.

This is an old model and its production has ended. So, no countermeasure will be taken.

(Service Parts)
Subject parts to be replaced with part (assy) which has increased contact margin with lever.

(N/P Parts)
From 03M, the shape and material (AL→ZDC) of the lever will be changed for increased strength.

[illegible]

The breaking torque of current M/P models is 2.5 times as high as S84 type, exhibiting the effectiveness of countermeasure.


- Study for market usage should be carried out and the results should be reflected to specification.
- Reflect to FTA in order to ensure preventive measures.

QUALITY IMPROVEMENT SHEET
[Q I S]

ISSUED BY	

OCCURRENCE MARKET		
REPORT #	A2C164-00	
FRAME #	[REDACTED]	
ENGINE #	[REDACTED]	
TRANSMISSION #		
TRANSMISSION CATEGORY		
MILEAGE OR HOURS	15638	Mile
REGISTRATION DATE		
OCCURRENCE DATE	2004/03/20	
PRODUCT DATE		

SERVICE PART #			
MAIN CAUSAL PART #	35100-S84-A33		
CAUSAL PART SYMPTOM CODE AND DESCRIPTION	005	Worn	
MODEL CODE			
CAUSE CATEGORY			
RESID.	DEPARTMENT		
	SUPPLIER	HONDA LOCK MFG. CO.	CODE 6504
COUNTERMEASURE CATEGORY	Only Market Disposal		
COUNTERMEASURE PART SYMPTOM CODE AND DESCRIPTION			
OCCURRENCE FORECAST	Free-of Secondary		
COUNTERMEASURE PART AVAILABILITY			No
REVISED ITEM	DRAWING	OPERATION STANDARD	

△						
△						
△						
△ 1	2005/04/07	FINISH				
△ 0	2004/05/11	NEW				
ISSUE	DATE	VERSION APPROVAL	CHECK	CHECK	CREATOR	

INVESTIGATION RESULTS

judged to be NG

2) Disassemble confirmation

-Deformation was found on the surface of interlock lever blocking area.

-Slight deformation was found on the inner collar and cylinder cam (projection).

*These deformations reduce the contact margin of inter lock lever and collar that rotates coinciding with key turning to LOCK, disabling blocking. As a result, the key can be turned to LOCK and removed.

TREATMENT FOR STOCK & SOLD UNITS & PARTS

*This case is not a subject of market action in Japan market, as the manner of key operation or usage are different.

Attachment #Q8

Document #2
QIC Report

Original Document (Japanese)

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Attachment #Q8

**Document #2
QIC Report**

English Translation

CONFIDENTIAL BUSINESS INFORMATION

QIC Report Identification

A2C164-00

Page : 1 / 1

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Attachment #Q8

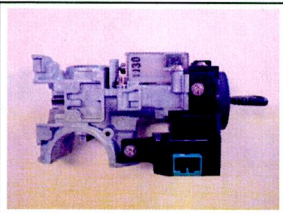
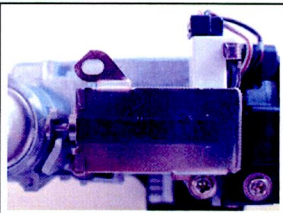
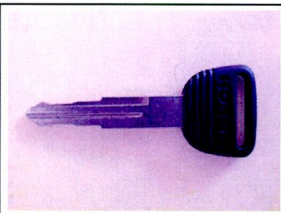
**Document #2
Analysis Report**

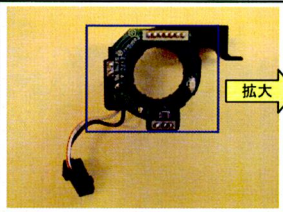
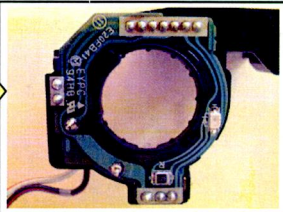
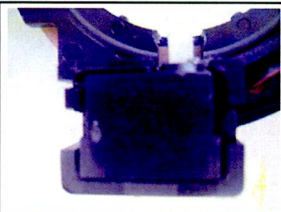
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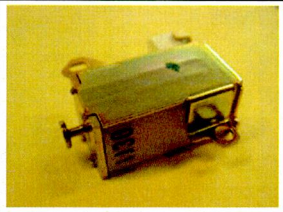
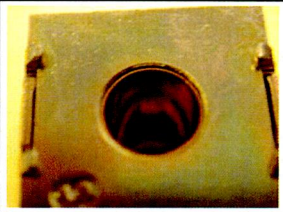

テーマ	ミツヨにキアが入っている時、IG/SWからキ-抜け
部 番	35100-S84-A33
部品名	キ-リッパ-セット


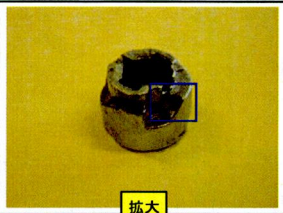
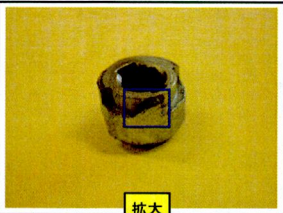

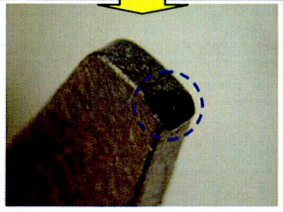
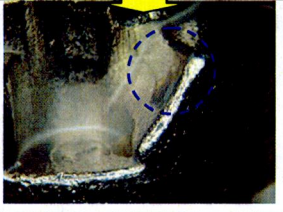
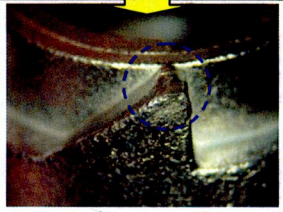
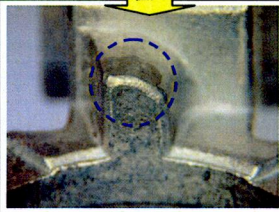
<別紙-1>

現品確認写真

		
スプリング ロック	インターロック部	キ-
異常なし	異常なし	代比無しモ-ルドキ-にて返却

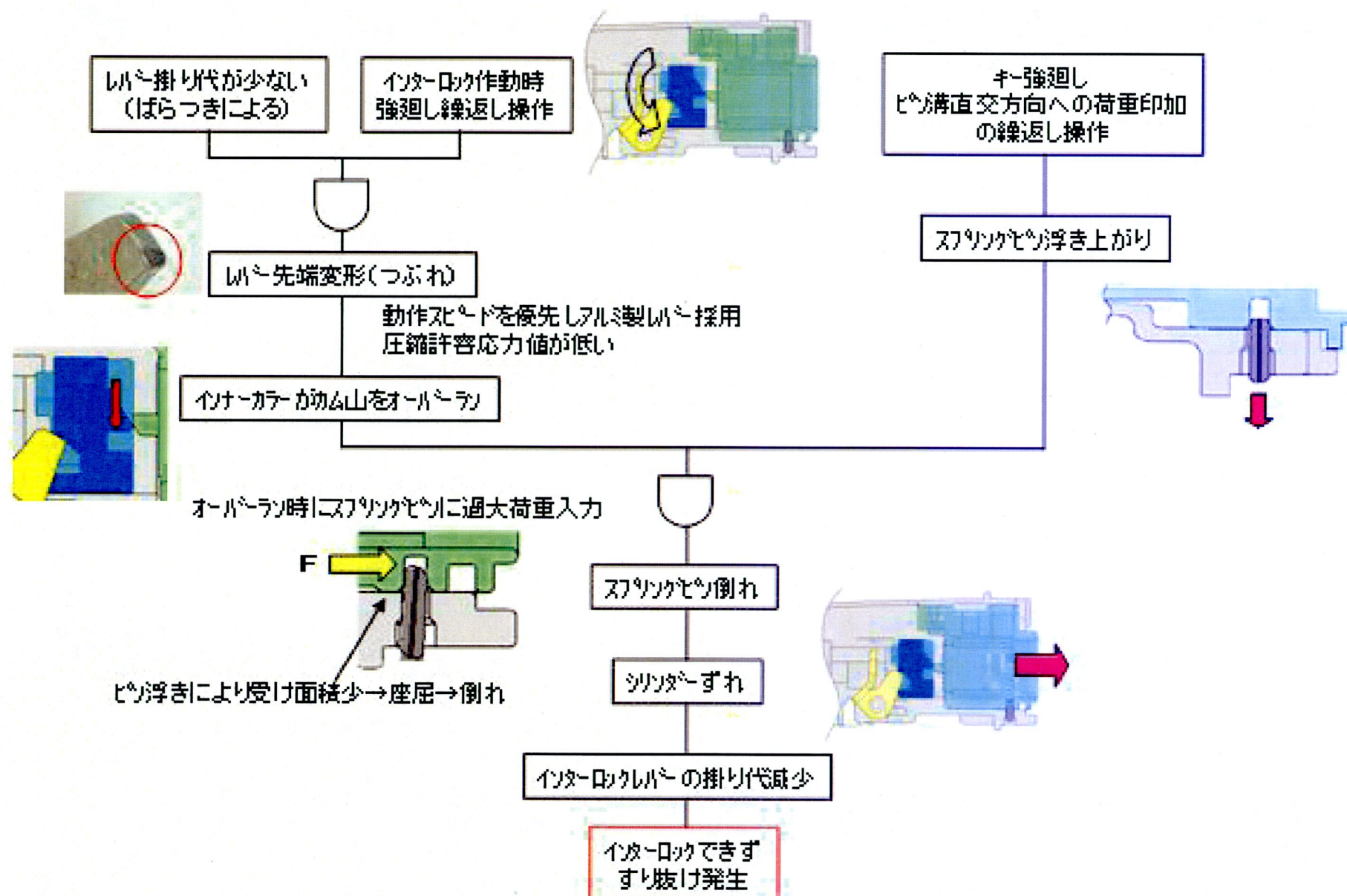
		
電装ユニット	電装ユニット基盤	電装ユニットスイッチ
異常なし	パターン破損なし	異常なし

		
インターロック	インターロック用ノイドバ-イフ	プ-ランジャー
異常なし	異物付着なし	異物付着なし

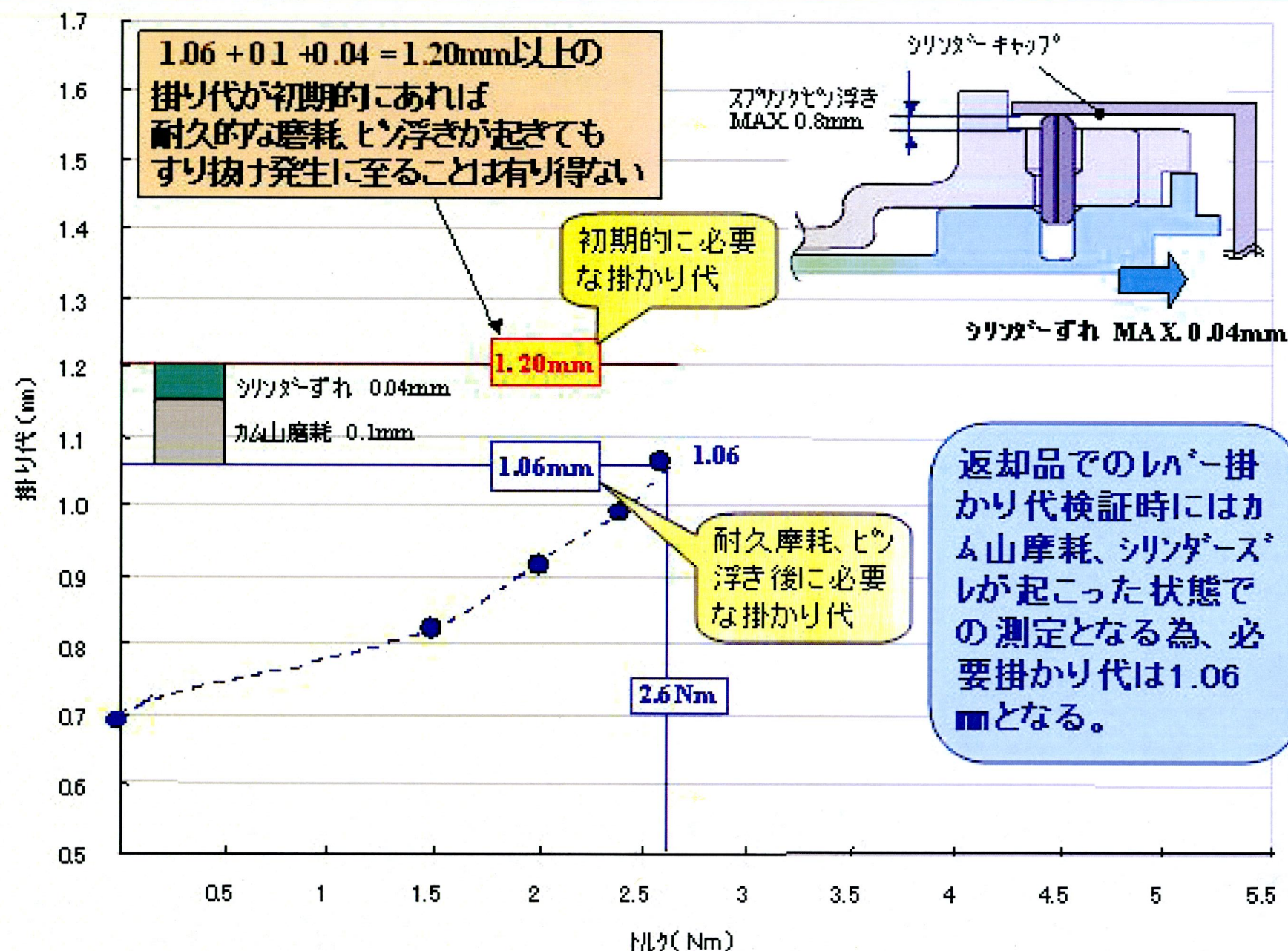
			
拡大	拡大	拡大	拡大
			
インターロックバ-	インターカーブ ロック部	インターカーブ山部	リッパ-山部
先端部変形あり	変形あり	摩耗あり	摩耗あり
変形量: 0.35mm	変形量: 0.07mm	摩耗量: 0.07mm	摩耗量: 0.04mm

不具合発生メカニズム

<別紙-2>



スプリングピンの浮きを考慮した必要掛り代 (US市場) <別紙-2>



駐車 の仕方の操作手順

- ① パーキングブレーキを掛ける
- ② セレクトレバーを「P」位置に入れる
- ③ キーをACC位置まで回す
- ④ キーを押し込んでLOCKの位置まで回す
- ⑤ キーを抜く

日本では自動車
教習所で操作手
順は十分教えら
れている

取り扱い 説明書
で必要事項を説
明している

日本では不具合が起きない

Attachment #Q8

**Document #2
Analysis Report**

English Translation

Theme	Key comes out of IG-SW while gear is in transmission
Part number	35100-S84-A33
Part name	Key cylinder set

Analysis record [Analysis Report]

Section	Honda Lock Mfg. Co., Ltd	Feb 24, 2005		
		Responsible	Confirmed by	Created by
		Yano	Nagatomo	Inada
Signed on original copy				

Occurrence situation (Symptom, Contention, Number of occurrences, Treatment)

Model : CG6 02M/ACCORD
 Occ date : Mar 20, 2004
 Occ location : US market
 No of occ. : 1
 VIN No. : JHMC66-6832
 Mileage : 9,773km
 Registration date : Jan 8, 2002
 Contention : Installed the IG/SW to a engineering test car and confirmed that the key can be removed with the shifter in any
 Product name : Key cylinder set
 Prod. Lot : Oct 30, 2001
 Treatment : Replacement of key cylinder set

AQAO control No. : 20040426180508
 C/M request reception date : Apr 28, 2004

Grasp of factors (Part confirmation results, Factorial Analysis/ Quality of production parts)

1. Failure part confirmation

(1) Exterior confirmation

- Steering SW had been removed. (not returned)
- Mold key without immobilizer is installed.
- No code cut on interlock solenoid from external damage, etc.
- Adhesion of contaminant is not observed on the electrical unit coupler terminals and the terminals are straight.

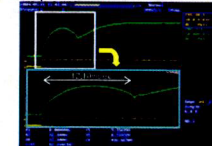
(2) Performance confirmation

<Inspection by QA machine>

<Interlock performance: Judged NG in lever block confirmation.

<Bench>

<Interlock response confirmation results: 12.10 msec compared to the spec of 15 msec or below. Met spec and has no abnormalities.



<Coil resistance of interlock solenoid met spec and has no abnormalities.

Spec	Measured value	Judgment
15 msec or below	12.10 msec	OK

(3) Operation confirmation

- Applied current from electrical unit and when pushed key at ACC position, the lever moved smoothly and worked with key pushing operation.
- When rotation load is applied in interlock blocking condition, the inner collar slip through and the key could be turned to OFF position.

Claimed symptom recreated

(4) Disassembly confirmation

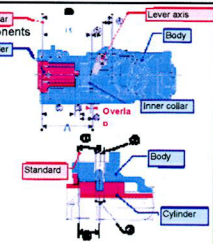
- No abnormalities such as adhesion of contaminant and corrosion were not observed on the electric unit push stroke SW and pattern. Continuity is normal.
- No abnormalities such as damages and corrosion were not observed on the interlock solenoid pipe and plunger.
- Deformation was confirmed on the interlock block.
- Slight deformation was confirmed on the inner collar and cylinder car.



No other abnormalities such as contamination that would affect interlock function were not observed.

(5) Precision measurement of the related components

	No.	Initial spec	Measurement
Body	1	5 ^{+0.1} ₀	5.02
	2	2.4 ^{+0.1} ₀	2.45
	3	53.8 ^{+0.07} ₀	53.76
	4	7.1 ^{+0.06} ₀	7.07
	5	8.265~8.645	8.33
Cylinder	6	25.6 ^{+0.1} ₀	25.51
	7	2 ^{+0.1} ₀	2.01
	8	5 ^{+0.06} ₀	5.03
Inner collar	9	3.6 ^{+0.1} ₀	3.49
	10	10.8 ^{+0.1} ₀	10.63



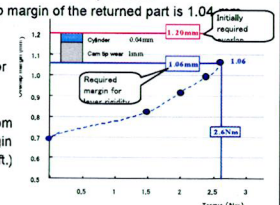
Measured components related to lever overlap margin and based on the wear amount of the cylinder 9 and inner collar 10, it is assumed that the initial dimensions are within the spec and have no problems.

From the results, the overlap margin of the returned part is 1.04

<Required margin>

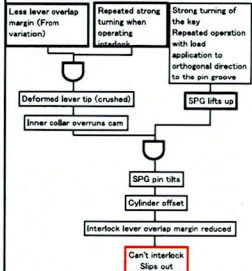
Required overlap margin for lever rigidity is 1.06 mm.

(Initially required margin becomes 1.20 mm when considered aging deterioration and spring pin lift.)



Cause identification (Occurrence mechanism/ Recreation test/ Why analysis)

1. Occurrence mechanism

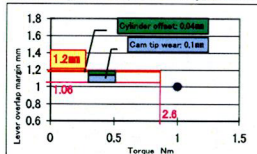


2. Recreation test

(1) SPEC 1 position Block durability
1.5Nm×10,000 cycles in interlock condition
Result: No slip out

(2) Confirm durability changing lever overlap margin and torque at blocking.
Condition: American's Max torque = 2.6Nm

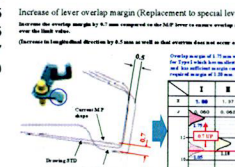
: Blocking cycles: Max 5,000
(from verification of handling methods)
Result: 1.06 mm is the limit value with 2.6Nm.
Required initial overlap margin becomes 1.2 mm considering the cam tip wear and cylinder offset.



Appropriate response (C/M content/ Forecast of effectiveness/ PPA)

1. Affected models

• ACCORD	Css vehicle 99~02M	285,653
• ACCORD	HAM vehicle 99M	148,005
• TL	HAM vehicle 99M	28,825
• PRELUDE	Css vehicle 97~01M	36,787
TOTAL		499,270



2. Countermeasure

Operate interlock and check if it blocks or not.

ACCORD, TL	If blocks: Replace parts with S84 lever kit (6351-S84-000)
	If not block: Replace parts with S84 cylinder kit (06352-S84-000)
PRELUDE	If blocks: Replace parts with S84 lever kit (06351-S84-000)
	If not block: Replace parts with S30 cylinder kit (06352-S30-000)

Stock parts: For the parts manufactured by HL-J, replace all of them to the Assy. parts installed with the parts with increased lever overlap (special lever).

2. Summary

Regarding the failure this time, the overlap margin when returned was 1.04 mm compared to the required margin 1.06 mm. Repeated strong turning of key beyond expectation at interlock blocking with overlap margin of 1.06 mm or below leads to slip out. Therefore we judge that the failure occurred with the returned part due to worn lever from repeated strong turning of key beyond expectation.

Confirmation of C/M effectiveness

1. Effect of the C/M

When installed a special lever to a key cylinder with the worst lever overlap of 1.05 mm, the margin increased by 0.7 mm, so the lever overlap margin becomes 1.75 mm.
The margin increases by 0.55 mm from the minimum required overlap margin, 1.2 mm and becomes 1.60 mm. Therefore we judge that the C/M is effective.

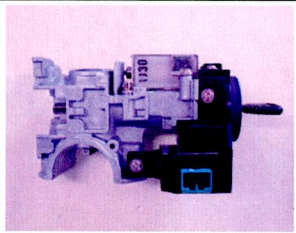
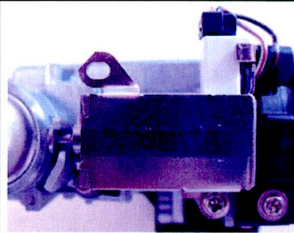
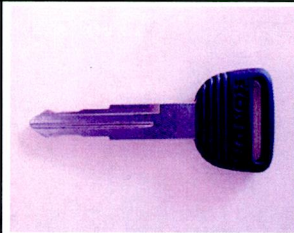
Feedback (Reflection to structure)

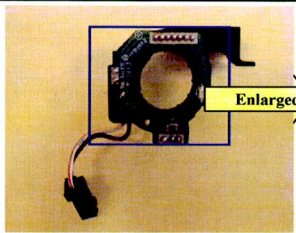
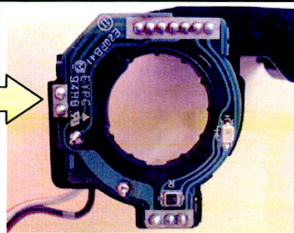
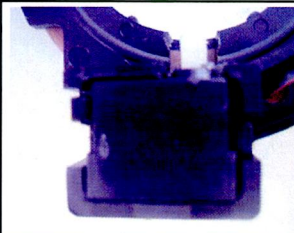
- To carry out reinvestigation of American's key turning torque and verify their handling methods, then reflect the results to SPEC.
- To reflect to FTA and prevent recurrences thoroughly.


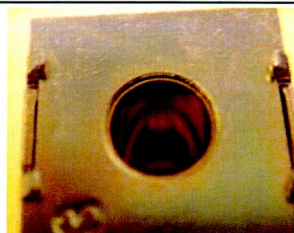

Title	Key comes out of IG-SW while gear is in transmission
P/N	35100-S84-A33
Part Name	Key cylinder set

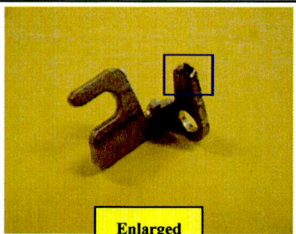
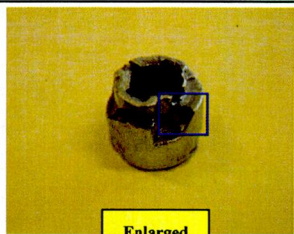

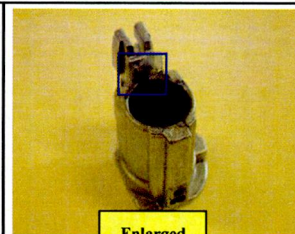
<Separate sheet 1>

Photos of failure part confirmation

		
Steering lock	Interlock part	Key
No abnormalities	No abnormalities	Mold key w/o immobiliser was returned

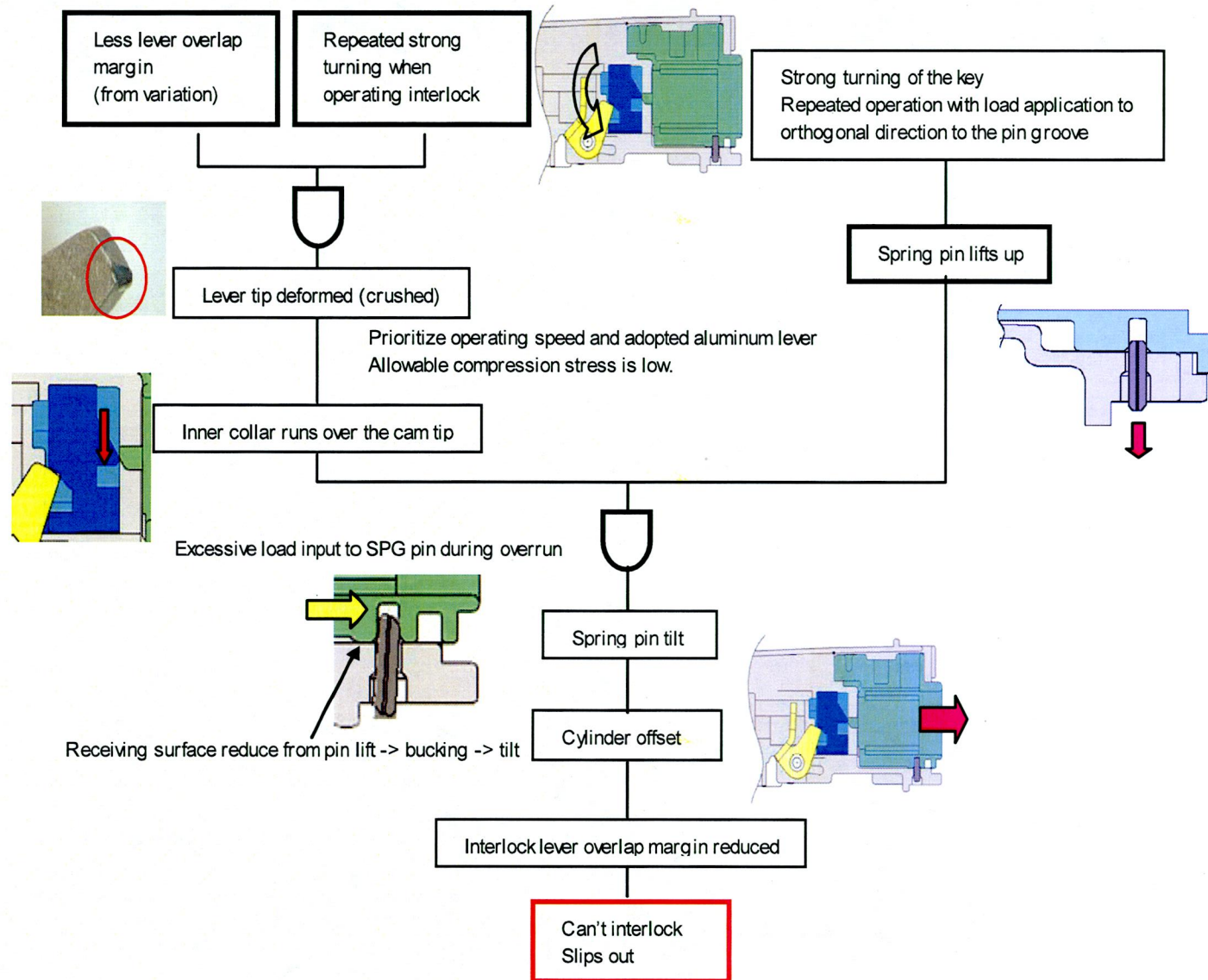
		
Electric unit	Electric unit/substrate	Electric unit/push switch
No abnormalities	No pattern breakage	No abnormalities

		
Interlock	Interlock solenoid pipe	Plunger
No abnormalities	No contaminants	No contaminants

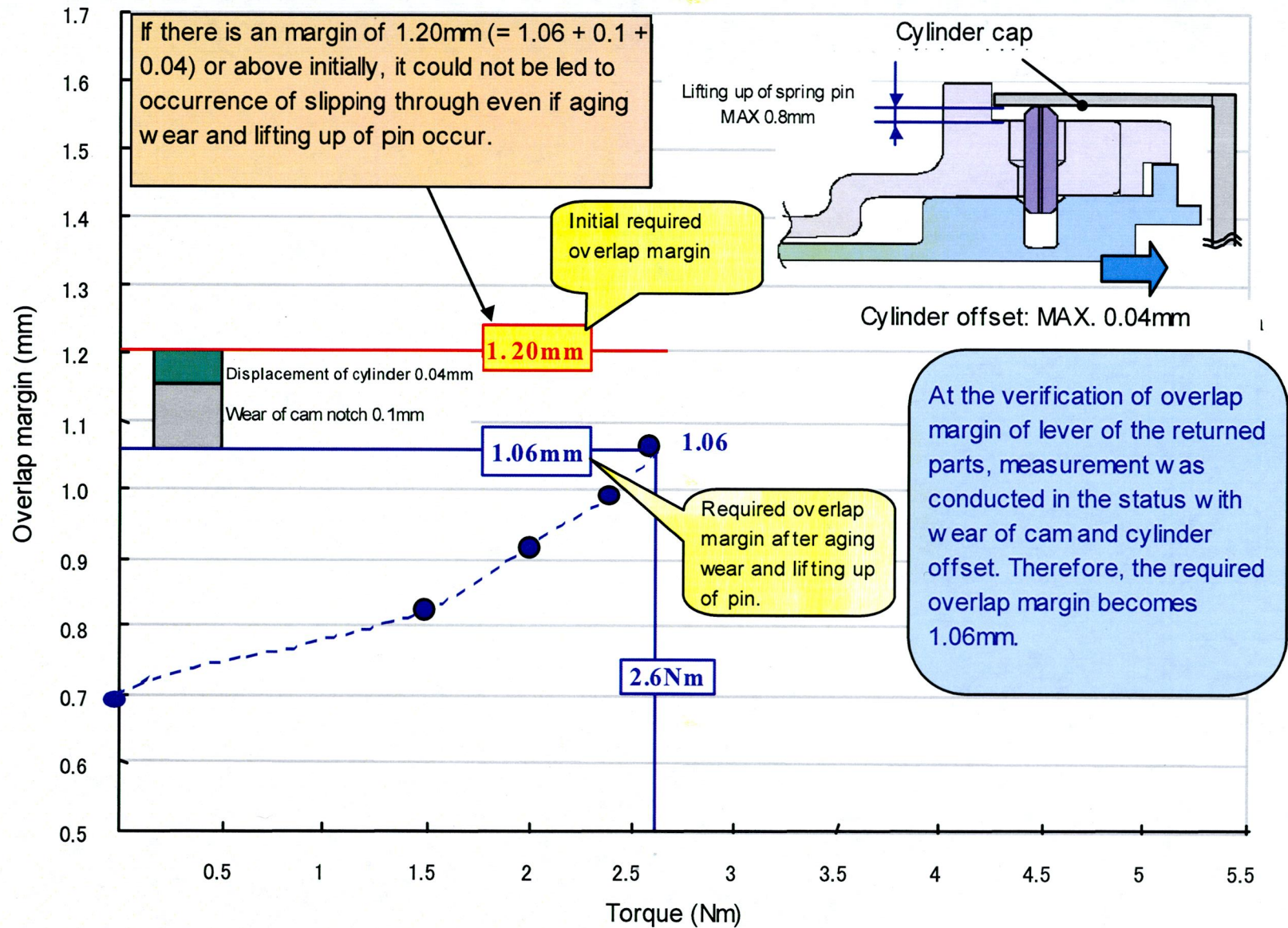
			
Interlock lever	Inner collar block part	Inner collar cam	Cylinder cam
Tip deformed	Deformed	Worn	Worn
Deformation : 0.35mm	Deformation : 0.07mm	Depth of wear : 0.07mm	Depth of wear : 0.04mm

Occurrence mechanism of the failure

<Separate sheet-2>



Required overlap margin with consideration of SPG pin lift up. (US Market) <Separate sheet-2>



Operating procedure of parking.

- (1) Apply the parking brake.
- (2) Put the gear select lever into P position.
- (3) Turn the key to "ACC" position.
- (4) Push the key and turn it to "LOCK" position.
- (5) Pull out the key.

In Japan,
operation
procedure is
taught sufficiently
at driving school.

Owner's manual
describes
necessary
information.

Failure does not occur in Japan.

Attachment #Q8

**Document #2
VIN Range**

Original Document (Japanese)

対象範囲一覧

車名	型式	通称名	仕向け	年式	対象車の車台番号の範囲及び製作期間		対象車の台数	
Css	BB6	HONDA PRELUDE	アメリカ向け	1997	JHMBB6201VC	~ JHMBB6246VC	7,541	
					1996/4/23	~		1997/8/1
			カナダ向け	1997	JHMBB6240VC	~ JHMBB6240VC	1,118	
					1996/7/2	~		1997/6/26
			アメリカ向け	1998	JHMBB6243WC	~ JHMBB6248WC	8,243	
					1997/8/6	~		1998/8/3
			カナダ向け	1998	JHMBB6243WC	~ JHMBB624XWC	978	
					1997/9/8	~		1998/6/5
			アメリカ向け	1999	JHMBB6246XC	~ JHMBB6245XC	5,934	
					1998/5/8	~		1999/7/3
	カナダ向け	1999	JHMBB6240XC	~ JHMBB6243XC	430			
			1998/8/17	~		1999/6/28		
	アメリカ向け	2000	JHMBB6247YC	~ JHMBB624XYC	4,978			
			1999/8/3	~		2000/7/31		
	カナダ向け	2000	JHMBB6241YC	~ JHMBB6249YC	758			
			1999/8/24	~		2000/6/17		
	アメリカ向け	2001	JHMBB62481C	~ JHMBB62421C	5,964			
			2000/8/1	~		2001/11/5		
	カナダ向け	2001	JHMBB624X1C	~ JHMBB62731C	1,187			
			2000/8/1	~		2001/11/3		
	CG5	HONDA ACCORD	アメリカ向け	1999	JHMC65641XC	~ JHMC65650XC	49,840	
					1998/5/8	~		1999/7/2
			カナダ向け	1999	JHMC65651XC	~ JHMC65648XC	3,721	
					1998/9/4	~		1999/3/26
			アメリカ向け	2000	JHMC6564XYC	~ JHMC65655YC	40,879	
					1999/4/12	~		2000/7/7
カナダ向け			2000	JHMC65669YC	~ JHMC65669YC	1		
				1999/4/22	~		1999/4/22	
アメリカ向け			2001	JHMC656441C	~ JHMC656631C	30,590		
				2000/2/23	~		2001/7/5	
カナダ向け			2001	JHMC656431C	~ JHMC656431C	1		
				2000/4/17	~		2000/4/17	
アメリカ向け			2002	JHMC656782C	~ JHMC656672C	33,737		
				2001/7/4	~		2002/6/27	
CG6				アメリカ向け	1999	JHMC66653XC	~ JHMC66679XC	36,728
						1998/7/9	~	
	アメリカ向け	2000		JHMC66673YC	~ JHMC6665XYC	36,492		
				1999/2/25	~		2000/7/6	
	アメリカ向け	2001		JHMC666541C	~ JHMC666061C	25,109		
				2000/4/17	~		2001/7/7	
	アメリカ向け	2002		JHMC666522C	~ JHMC666842C	28,517		
				2001/7/4	~		2002/7/2	
CF8		アメリカ向け	2000	JHMC68646YC	~ JHMC68647YC	549		
				1999/5/13	~		2000/7/1	
		カナダ向け	2000	JHMC68645YC	~ JHMC68645YC	1		
				1999/4/15	~		1999/4/15	
CG1		アメリカ向け	2001	JHMC686431C	~ JHMC686471C	594		
				2000/7/12	~		2001/7/3	
		アメリカ向け	2002	JHMC6864X2C	~ JHMC686402C	487		
				2001/7/30	~		2002/6/5	
アメリカ向け	2001	JHMC616411C	~ JHMC616561C	4				
		2000/7/3	~		2000/7/3			

対象範囲一覧

車名	型式	通称名	仕向け	年式	対象車の車台番号の範囲及び製作期間	対象車の台数
ホンダ オブ アメリカ	CF8	HONDA ACCORD	アメリカ向け	1999	CF8-092950 ~ CF8-163632 1999/2/18 ~ 1999/7/23	1,660台
				2000	CF8-000003 ~ CF8-000566 1999/3/23 ~ 1999/7/28	61台
			カナダ向け	1999	CF8-807445 ~ CF8-810025 1999/2/19 ~ 1999/7/23	301台
			CG5	アメリカ向け	1999	CG5-087584 ~ CG5-165179 1999/2/16 ~ 1999/7/30
	2000				CG5-000073 ~ CG5-002400 1999/7/27 ~ 1999/7/30	1,317台
	カナダ向け			1999	CG5-807446 ~ CG5-810026 1999/3/6 ~ 1999/7/27	1,680台
				2000	CG5-800001 ~ CG5-800001 1999/5/11 ~ 1999/5/11	1台
	CG6		アメリカ向け	1999	CG6-087764 ~ CG6-165178 1999/2/16 ~ 1999/7/28	24,546台
				2000	CG6-000004 ~ CG6-002306 1999/3/23 ~ 1999/7/30	905台
	CG1		アメリカ向け	1999	CG1-023144 ~ CG1-068789 1999/2/16 ~ 1999/7/29	45,616台
				2000	CG1-000001 ~ CG1-002797 1999/2/25 ~ 1999/7/30	1,670台
			カナダ向け	1999	CG1-801865 ~ CG1-803064 1999/3/4 ~ 1999/6/18	1,200台
				2000	CG1-800001 ~ CG1-800003 1999/2/25 ~ 1999/5/11	3台
	CG3		アメリカ向け	1999	CG3-012418 ~ CG3-027975 1999/2/16 ~ 1999/7/29	11,842台
				2000	CG3-000001 ~ CG3-000009 1999/3/10 ~ 1999/4/15	8台
			カナダ向け	1999	CG3-800902 ~ CG3-801622 1999/3/6 ~ 1999/7/16	420台
				2000	CG3-800002 ~ CG3-800002 1999/4/14 ~ 1999/4/14	1台
	CG2		アメリカ向け	1999	CG2-015070 ~ CG2-032647 1999/2/16 ~ 1999/7/30	17,529台
				2000	CG2-000001 ~ CG2-000017 1999/3/4 ~ 1999/7/15	17台
			カナダ向け	1999	CG2-800902 ~ CG2-801502 1999/3/4 ~ 1999/7/6	600台
				2000	CG2-800001 ~ CG2-800002 1999/3/10 ~ 1999/4/15	2台
	UA5		ACURA TL	アメリカ向け	1999	UA5-023687 ~ UA5-050064 1999/2/16 ~ 1999/7/30
		2000			UA5-000001 ~ UA5-000063 1999/2/17 ~ 1999/7/28	63台
		カナダ向け		1999	UA5-803588 ~ UA5-806789 1999/2/16 ~ 1999/7/28	3,084台
				2000	UA5-800001 ~ UA5-800002 1999/6/3 ~ 1999/7/28	2台

Attachment #Q8

**Document #2
VIN Range**

English Translation

Subject range list

Factory	Type	Model	Destination	MY	Subject vehicles' VIN range and manufacturing time	No. of subject cars
Honda of America	CF8	HONDA ACCORD	U.S.	1999	CF8-092950 ~ CF8-163632 1999/2/18 ~ 1999/7/23	1,660
				2000	CF8-000003 ~ CF8-000566 1999/3/23 ~ 1999/7/28	61
			Canada	1999	CF8-807445 ~ CF8-810025 1999/2/19 ~ 1999/7/23	301
				CG5	U.S.	1999
	2000		CG5-000073 ~ CG5-002400 1999/7/27 ~ 1999/7/30			1,317
	Canada		1999		CG5-807446 ~ CG5-810026 1999/3/6 ~ 1999/7/27	1,680
			2000		CG5-800001 ~ CG5-800001 1999/5/11 ~ 1999/5/11	1
	CG6		U.S.	1999	CG6-087764 ~ CG6-165178 1999/2/16 ~ 1999/7/28	24,546
				2000	CG6-000004 ~ CG6-002306 1999/3/23 ~ 1999/7/30	905
	CG1		U.S.	1999	CG1-023144 ~ CG1-068789 1999/2/16 ~ 1999/7/29	45,616
				2000	CG1-000001 ~ CG1-002797 1999/2/25 ~ 1999/7/30	1,670
			Canada	1999	CG1-801865 ~ CG1-803064 1999/3/4 ~ 1999/6/18	1,200
				2000	CG1-800001 ~ CG1-800003 1999/2/25 ~ 1999/5/11	3
	CG3		U.S.	1999	CG3-012418 ~ CG3-027975 1999/2/16 ~ 1999/7/29	11,842
				2000	CG3-000001 ~ CG3-000009 1999/3/10 ~ 1999/4/15	8
			Canada	1999	CG3-800902 ~ CG3-801622 1999/3/6 ~ 1999/7/16	420
				2000	CG3-800002 ~ CG3-800002 1999/4/14 ~ 1999/4/14	1
	CG2		U.S.	1999	CG2-015070 ~ CG2-032647 1999/2/16 ~ 1999/7/30	17,529
				2000	CG2-000001 ~ CG2-000017 1999/3/4 ~ 1999/7/15	17
			Canada	1999	CG2-800902 ~ CG2-801502 1999/3/4 ~ 1999/7/6	600
				2000	CG2-800001 ~ CG2-800002 1999/3/10 ~ 1999/4/15	2
	UA5		ACURA TL	U.S.	1999	UA5-023687 ~ UA5-050064 1999/2/16 ~ 1999/7/30
		2000			UA5-000001 ~ UA5-000063 1999/2/17 ~ 1999/7/28	63
		Canada		1999	UA5-803588 ~ UA5-806789 1999/2/16 ~ 1999/7/28	3,084
				2000	UA5-800001 ~ UA5-800002 1999/6/3 ~ 1999/7/28	2

Subject range list

Factory	Type	Model	Destination	MY	Subject vehicles' VIN range and manufacturing time		No. of subject cars ¹	
Csa	BB6	HONDA PRELUDE	U.S.	1997	JHMBB6201V[REDACTED] ~ JHMBB6246VC[REDACTED]	1996/4/23 ~ 1997/8/1	7,541	
			Canada	1997	JHMBB6240VC[REDACTED] ~ JHMBB6240VC[REDACTED]	1996/7/2 ~ 1997/6/26	1,118	
			U.S.	1998	JHMBB6243WC[REDACTED] ~ JHMBB6248WC[REDACTED]	1997/8/6 ~ 1998/8/3	8,243	
			Canada	1998	JHMBB6243WC[REDACTED] ~ JHMBB624XWC[REDACTED]	1997/9/8 ~ 1998/6/5	978	
			U.S.	1999	JHMBB6246XC[REDACTED] ~ JHMBB6245XC[REDACTED]	1998/5/8 ~ 1999/7/3	5,934	
			Canada	1999	JHMBB6240XC[REDACTED] ~ JHMBB6243XC[REDACTED]	1998/8/17 ~ 1999/6/28	430	
			U.S.	2000	JHMBB6247YC[REDACTED] ~ JHMBB624XVC[REDACTED]	1999/8/3 ~ 2000/7/31	4,978	
			Canada	2000	JHMBB6241YC[REDACTED] ~ JHMBB6249YC[REDACTED]	1999/8/24 ~ 2000/6/17	758	
			U.S.	2001	JHMBB62481C[REDACTED] ~ JHMBB62421C[REDACTED]	2000/8/1 ~ 2001/11/5	5,964	
			Canada	2001	JHMBB624X1C[REDACTED] ~ JHMBB62731C[REDACTED]	2000/8/1 ~ 2001/11/3	1,187	
	CG5	HONDA ACCORD	U.S.	1999	JHMC5641XC[REDACTED] ~ JHMC5650XC[REDACTED]	1998/5/8 ~ 1999/7/2	49,840	
			Canada	1999	JHMC5651XC[REDACTED] ~ JHMC5648XC[REDACTED]	1998/9/4 ~ 1999/3/26	3,721	
			U.S.	2000	JHMC564XVC[REDACTED] ~ JHMC5655VC[REDACTED]	1999/4/12 ~ 2000/7/7	40,879	
			Canada	2000	JHMC5669YC[REDACTED] ~ JHMC5669YC[REDACTED]	1999/4/22 ~ 1999/4/22	1	
			U.S.	2001	JHMC56441C[REDACTED] ~ JHMC56631C[REDACTED]	2000/2/23 ~ 2001/7/5	30,590	
			Canada	2001	JHMC56431C[REDACTED] ~ JHMC56431C[REDACTED]	2000/4/17 ~ 2000/4/17	1	
			U.S.	2002	JHMC56782C[REDACTED] ~ JHMC56672C[REDACTED]	2001/7/4 ~ 2002/6/27	33,737	
			CG6	U.S.	1999	JHMC6653XC[REDACTED] ~ JHMC6679XC[REDACTED]	1998/7/9 ~ 1999/7/2	36,728
				U.S.	2000	JHMC6673YC[REDACTED] ~ JHMC665XVC[REDACTED]	1999/2/25 ~ 2000/7/6	36,492
				U.S.	2001	JHMC66541C[REDACTED] ~ JHMC66061C[REDACTED]	2000/4/17 ~ 2001/7/7	25,109
	U.S.	2002		JHMC66522C[REDACTED] ~ JHMC66842C[REDACTED]	2001/7/4 ~ 2002/7/2	28,517		
	CF8	U.S.	2000	JHMC68646YC[REDACTED] ~ JHMC68647YC[REDACTED]	1999/5/13 ~ 2000/7/1	549		
		Canada	2000	JHMC68645YC[REDACTED] ~ JHMC68645YC800001	1999/4/15 ~ 1999/4/15	1		
		U.S.	2001	JHMC686431C[REDACTED] ~ JHMC686471C[REDACTED]	2000/7/12 ~ 2001/7/3	594		
		U.S.	2002	JHMC6864X2C[REDACTED] ~ JHMC686402C[REDACTED]	2001/7/30 ~ 2002/6/5	487		
	CG1	U.S.	2001	JHMC616411C[REDACTED] ~ JHMC616561C[REDACTED]	2000/7/3 ~ 2000/7/3	4		

Attachment #Q8

**Document #3
Quality Committee Report**

Original Document (Japanese)

Entire original document (Japanese) is included with English translated document, which is being submitted under a Request for Confidentiality.

Attachment #Q8

**Document #3
Quality Committee Report**

English Translation

Quality Committee (JQC)

99~02YM ACCORD

99 YM TL

97~01YM PRELUDE

Key comes out in ranges other than P

Proposal of Market Action

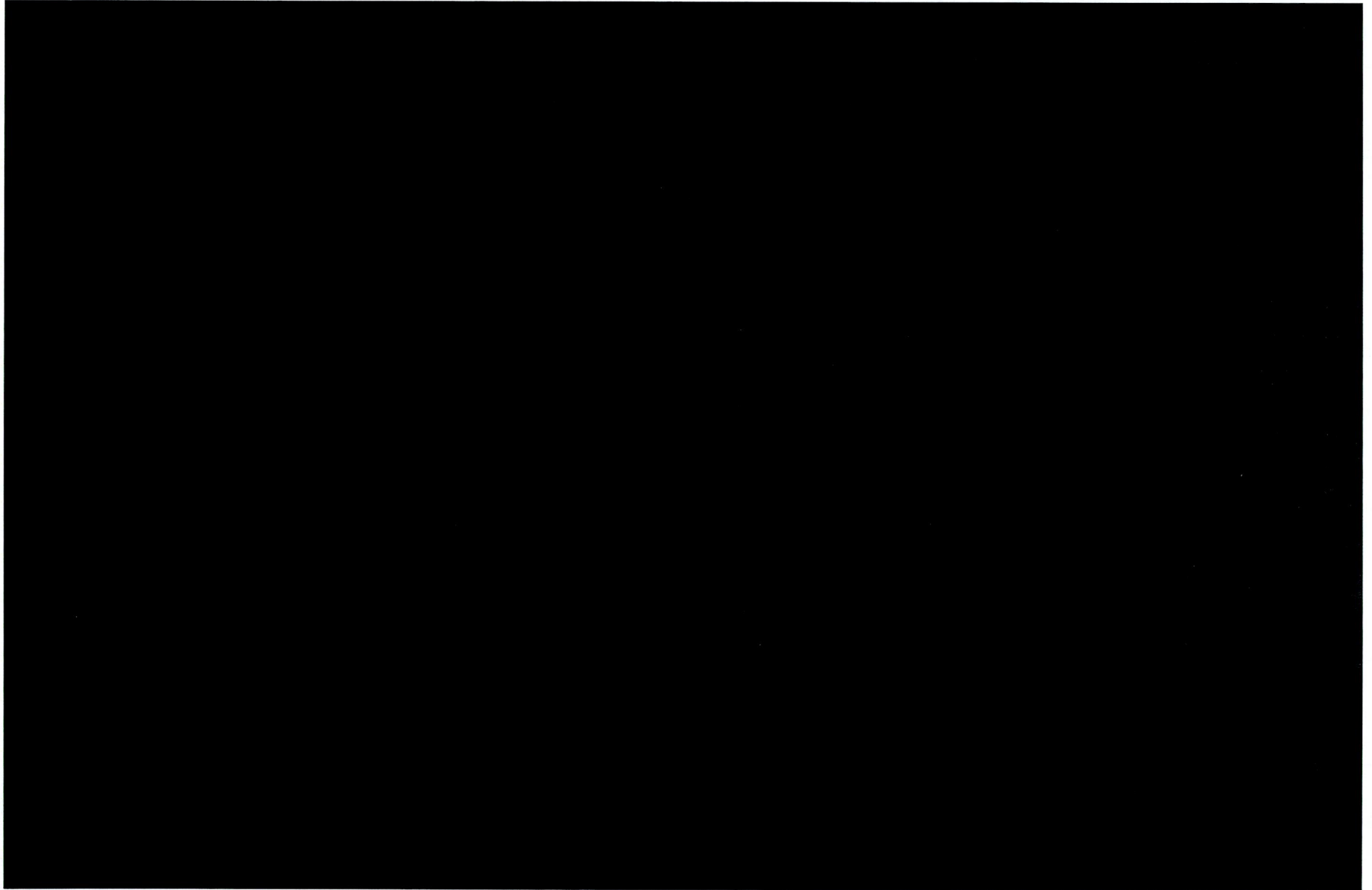
(MV20040426180508)

Jan 20, 2005

HGT D2

QCT AQAO

Changes since QEM on 10-Jan to present



Overview of the problem

CONFIDENTIAL BUSINESS INFORMATION

1. Problem symptom

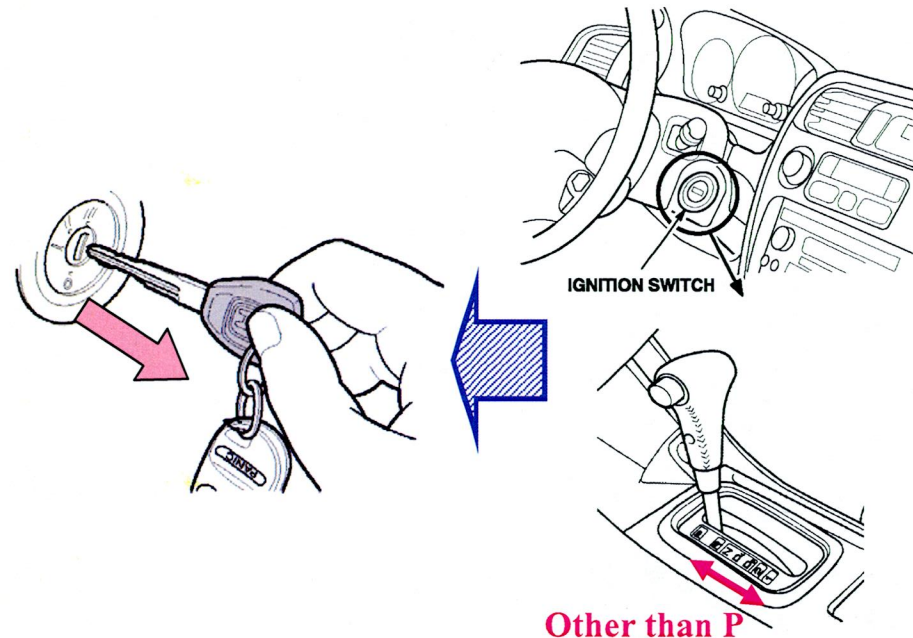
Key comes out even when shift lever is in ranges other than P.

(When customer leaves the vehicle without applying P brake, the vehicle may roll on it's own on sloped ground)

2. Market occurrence situation

- Known by NHTSA: 13 (1 accident)
- Warranty claims (US market)

Models	Claims
ACCORD	211
TL	25
PRELUDE	2



3. Market action proposal

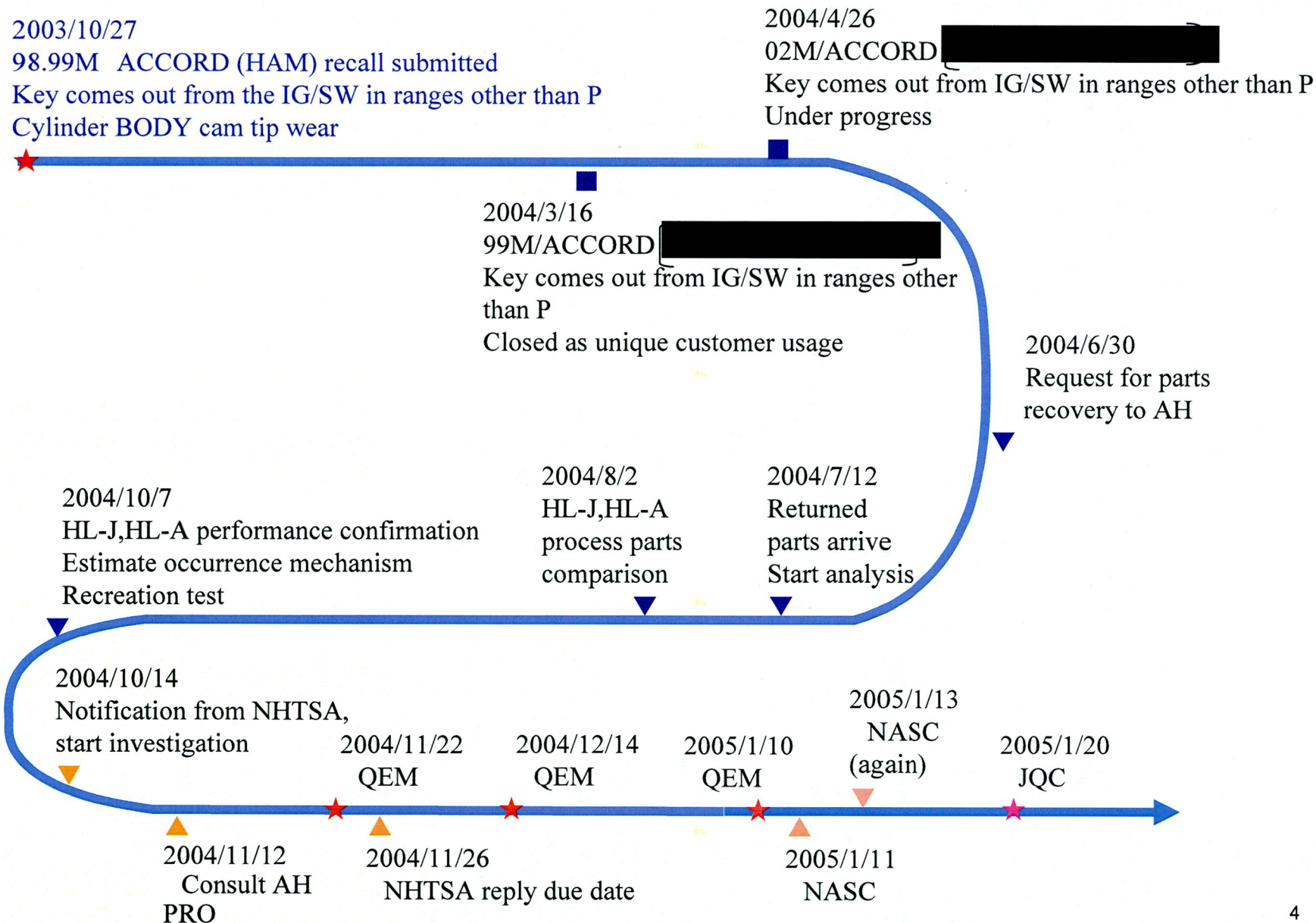
Carry out safety recall in US / Canada

4. Affected vehicles / cost

Affected models / quantity	Repair method	Cost
•99M~02M—ACCORD: 285, 653 (C55)	Check lever block ↓ Interlock lever replacement or key set replacement	
•99M~00M—ACCORD: 148, 005 (HAM:1999/02~1999/07)		
•99M—TL: 28, 825 (HAM:1999/02~1999/07)		
•97M~01M—PRELUDE: 36, 787 (C55)		
Total : 499, 270		

Timeline

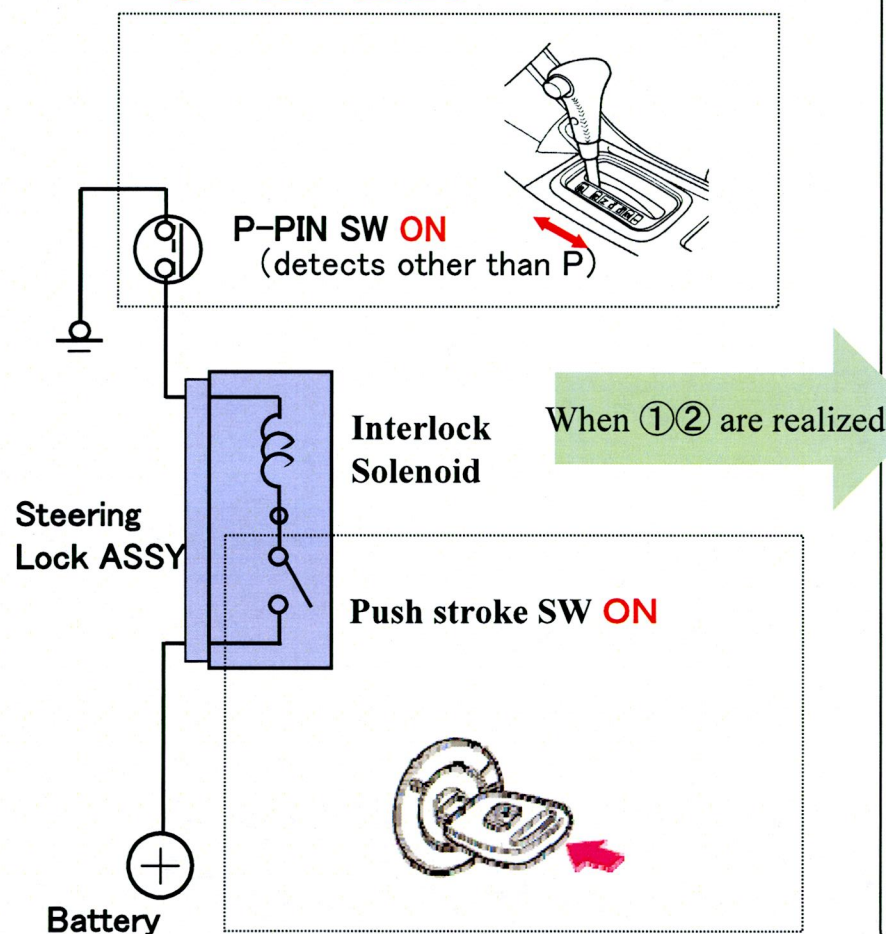
CONFIDENTIAL BUSINESS INFORMATION



Key interlock structure

Key interlock is, a system to prevent IGN key from coming out with the shift lever in positions other than P.

① Other than P

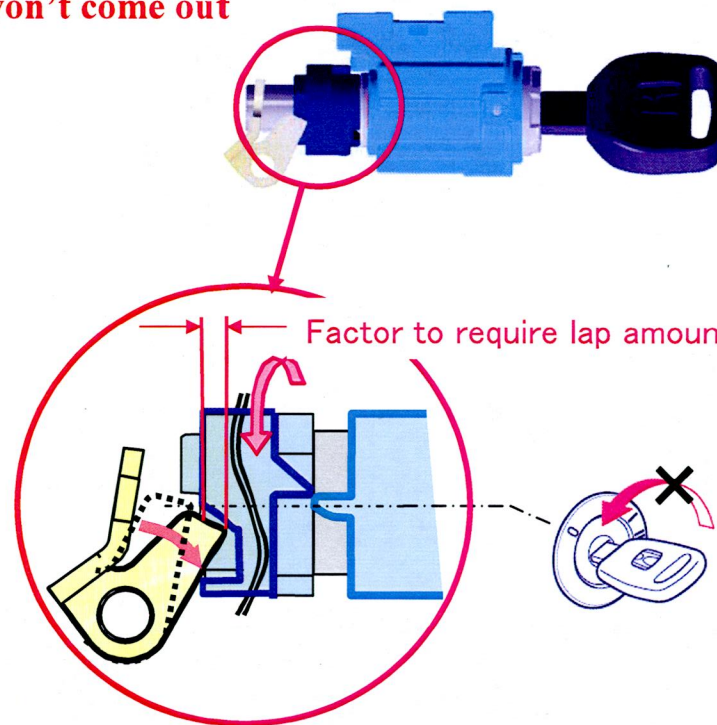


② Push key in ACC position

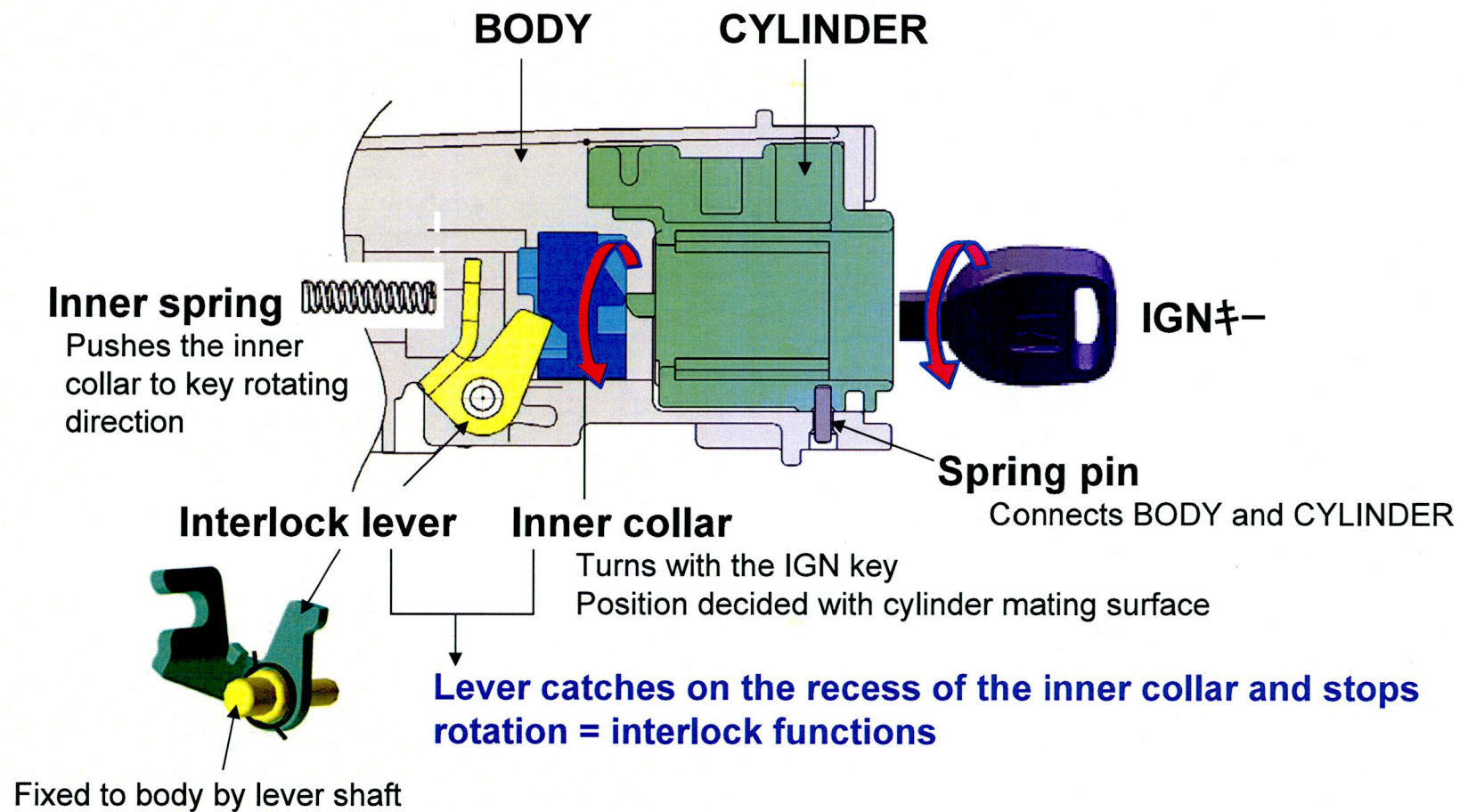
Solenoid pulls in the lever and blocks inner collar rotation

Key can't be turned from ACC to LOCK position (0)

Key won't come out



Explanation of the structure

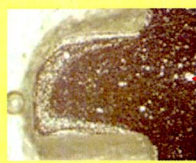


Previous recall contents

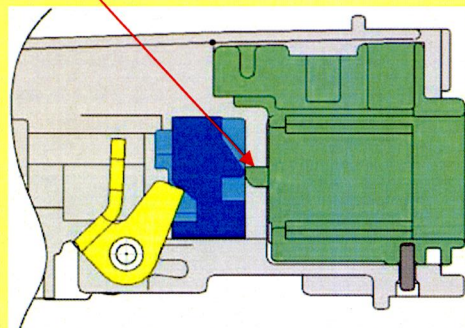
Market failure condition

(ALTEC cylinder)

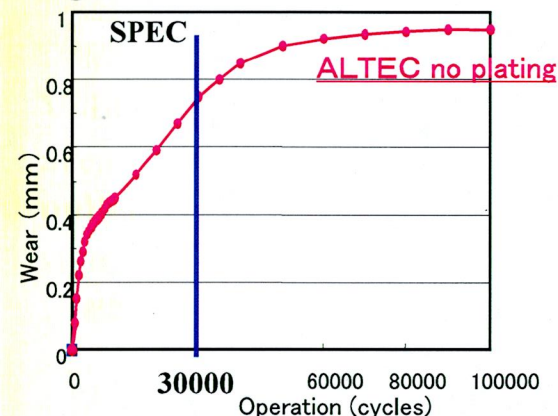
Cylinder cam tip is significantly worn (0.48-0.96mm), and overlap margin is reduced.



Void on surface area



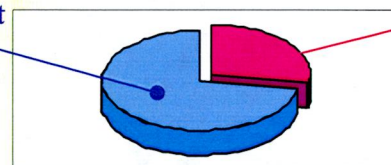
Voids on cam tip surface area, so operation with key pulled (10N) will result in significant wear.



Condition of healthy recovered vehicle

Confirmed slip out on 5/18 vehicles (28%).
This backs up potential failures in market.

No slip out
13 units



Slip out
5 units
(28%)

Decided recall as there was possibility of occurrence on all affected vehicles durably.

Occurrence situation (US market 99-04M)

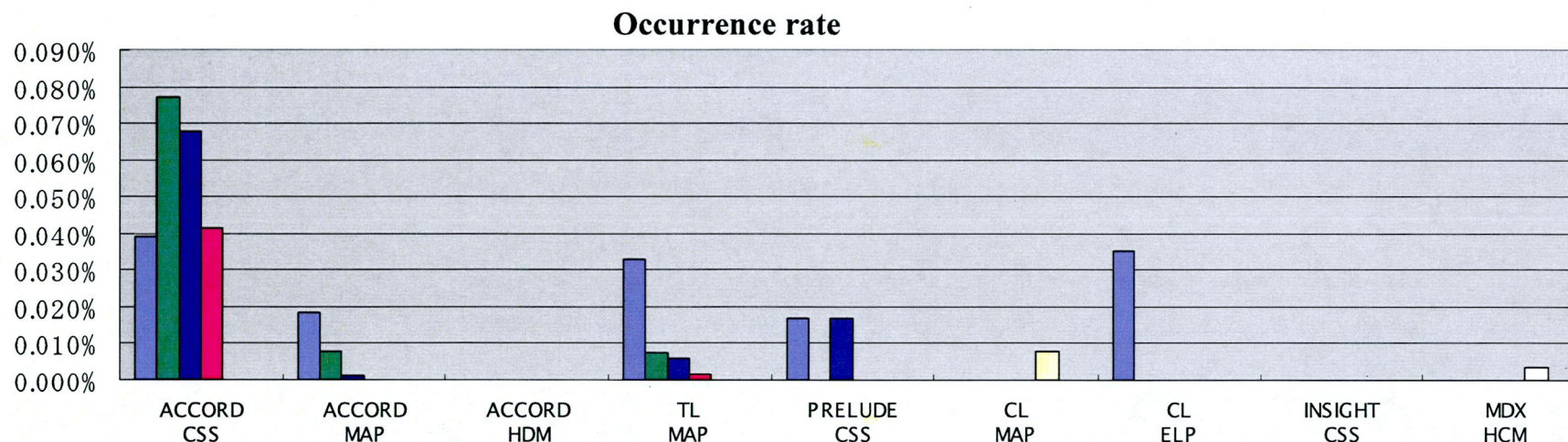
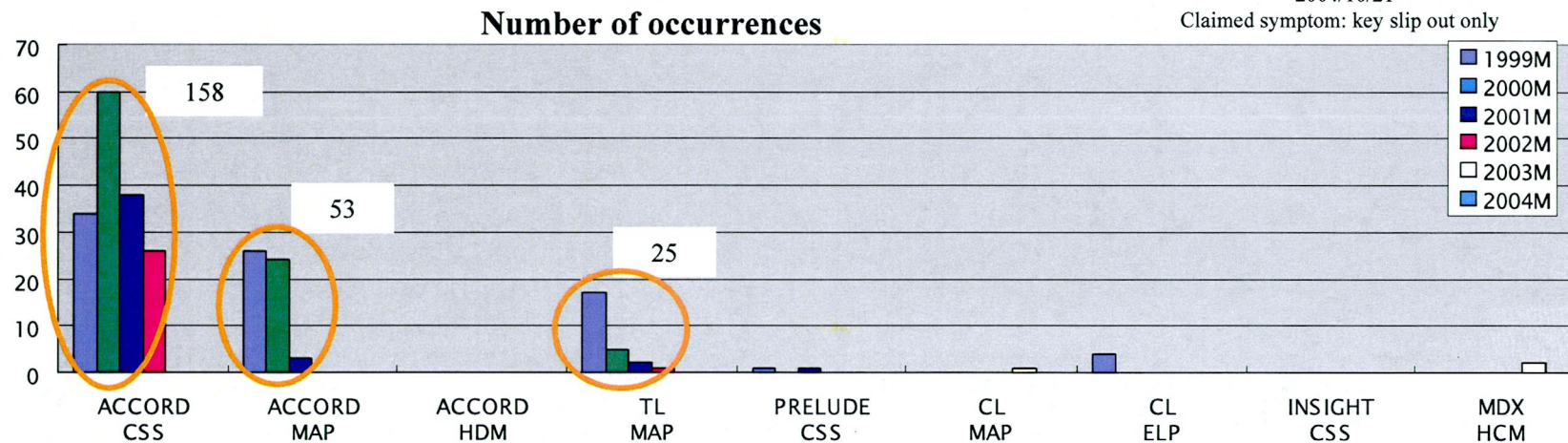
Warranty (which can be determined as symptom of key coming out in ranges other than P)

Excluding range subject to action by previous recall

(Occurrence) HAM database

2004/10/21

Claimed symptom: key slip out only

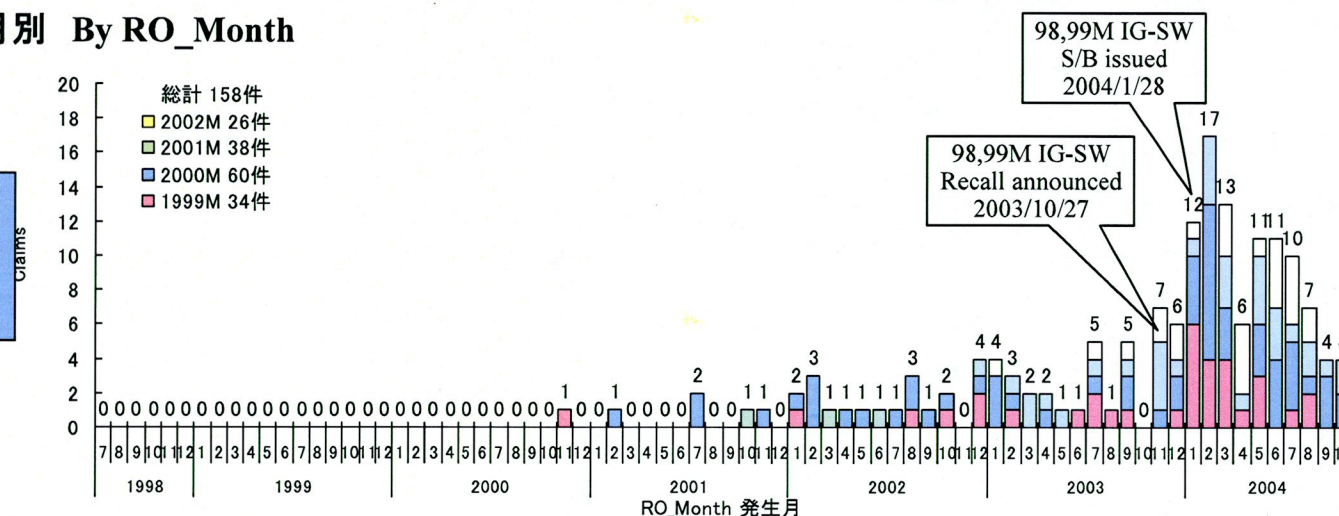


Occurrences high on ACCORD and TL

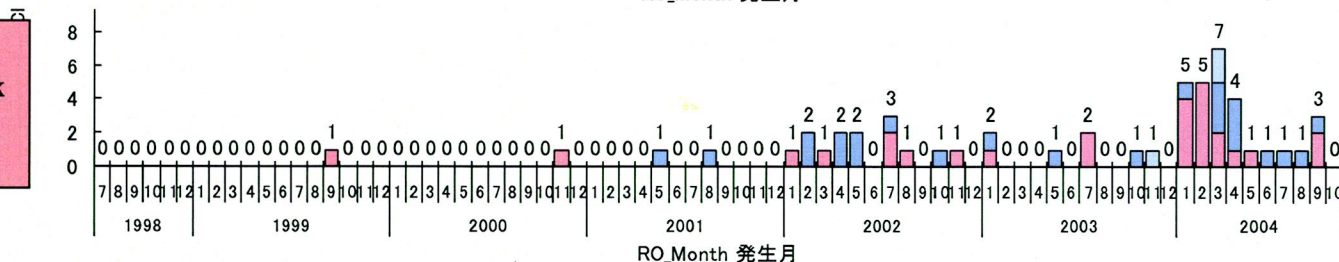
Occurrence situation (area subject to NHTSA investigation)

発生月別 By RO_Month

Css ACCORD
158 claims /
280,000 vehicles
0.056%



HAM ACCORD
53 claims / approx
1,060,000 vehicles
0.005%



HAM TL
25 claims /
approx 310,000
vehicles
0.008%

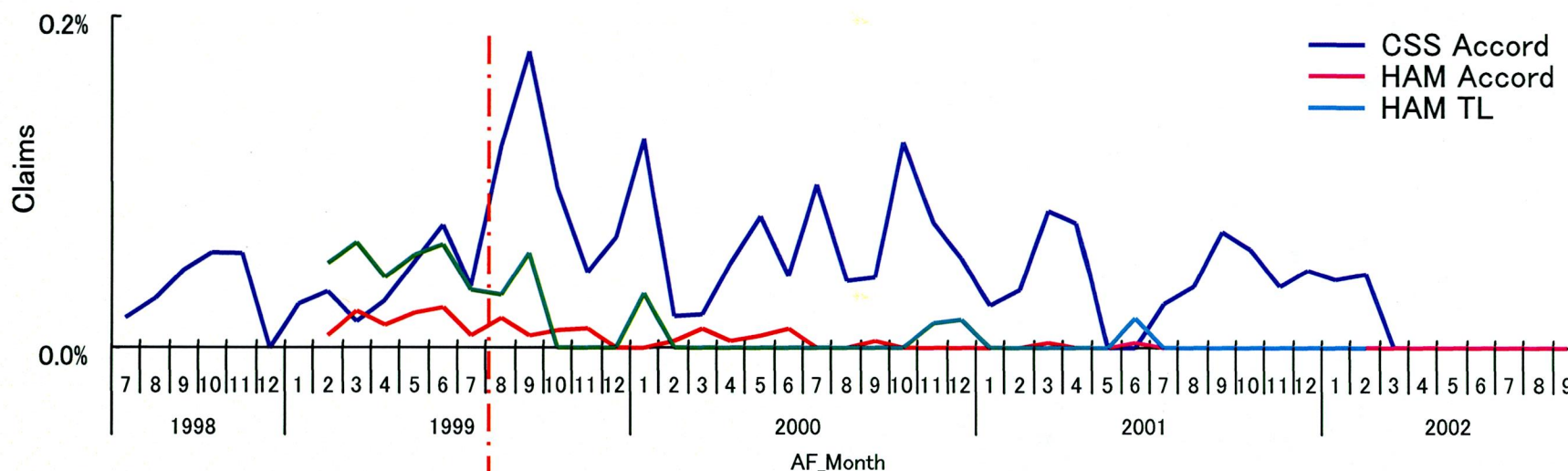


- Occurrences increased after recall announcement = potential problem
- Occurrence rate high on Coss vehicles

Occurrence situation (area subject to NHTSA investigation)

ACCORD . TL warranty (which can be determined as symptom of key coming out in ranges other than P)

発生率 Occurrence Ratio



NHTSA

Claim vchcl



Css
prod

Type I

HL-J Cylinder

HL-J Body

HAM
prod

ALTEC

Cylinder

Prev. recall

Type I

Type II

HL-J Cylinder

HL-A Body

Type III

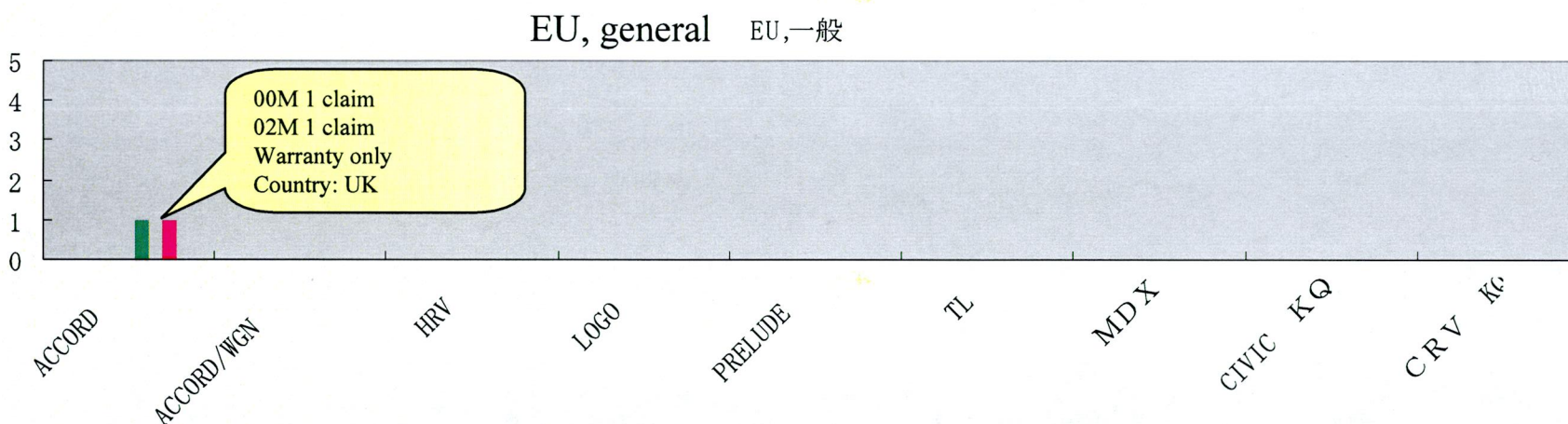
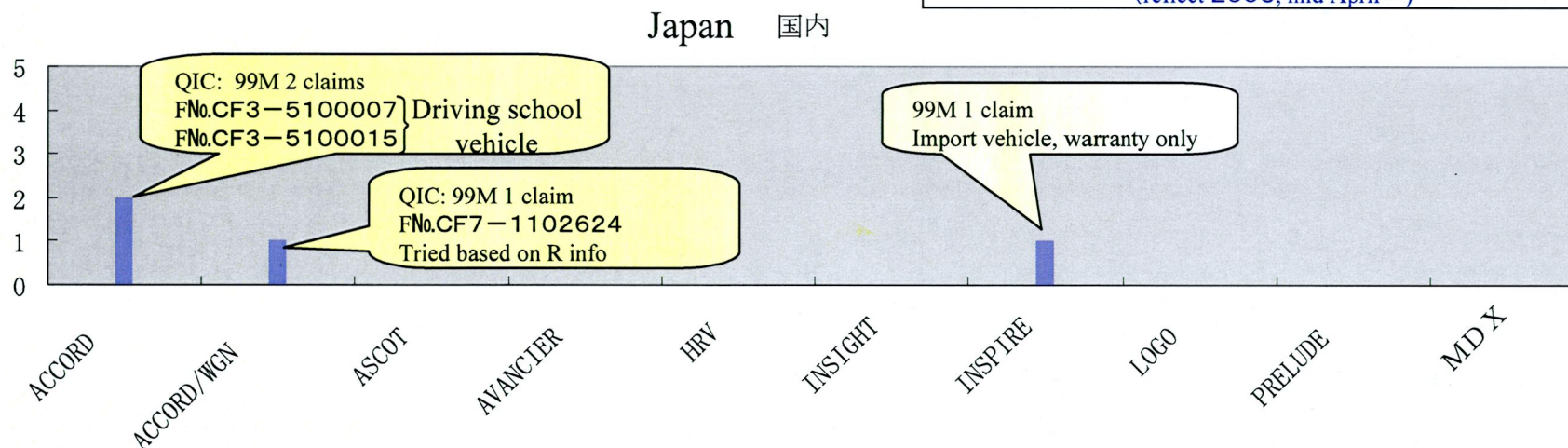
HL-A Cylinder

HL-A Body

Occurrence rate differ depending on body, cylinder combinations

Occurrence situation (other regions 94-04M)

Number of claims with contentions which can be read as key slip out
(reflect 2003, mid April ~)

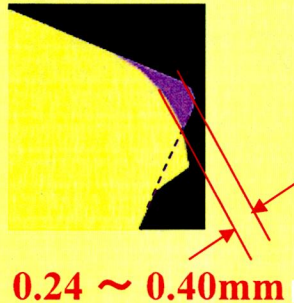


Claims which can be determined as key slip out are
Japan: 4 claims, EU/general: 2 claims

Condition of market failure parts subject to investigation this time

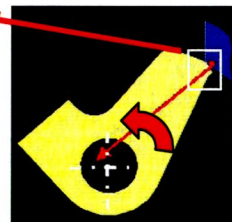
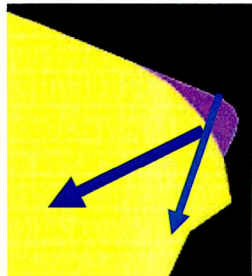
Condition of market failure part returned from US (Css build ACCORD Type I N=7)

① Lever tip deformed



0.24 ~ 0.40mm

Tip R increase, lever can be kicked up easily



② Spring pin lift → tilt

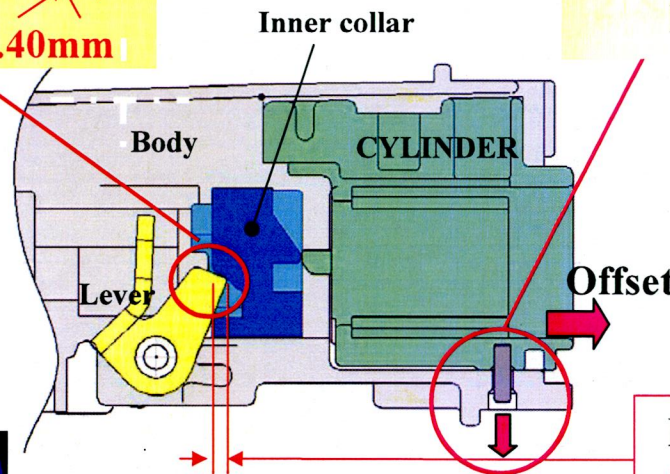


Lift (0.51 ~ 0.74mm) + tilt

Cylinder offset as a result
0.10 ~ 0.24mm

Reduced lever overlap margin
Overlap margin of failed part 0.77 ~ 0.96mm

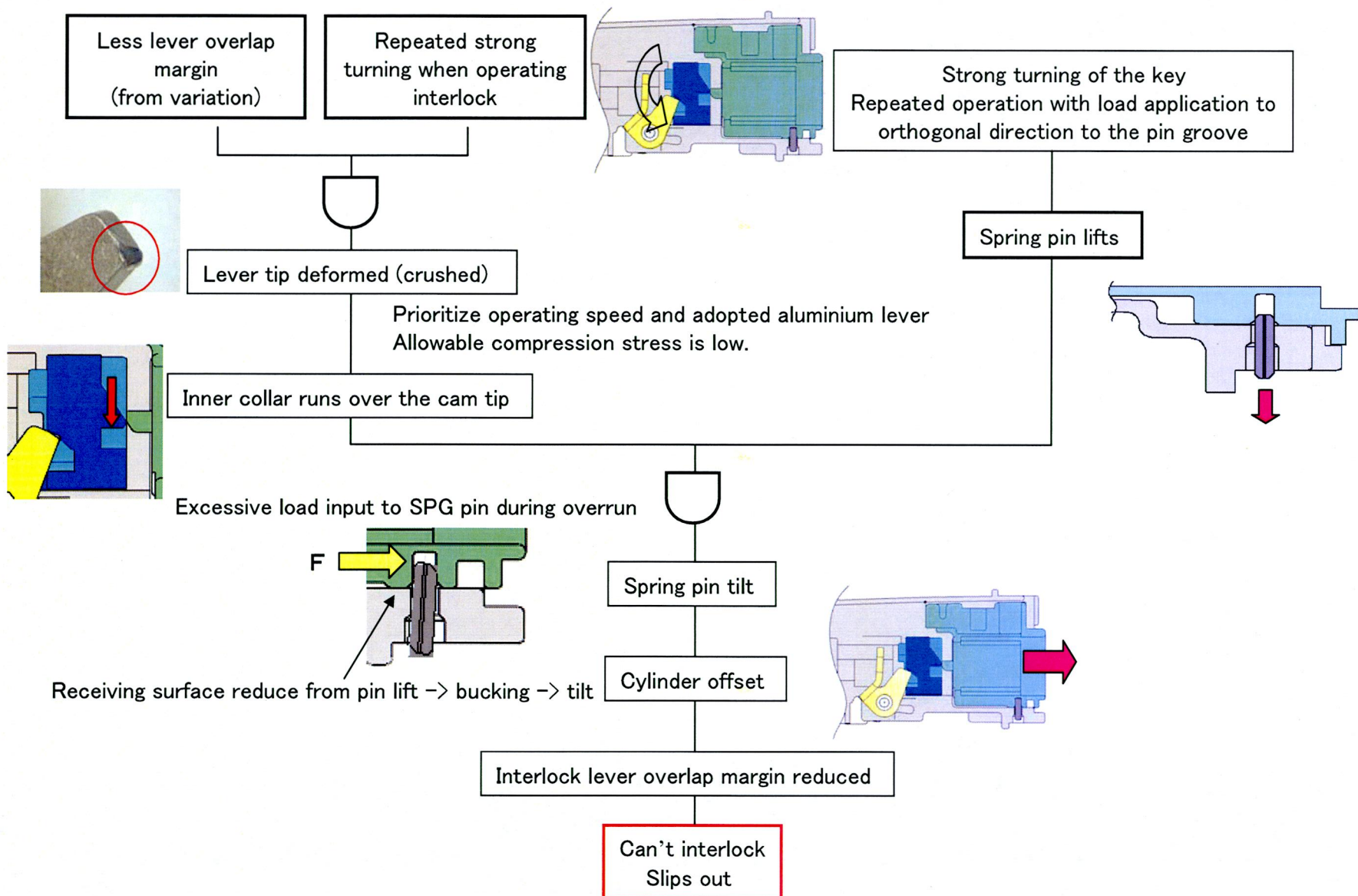
Initial setting: min. 1.02mm



Recreated slip out on all parts.

No abnormality with electric function of the lever.

Occurrence mechanism

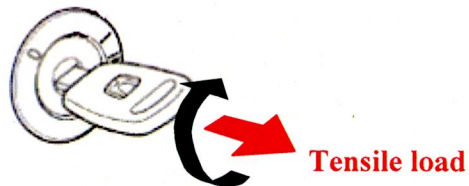


Customer usage verification results

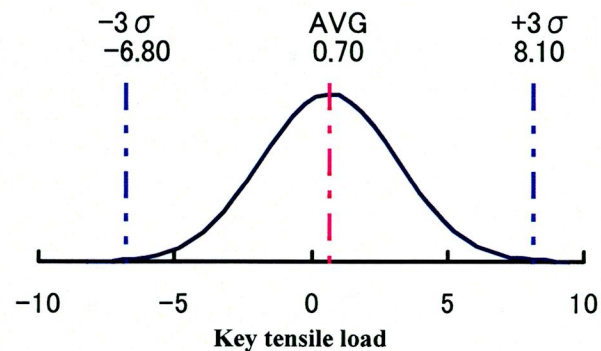
CONFIDENTIAL BUSINESS INFORMATION

<US customer usage>

Tensile load at key operation



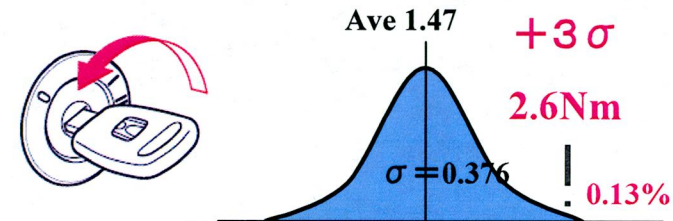
II \Rightarrow I \Rightarrow O O \Rightarrow I \Rightarrow II



Tensile force MAX = 10N

Operating torque during interlock

Test results from 30 Americans



Operating torque MAX = 2.6Nm



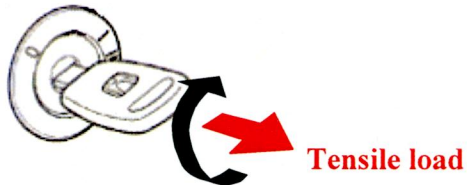
Install distortion gauge on steering lock on vehicle, to read waveform with an oscilloscope

Customer usage verification results

CONFIDENTIAL BUSINESS INFORMATION

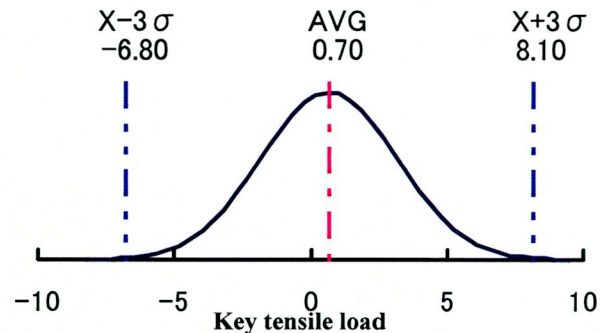
<Japan customer usage>

Tensile load at key operation



$\text{II} \Rightarrow \text{I} \Rightarrow \text{O} \quad \text{O} \Rightarrow \text{I} \Rightarrow \text{II}$

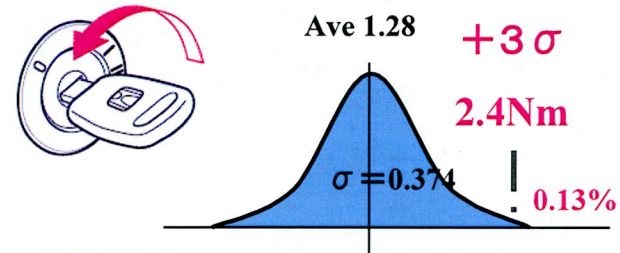
Data from Americans and Japanese were the same.



Tensile force MAX=10N

Operating torque during interlock

Test results from 30 Japanese



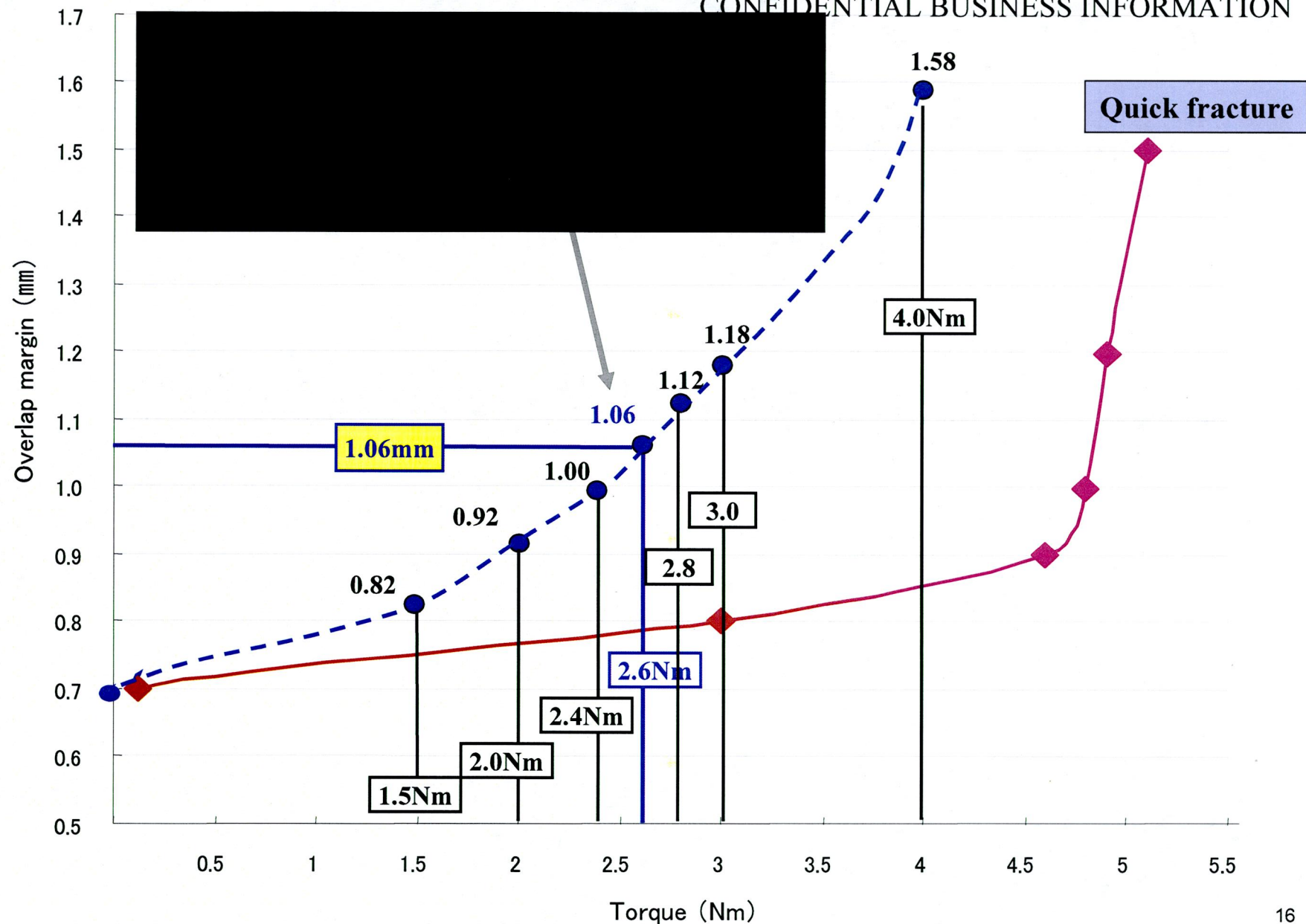
Bully operation torque = 2.4Nm



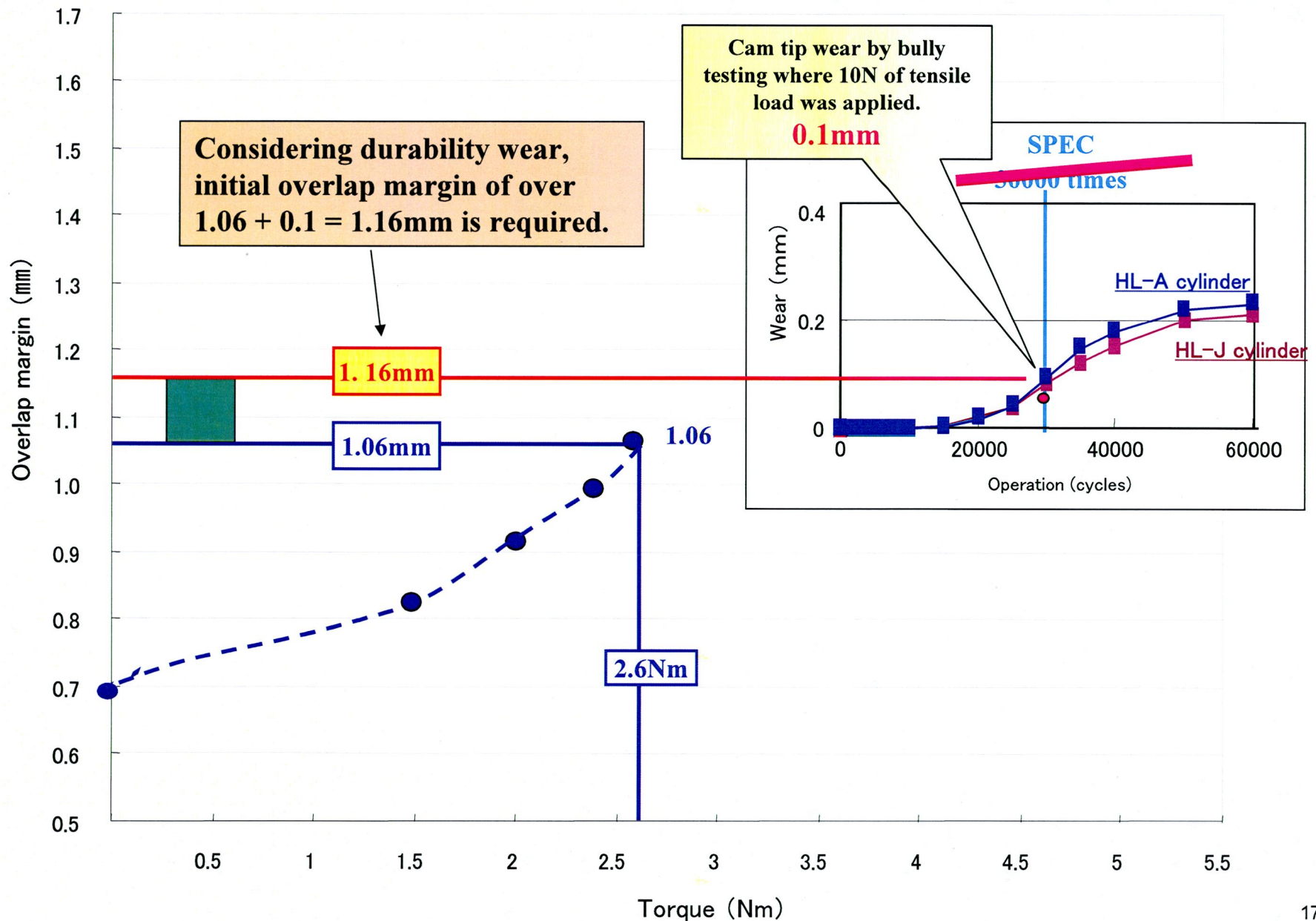
Install distortion gauge on steering lock on vehicle, to read waveform with an oscilloscope

Required overlap margin by lever rigidity (US market)

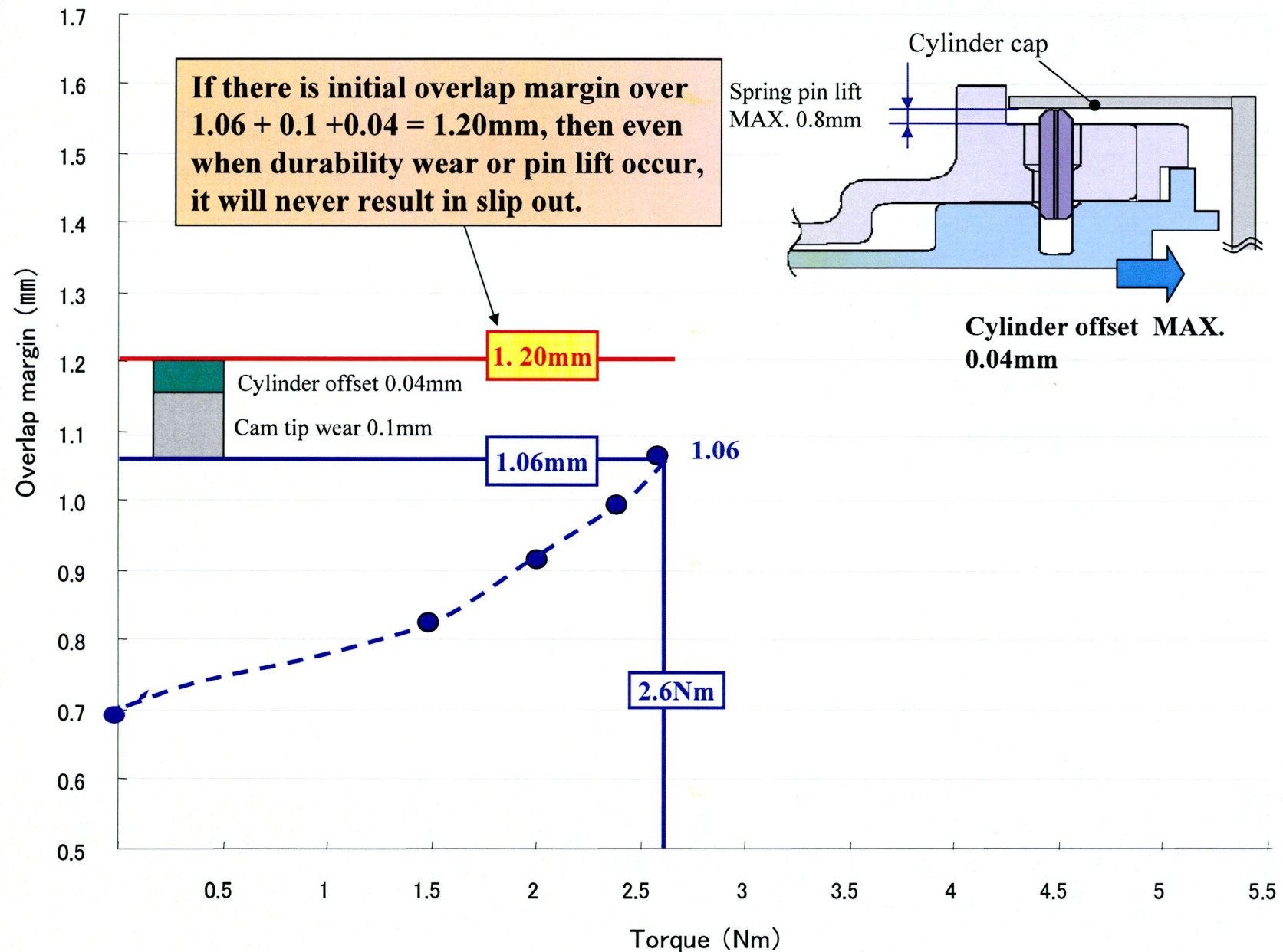
CONFIDENTIAL BUSINESS INFORMATION



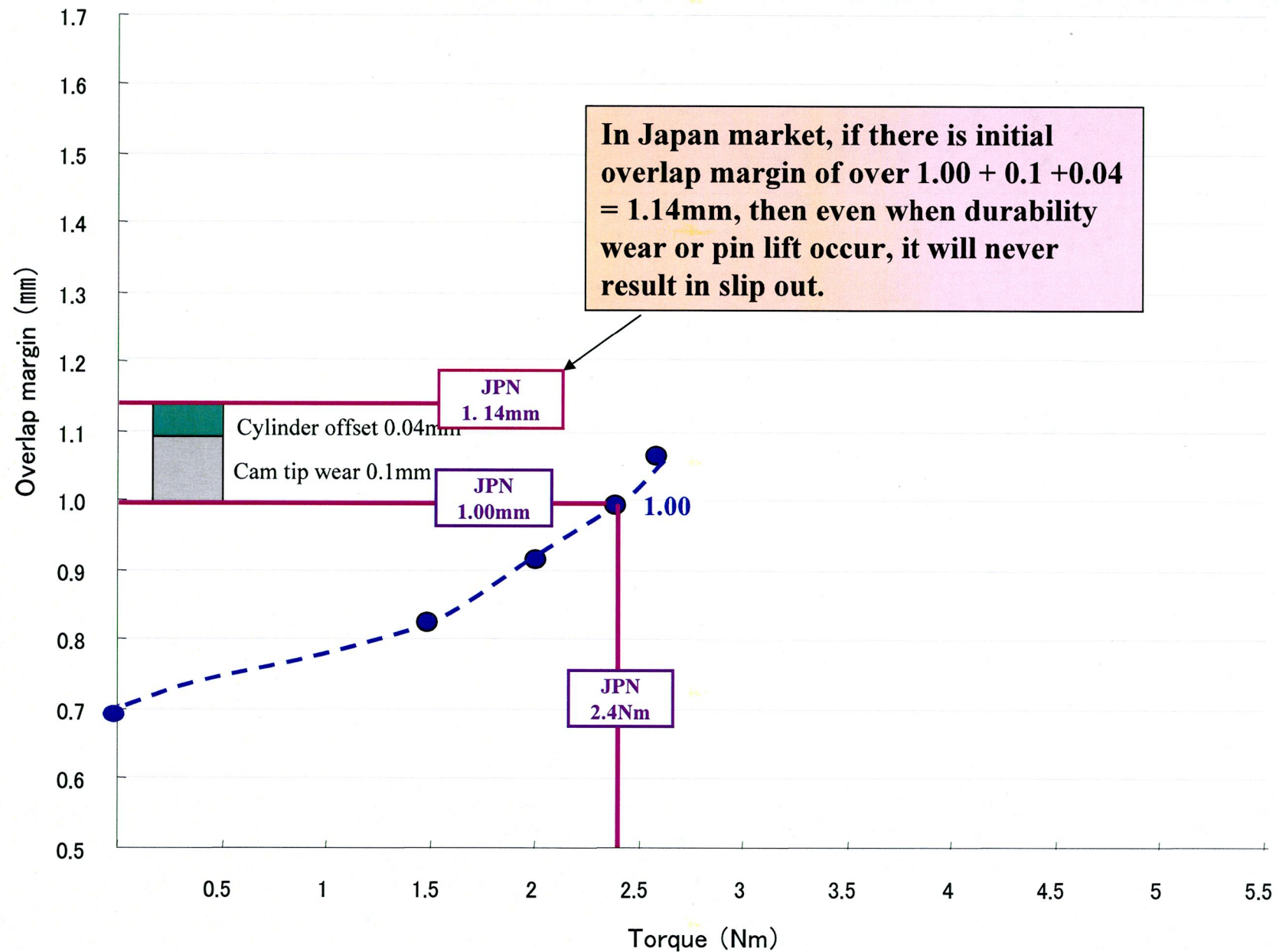
Required lever overlap margin considering durability deterioration (US market)



Required overlap margin considering spring pin lift (US market)



Required overlap margin considering spring pin lift (Japan market)

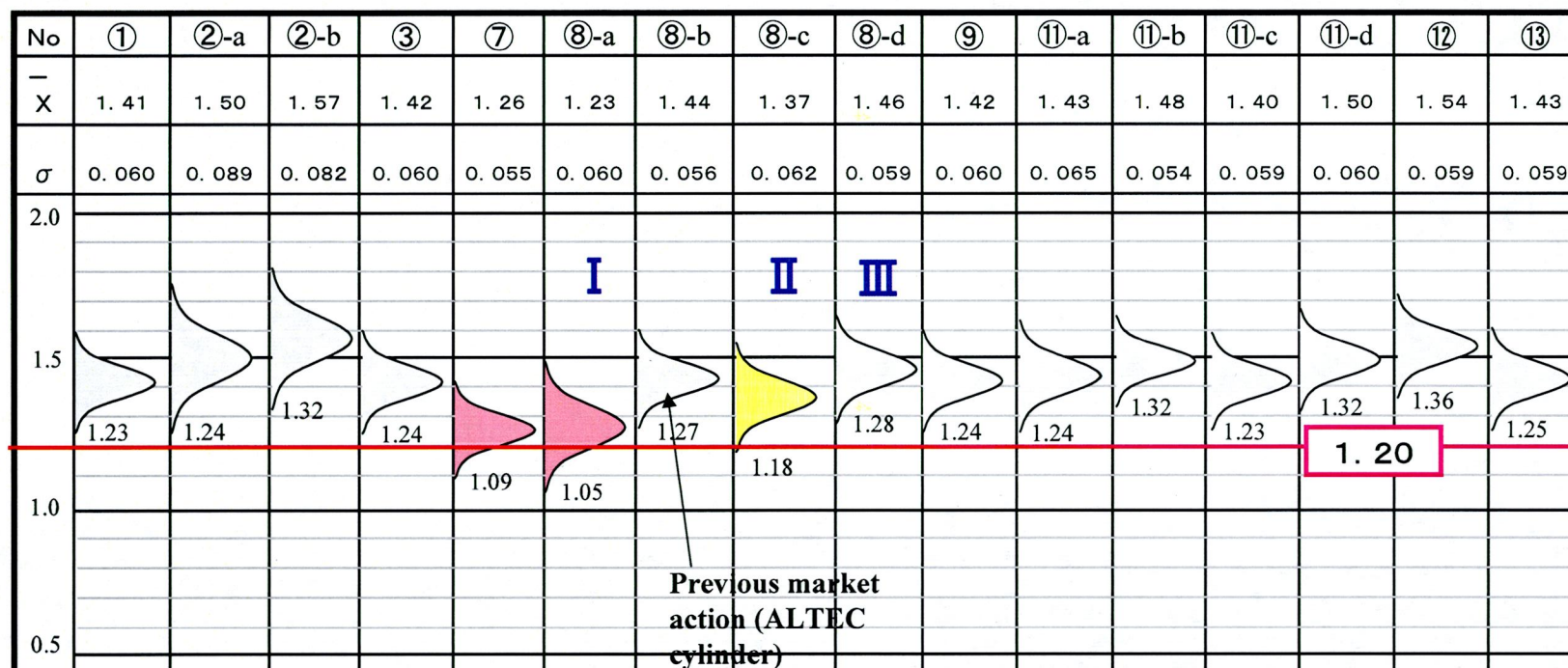


Distribution of overlap margin (US market)

Same type product: measurement result of initial lever overlap

	Body	Cylinder
I	HL-J	HL-J
II	HL-A	HL-J
III	HL-A	HL-A

Model	94M	95M	96M	97M	98M	99M	00M	01M	02M	03M	04M
ACCORD (C _{ss})						⑧-a					
ACCORD (HAM)	①	②-a	②-b		⑧-b	⑧-a	⑧-c	⑧-d			
ACCORD/WGN	②-a		②-b								
CL				⑪-a	⑪-b	⑪-c			⑪-d		
INSIGHT									⑨		
PRELUDE				⑦					⑧-a		
TL		③	②-b		⑧-b	⑧-a	⑧-c	⑧-d			
MDX								⑫			⑬

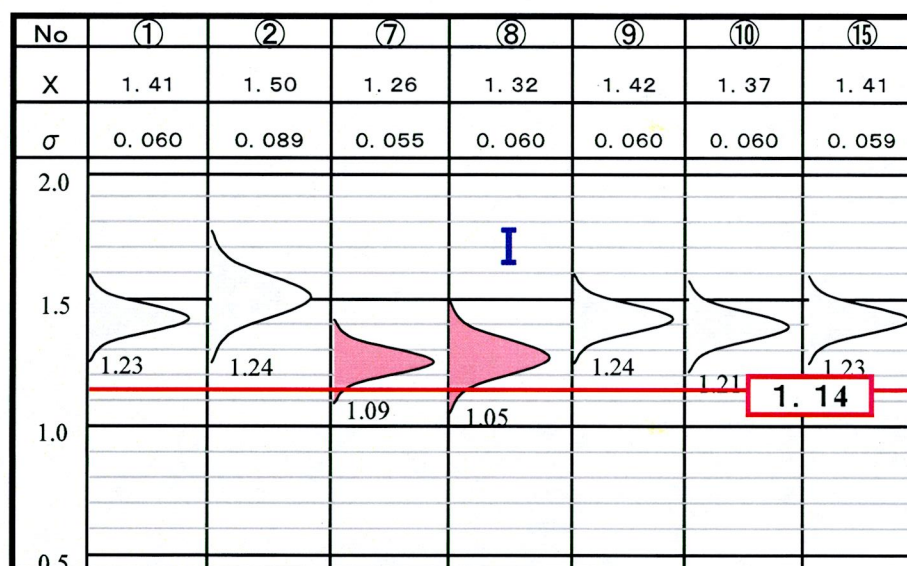


Distribution of overlap margin (J market)

Same type product: measurement result of initial lever overlap

	Body	Cylinder
I	HL-J	HL-J
II	HL-A	HL-J
III	HL-A	HL-A

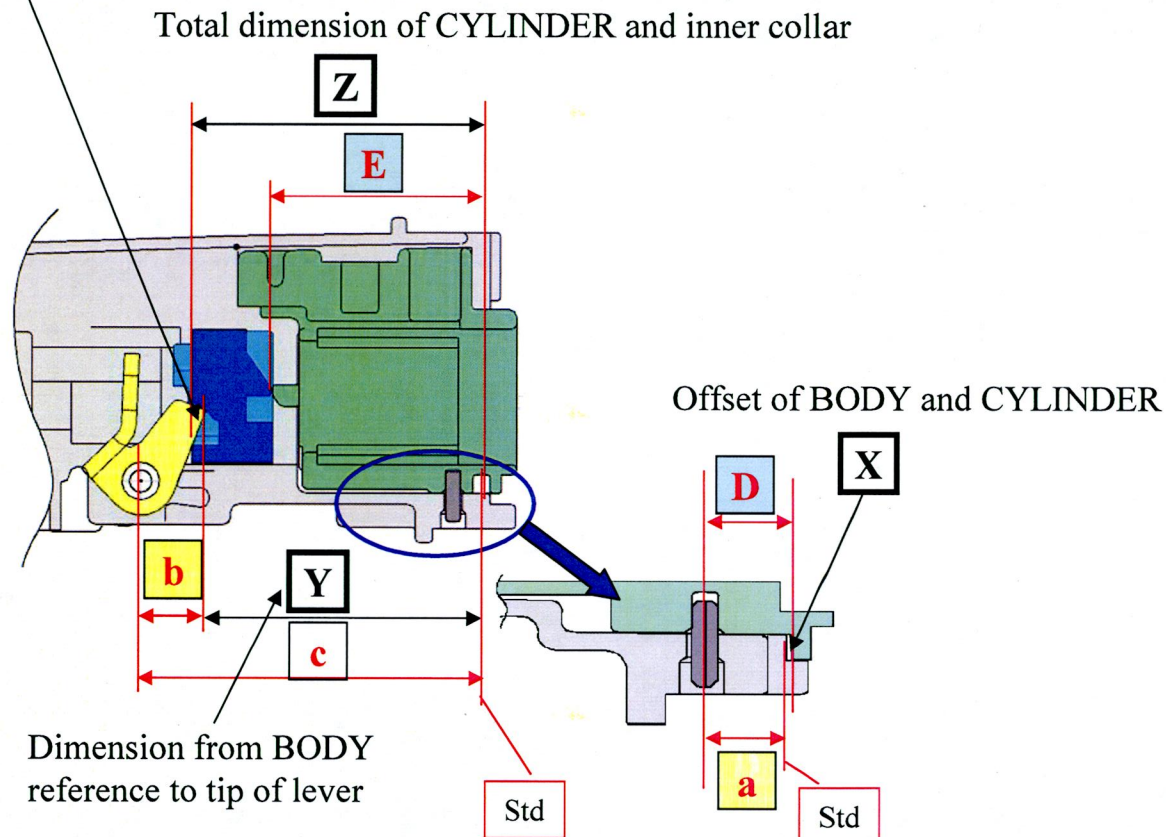
Model	94M	95M	96M	97M	98M	99M	00M	01M	02M	03M	04M
ACCORD	①		②		⑧						
ACCORD/WGN		②			⑧						
ASCOT		②									
AVANCIER								⑩			
HRV								⑨			
INSIGHT								⑨			
INSPIRE			②				⑧				
LOGO						⑨					
PRELUDE				⑦		⑧					
MDX										⑮	



Verification of lever overlap margin

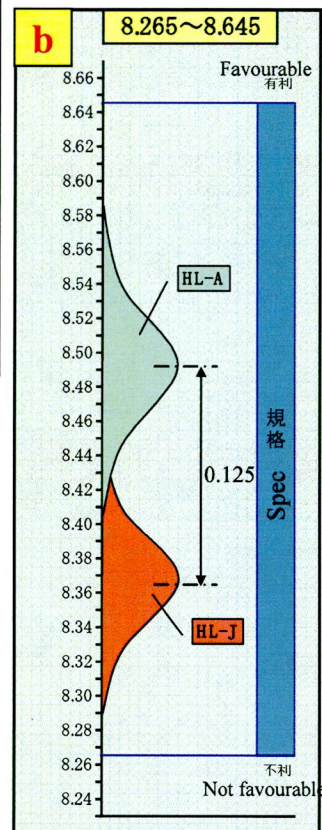
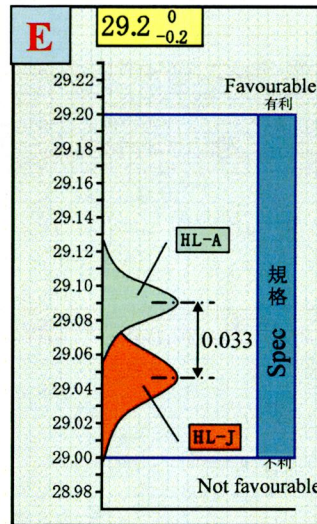
Molding accuracy of BODY and CYLINDER + inner collar result in variation of lever overlap margin.

$$\text{Lever overlap margin} = Z - Y - X$$



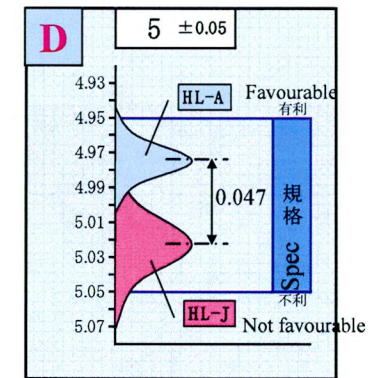
a b D E dimensions were found to have dimensional variation between HL-J and HL-A

Verification of lever overlap margin



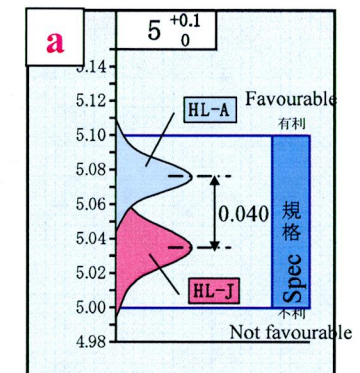
	I	II	III
X	1.23	1.37	1.46
σ	0.060	0.062	0.059
Overlap margin 掛り代	1.05	1.18	1.28

BODY HL-J HL-A HL-A
CYLINDER HL-J HL-J HL-A



Overlap margin
initially required

1.20



HL-J made BODY/CYLINDER have some bias toward less overlap margin by dimension, so I and II falls below initially required overlap margin.

Calculating occurrence rate

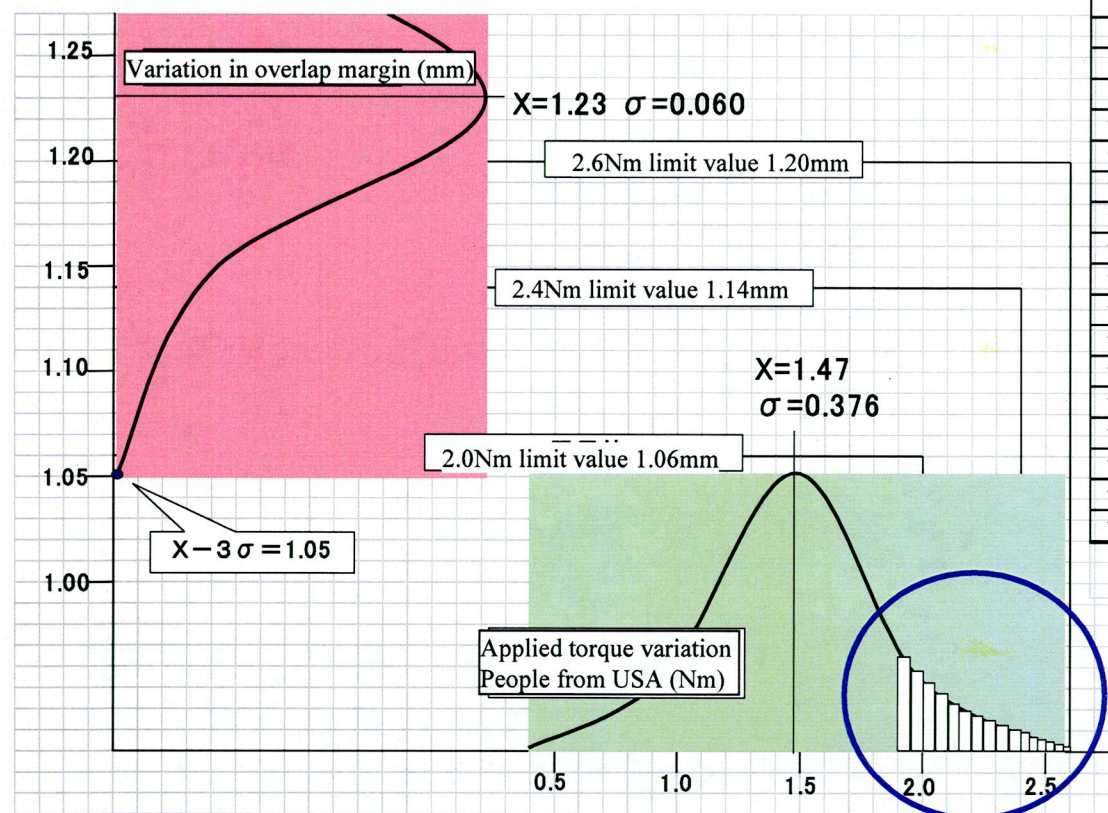
US market: Type I

Calculated occurrence rate = 0.071%

Market occurrence rate

99M ACCORD C_{ss} 0.039%

OOM ACCORD C_{ss} 0.077%



Overlap margin		Applied torque		Occ rate
Range	Freq.	Range	Freq.	
1.00~1.01	0.0000	1.70~1.75	0.0413	0.0000%
1.01~1.02	0.0001	1.75~1.80	0.0402	0.0004%
1.02~1.03	0.0002	1.80~1.85	0.0332	0.0007%
1.03~1.04	0.0004	1.85~1.90	0.0291	0.0012%
1.04~1.05	0.0005	1.90~1.95	0.0268	0.0013%
1.05~1.06	0.0010	1.95~2.00	0.0210	0.0021%
1.06~1.07	0.0015	2.00~2.05	0.0175	0.0026%
1.07~1.08	0.0024	2.05~2.10	0.0153	0.0037%
1.08~1.09	0.0037	2.10~2.15	0.0114	0.0042%
1.09~1.10	0.0051	2.15~2.20	0.0089	0.0045%
1.10~1.11	0.0078	2.20~2.25	0.0070	0.0055%
1.11~1.12	0.0108	2.25~2.30	0.0056	0.0060%
1.12~1.13	0.0139	2.30~2.35	0.0040	0.0056%
1.13~1.14	0.0193	2.35~2.40	0.0028	0.0054%
1.14~1.15	0.0250	2.40~2.43	0.0016	0.0040%
1.15~1.16	0.0292	2.43~2.47	0.0012	0.0035%
1.16~1.17	0.0377	2.47~2.50	0.0009	0.0034%
1.17~1.18	0.0446	2.50~2.53	0.0008	0.0036%
1.18~1.19	0.0481	2.53~2.57	0.0005	0.0024%
1.19~1.20	0.0571	2.57~2.60	0.0005	0.0029%
1.20~1.21	0.0622	2.60~2.63	0.0003	0.0019%
1.21~1.22	0.0618	2.63~2.67	0.0003	0.0019%
1.22~1.23	0.0675	2.67~2.70	0.0002	0.0014%
1.23~1.24	0.0675	2.70~2.73	0.0001	0.0007%
1.24~1.25	0.0618	2.73~2.77	0.0001	0.0006%
1.25~1.26	0.0622	2.77~2.80	0.0001	0.0006%
1.26~1.27	0.0571	2.80~2.83	0.0001	0.0006%
1.27~1.28	0.0481	2.83~2.87	0.0000	0.0000%
			Total %	0.0705%

Change range of applied torque by 0.01 of overlap margin, multiply each of the frequency, and summation of this become the occurrence rate.

Calculating occurrence rate

US market: Type II

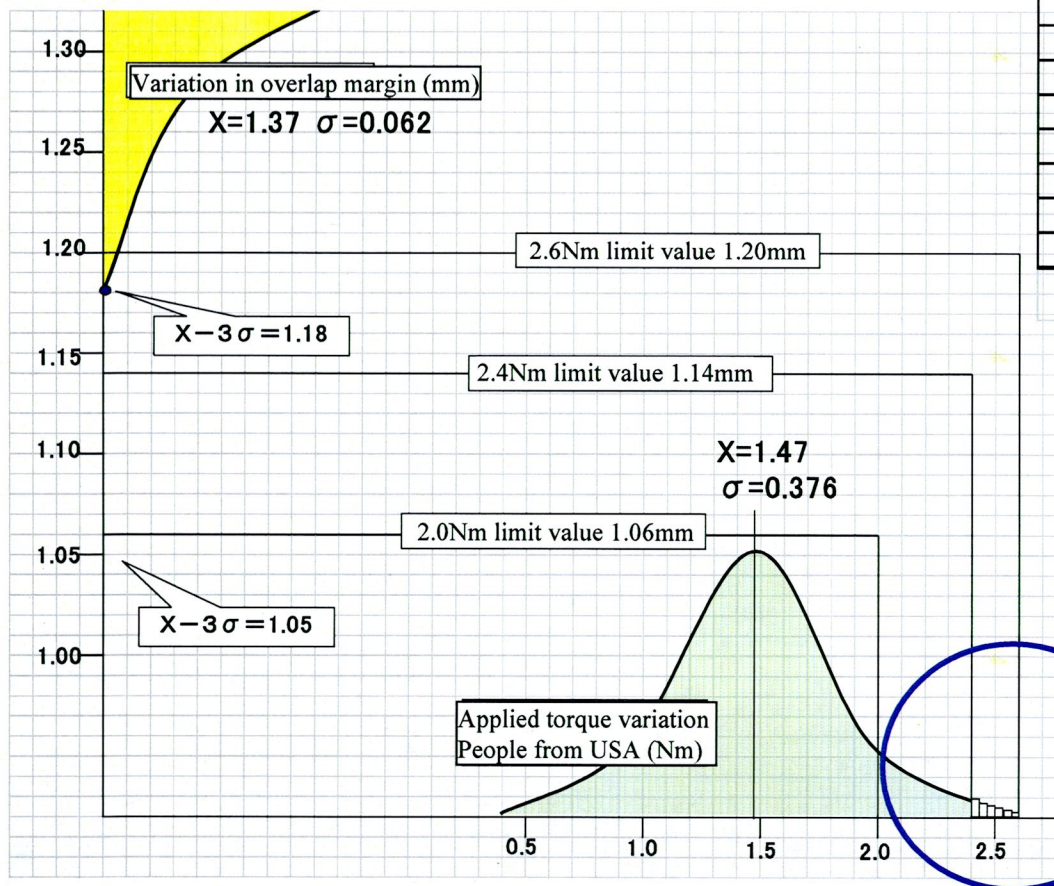
Calculated occurrence rate = 0.0008%

Market occurrence rate

OOM ACCORD HAM 0.008%

OOM TL 0.007%

Overlap margin		Applied torque		Occ rate
Range	Freq.	Range	freq.	
1.13~1.14	0.0000	2.35~2.40	0.0028	0.00000%
1.14~1.15	0.0001	2.40~2.43	0.0016	0.00002%
1.15~1.16	0.0001	2.43~2.47	0.0012	0.00001%
1.16~1.17	0.0003	2.47~2.50	0.0009	0.00003%
1.17~1.18	0.0005	2.50~2.53	0.0008	0.00004%
1.18~1.19	0.0008	2.53~2.57	0.0005	0.00004%
1.19~1.20	0.0012	2.57~2.60	0.0005	0.00006%
1.20~1.21	0.0018	2.60~2.63	0.0003	0.00005%
1.21~1.22	0.0029	2.63~2.67	0.0003	0.00009%
1.22~1.23	0.0041	2.67~2.70	0.0002	0.00008%
1.23~1.24	0.0060	2.70~2.73	0.0001	0.00006%
1.24~1.25	0.0083	2.73~2.77	0.0001	0.00008%
1.25~1.26	0.0122	2.77~2.80	0.0001	0.00012%
1.26~1.27	0.0153	2.80~2.83	0.0001	0.00015%
1.27~1.28	0.0198	2.83~2.87	0.0000	0.00000%
Total %				0.0008%



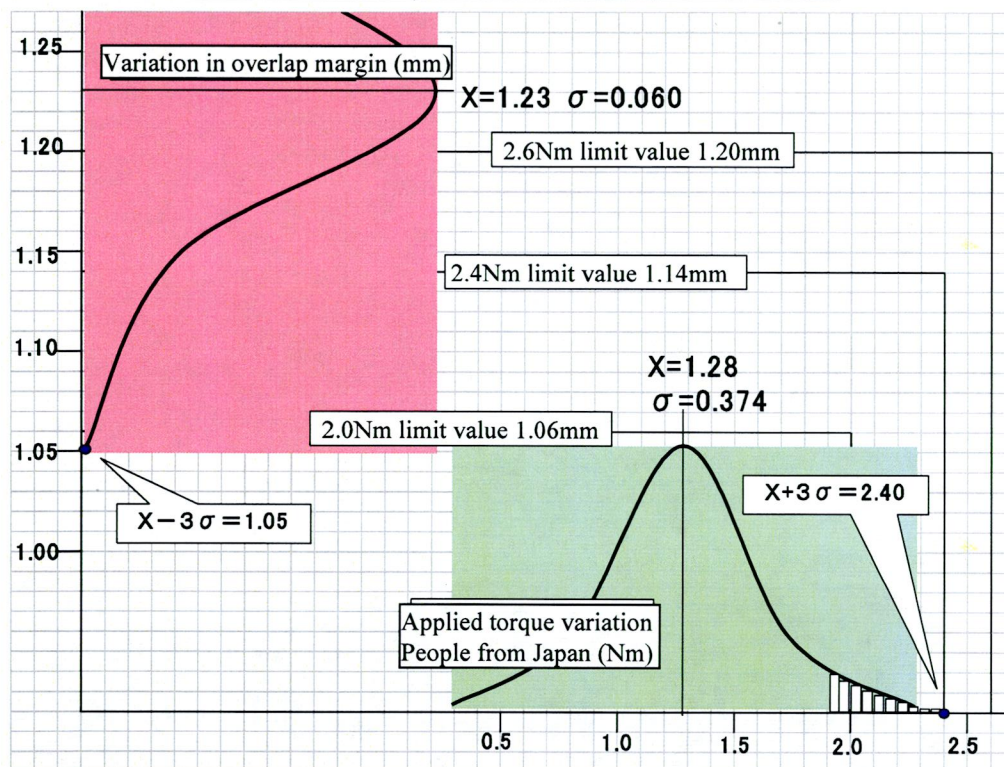
Same concept as previous page

Calculating occurrence rate

JPN market: ⑧

Calculated occurrence rate = 0.019%

From survey results, people who experience over 60 times of blocking in 10 years is only 2.8%, so we can say that this will only occur with people with unique usage. For Japan market, occurrence rate is further multiplied based on this logic, and results in 0.0005% (=practically no occurrence)



Overlap margin		Applied torque		Occ rate
Range	Freq.	Range	Freq.	
1.00~1.01	0.0000	1.70~1.75	0.0276	0.0000%
1.01~1.02	0.0001	1.75~1.80	0.0215	0.0002%
1.02~1.03	0.0002	1.80~1.85	0.0180	0.0004%
1.03~1.04	0.0004	1.85~1.90	0.0158	0.0006%
1.04~1.05	0.0005	1.90~1.95	0.0118	0.0006%
1.05~1.06	0.0010	1.95~2.00	0.0099	0.0010%
1.06~1.07	0.0015	2.00~2.05	0.0071	0.0011%
1.07~1.08	0.0024	2.05~2.10	0.0054	0.0013%
1.08~1.09	0.0037	2.10~2.15	0.0044	0.0016%
1.09~1.10	0.0051	2.15~2.20	0.0030	0.0015%
1.10~1.11	0.0078	2.20~2.25	0.0021	0.0016%
1.11~1.12	0.0108	2.25~2.30	0.0016	0.0017%
1.12~1.13	0.0139	2.30~2.35	0.0011	0.0015%
1.13~1.14	0.0193	2.35~2.40	0.0008	0.0015%
1.14~1.15	0.0250	2.40~2.43	0.0003	0.0008%
1.15~1.16	0.0292	2.43~2.47	0.0002	0.0006%
1.16~1.17	0.0377	2.47~2.50	0.0002	0.0008%
1.17~1.18	0.0446	2.50~2.53	0.0002	0.0009%
1.18~1.19	0.0481	2.53~2.57	0.0001	0.0005%
1.19~1.20	0.0571	2.57~2.60	0.0001	0.0006%
1.20~1.21	0.0622	2.60~2.63	0.0001	0.0006%
1.21~1.22	0.0618	2.63~2.67	0.0000	0.0000%
Total rate				0.0194%

⑧ with least overlap margin have occurrence rate of “practically no occurrence”, so there is no problem for Japan market.

Summary of investigation results / market action proposal

1. We propose market action for Type I (HL-J/J) in US market

- Some parts with overlap margin less than what is initially required, occurred from production variation.
- Compared to Type II III, predicted market failure rate is high at 0.071%, and occurrences are following this prediction.

2. We determine that no action is required for Type II (HL-J/A) in US market

- There may be some with overlap margin just below the required value, but predicted failure rate is 0.0008%.
- Occurrence in market is 0.007–0.008%, which is over the prediction, but the absolute value is small.

3. We determine that no action is required for Type III (HL-A/A) in US market.

- Overlap margin is more than the required value.
- There have been 3 market failures to date, and on 1 which we were able to recover, it showed damaged marks from over 2.6Nm

4. We determine that no action is required for Japan market.

- Even on ⑧ with least overlap margin, predicted market failure rate is 0.019%, and considering interlocking frequency, this become 0.0005% we can say that the occurrence is very little.
- There is only 4 failures in market, and 2 of these occurred on driving school vehicles which is used by users not used to operation.

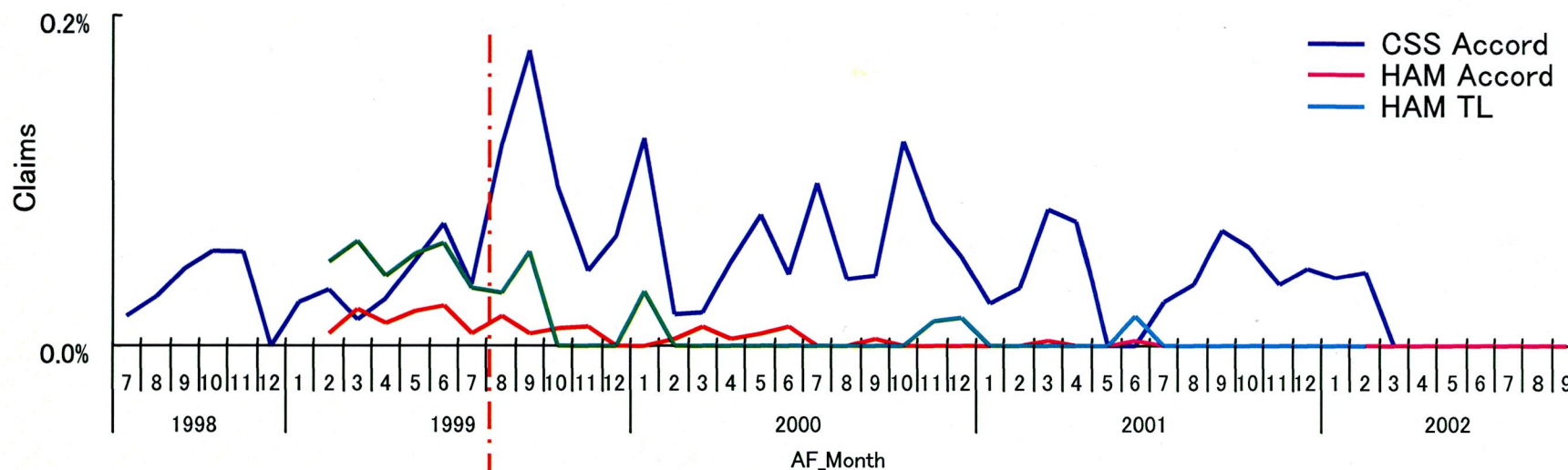
5. We determine that no action is required for overseas market other than the US.

- There have only been 2 occurrences reported.

Market action proposal

ACCORD / TL warranty (which can be determined as symptom of key coming out in ranges other than P)

発生率 Occurrence Ratio



NHTSA

Claim vhcl



Css
Prod

Type I

HL-J Cylinder

HL-J Body

HAM
prod

ALTEC
Cylinder
Prev. recall

Type I

Type II

HL-J Cylinder

HL-A Body

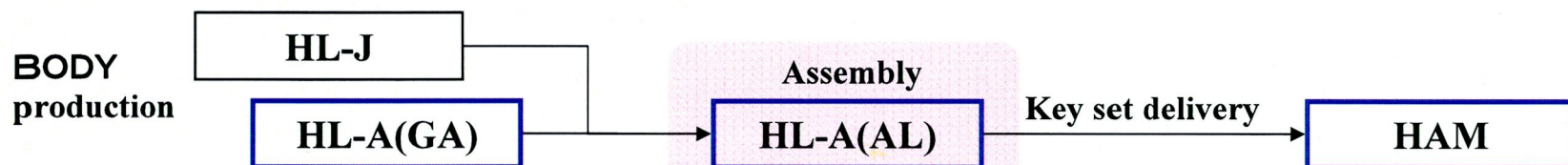
Type III

HL-A Cylinder

HL-A Body

Type I have high occurrence rate compared to II and III, so action is required.

HAM:ACCORD/TL switchover to HL-A BODY



From 6th April '99, switch over from HL-J to HL-A was started, but HL-J was used in parallel.

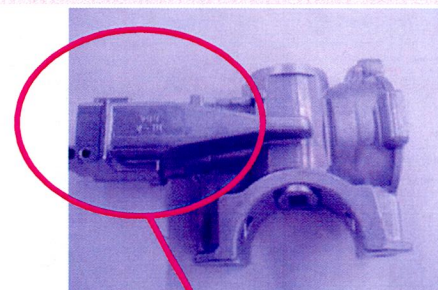
1 : there were 8214 parts of HL-J stock at the time of switch over

2 : there are 13 types subject to switch over, but IPP was issued for 6 types but not for 7 types.

3 : stamp on HL-A products are the same as Japan, so it is not possible to identify from HL-J. There is only 1 drawing (die), which is made in Japan.

	End Mar '99	Apr '99
Switchover IPP records		<div> <div>6th</div> <div>14th</div> <div>Start switchover</div> <div>Switchover complete</div> <div>6 types, issue IPP</div> </div>
HL-A parts stock	Delivery from 18-Mar 15800	15800 Start use →
HL-J parts stock	11192	8214 Continue use →
Production results		7379

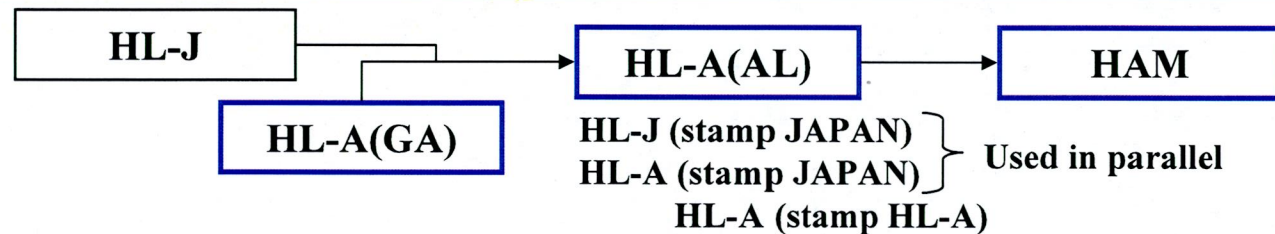
Situation as of 6th



HL-J/HL-A have same stamp, can't visually distinguish.

HAM:ACCORD/TL switchover to HL-A BODY

Estimation of switchover timing





We decide that that timing when it was completely switched to HL-A body after finishing mixed usage of HL-J parts to be 30th July.

-HL-A stamped body made by HL-A can be identified from HL-J body, so we believe that thorough FIFO control was carried out.

We decided the switchover timing to HL-A stamped body made by HL-A, was switchover timing to HL-A body.

-At the time of delivery from GA to AL, IPP controls were carried out but at AL, this was determined as in-house initial parts, so no application controls were carried out at AL. therefore, we estimated application based on delivery, stock, and production results.

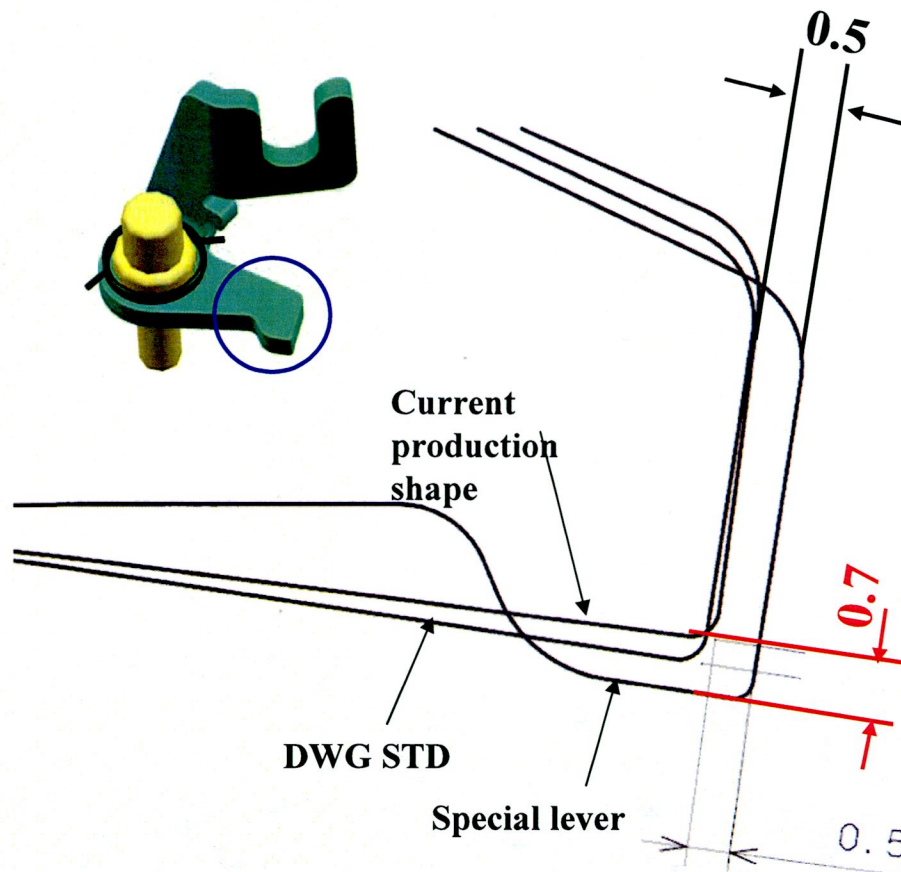
	May '99	Jun '99	Jul '99																				
Change stamp JAPAN→HL-A Application history	26 th ▼ GA→AL Start body delivery		10 th ▼ Estimated switching date at HL-A (AL)	23 rd ▼ Estimation til HAM application + 2W	30 th ▼ Margin +1W																		
Old stock HL-J (stamp JAPAN) HL-A (stamp JAPAN)	End/May 36740	End/Jun 6850	<table><tr><th>Day</th><th>Prod.</th><th>Stock</th></tr><tr><td>6</td><td>1900</td><td>4950</td></tr><tr><td>7</td><td>1521</td><td>3429</td></tr><tr><td>8</td><td>1545</td><td>1884</td></tr><tr><td>9</td><td>1660</td><td>224</td></tr><tr><td>10</td><td>1800</td><td>0</td></tr></table>			Day	Prod.	Stock	6	1900	4950	7	1521	3429	8	1545	1884	9	1660	224	10	1800	0
Day	Prod.	Stock																					
6	1900	4950																					
7	1521	3429																					
8	1545	1884																					
9	1660	224																					
10	1800	0																					
Production results		29890	<div> ▼ </div>																				
In July, production started from 6 th , and usage of old parts were completed on 10 th July.																							

Countermeasure method

Increase lever overlap margin (replacement to special lever)

Increase overlap margin by 0.7mm more than production lever, to secure overlap margin more than the limit value.

(increase 0.5mm in longitudinal direction, so it won't result in overrun easily)



Even with Type I where the overlap margin is the smallest, this can secure overlap margin of 1.75mm, providing enough margin for the required 1.20mm.

	I	II	III
X	1.93	1.37	1.46
σ	0.060	0.062	0.059
1.5	1.75		
1.0	1.05	1.18	1.28
			1.20

Overlap margin initially required.

Market action method

Replace levers on all affected vehicles to special lever.

For those which slip out, replace to a new cylinder (same as B kit for previous action)

《Procedure》

① Function the interlock on vehicle

**When it can't
be blocked**

⑥ Replace whole key set (but, S/L is with special lever spec)

From analysis results, we found that slip out occur just before the spring pin die, so for those vehicles which do not result in slip out, we can say that the spring pin is not tilting and replacement to special lever only would be OK.

**When it can
be blocked**

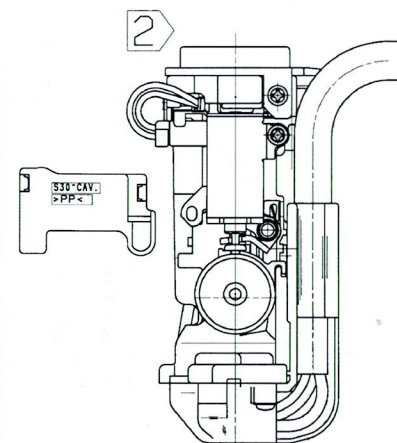
② Remove the interlock cover
(after removing column cover)
OK for cover to deform as it will be replaced.

③ Remove solenoid
Save plunger as this will be re-used.
Do not remove coupler.

④ Remove lever shaft
Remove lever shaft using special tool.
At that time, pull it out straight as
you in the manner of slide hammer.
Discard lever, lever return spring, and
lever shaft.

⑤ Fit **special lever** & lever shaft & interlock cover

- Measure height of the installed lever pin using calipers. This must be close to height confirmed in step 5 of confirmation procedure (measured before removing lever pin).
- If height is over 5.3mm, the pin is not properly inserted.
If required, re-fit slide hammer and insert pin.



Country subject to market action

Css built 99M~02M ACCORD, 97M~01M PRELUDE

HAM built 99M ACCORD/TL

Region	Proposal	Reasons
North America	Positive market action	-Safety defect, already treated once, weakness on parts
China	No action	-No regulation
Europe	No action	-Do not infringe regulations
Asia		-Very few information of occurrence
Oceania		-Did not take action previously
Japan		-O/M states to shift into P position and to apply parking brake.

Regulatory requirement relating to key interlock (AT vehicles with P position)

Quality control Div.

- ① US regulation (FMVSS114), Canada regulation (CMVSS114), Japan voluntary regulation
 - Key should not come out in positions other than P
- ② Europe regulation (95/56EC), Australia regulation (ADR25)
 - Key should not come out in positions other than P, or steering lock feature should function when key is removed.
- ③ G.C.C countries (Saudi Arabia, Qatar, UAE, Bahrain, Oman, Kuwait)
 - To conform to regulations of production country (excluding voluntary regulation)

Number of affected vehicles

Css built

ACCORD: AT vehicles built by Coss (98M~02M)

Export to	YM					Total	Action proposal
	98M	99M	00M	01M	02M		
United States	—	86475	77842	56214	62726	283257	R
Canada	—	2396	—	—	—	2396	R
Philippines	—	—	—	1	—	1	
Japan	52030	25910	—	21954	19701	119595	
Total	52030	114781	77842	78169	82427	405249	285653

PRELUDE: AT vehicles built by Coss (97M~01M)

Export to	YM					Total	Action proposal
	97M	98M	99M	00M	01M		
United States	7508	8229	5920	4972	5954	32583	R
Canada	1069	916	402	708	1109	4204	R
Australia	1248	955	635	503	329	3670	
Austria	255	—	5	3	—	263	
Belgium	170	37	6	10	—	223	
Denmark	16	6	2	1	—	25	
Finland	74	—	2	4	—	80	
France	602	30	76	44	—	752	
Germany	1097	12	199	116	—	1424	
Italy	281	189	9	—	—	479	
Netherlands	65	16	9	4	—	94	
Norway	89	4	5	2	—	100	
Portugal	36	4	1	1	—	42	
Poland	—	—	—	1	—	1	
Spain	235	84	45	2	—	366	
Sweden	15	5	2	1	—	23	
United Kingdom	1073	933	80	108	—	2194	
Japan	7102	2088	985	566	—	10741	
Total	20935	13508	8383	7046	7392	57264	36787

R proposed
vehicles

322,440 vehicles

Number of affected vehicles

HAM built

ACCORD: AT vehicles built at HAM

(Build date: 1999/2/16~1999/7/30 <uses HL-J cylinder>)

Export to	MY		Total	Action proposal
	99M	OOM		
United States	140232	3931	144163	R
Canada	3842	—	3842	R
Austria	7	—	7	
Belgium	115	—	115	
Finland	14	—	14	
France	74	—	74	
Germany	329	—	329	
Italy	4	—	4	
Spain	82	—	82	
Sweden	10	—	10	
United Kingdom	760	—	760	
Hong Kong	288	—	288	
Total	145757	3931	149688	148005

TL: AT vehicles built at HAM

(Build date: 1999/2/16~1999/7/30 <uses HL-J cylinder>)

Export to	MY		Total	Action proposal
	99M	OOM		
United States	26066	9	26075	R
Canada	2750	—	2750	R
Japan	6934	—	6934	
Hong Kong	120	—	120	
Total	35870	9	35879	28825

R proposed
vehicles

176,830 vehicles

Number of affected vehicles / cost CONFIDENTIAL BUSINESS INFORMATION



Preparation of parts for market action

① Service parts preparation schedule (delivery) (currently progressing per schedule)

	Monthly rate	Issues	Dec	Jan	Feb	Mar	
M3 × 8 cup tight Lever return SPG Vinyl pack	Over 500 thou	—		▽ 300 thou	▽ 180 thou		
Lever shaft	↑	Arrange material Start from Feb	Arrange material (1/15)	▽ 75 thou 万	▽ 405 thou		
Lever shade	200 thou	Domestic /overseas procurement (HL-J: 100 thou, HL-A100 thou)	▽ 50 thou	▽ 200 thou	▽ 200 thou	▽ 30 thou	
Interlock lever	475 thou	Only 175 thou can be secured at this point		▽ 175 thou		▽ 305 thou	
Delivery quantity	200 thou			1/30 ▽ 75 thou	2/25 ▽ 100 thou	3/25 ▽ 305 thou	
Cumulative delivery units				1/25 ▽ 75 thou	2/25 ▽ 175 thou	3/25 ▽ 480 thou	

※Concern parts: interlock lever (material arrival)
lever shaft (↑)

Prep % 1 3 10
 5% 6% 0%

APPENDIX

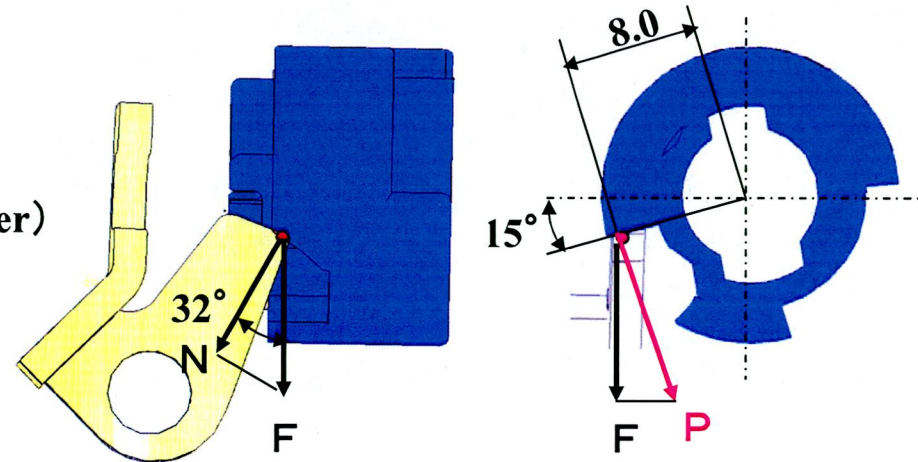
Occurrence mechanism (crushed lever tip)

When key rotation load is 2.6Nm,

$$P = 2.6 \times 1000 / 8.0 = 325\text{N}$$

$$F = P \times \cos 15^\circ = 314\text{N}$$

$$N = F \times \cos 32^\circ = 266\text{N} \quad (\text{load applied to lever})$$



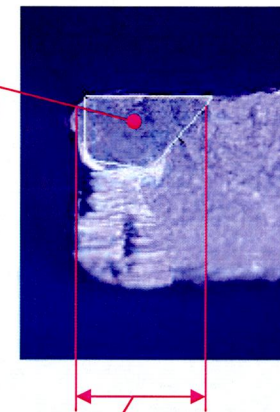
Allowable compression stress of lever material aluminium (A5052P-H38) = 340N/mm^2 ,

So when contact surface (S) between lever and inner collar reach below

$$S = 266 / 340 = 0.78\text{ mm}^2,$$

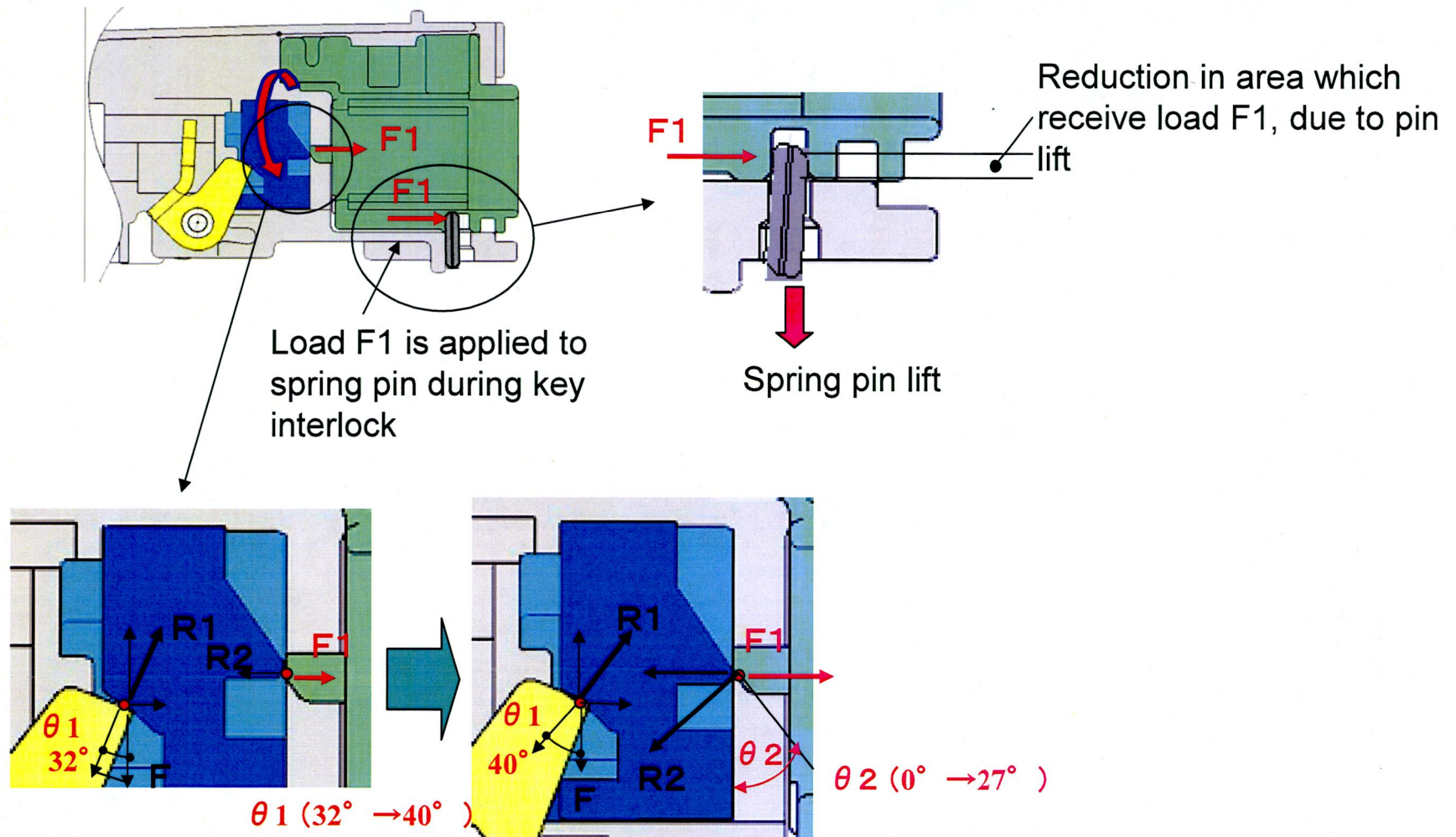
Buckling deformation occur on the aluminium

Deformation will not progress with contact surface more than 0.78mm^2



With less lever overlap margin, contact area will also be small, so more buckling deformation = slackening of the lever occur.

Occurrence mechanism (spring pin tilt)



From lever tip deformation, inner collar rotates more than normal, so it rides over the cam tip (overrun), increasing F1 by approx 2.3 fold.

$$F1 = F / (\cos \theta 2 / \sin \theta 1 * \cos \theta 1 - \sin \theta 2) * \cos \theta 2$$

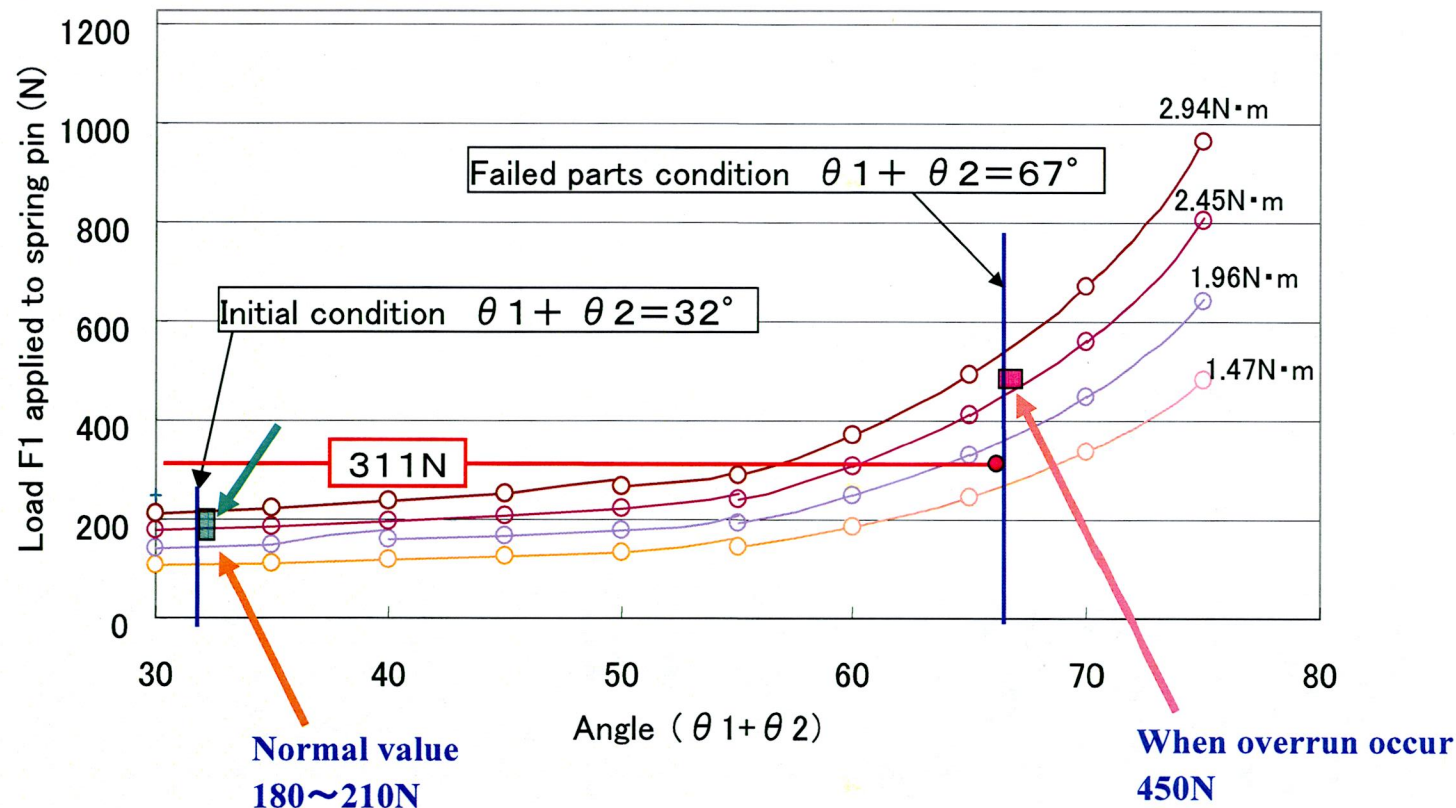
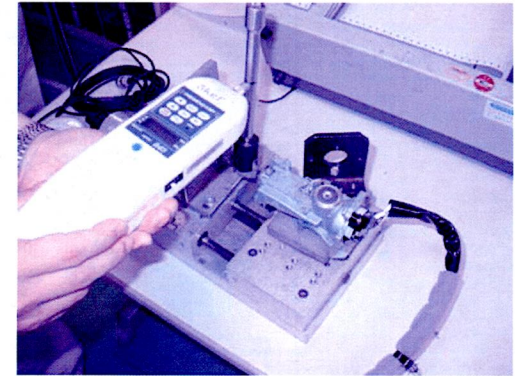
Occurrence mechanism (spring pin tilt)

Allowable stress of the cylinder when spring pin lift is 0.6mm is **311N**

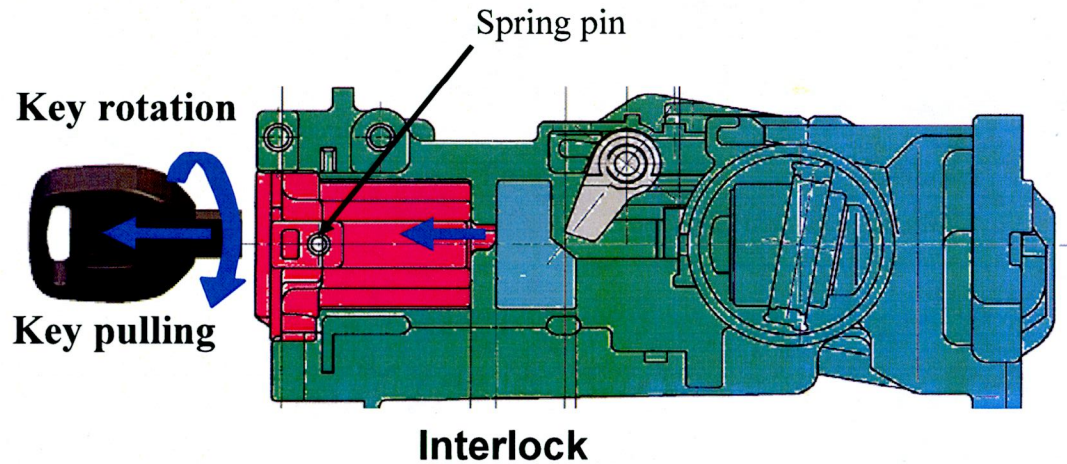
(calculated from allowable compression stress of cylinder material ZDO, 420N/mm²)

Measurement results

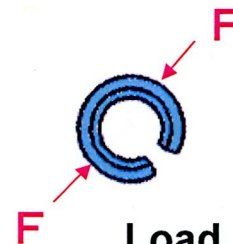
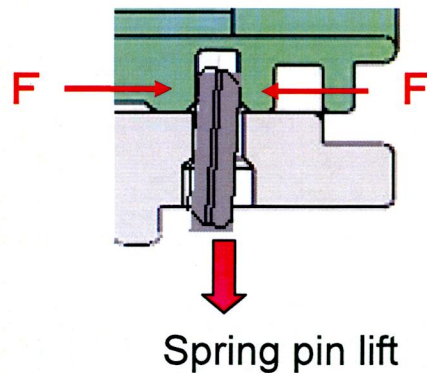
Load of 450N is generated, and is over allowable stress for the cylinder material so cylinder buckles \Rightarrow spring pin tilts \Rightarrow cylinder offsets



Occurrence mechanism (spring pin lift)



Load is input to spring pin with normal key operation.

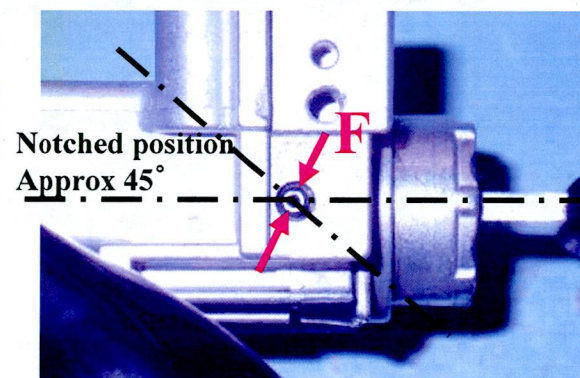
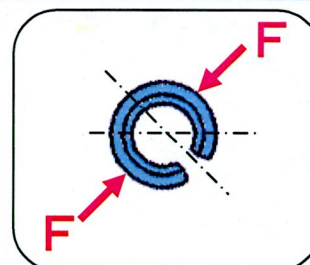


Load input to radial direction of the spring pin cause spring pin to repeatedly be stretched/compressed, lifting gradually.

Occurrence mechanism (spring pin lift)

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<Spring pin lift: recreation test>



Test condition

1. When you hit the stopper in right rotation (III position), apply torque (approx 2.5, 2.0, 1.5Nm) and approx 10N of tensile load at the same time.
2. When you hit the stopper in left rotation (0 position), apply torque (approx 2.5, 2.0, 1.5Nm) and approx 10N of push-in load at the same time.



Method to measure variation in lever overlap margin distribution

<Method to calculate overlap margin>

① Measuring dimension of components for overlap margin (verification of variation)

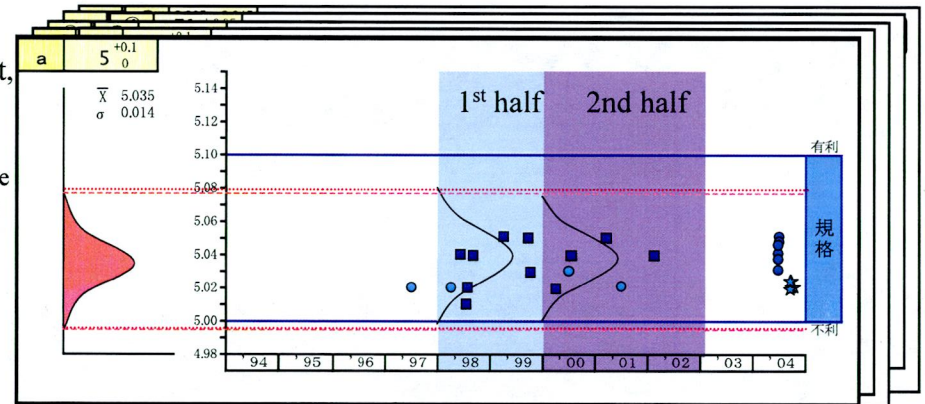
Measure each of the componential direction to make up the overlap margin (die history, current production parts, healthy vehicles in market, recovered parts). Calculate σ based on market healthy vehicle measurements from '98 to '02.

Variation in 1st and 2nd halves of market healthy vehicle measurement values are at the same level, and other measurement data are within this variation so we can determine that this variation is valid.

3D measurement



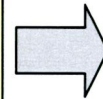
Pin gauge to measure hole dia.



② Calculating overlap margin

Allocate measured values of the dimension to the following formula.

$$\begin{aligned}
 A &= e(\text{cylinder}) + f(\text{inner collar}) \\
 B &= g(\text{body}) - h(\text{lever shaft center to lever tip}) \\
 C &= \{d(\text{cylinder}) - c(\text{cylinder})/2\} \\
 &\quad - \{a(\text{body}) - b(\text{body})/2\}
 \end{aligned}$$



$$\text{Lever overlap margin} = A - B - C$$

③ Calculate overlap margin σ

Calculate overall σ by square root method using all dimension σ

Attachment #Q8

**Document #4
QIS S84C-070125-07**

HONDA
 The power of dreams

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DB: Supplier Design

QUALITY IMPROVEMENT SHEET (Q.I.S.)

Issued by:

HAM M.Q.

Page 1

COUNTERMEASURE CONTROL # S84C-070125-07		RESPONSIBLE PLANT AND DEPARTMENT North American Logistics		6170 AQG: MARKET QLTY HUB		RANK A
INFO ID WAR-009703-404411		A. H. NUMBER 1		INFORMATION SOURCE Warranty Claim		MODEL CG5
ODOMETER 63014 mi		SUPPLIER HONDA LOCK AMERICA		VIN [REDACTED]		
MARKET INFORMATION ISSUER [REDACTED]		MARKET QUALITY ISSUER [REDACTED]		ENGINE NUMBER [REDACTED]		TRANSMISSION NUMBER [REDACTED]
PRIMARY FAILED PART NUMBER AND DESCRIPTION 35100-S0KA04 LOCK ASSY., STEERING				RELATED A.P. TECHLINE CODE 2590: SHIFT CABLE/INTERLOCK		
PRIMARY CAUSAL PART NUMBER AND DESCRIPTION				PRIMARY RELATED WARRANTY CLASS pn/key Cylinder Ignition Switch Inoperative/in		
DEALER/STATE 009703 NL		TITLE Interlock system not working properly.				
PRODUCTION DATE 99/08/10		OCCURRENCE DESCRIPTION Customers report the key came out of the ignition while the vehicle was in drive/or without engaging into Park. To fix, dealers replaced the ignition switch.				
SALES DATE 99/10/29		MARKET INFORMATION INVESTIGATION [REDACTED]				
OCCURRENCE DATE 06/08/23						
MQ RECEIVE DATE 06/08/30						
THEME UP DATE 07/01/25						
ANALYSIS RECEIVE DATE 07/01/30		MARKET QUALITY CAUSE ANALYSIS <Investigation n=2> HAM has confirmed 2 S84 style switches where the key can be removed with the car in gear. <Supplier (HL-J) Analysis n=2> HL-J has confirmed 2 S84 style switches with loose pin. The loose pin holds the key cylinder inside the body. This pin condition allows for excess movement of the inner collar, which reduces the interlock lever overlap. This reduced overlap allows for the inner collar to bypass the interlock lever allowing for the key to be removed from the ignition while the car is in gear. <Judgment> MQ Judges this to be a supplier related design problem				
CAUSE ANALYSIS APPROVAL DATE 07/01/31						
RESPONSIBLE DPT ISSUE DATE 07/01/31						
COUNTERMEASURE REPLY DATE						
1st COUNTERMEASURE APPLICATION DATE 02/06/18						
Finish Date						

VIEW BEFORE COUNTERMEASURE

VIEW AFTER COUNTERMEASURE

HONDA
The power of dreams

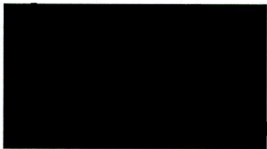


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QUALITY IMPROVEMENT SHEET (Q.I.S.)

Issued by:

HAM M.Q.

Page 2

RESPONSIBLE DEPARTMENT CAUSE ANALYSIS				COUNTERMEASURE BY	
<N=8> Found pin loose condition on all 8 pieces, after pin loosens the inner cylinder may move away from the interlock. This movement can cause a reduced interlock lever overlap resulting in a lack of toughness for interlock.				07/05/31	
				COUNTERMEASURE CONTROL # S84C-070125-07	
COUNTERMEASURE CONTENTS <Permanent C/M> Application of newer IGN S/W style. <Accord> Starting at 03M M/P Start S5A style applied. <TL> Starting at 04M M/P Start SEA style applied.				SOLD PRODUCT TREATMENT	
				AH: NORMAL WARRANTY	
				CH: NORMAL WARRANTY	
				JH: NORMAL WARRANTY	
				EH: NORMAL WARRANTY	
				OTHERS: NORMAL WARRANTY	
				STOCKED PRODUCT TREATMENT	
				NO TREATMENT	
				PART STOCK CHANGE	
				NO CHANGE	
				AFTER SERVICE PART NUMBER	
				SERVICE BULLETIN NUMBER	
				DESIGN CHANGE NUMBER	
COUNTERMEASURE APPLICATION INFORMATION					
C/M TYPE	VEHICLE IDENTIFICATION NUMBER	C/M APPLICATION DATE	ENGINE NUMBER	TRANSMISSION NUMBER	NOTES
HARD		03/08/15			Switch to SEA interlock
HARD		03/03/14			Switch to SEA inerlock
HARD		02/07/31			Switch to S5A interlock
HARD		02/06/18			Switch to S5A interlock
RECOMMENDED FIELD ACTION Due to decreasing warranty handle under normal warranty					
COUNTERMEASURE EFFECTIVENESS C/M is judged 100% effective for pin falling out as the new design does not rely on the pin to guarantee interlock					
RECOGNITION SIGNATURES					
CHIEF ENGINEER	MQ MANAGER	MQ STAFF ENGINEER		RESPONSIBLE DEPT. MANAGER	
		REPLY	ISSUE		

Attachment #Q8

Document #5 Analysis Report of Failed Part Original Document (Japanese)

Entire original document (Japanese) is included with English translated document, which is being submitted under a Request for Confidentiality.

Attachment #Q8

**Document #5
Analysis Report of Failed Part**

English Translation

Interlock key slip out (SV4 Type) Investigation results

5/18/2007

Honda lock

Quality Analysis Dept.

1. Occurrence situation (4-23-'07 Returned part from HAM→HLA-OH)

Feature of the failure occurred part

CONFIDENTIAL BUSINESS INFORMATION

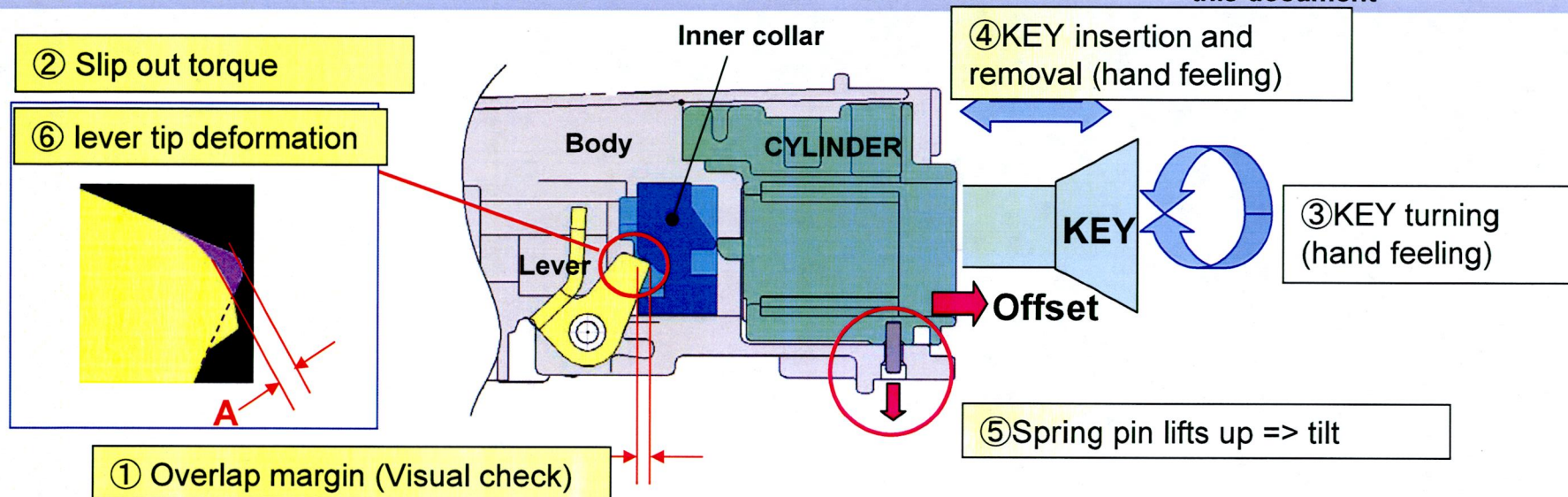
VIN	1HGCG22502A [REDACTED]
MTF	82,810
DTF	1,616
AF_OFF	8/12/2002
Contention	"IGNITION KEY COMES OUT WHEN IN GEAR FOUND FAULTY STEERING LOCK ASSY REPLACED STEERING LOCK ASSY"
Dealer Number	206698
Claim Number	246191
Body Style	S84
BODY Lot Code	2H07
SOLENOID Lot Code	2D27

	Returned part No1
MODEL	02M
Frame No	[REDACTED]
Vehicle prod. date	2002-08-12
Vehicle registration date	Unknown
Occ. date	Unknown
Mileage	82,810 Mil
DTF	1,616 Day
Occ. Location Dealer No	206698
Part name	Steering lock ASSY
Prod. LOT(HLA)	2002-08-07 (Body Lot stamp: 2H07)

This failure part was produced after the recall range. (After JJ)

2. Failure part investigation results - Summary

See photos (ref) at the end of this document



Items confirmed	Failure part
	No1
① Overlap margin (mm)	0.7
② Slip out torque (Nm)	0.25
③ KEY rotation (hand feeling)	OK
④ KEY insertion and removal (hand feeling)	OK
⑤ SPG pin lifts up (mm)	Lifted up: 0.85
⑥ Lever tip shape (mm)	0.25 (strong rotation + wear)

① Lever overlap is 1mm or below.

② Slip out was recreated.

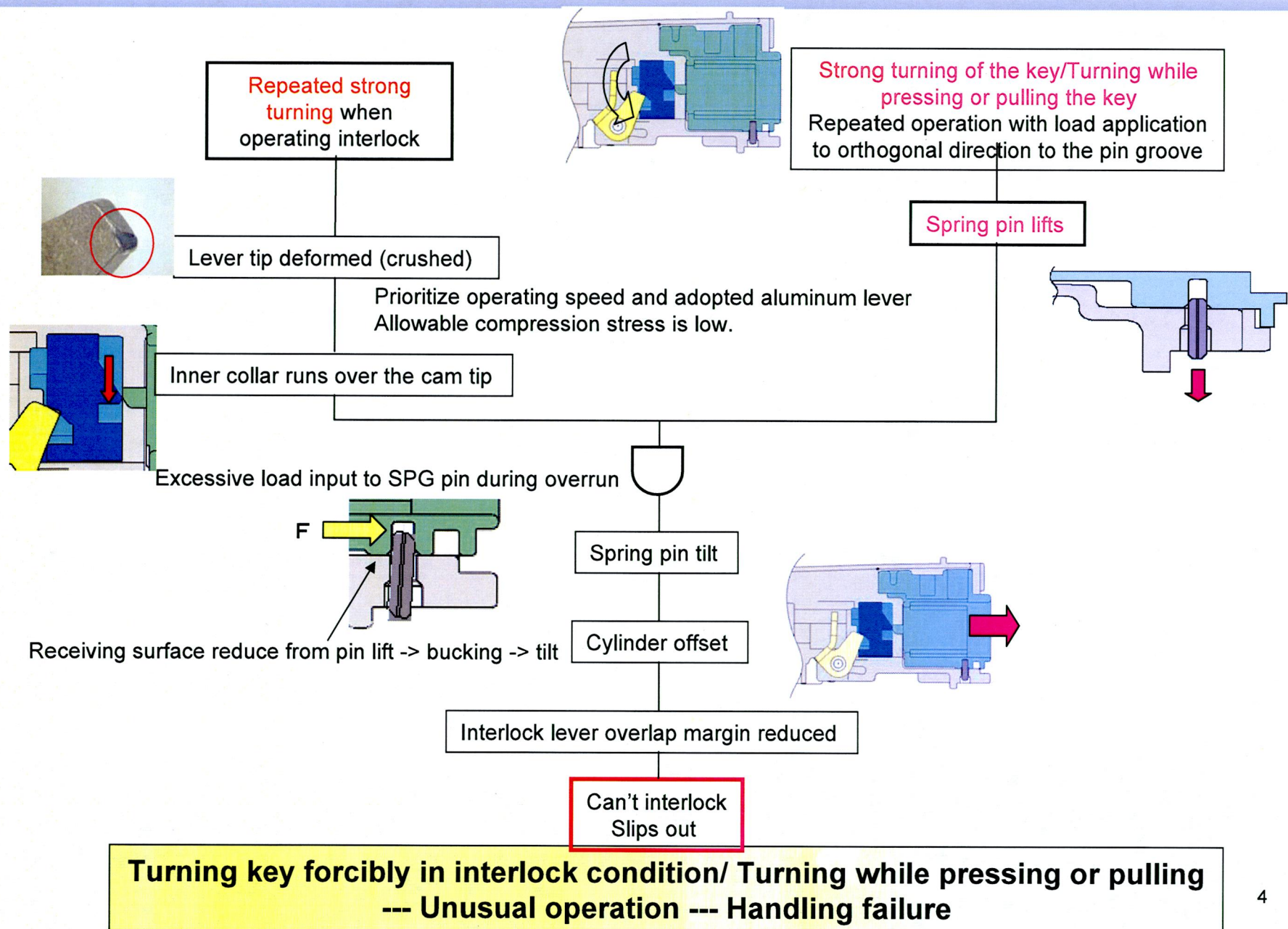
⑤ SPG pin lifts up.

⑥ Trace of strong rotation is on the lever tip shape.

* No abnormalities found on other areas.

◆ Overlap margin decreases due to worn lever and slipping out was recreated. (SPG pin lifted up too.)

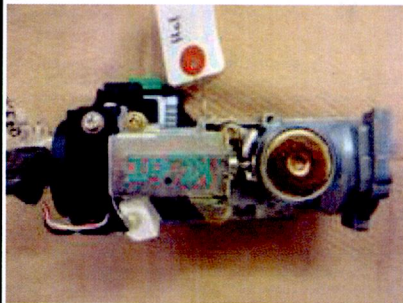
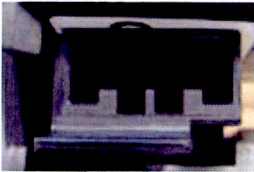

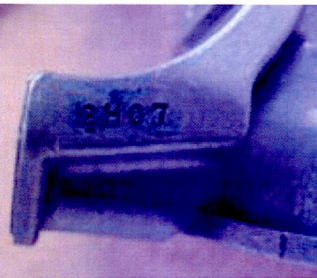

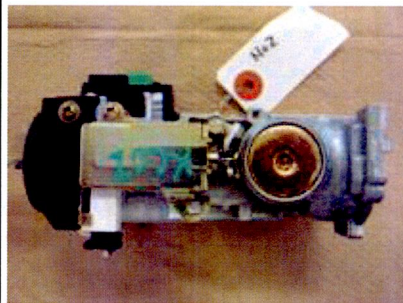
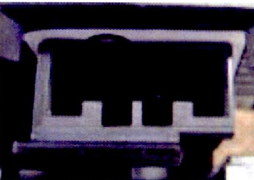

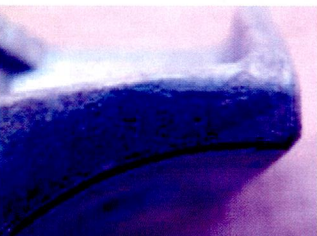
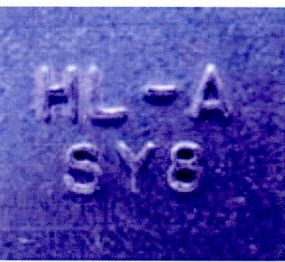
3. Occurrence mechanism

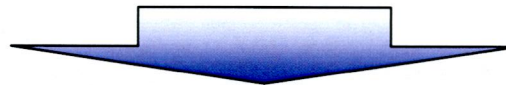


Detailed documents

Failure part investigation

1. Exterior investigation: Assembly condition

	Overall	Coupler	Solenoid	BODY-LOT	Prod. stamp
Part No1					
Part No2					



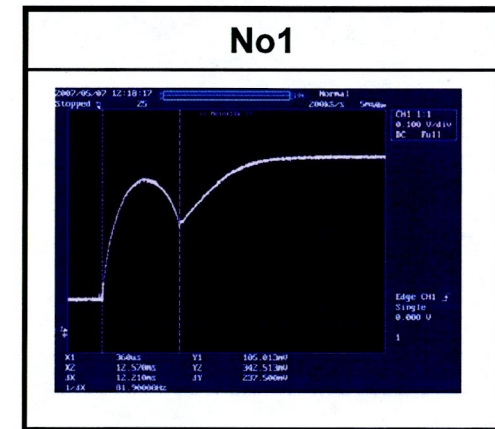
No abnormalities were observed on the exterior of the assembled condition.

Failure part investigation

2. Confirmation of interlock performance (Electrical operation and response)

<Ref: response waveform>

		Part
Item	Spec	No1
Operating voltage (V)	7V or below	4.55
Recovery voltage (V)	0.3V or over	0.67
Lever response (msec)	15msec or below	12.21
Judgment		OK



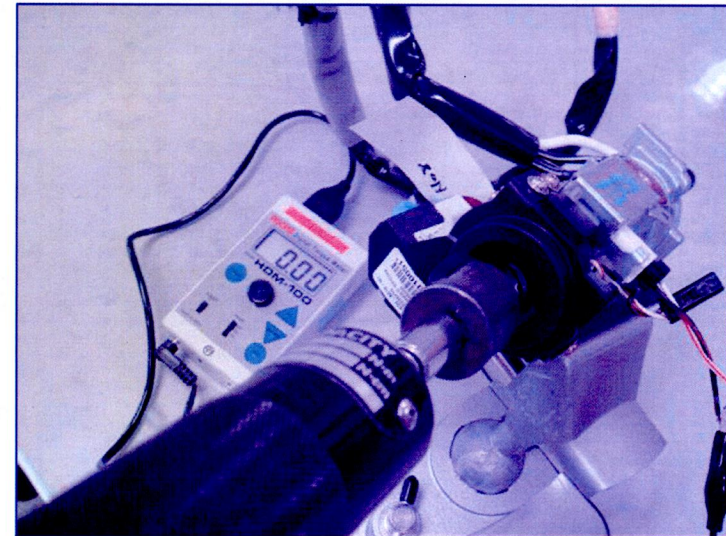
* No abnormalities observed in the electrical interlock lever operation

Failure part investigation

3. Operation confirmation by hand

		Part
		No1
Confirmation of slipping out (Max 1Nm level)		Slip out
Confirmation of slipping out torque (Unit: Nm Spec: 3.9Nm)		0.25
Key turning operation (hand feeling)		Good
Ref: Key turning torque (Peak value: Nm)	II → I	0.04
	I → 0	0.03
Confirmation of key insertion and removal (hand feeling)		Good
Ref: Key removal load (N)		5.1
Ref: SPG pin lift up (mm)		Lift up: 0.85

Confirmation method of slip out torque and key turning torque


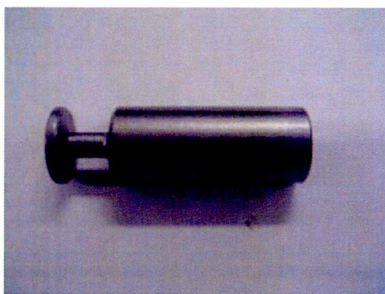
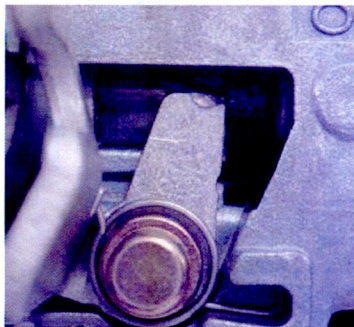
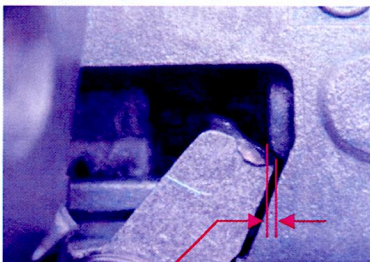
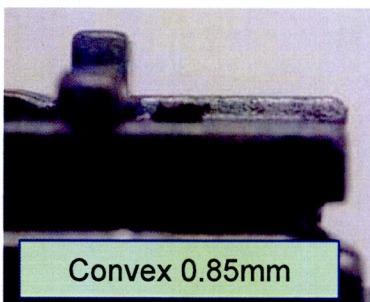

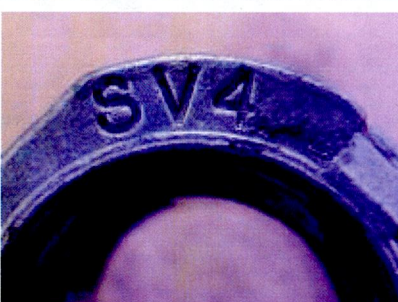





- Slip out with 0.25 Nm when interlock is blocking.

No abnormalities were observed in other key turning, insertion and removal operations.



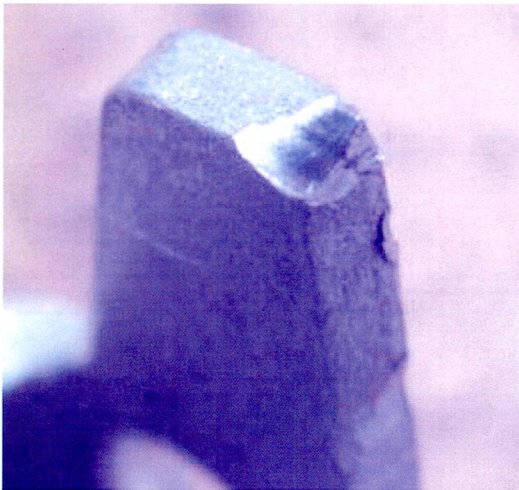
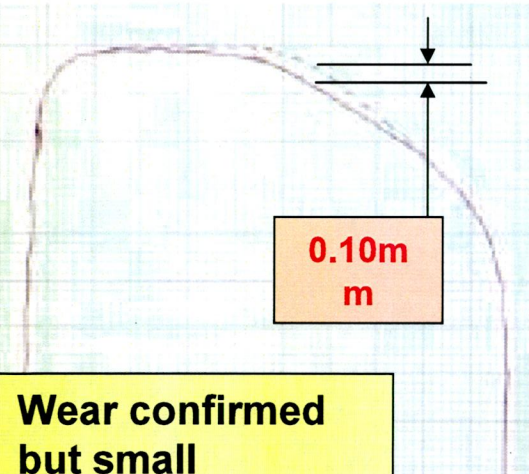
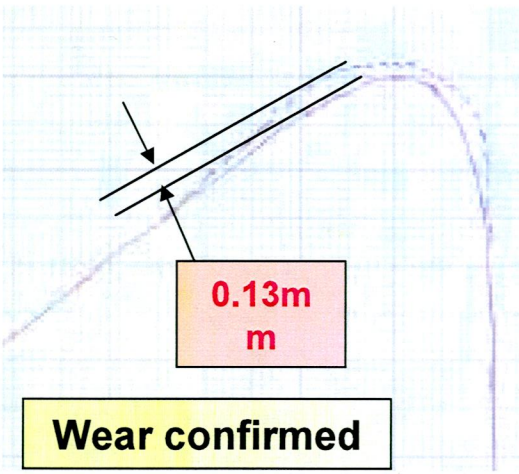
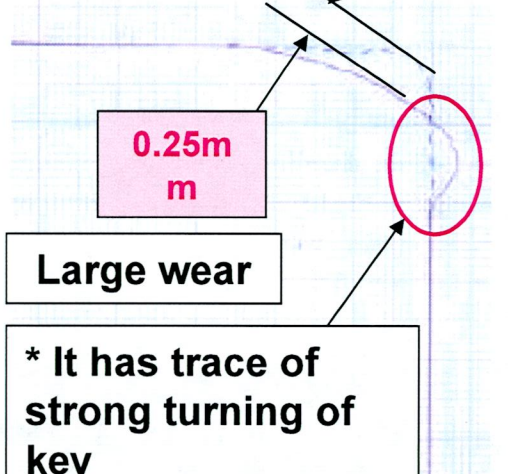
Failure part investigation

4. Disassembly confirmation

Part No1	Solenoid	Plunger	Lever installatin	Lever overlap margin
				 Ref: 0.7mm (Visual check)
	SPG pin	Interlock lever seating surface	CYL stamp	CYL cam
	 Convex 0.85mm			
	Inner cam	Lever tip	<div> <ul style="list-style-type: none"> - Lever tip is worn - With SPG pin lift up </div>	
		 Wear confirmed		

Failure part investigation

5. Shape confirmation: Returned part No. 1

CYL cam	Inner cam	Lever tip
		
 <p>0.10m m</p> <p>Wear confirmed but small</p>	 <p>0.13m m</p> <p>Wear confirmed</p>	 <p>0.25m m</p> <p>Large wear</p> <p>* It has trace of strong turning of key</p>

Red line: Shape of failure part

Black dot line: Shape of new part

Attachment #Q8

Document #6
QIS MV20081112093123

Original Document (Japanese)

Entire original document (Japanese) is included with English translated document, which is being submitted under a Request for Confidentiality.

Attachment #Q8

Document #6
QIS MV20081112093123

English Translation

CONFIDENTIAL BUSINESS INFORMATION

EVENT FLOW
RESPONSIBLE DEPARTMENT AND PERSON
COMPLETION DATE

RECEPTION
2008/11/05

INFORMATION INVESTIGATION
2008/11/12

INVESTIGATION AND ANALYSIS
2008/09/30

COUNTERMEASURE REQUEST
2008/09/30

INTERMEDIATE REPLY

COUNTERMEASURE REPLY

COUNTERMEASURE ISSUED

COUNTERMEASURE APPLICATION

COMPLETED

COUNTERMEASURE REQUEST

MODEL CODE YM/MODEL NAME	TITLE	QIS CONTROL #
015	Ignition switch interlock system is not working	MV20081112093123
03/ACCORD/		
OCCURRENCE DESCRIPTION		
GUST STATES KEY COMES OUT OF IGNITION WITH GEAR SELECTOR IN DRIVE.		

REPLY TO Q 4Rin Hinkai Goto VIA BY

INVESTIGATION AND ANALYSIS RESULTS

RECEPTION DATE

DATE	REPLY DEPARTMENT (IN-HOUSE)	APPROVAL	CHECK	CREATOR	DATE	REPLY DEPARTMENT (IN-HOUSE)	APPROVAL	CHECK	CREATOR	DATE	REPLY DEPARTMENT (OUTSIDE)	APPROVAL	CHECK	CREATOR

ADDRESSEE

RANK
A

DATE:
APPROVAL
CHECK
CREATOR

CAUSE ANALYSIS

COUNTERMEASURE

TREATMENT FOR STOCK & SOLD UNITS & PARTS

COUNTERMEASURE EFFECTIVENESS

FEED BACK TO THE SOURCE

COUNTERMEASURE APPLICATION INFORMATION

DATE	MODEL CODE (MODEL NAME)	YM	DEST.	CATEGORY	PRODUCT #

QUALITY IMPROVEMENT SHEET [Q I S]

ISSUED BY

Q 4Rin Hinkai Goto

OCCURRENCE MARKET
REPORT #
4CS02008900-00
FRAME #
ENGINE #
TRANSMISSION #
TRANSMISSION CATEGORY
5AT
MILEAGE OR HOURS
38775
Mile
REGISTRATION DATE
2002/11/23
OCCURRENCE DATE
2004/11/23
PRODUCT DATE
2002/09/27

SERVICE PART #
MAIN CAUSAL PART #
35100-S0A-A31
CAUSAL PART SYMPTOM CODE AND DESCRIPTION
MODEL CODE
CAUSE CATEGORY
Outside of manufact
DEPARTMENT
SUPPLIER
HONDA LOCK INF. CO.
CODE
6504
COUNTERMEASURE CATEGORY
COUNTERMEASURE PART SYMPTOM CODE AND DESCRIPTION
OCCURRENCE FORECAST
COUNTERMEASURE PART AVAILABILITY
Yes
REVISED ITEM
DRAWING
OPERATION STANDARD

ISSUE
DATE
VERSION
APPROVAL
CHECK
CHECK
CREATOR

Attachment #Q8

Document #6
QIC Report

Original Document (Japanese)

Entire original document (Japanese) is included with English translated document, which is being submitted under a Request for Confidentiality.

Attachment #Q8

**Document #6
QIC Report**

English Translation

CONFIDENTIAL BUSINESS INFORMATION

QIC Report Identification

4CS02008900-00

Page : 1 / 1

TO	ATTN	Date	2008/Nov/04		
AQAO		Model Name	ACCORD/TSX		
CC	ATTN	Model Code	CM5		
CSO		Model Year	2003		
			Evaluation	Grade	
		Country of Occurrence	JAPAN	Customer Evaluation	4
				Dealer Repair Evaluation	2
		Issued by	CSO	Responsible Person	Rank
				Manager's Signature	A
		Recieved by		Responsible Person	
				Manager's Signature	

Title	Ignition switch interlock system is not working	
Symptoms	Symptom Code	
CUST STATES KEY COMES OUT OF IGNITION WITH GEAR SELECTOR IN DRIVE.		
Diagnosis		
SHIFT INTERLOCK SYSTEM IS NOT WORKING PROPERLY.		

Suspected Cause	Defect Code
-----------------	-------------

Temporary Treatment and Effect/Result	LON	
---------------------------------------	-----	--

REPLACE IGNITION AND REKEY

Specific Information	
----------------------	--

Occurrence Statistics							Sales and Registration Number of the affected model	
Month/Week/Date	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Distributor Unit Sales	
Customer Contacts / Warranty Claim							Total Registration	

[illegible]

Affected Parts and Parts Call-in Information		Affected Parts Availability	Affected Part Number	Stock	B/O Ttl
		I	35100-SDA-A31		
		II			
		III			
VIN / Frame No	Remarks	IV			
[REDACTED]		V			
		Affected Parts Attention			

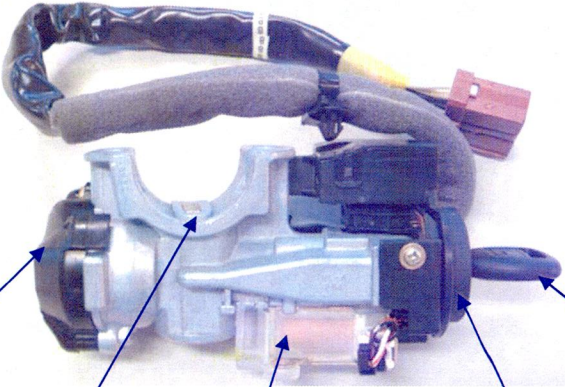
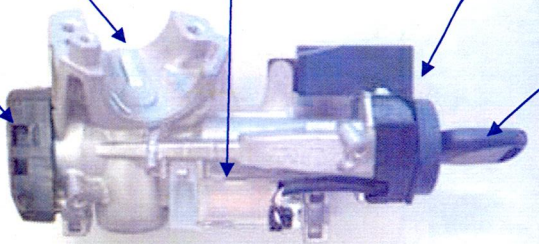
Attachment #Q9b

Description of Modification/Change

Original Document (Japanese)

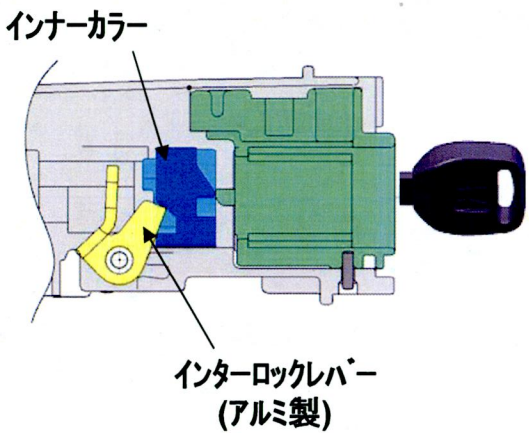
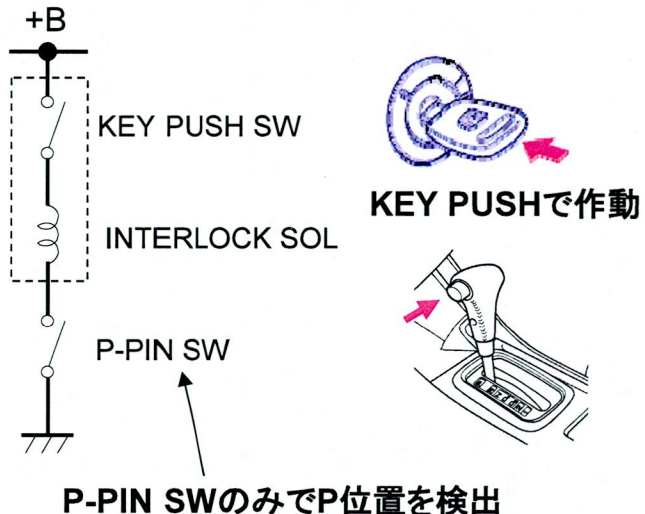
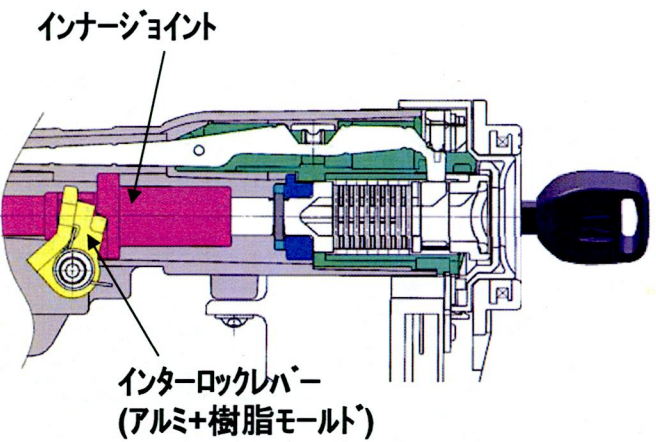
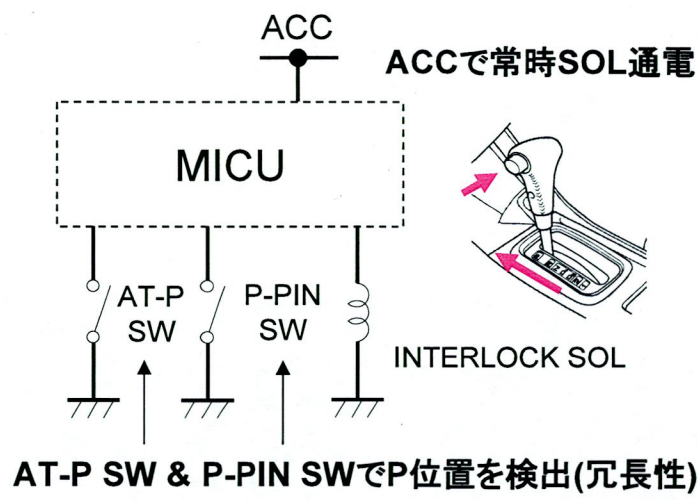
キーロック Assyの新作
(2002MY→2003MY Accord 変化点)

2002MY→2003MY Accord 変化点

MODEL	変更内容 (変更構造)
02 Accord	
03Accord	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px; text-align: center;">IGN.SW.</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">LOCK</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">INTERLOCK</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">IMMOBILISER</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">KEY</div> </div> 

02Accordから03Accordの変更の理由 : 性能向上/軽量化 (Body : ZnDc→Mg)
(ステアリングロック全体の統合変更)

2002MY→2003MY Accord 変化点

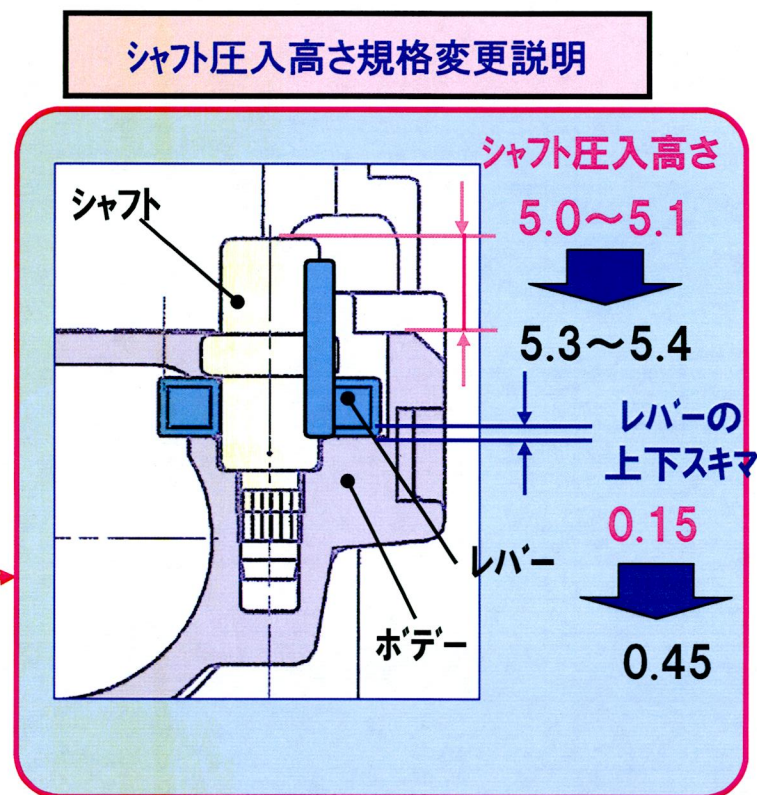
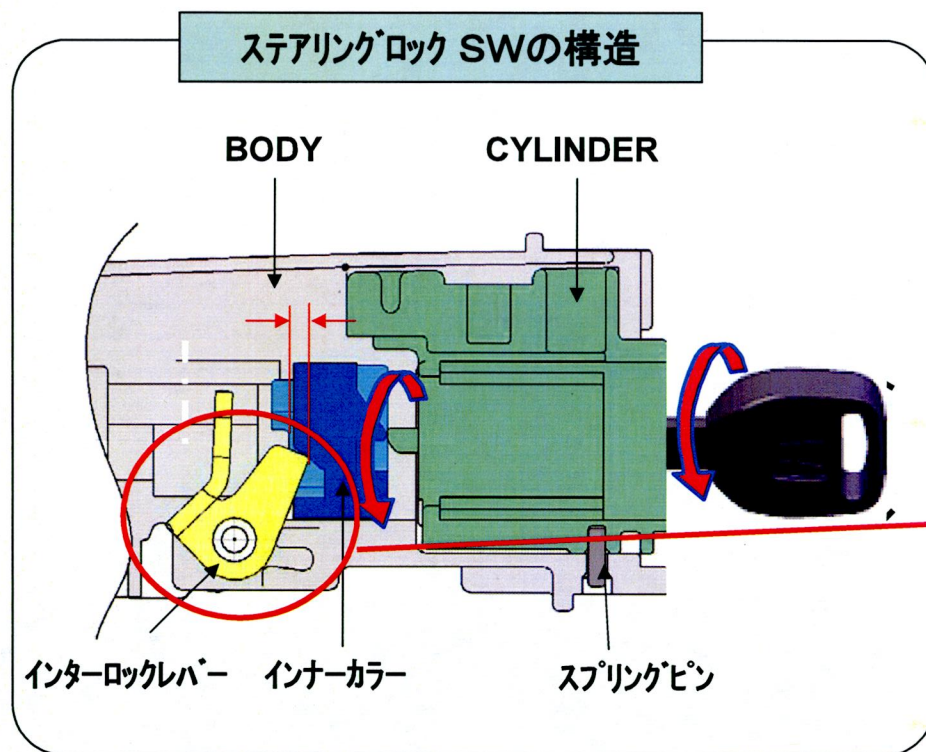
	構造	制御方法
02Accord	 <p>インナーカラー</p> <p>インターロックレバー (アルミ製)</p>	 <p>+B</p> <p>KEY PUSH SW</p> <p>INTERLOCK SOL</p> <p>P-PIN SW</p> <p>KEY PUSHで作動</p> <p>P-PIN SWのみでP位置を検出</p>
03Accord	 <p>インナージョイント</p> <p>インターロックレバー (アルミ+樹脂モールド)</p>	 <p>ACC</p> <p>MICU</p> <p>AT-P SW</p> <p>P-PIN SW</p> <p>INTERLOCK SOL</p> <p>ACCで常時SOL通電</p> <p>AT-P SW & P-PIN SWでP位置を検出(冗長性)</p>

レバーシャフト圧入高さの規格変更

03M 製造規格変更の詳細内容

1、レバーシャフト圧入高さ規格変更説明

- ◆ 目的 : レバーとシャフトの上下スキマを、適正な設定に見直すことで、レバーの回転作動性(応答性)の安定化を図る。(スキマ STD 0.15→0.45mm)
- ◆ 変更内容 : シャフトの圧入高さ規格値を、5.0～5.1mm→5.3～5.4mmに変更する。
- ◆ 適用時期 : 2003年 1月 27日



Attachment #Q9b

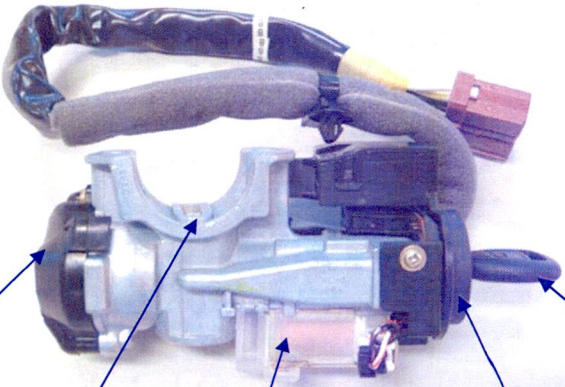
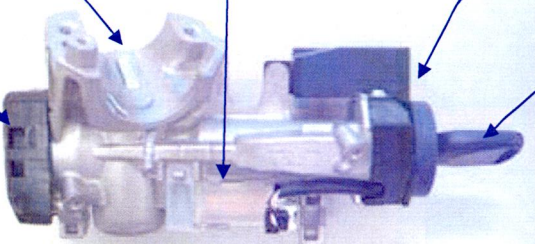
Description of Modification/Change

English Translation

New key lock Assembly

(Change points from 2002MY to 2003MY Accord)

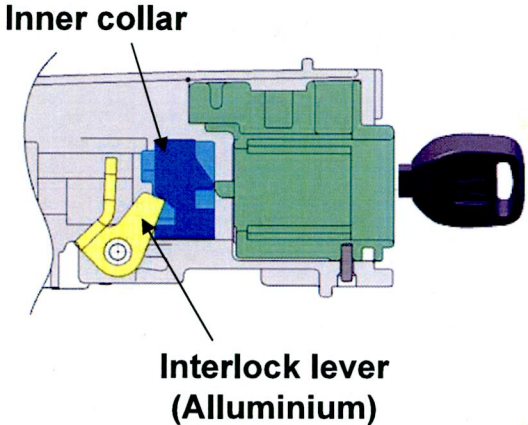
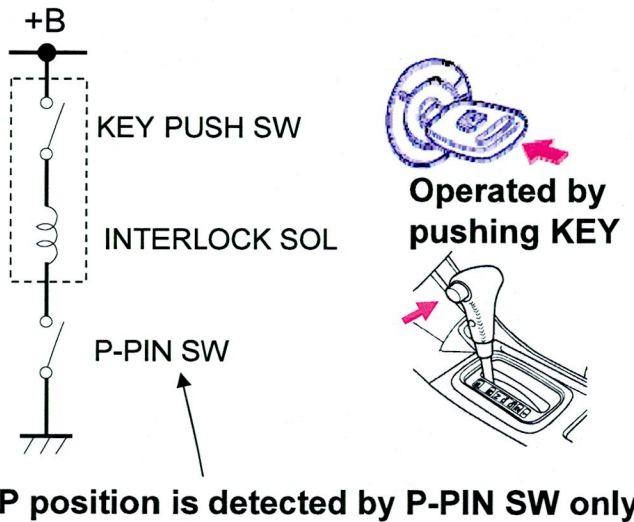
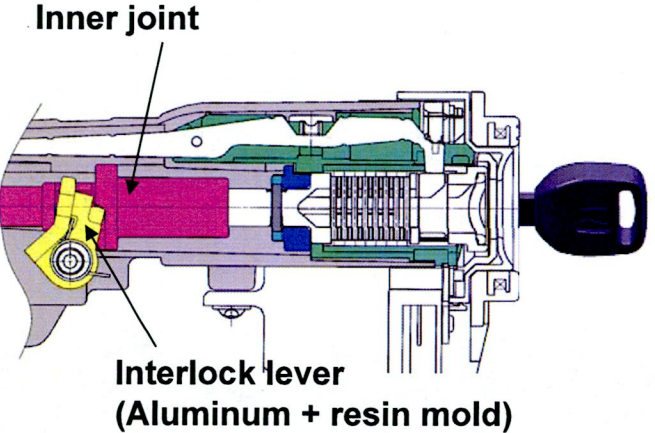
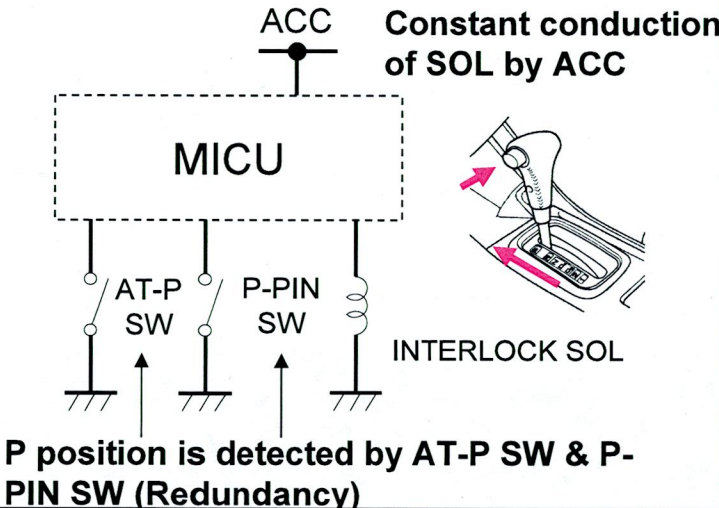
2002MY→2003MY Accord Change points

MODEL	Content of changes (Changed structure)
02 Accord	
03Accord	<div data-bbox="640 841 1717 922"><div>IGN.SW.</div><div>LOCK</div><div>INTERLOCK</div><div>IMMOBILISER</div><div>KEY</div></div> 

Reasons for change from 02Accord to 03Accord:

Improvement of performance/ Weight reduction (Body: ZnDc→Mg)
(Unification change of overall steering lock)

2002MY→2003MY Accord Change points

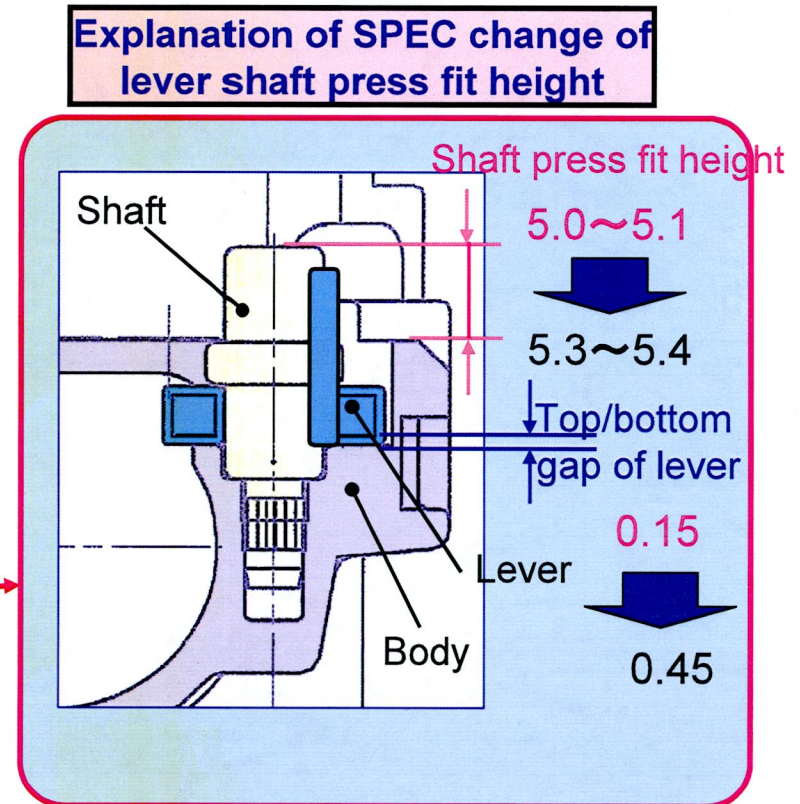
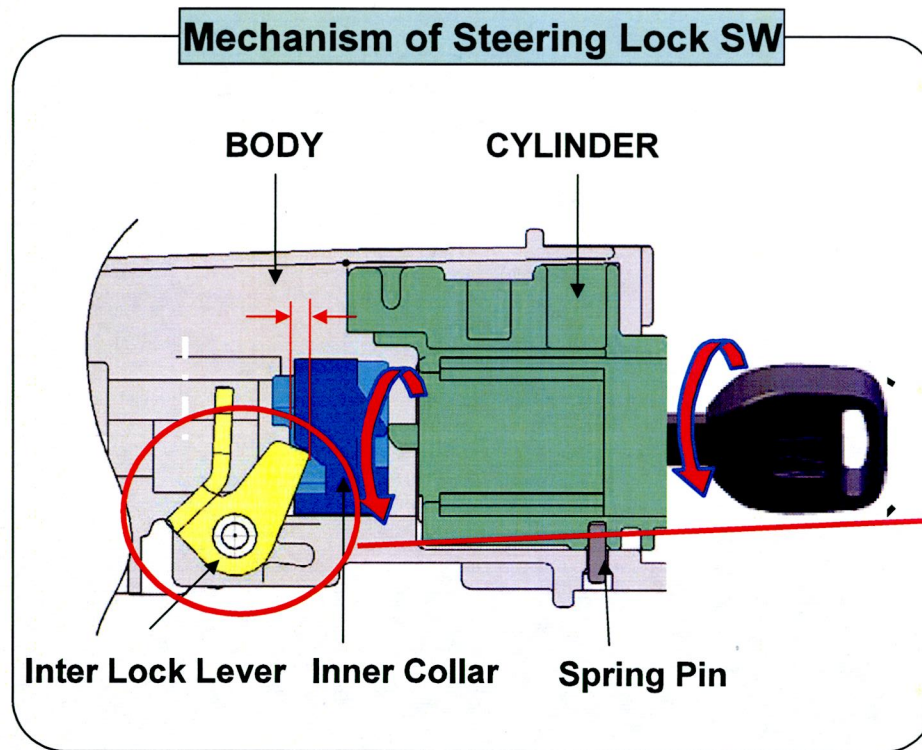
	Structure	Control method
02Accord	 <p>Inner collar</p> <p>Interlock lever (Alluminium)</p>	 <p>+B</p> <p>KEY PUSH SW</p> <p>INTERLOCK SOL</p> <p>P-PIN SW</p> <p>Operated by pushing KEY</p> <p>P position is detected by P-PIN SW only</p>
03Accord	 <p>Inner joint</p> <p>Interlock lever (Aluminum + resin mold)</p>	 <p>ACC</p> <p>Constant conduction of SOL by ACC</p> <p>MICU</p> <p>AT-P SW</p> <p>P-PIN SW</p> <p>INTERLOCK SOL</p> <p>P position is detected by AT-P SW & P-PIN SW (Redundancy)</p>

Spec change of lever shaft press fit height

Detail Content of 03M Manufacturing SPEC Change

1.Explanation of SPEC change of lever shaft press fit height

- ◆ Purpose : By revising top/bottom gap of lever and shaft to an adequate setting, aim stabilization of lever rotation function (response) (Gap STD 0.15→0.45mm)
- ◆ Alteration content: Change SPEC value of shaft press fit height from 5.0~5.1mm → 5.3~5.4mm
- ◆ Application date: 27 JAN 2003



Attachment #Q9d,e

Original & Modified Components
Service and Engineering Part Numbers

Original Document (Japanese)

コンポーネントの部品番号

	2002MYから2003MYでの仕様変更
d	06350-S82-A12 (キーセット) 06350-S82-A32 (キーセット) 06350-S84-A12 (キーセット) 06350-S84-A32 (キーセット) 06350-S84-A72 (キーセット) 35100-S84-A13 (ステアリングロックAssy) 35100-S84-A33 (ステアリングロックAssy)
e	06350-SDA-A01 (キーセット) 06350-SDA-A20 (キーセット) 06350-SDA-A30 (キーセット) 06350-SDN-A10 (キーセット) 35100-SDA-A11 (ステアリングロックAssy) 35100-SDA-A31 (ステアリングロックAssy)

Attachment #Q9d,e

Original & Modified Components
Service and Engineering Part Numbers

English Translation

Component part numbers

	Spec change from 2002MY to 2003MY
d	06350-S82-A12 (key set) 06350-S82-A32 (key set) 06350-S84-A12 (key set) 06350-S84-A32 (key set) 06350-S84-A72 (key set) 35100-S84-A13 (steering lock Assy) 35100-S84-A33 (steering lock Assy)
e	06350-SDA-A01 (key set) 06350-SDA-A20 (key set) 06350-SDA-A30 (key set) 06350-SDN-A10 (key set) 35100-SDA-A11 (steering lock Assy) 35100-SDA-A31 (steering lock Assy)

Attachment #Q11

2002MY Sales History

2002MY ACCORD COMPONENT SALES HISTORY
AS OF 11/20/2008

PART DESC	SERVICE PART NO.	MODEL APPLICATION	CALENDAR YEAR				
			2003	2004	2005	2006	2007
CYLINDER SET, KEY	06350-S82-A12	1998-2002 Accord*	NA	NA	NA	NA	NA
CYLINDER SET, KEY	06350-S82-A32	1998-2002 Accord*	NA	NA	NA	NA	NA
CYLINDER SET, KEY	06350-S84-A12	1998-2002 Accord*	13	25	5	5	6
CYLINDER SET, KEY	06350-S84-A32	1998-2002 Accord*	NA	NA	NA	NA	NA
CYLINDER SET, KEY	06350-S84-A72	1998-2002 Accord*	NA	NA	NA	NA	NA
LOCK ASSY., STEERING	35100-S84-A13	2000-2002 Accord*	NA	NA	NA	NA	NA
LOCK ASSY., STEERING	35100-S84-A33	2000-2002 Accord*	NA	NA	NA	NA	NA

*Sales history totals do not reflect
sales for 2002 MY only.

24-MONTH HISTORY	
	S84-A12
Nov-06	1
Dec-06	2
Jan-07	1
Feb-07	0
Mar-07	0
Apr-07	0
May-07	0
Jun-07	0
Jul-07	2
Aug-07	2
Sep-07	1
Oct-07	0
Nov-07	0
Dec-07	0
Jan-08	0
Feb-08	1
Mar-08	1
Apr-08	1
May-08	0
Jun-08	1
Jul-08	0
Aug-08	0
Sep-08	0
Oct-08	0

Attachment #Q11

2003MY Sales History

RQ08-006

Q11

**2003MY ACCORD COMPONENT SALES HISTORY
AS OF 11/20/08**

PART DESC	SERVICE PART NO.	MODEL APPLICATION	CALENDAR YEAR				
			2003	2004	2005	2006	2007
CYLINDER SET, KEY	06350-SDA-A01	2003-2004 Accord*	2	4	9	8	0
CYLINDER SET, KEY	06350-SDA-A02	2003-2004 Accord*	NA	NA	NA	NA	NA
CYLINDER SET, KEY	06350-SDA-A20	2003 Accord*	68	40	23	28	12
CYLINDER SET, KEY	06350-SDA-A21	2003-2004 Accord*	1	19	9	7	6
CYLINDER SET, KEY	06350-SDA-A22	2003-2005 Accord*	69	59	81	79	63
CYLINDER SET, KEY	06350-SDA-A30	2003 Accord*	186	100	65	36	38
CYLINDER SET, KEY	06350-SDA-A31	2003-2005 Accord*	26	55	42	3	0
CYLINDER SET, KEY	06350-SDA-A32	2003-2005 Accord*	NA	NA	NA	NA	NA
CYLINDER SET, KEY	06350-SDN-A10	2003 Accord*	50	28	23	0	0
CYLINDER SET, KEY	06350-SDN-A11	2003-2004 Accord*	2	20	22	17	14
LOCK ASSY., STEERING	35100-SDA-A11	2003 Accord*	4	2	17	34	58
LOCK ASSY., STEERING	35100-SDA-A31	2003 Accord*	NA	NA	NA	NA	NA

*Sales history totals do not
reflect sales for 2003 MY
only.

RQ08-006

Q11

2003MY ACCORD COMPONENT 24-MONTH SALES HISTORY
AS OF 11/20/08

24-MONTH HISTORY									
	SDA-A01	SDA-A20	SDA-A21	SDA-A22	SDA-A30	SDA-A31	SDN-A10	SDN-A11	SDA-A11
Nov-06	1	2	1	6	2	0	0	3	3
Dec-06	0	2	0	4	5	0	0	0	3
Jan-07	0	1	2	5	4	0	0	4	3
Feb-07	0	2	2	6	1	0	0	1	3
Mar-07	0	1	2	6	2	0	0	3	5
Apr-07	0	0	0	6	1	0	0	1	2
May-07	0	3	0	7	0	0	0	0	7
Jun-07	0	1	0	4	8	0	0	2	9
Jul-07	0	2	0	7	4	0	0	0	5
Aug-07	0	1	0	2	4	0	0	1	7
Sep-07	0	0	0	5	1	0	0	0	6
Oct-07	0	1	0	5	2	0	0	1	7
Nov-07	0	0	0	9	4	0	0	0	2
Dec-07	0	0	0	1	7	2	0	1	2
Jan-08	0	1	0	8	0	0	0	1	6
Feb-08	0	0	0	2	2	0	0	0	2
Mar-08	0	1	0	5	2	0	0	2	6
Apr-08	0	2	0	4	4	0	2	0	8
May-08	0	1	0	7	2	0	0	1	11
Jun-08	0	2	0	6	3	0	0	1	13
Jul-08	0	0	0	1	3	0	2	0	9
Aug-08	0	0	0	6	4	0	0	0	5
Sep-08	0	0	0	4	2	0	0	0	7
Oct-08	0	0	0	4	1	0	0	0	6

Attachment #Q13b

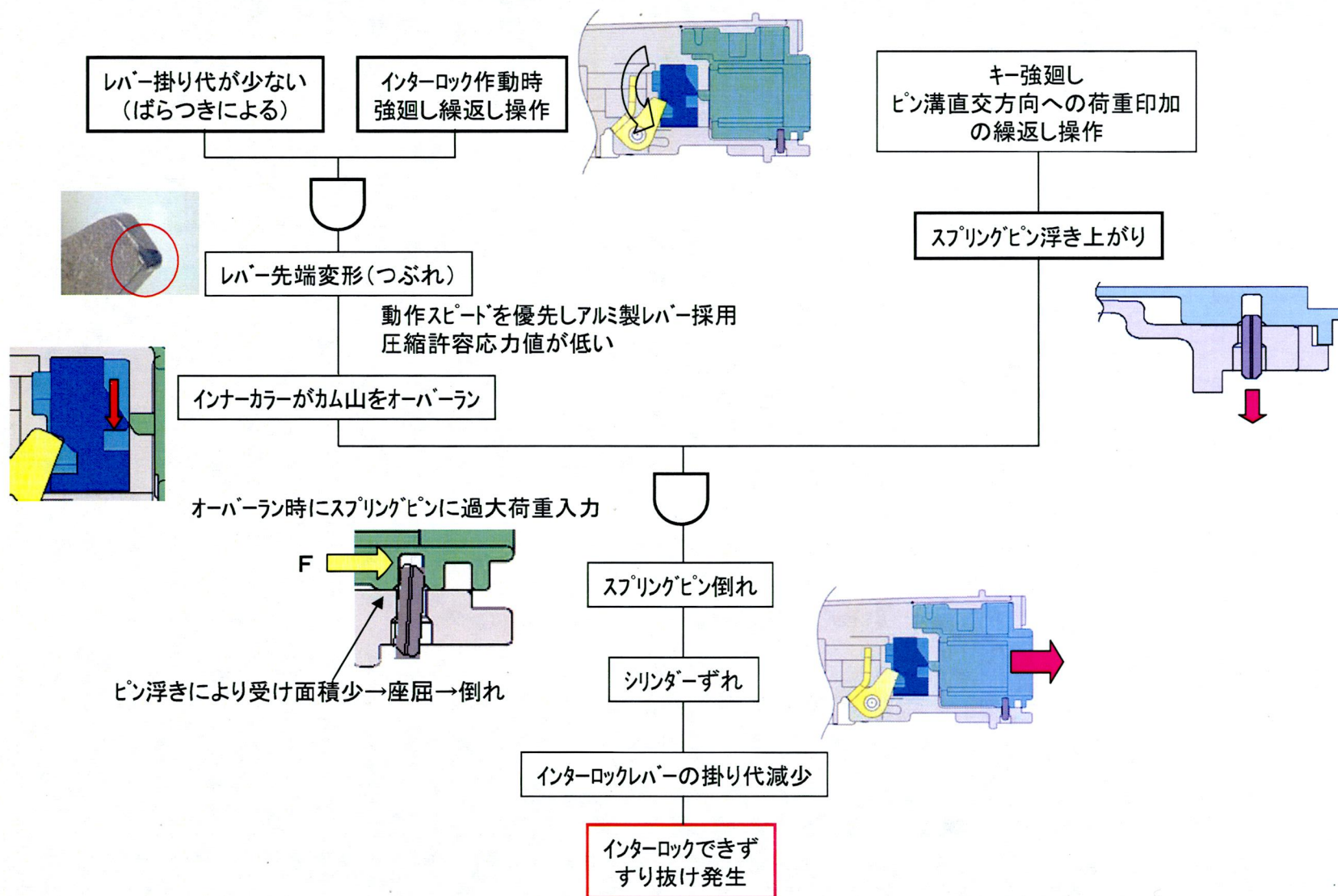
2002MY Failure Mechanisms

Original Document (Japanese)

2002M 故障メカニズム

(=品質委員会資料P13と同じもの)

不具合発生メカニズム



Attachment #Q13b

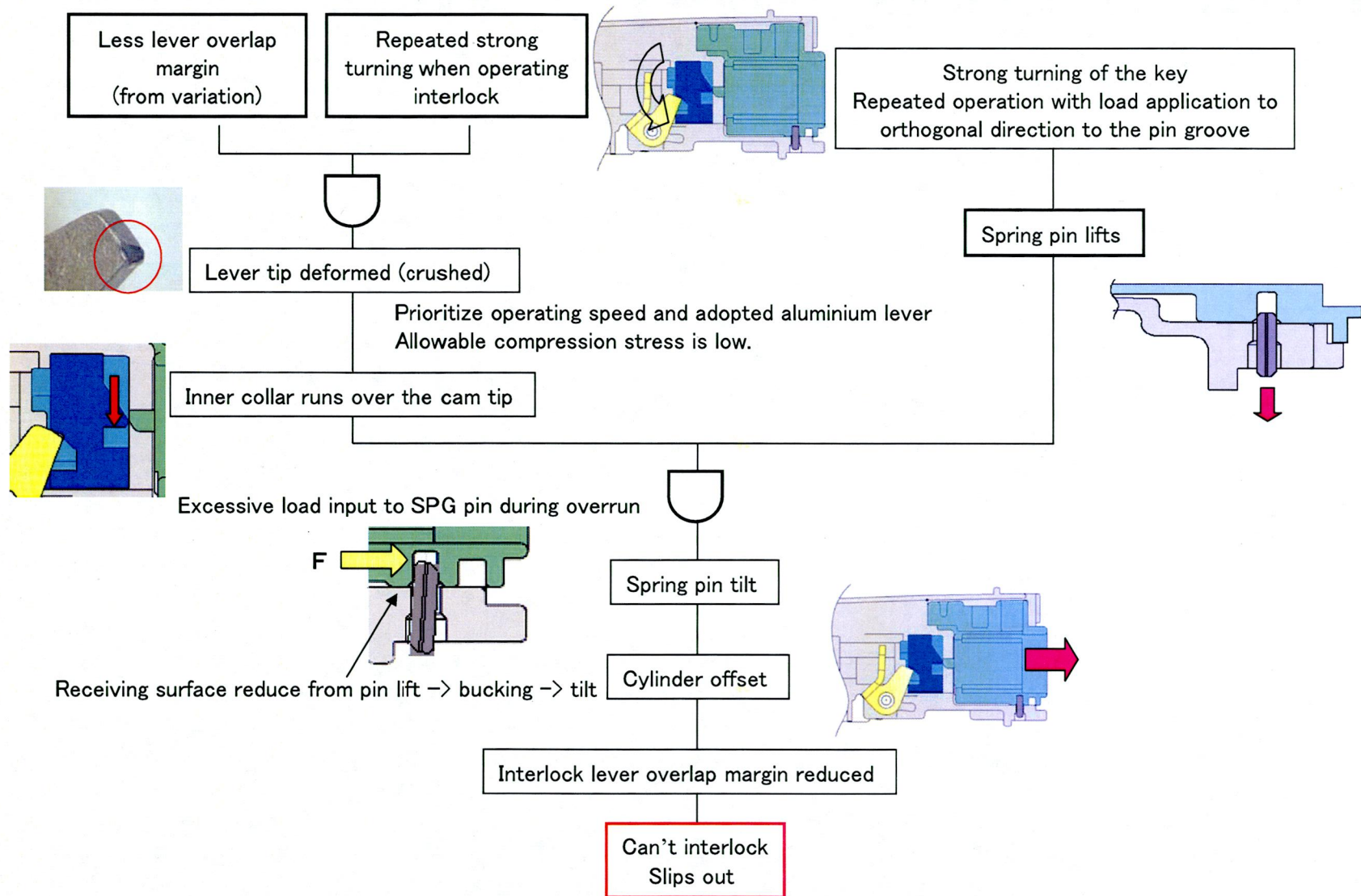
2002MY Failure Mechanisms

English Translation

2002M Failure mechanism

(= same as page 13 of JQC material)

Occurrence mechanism



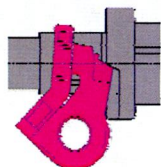
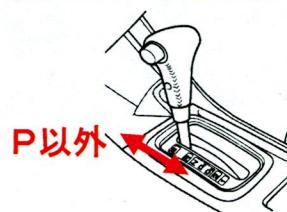
Attachment #Q13b

2003MY Failure Mechanisms

Original Document (Japanese)

2003M 故障メカニズム

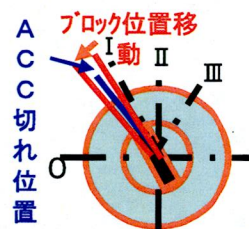
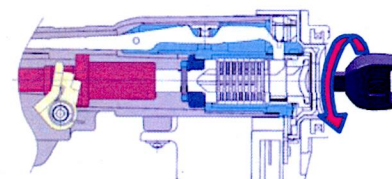
発生メカニズム 3-2 S5Aタイプ



インターロックが作動する

キーを抜こうとユーザーがOFF側にトルクをかける

1.02Nm

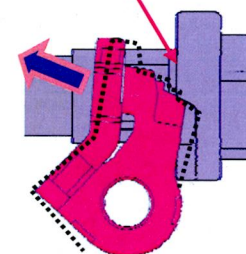


ACCが切れソレノイド電源切れ

ソレノイドがOFFしレバーが戻ろうとする

レバーが戻ろうとする時に、キーをON側へ少し廻すと
レバーの掛り代が不十分な状態(半かかり)になる

半掛り



キーを抜こうとユーザーがOFF側に強いトルクをかける



レバー先端が潰れる

インターロックできず
すり抜け発生

Attachment #Q13b

2003MY Failure Mechanisms

English Translation

2003M Failure mechanism

Occurrence mechanism 3-2 S5A type

