

EA14-004

HONDA

11/10/2014

QUESTION 6

LABOR OP AND DEFECT
CODES

Labor	Description
723199	coolant temperature switch and oil pressure switch - replace
723505	retrieve or clear SRS codes w/ diagnostic system
723507	DTC SRS system - retrieve codes with SRS light, read data, troubleshoot and clear DTC, initialize SRS
751096	SRS - repair
751099	SRS - repair
751100	SRS unit - replace
751107	side airbag, left - replace
751108	side airbag, right - replace
751199	SRS - replace
752092	SRS - repair
752099	SRS - repair
752199	SRS - replace
754110	passenger side airbag assembly - replace
754199	passenger side airbag assembly - replace
823503	retrieve codes for SRS indicator light, read data, troubleshoot and clear DTC
823505	retrieve SRS codes w/test drive
842099	headliner - repair
842100	headliner - replace
842199	headliner - replace
851199	left front seat - replace
852199	right front seat - replace
854175	front shoulder belt/retractor or retractor/tensioner, left (1st row) - replace
855185	front shoulder belt buckle, left (1st row) - replace
864175	front shoulder belt/retractor or retractor/tensioner, right (1st row) - replace
7521A4	SRS crash (impact) sensor, left front - replace
7521A5	SRS side curtain airbag, left - replace
7521A5B	with glass roof add. Note: accord - includes removal of a pillar harness
7521A8	SRS crash (impact) sensor, right front - replace

Defect	Category	Sub-category
00201	Broken, Worn, Distorted, Cut, and Deteriorated	Bent
00401	Distorted	
01101	Broken, Worn, Distorted, Cut, and Deteriorated	Permanent set-in fatigue
01801	Broken, Worn, Distorted, Cut, and Deteriorated	Broken
03214	Improper Operation	Erroneous operation
03217	Improper Operation	Not working properly or at all
06401	Short Circuit/Open Circuit	Short circuit
09999	Others	Other

EA14-004

HONDA

11/10/2014

QUESTION 7

Class Action Claim Form

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

██████████ and ██████████
on behalf of themselves and all
others similarly situated,

Plaintiffs,

vs.

AMERICAN HONDA MOTOR CO., INC., a
California corporation,

Defendant.

CASE NO: ██████████

Judge Jack Zouhary

CLAIM FORM

SIDE AIRBAG SETTLEMENT
c/o Class Administrator
P.O. Box 2718
Torrance, CA 90509

**Your Signed Claim Form Must Be Mailed and Postmarked
No Later Than September 2, 2014**

**If You Do Not Submit A Claim Form By September 2,
2014, You Will Not Receive The Benefits Described In The
Class Notice. Please Read This Entire Form Carefully.**

If you experienced a Reimbursable Deployment prior to February 13, 2014, you must fill out this Claim Form to receive the settlement benefits. Members of the Injunctive Class do not need to fill out this Claim Form.

I. ELIGIBILITY AND INSTRUCTIONS

Please read the Class Notice (available at www.SideAirbagSettlement.com) regarding the Settlement carefully before filling out this form. Terms in this Claim Form are defined in the Class Notice and the Settlement Agreement, both of which are available at the Settlement Website.

If you purchased or leased, new or used, one of the following vehicles and you experienced a Reimbursable Deployment while owning or leasing such a vehicle and your vehicle is identified by VIN in the list available on the Settlement Website (see www.SideAirbagSettlement.com), you may be entitled to compensation if you complete and submit this Claim Form in a timely manner: (1) a 2003 Honda Accord Sedan or Coupe with Side Airbags; (2) a 2004 Accord Sedan with Side Airbags manufactured before April 8, 2004; (3) a 2004 Accord Coupe with Side Airbags; or (4) a 2008 Accord Sedan manufactured before June 12, 2008. For a full description of the benefits available under the Settlement and eligibility to claim them, please see Paragraphs 4 and 6 of the Class Notice.

All persons who are members of the Settlement Class and who do not timely request exclusion from the Settlement Class are bound by the terms of the judgment entered by the Court and release their claims against American Honda Motor Co., Inc. ("AHM") described in the Class Notice and Settlement Agreement whether or not they submit a Claim Form.

II. TO CLAIM BENEFITS

The benefit to which you may be entitled under the Settlement depends upon whether your Side Airbag has been previously repaired or replaced.

A. IF YOU EXPERIENCED A REIMBURSABLE DEPLOYMENT BUT YOUR SIDE AIRBAG HAS NOT BEEN REPAIRED OR REPLACED

If you experienced a Reimbursable Deployment of a Side Airbag and the Side Airbag has not been repaired or replaced, you are eligible to have AHM repair or replace (at its election) your Side Airbag free of charge. In order to obtain this benefit, you must:

- Fill out the Settlement Class Information (Section III) below;
- Sign the Verification at the end of the Claim Form;
- Return this completed Claim Form, by mail, no later than September 2, 2014; and
- Take your vehicle to an Authorized Honda Dealer in accordance with the instructions in the written acknowledgment of your claim that you will receive from AHM.

B. IF YOU EXPERIENCED A REIMBURSABLE DEPLOYMENT AND INCURRED EXPENSES TO REPAIR OR REPLACE YOUR SIDE AIRBAG

If you experienced a Reimbursable Deployment of a Side Airbag and incurred out-of-pocket expenses to have your vehicle's Side Airbag repaired or replaced, pursuant to the Settlement, you are eligible for reimbursement of the out-of-pocket expenses that you incurred to replace or repair your vehicle's Side Airbag. In order to obtain this benefit, you must:

- Fill out the Settlement Class Information (Section III) below;
- Sign the Verification at the end of the Claim Form;
- Submit documentation (in the form of receipts, work orders, repair orders or the like) providing proof of the amount of out-of-pocket expenses claimed, the work performed on your vehicle and who performed that work; and
- Submit documentation of any prior reimbursements or deductions from the out-of-pocket expenses claimed, including but not limited to any amounts paid by insurance, discounts given by the person who performed the work on your vehicle or "goodwill" or other credits from AHM or others; and return the completed Claim Form, by mail, no later than September 2, 2014.

CLAIM FORM FOR SIDE AIRBAG DEPLOYMENT

Claim #: [REDACTED]

Name/Address Changes (if any):

First Name

Last Name

Address

City

State

Zip

NOTE: you will not be entitled to reimbursement from AHM for any amounts for which you have been previously reimbursed, including but not limited to, prior reimbursements by AHM or through an insurance claim.

III. SETTLEMENT CLASS MEMBER CONTACT INFORMATION

Please provide the information below for all claims so we may contact you if necessary or notify you of status:

Daytime Phone _____ Evening Phone _____

Cell Phone _____ e-mail _____

Select One:

____ I experienced a Reimbursable Deployment of a Side Airbag that has not been repaired or replaced.

____ I experienced a Reimbursable Deployment and incurred expenses in the amount of \$ _____ to repair or replace the Side Airbag.

If You Are Seeking Reimbursement, Select One:

____ I have not received any reimbursement of the out-of-pocket expenses I incurred to repair or replace my Side Airbag.

____ I have received partial reimbursement in the amount of \$ _____ for the out-of-pocket expenses I incurred to repair or replace my Side Airbag.

____ I have been fully reimbursed for all out-of-pocket expenses I incurred to repair or replace my Side Airbag.

If you are submitting this Claim Form on behalf of another person who is a Settlement Class Member, please explain why you have the authority to do so and attach a copy of any Power of Attorney or other documents that you may have.

NOTE: If there is evidence that abuse or misuse of your vehicle caused the Side Airbag to deploy or that the vehicle otherwise did not experience a Reimbursable Deployment, AHM reserves the right to deny reimbursement, repair or replacement. The process for addressing any disputes regarding the denial of

reimbursement, repair or replacement is described in Section IV, Paragraph 3 of the Settlement Agreement.

Documentation

If you are seeking reimbursement of expenses you incurred to repair or replace your Side Airbag, you must submit copies of documents and records you have that establish: (1) the amount of out-of-pocket expenses you paid to repair or replace the Side Airbag of your vehicle; and (2) the amount of any reimbursement (even if it was only partial reimbursement) that you received for the repair or replacement of the Side Airbag of your vehicle. Such documents may include, but are not limited to: receipts, work orders, repair orders, canceled checks, credit card statements or other documents that may describe the work performed on your vehicle and who performed that work.

IV. VERIFICATION

I declare under penalty of perjury under the laws of the United States of America and the State of California that I experienced a Reimbursable Deployment of one or more Side Airbags in a Class Vehicle and that the information in this Claim Form is true and correct and that if I am seeking reimbursement, I have provided copies of all of the documents and records within my possession that are requested in Section IV of this Claim Form.

This Claim Form was executed on _____ (month), _____
(year) in _____ (city, state, country).

SIGN YOUR NAME HERE

PRINT OR TYPE YOUR NAME HERE

PLEASE KEEP A COPY OF YOUR COMPLETED CLAIM FORM AND OTHER DOCUMENTATION. THE PROCESSING OF CLAIMS WILL TAKE TIME. NO MONEY WILL BE ISSUED UNTIL AFTER THE EFFECTIVE DATE OF THIS SETTLEMENT. AHM RESERVES THE RIGHT TO AUDIT ANY CLAIM FORMS SUBMITTED. PLEASE CHECK THE SETTLEMENT WEBSITE PERIODICALLY FOR UPDATES ON THE STATUS OF THE SETTLEMENT. THANK YOU FOR YOUR PATIENCE.

Please mail your completed claim form, along with your supporting documentation (if required), so that it is postmarked no later than September 2, 2014 to:

**SIDE AIRBAG SETTLEMENT
c/o Class Administrator
P.O. Box 2718
Torrance, CA 90509**

EA14-004

HONDA

11/10/2014

QUESTION 7

Class Action Notice

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

██████████ and ██████████,
on behalf of themselves and all others similarly
situated,

Plaintiffs,

vs.

AMERICAN HONDA MOTOR CO., INC., a
California corporation,

Defendant.

Case No. ██████████

Judge Jack Zouhary

NOTICE OF PROPOSED
CLASS ACTION SETTLEMENT

PLEASE READ THIS NOTICE CAREFULLY AS IT AFFECTS YOUR LEGAL RIGHTS.¹

If you purchased or leased, new or used, one of the following vehicles,

- (1) a 2003 Honda Accord Sedan or Coupe with Side Airbags and identified by VIN on the Settlement Website (www.SideAirbagSettlement.com);
- (2) a 2004 Accord Sedan with Side Airbags manufactured before April 8, 2004 and identified by VIN on the Settlement Website (www.SideAirbagSettlement.com);
- (3) a 2004 Accord Coupe with Side Airbags and identified by VIN on the Settlement Website (www.SideAirbagSettlement.com); or
- (4) a 2008 Accord Sedan manufactured before June 12, 2008 (the “Class Vehicles”)

then you may be entitled to one of the benefits described below.

A judge has approved and authorized the mailing of this Notice to you because you are a potential member of the Settlement Class. This is not a solicitation from a lawyer.

The purpose of this Notice is to: (a) provide a brief description of the Litigation; (b) inform you of the proposed Settlement; and (c) discuss your rights and options as a member of the Settlement Class. All Settlement Class Members who do not elect to exclude themselves from the Settlement, will release American Honda Motor Co., Inc. (“AHM”) and others from claims that were alleged or that could have been alleged in the Litigation (“Released Claims”) and will be bound by the Settlement.

SUMMARY OF SETTLEMENT		
	<u>Deployment Class</u>	<u>Injunctive Class</u>
Class Eligibility	You may be a member of the Deployment Class if you purchased or leased, new or used, a Class Vehicle that experienced a Reimbursable Deployment of a Side Airbag and is identified by VIN on the Settlement Website (www.sideairbagsettlement.com).	You may be a member of the Injunctive Class, if you purchased or leased, new or used, a 2008 Honda Accord Sedan, manufactured before June 12, 2008.

¹ Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the Class Action Settlement Agreement and Release (“Agreement”) available at www.SideAirbagSettlement.com.

SUMMARY OF SETTLEMENT (continued)

	<u>Deployment Class</u>	<u>Injunctive Class</u>
Class Benefits	<p>Members of the Deployment Class are eligible to receive one of two benefits:</p> <ul style="list-style-type: none"> • Reimbursement of all expenses incurred, but not previously reimbursed, to repair or replace the Side Airbag following a Reimbursable Deployment; or • Repair or replacement (at AHM's election) at no charge of a Side Airbag that experienced a Reimbursable Deployment <u>prior</u> to the Preliminary Approval Date but had not been previously repaired. 	<p>Members of the Injunctive Class who experience a Reimbursable Deployment of a Side Airbag are eligible to have the Side Airbag repaired or replaced (at AHM's election) at no charge provided that they present a claim for a Reimbursable Deployment to an Authorized Honda Dealer within two (2) years of the Effective Date.</p>
Your Legal Options	<ul style="list-style-type: none"> • Participate in the Settlement; • Opt Out of the Settlement; or • Object to the Settlement. 	<ul style="list-style-type: none"> • Participate in the Settlement; • Opt Out of the Settlement; or • Object to the Settlement.
What You Must Do To Participate In The Settlement	<p>Submit a timely and valid Claim Form by September 2, 2014 along with the required documentation supporting your claim. See Section 10(a) below for more information.</p>	<p>Nothing at this time. If you experience a Reimbursable Deployment within two (2) years of the Effective Date, you must take your vehicle to an Authorized Honda Dealer.</p>
What You Must Do To Opt Out Of The Settlement	<p>You must act by September 2, 2014. See Section 10(b) Below.</p>	<p>You must act by September 2, 2014. See Section 10(b) Below.</p>
What You Must Do To Object To The Settlement	<p>You must act by September 2, 2014. See Section 10(c) Below.</p>	<p>You must act by September 2, 2014. See Section 10(c) Below.</p>
What You Must Do To Attend The Hearing On November 19, 2014	<p>You must act by October 10, 2014. See Section 11 Below.</p>	<p>You must act by October 10, 2014. See Section 11 Below.</p>
What Happens If You Do Nothing	<p>If you do not sign and return a Claim Form, you will not be able to claim benefits under the Settlement, but you will be bound by the Court's judgment.</p>	<p>You are not required to take any action at this time. If you experience a Reimbursable Deployment within two (2) years of the Effective Date, you must take your vehicle to an Authorized Honda Dealer. If you do nothing, you will not receive any benefits and will be bound by the Court's judgment.</p>

1. **SETTLEMENT SCOPE:** Upon final approval of this Settlement, all claims asserted in Gutierrez, et al. v. American Honda Motor Co., Inc., Case No. 5:09-cv-01517-JZ-OP (C.D. Cal., filed Aug. 10, 2009) will be fully and finally resolved.

2. **NATURE OF THE LITIGATION:** Plaintiffs filed a complaint in the United States District Court for the Central District of California, alleging on behalf of themselves and a proposed class that AHM markets, distributes and sells vehicles allegedly equipped with a defective side airbag system in that the side airbags are purportedly prone to inadvertently deploying while the vehicle is being driven under normal conditions. Plaintiffs assert causes of action for violation of Cal. Bus. & Prof. Code § 17200, et seq. and Cal. Civ. Code § 1750, et seq.

AHM expressly denies the allegations in the Litigation and all claims asserted therein and specifically denies that it has engaged in any wrongdoing whatsoever, that the side airbags in Honda Accords are in any sense defective and that it has made any false or misleading statements whatsoever.

On February 13, 2014, the Hon. Jack Zouhary preliminarily approved a proposed Settlement of all of the claims in the Litigation, preliminary certified the Settlement Classes described below and directed Notice as provided for in the Settlement.

3. **NOTICE:** This Notice informs members of the Settlement Class of the Litigation and the proposed Settlement and describes their rights, options and choices. This Notice and the Agreement in its entirety are posted on the Settlement Website at www.SideAirbagSettlement.com and are also available from AHM. Other documents available on the website include the operative complaint filed in the Litigation, the papers that are or will be filed with the Court requesting preliminary and final approval of the Settlement described in this Notice, a copy of this Notice and a Claim Form.

4. **SETTLEMENT CLASSES:** The classes described below have been conditionally certified by the Court. If you are a member of the Settlement Class described in this Notice, the proposed Settlement will affect your legal rights.

Injunctive Class: All Persons in the United States and the District of Columbia who purchased or leased a new or used 2008 Accord Sedan manufactured before June 12, 2008.

Specifically excluded from the Injunctive Class are the following Persons:

- (i) Class Counsel;
- (ii) AHM; AHM's officers, directors and employees; the officers, directors and employees of AHM's affiliated companies; issuers of extended vehicle warranties; and
- (iii) The judges who have presided over this Litigation.

Deployment Class: All Persons in the United States and the District of Columbia who purchased or leased: (1) a 2003 Honda Accord Sedan or Coupe with Side Airbags for which the owner or lessee complained to AHM or an Authorized Honda Dealer about a Reimbursable Deployment of a Side Airbag and identified by VIN in an Exhibit that is to be filed with the Court prior to the Notice Date; (2) a 2004 Accord Sedan with Side Airbags manufactured before April 8, 2004 which the owner or lessee complained to AHM or an Authorized Honda Dealer about a Reimbursable Deployment of a Side Airbag and identified by VIN in an Exhibit that is to be filed with the Court prior to the Notice Date; (3) a 2004 Accord Coupe with Side Airbags which the owner or lessee complained to AHM or an Authorized Honda Dealer about a Reimbursable Deployment of a Side Airbag and identified by VIN in an Exhibit that is to be filed with the Court prior to the Notice Date; and (4) a 2008 Accord Sedan manufactured before June 12, 2008 with Side Airbags for which the owner or lessee complained to AHM or an Authorized Honda Dealer about a Reimbursable Deployment of a Side Airbag and identified by VIN in an Exhibit that is to be filed with the Court prior to the Notice Date.

Specifically excluded from the Deployment Class are the following Persons:

- (i) Class Counsel;
- (ii) AHM; AHM's officers, directors and employees; the officers, directors and employees of AHM's affiliated companies; issuers of extended vehicle warranties; and
- (iii) The judges who have presided over this Litigation.

5. **CLASS COUNSEL:** The Court has appointed the following as counsel for the Injunctive Class and the Deployment Class:

Mike Arias, Esq.
Alfredo Torrijos, Esq.
Arias, Ozzello & Gignac, LLP
6701 Center Drive West, 14th Floor
Los Angeles, California 90045
Telephone: (310) 670-1600
Facsimile: (310) 670-1231
E-mail: marias@aogllp.com
atorrijos@aogllp.com

Jordan S. Esensten, Esq.
Esensten Law
12100 Wilshire Blvd.
Suite #1660
Los Angeles, California 90025
Telephone: (310) 273-3090
Email: jesensten@esenstenlaw.com

Brian D. Chase, Esq.
Bisnar Chase
One Newport Place
1301 Dove Street, Suite 120
Newport Beach, California 92660
Telephone: (949) 752-2999
Facsimile: (949) 752-2777
E-mail: bchase@bisnarchase.com

6. **AN EXPLANATION OF THE PROPOSED SETTLEMENT:** If the Court approves the proposed Settlement at the Final Approval Hearing and the Settlement becomes Final (in other words, no longer subject to appeal and therefore in effect (the date on which this occurs being the "Effective Date")), AHM will provide the following benefits to eligible members of the Injunctive Class and Deployment Class:

a. **The Deployment Class.** A member of the Deployment Class may be entitled to reimbursement of expenses incurred but not previously reimbursed to repair or replace a Side Airbag that experienced a Reimbursable Deployment. A member of the Deployment Class will not be entitled to reimbursement for any amounts for which he or she has been previously reimbursed in any manner whatsoever, including but not limited to, any amounts paid by insurance, discounts given by the Person who performed work on the Side Airbag and vehicle or "goodwill" or other credits from AHM or others.

A member of the Deployment Class who experienced a Reimbursable Deployment of a Side Airbag, but who has not yet had the Side Airbag repaired or replaced may be entitled to bring his or her vehicle to an Authorized Honda Dealer for repair or replacement (at AHM's election) at no charge.

To obtain reimbursement, you must timely submit a completed Claim Form on or before **September 2, 2014**. Depending upon your claim, you may also be required to submit documentation supporting your claim that you experienced a Reimbursable Deployment and the amount of out-of-pocket expenses you incurred to repair or replace the Side Airbag. If you do not already have such documentation, you may obtain such documents from the Authorized Honda Dealer or other automotive repair shop that repaired your vehicle. AHM reserves the right to audit all Claim Forms and to deny reimbursement, repair or

replacement if there is evidence that abuse or misuse of the vehicle caused the Side Airbag to deploy or that the vehicle otherwise did not experience a Reimbursable Deployment. The process for addressing any disputes regarding denial of reimbursement is set forth in the Settlement Agreement. **Please note that Claim Forms for reimbursement will not be processed until after the Effective Date, and reimbursement will not be provided until after the Effective Date. Claim Forms for members of the Deployment Class who have not yet had their Side Airbags repaired or replaced will be processed upon receipt so that the class members may present their vehicles to an Authorized Honda Dealer as soon as possible.**

b. **The Injunctive Class.** For two (2) years after the Effective Date and subject to the terms of the Settlement Agreement, AHM agrees to repair or replace (at AHM's election) the Side Airbag for members of the Injunctive Class who experience a Reimbursable Deployment of a Side Airbag, provided that the member of the Injunctive Class presents his or her vehicle to an Authorized Honda Dealer within the two (2) years of the Effective Date. AHM has the right to deny, in its discretion, repair or replacement to a member of the Injunctive Class if there is evidence that abuse or misuse of his or her vehicle caused the Side Airbag to deploy or that the vehicle otherwise did not experience a Reimbursable Deployment. The process for addressing any disputes regarding denial of repair is set forth in the Settlement Agreement. **Members of the Injunctive Class are encouraged to present their vehicles to an Authorized Honda Dealer as soon as possible after experiencing a Reimbursable Deployment.**

7. **CLASS COUNSEL'S FEES, EXPENSES AND NAMED PLAINTIFF INCENTIVE AWARDS:** Class Counsel will collectively request, as part of the final approval of the Settlement, that the Court approve a payment of up to \$1,180,000 in Attorneys' Fees and Expenses and an aggregate payment of \$15,000 to the class representatives in consideration for their participation and the time each devoted to this litigation. **These payments will not reduce the benefits that the Settlement Class may receive.**

8. **ADMINISTRATIVE COSTS:** All administrative costs of settlement, including the cost of notice, claims administration, cost of the Settlement Administrator, and any other costs of settlement shall be paid by AHM and will not reduce any potential benefits to the Settlement Class Members.

9. **RESULT IF COURT APPROVES SETTLEMENT:** If the Court approves the proposed Settlement, the Litigation will be dismissed, and AHM will provide the benefits described above to Settlement Class Members. After the Litigation is dismissed, no Settlement Class Member who did not request exclusion will be able to file his or her own lawsuit for recovery for any of the Released Claims.

10. **YOUR CHOICES:**

a. **Participate In The Settlement.** If the Court approves the Settlement, you will automatically become eligible to receive some or all of the benefits described above. If you are a member of the Deployment Class, you must timely complete and submit a Claim Form. If you are a member of the Injunctive Class, you need not do anything at this time. Unless you exclude yourself from the Settlement, you are staying in the Settlement Class, and that means that you cannot sue, continue to sue, or be part of any other lawsuit against AHM about the legal issues in this case. It also means that all of the Court's orders will apply to you and legally bind you. A description of the "Released Claims," which explains exactly the legal claims that you give up if you do not exclude yourself from the Settlement, is set forth in the Settlement Agreement available at www.SideAirbagSettlement.com. If you wish to comment in favor of the proposed Settlement, you may mail your comment to SIDE AIRBAG SETTLEMENT c/o Class Administrator, P.O. Box 2718, Torrance, CA 90509, and your comment will be forwarded to Class Counsel and the Court. Alternatively, you may send your comments directly to any Class Counsel at the addresses listed in Paragraph 5.

b. **Exclude Yourself From The Settlement.** If you are a member of the Settlement Class and wish to be excluded from the Settlement, you must mail an Opt Out request, postage prepaid, postmarked no later than **September 2, 2014** to the following address: SIDE AIRBAG SETTLEMENT c/o Class Administrator, P.O. Box 2718, Torrance, CA 90509. A request to exclude yourself from the Settlement must include (i) your name, address, telephone number, (ii) the model year and VIN of your Accord, and (iii) a

signed statement indicating your wish to be excluded from the Settlement Class. If you do not timely submit an Opt Out request including all of the above information, you will be bound by the Settlement and all of your claims for any of the Released Claims will be released. If you validly and timely request exclusion from the Settlement Class, you will not be bound by the Final Order and Judgment entered in this Litigation. Excluding yourself means you cannot receive any of the benefits of the Settlement or comment upon the Settlement, but you will be able to file a lawsuit on your own behalf. If you have any questions concerning these procedures, please contact Class Counsel.

c. **Filing Written Objections.** If you are a member of the Settlement Class and you do not Opt Out, you may object to the terms of the Settlement, the Attorneys' Fees and Expenses, and/or the incentive awards to the class representatives. If you object and the Settlement is approved, you will be barred from bringing your own lawsuit, and you will be bound by the Final Order and Judgment entered in this Litigation. You may, but need not, enter an appearance through counsel of your choice. If you do retain counsel, however, you will be responsible for your own counsel's fees and costs, and in any event, AHM will bear no responsibility for such fees and costs. If you object to the Settlement, you or your counsel must on or before **September 2, 2014** file with the Court and serve on Class Counsel and AHM (to the respective addresses listed on this Notice) a written objection including: (i) your name, address and telephone number and, if represented by counsel, of your counsel; (ii) the model year and VIN of your vehicle; (iii) a written statement of all grounds for the objection accompanied by any legal support for such objection; (iv) copies of any papers, briefs or other documents upon which the objection is based; (v) a statement of whether you intend to appear at the Final Approval Hearing; and (vi) if you intend to appear at the Final Approval Hearing through counsel, the objection must also identify the attorney(s) who is representing you and who will appear at the Final Approval Hearing. In addition, any Settlement Class Member who intends to appear and address the Court at the Final Approval Hearing (including through counsel) must on or before **October 10, 2014** file with the Clerk of the Court a notice of appearance and, if necessary, a *pro hac vice* application. The address for filing any documents with the Court is George E. Brown, Jr. Federal Building and United States Courthouse, 3470 Twelfth Street, Riverside, CA 92501-3801. **Settlement Class Members who do not timely make their objections in accordance with the procedures set forth above waive all objections and may not be heard at the Final Approval Hearing or have the right to appeal approval of the Settlement.** If you have any questions concerning these procedures, please contact any Class Counsel.

11. **FINAL APPROVAL HEARING:** A hearing will be held at the Ninth Circuit Court of Appeals, Richard H. Chambers Courthouse, 125 South Grand Avenue, Pasadena, California 91105 on November 19, 2014 at 9:00 a.m., Judge Jack Zouhary presiding. At the Final Approval Hearing, the Court will decide whether the proposed Settlement is fair, reasonable and adequate and should be approved and, if so, approve the Attorneys' Fees and Expenses and Plaintiffs' Incentive Awards. The time, date and location of this Final Approval Hearing may be changed by the Court without further notice to you. Any member of the Settlement Class may attend the Final Approval Hearing. Any member of the Settlement Class who does not request exclusion may also enter an appearance through counsel, but all fees and costs of such counsel are the responsibility of the member of the Settlement Class. If you wish to attend or have your attorney attend the hearing on your behalf, you may do so, but if you or your attorney would like to address the Court during the hearing, you must follow the procedures set forth in Paragraph 10(c) above. If you plan to attend the hearing, you should confirm its time, date and location. Any updates or changes on the time, date or location of this hearing will be posted on the Settlement Website at www.SideAirbagSettlement.com.

12. **ADDITIONAL INFORMATION:** For additional information, you may call 1-888-888-3082 or visit www.SideAirbagSettlement.com.

Please do not call or write the Court or the Office of the Clerk except as directed by this Notice.

EA14-004

HONDA

11/10/2014

QUESTION 7

SERVICE BULLETIN A14-
023

May 24, 2014

ATB 51520-51647 (1405)

Class Action Notification Mailing: Proposed Warranty Extension for Inadvertent Side Curtain and or Front Seat Side Airbag Deployment

Supersedes 14-024, dated May 13, 2014, to revise the information highlighted in yellow.

REVISION SUMMARY

In the Title, the text "Side Curtain" has been added. Under BACKGROUND and DEALER RESPONSIBILITY, the text "side curtain" has also been added.

AFFECTED VEHICLES

Year	Model	Trim
2008	Accord	4-Door

BACKGROUND

This bulletin is a preliminary notification of a class action settlement, pending final court approval, relating to alleged inadvertent deployment of the **side curtain** and or front seat side airbag. If approved by the court, the warranty of some 2008 4-door Accords will be extended for 2 years from the effective date of the settlement to cover the **side curtain** and or front seat side airbags and related components in the event of an inadvertent deployment. If approved, the estimated date of the warranty extension will be approximately December 2014. The bulletin will then be revised to include warranty claim information.

If approved, this warranty extension will not cover any deployment due to collision, misuse, or abuse. If there is evidence that abuse or misuse of the vehicle caused the **side curtain** and or front seat side airbag to deploy, contact your DPSM.

This warranty extension will not apply to any vehicle that has ever been declared a total loss or sold for salvage by a financial institution or insurer, or has a branded or similar title under any state's law.

CUSTOMER NOTIFICATION

Owners of affected vehicles will receive a notification of this class action starting in May 2014. Customers may also call the toll free number **1-888-888-3082** or go to <http://www.sideairbagsettlement.com>.

DEALER RESPONSIBILITY

The warranty extension is subject to final approval from the court. Until that time, the normal vehicle warranty applies.

- Until final court approval, before working on any vehicle that may have experienced an inadvertent **side curtain** and or front seat side airbag deployment, contact your DPSM.
- Customers who claim to have experienced an inadvertent deployment prior to final approval of the settlement, and who have not had the airbag replaced or repaired, might bring their vehicles to an authorized Honda dealer for inspection before the court has granted final approval of the settlement. Such claim will be treated as a goodwill request and addressed on a case-by-case basis. Contact your DPSM.
- Customers seeking reimbursement for out-of-pocket expenses for past repairs should refer to the class action notice or can call the toll free number **1-888-888-3082** or <http://www.sideairbagsettlement.com>.

CUSTOMER INFORMATION: The information in this bulletin is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely maintain your vehicle. These procedures should not be attempted by "do-it-yourselfers," and you should not assume this bulletin applies to your vehicle, or that your vehicle has the condition described. To determine whether this information applies, contact an authorized Honda automobile dealer.

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-1_QIS_TA5A08051202

Q8-11 - MQ Monthly 2PX

Door slam

deployment_7_23_08_REDAC

TED

08M Accord 4dr – Door slam deployment

1.0 Overview

1.1 Customer Complaint:

- Curtain and side airbags deployed when the customers shut/slammed the door closed

1.2 Dealer Repair

- Contacting AH Techline – repair vehicle by replace airbags, sensors, and SRS unit.

1.3 Affected Model (N=16 occurrences)

- 08M Accord 4dr MAP (N=12)
- 08M Accord 4dr Css (N=4)
- 2dr Accord **Not** affected

1.4 QIS

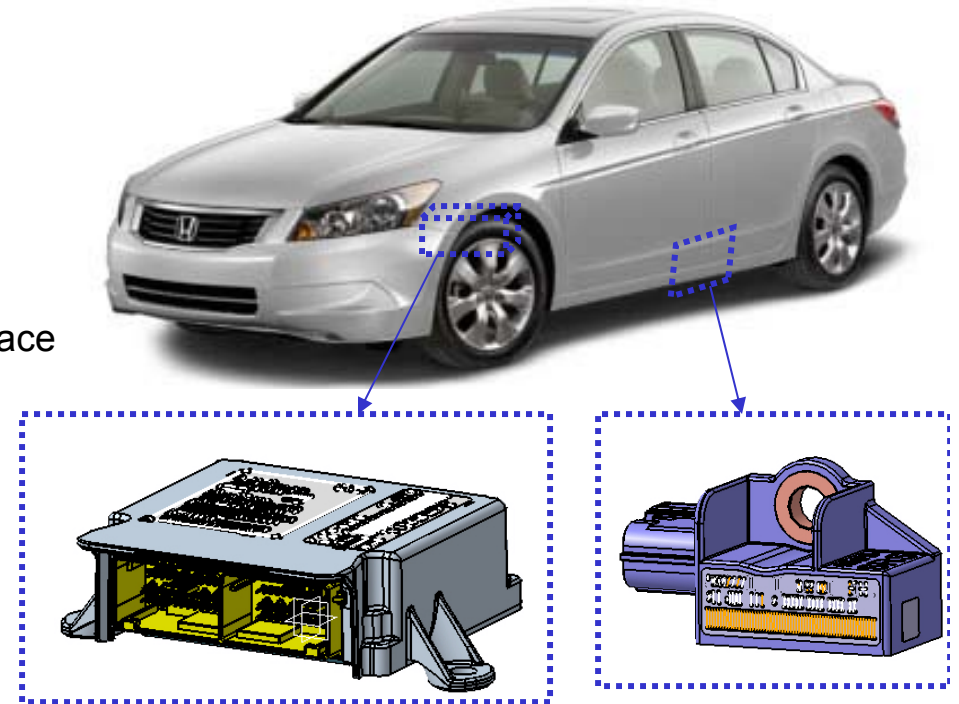
- HAM: TA5A08051202
- AQAO: MV20080416135749

1.5 C/M

- Design Change: C48-2-1702
- MAP C/M Date: 6/4/08
- Css C/M Date: 6/30/08

1.6 Next Step

- QIS Closure for NA Market



08M Accord 4dr – Door slam deployment

2. Market Occurrences

VIN	AF Date	Honda Contact Date	Techline #	Claim #	Other
1HGCP26738A	2/8/2008	2/19/2008			Railyard
1HGCP26718A	2/7/2008	3/18/2008	2576877		
JHMCP26828C	1/10/2008	3/24/2008	2580959		
JHMCP26388C	1/9/2008	3/24/2008	2580818		
1HGCP267X8A	9/18/2007	4/23/2008	2569095		
JHMCP26868C	9/18/2007	4/24/2008	2601024		
1HGCP26828A	12/7/2007	4/25/2008	2602293		
1HGCP26318A	3/4/2008	4/28/2008	2602740		
1HGCP26408A	10/31/2007	4/29/2008	2603963		
1HGCP268X8A	3/20/2008	5/14/2008	2613246		
1HGCP26318A	11/20/2007	5/19/2008	2615428		
1HGCP36868A	1/29/2008	6/9/2008	2628527		
JHMCP26828C	8/28/2007	6/12/2008	2631093		
1HGCP26488A	12/4/2007	6/14/2008	2632121		
1HGCP26828A	10/18/2007	6/19/2008	2635077		
1HGCP26838A	10/25/2007	7/2/2008	2643472		

Key Points

- Dealer and MQ was unable to find any body damage as a result of a deployment
- All deployments occurred when one of the front doors were shut/slam.
- About 50% of the occurrences have a warranty claim.

08M Accord 4dr – Door slam deployment

3. Part Analysis (Returned SRSCU)

	1HGCP26738A [REDACTED]	1HGCP26718A [REDACTED]																				
SIS	<table border="1"> <tr> <td>[REDACTED]</td> <td>All d_v values from all SIS: Row1 SIS Left DV short High byte (ROW1_L_DVSn)</td> <td>[REDACTED]</td> <td>[REDACTED]</td> </tr> <tr> <td>[REDACTED]</td> <td>All d_v values from all SIS: Row1 SIS Left DV short Low byte</td> <td>[REDACTED]</td> <td>[REDACTED]</td> </tr> <tr> <td>[REDACTED]</td> <td>All d_v values from all SIS: Row2 SIS Left DV short</td> <td>[REDACTED]</td> <td>[REDACTED]</td> </tr> </table>	[REDACTED]	All d_v values from all SIS: Row1 SIS Left DV short High byte (ROW1_L_DVSn)	[REDACTED]	[REDACTED]	[REDACTED]	All d_v values from all SIS: Row1 SIS Left DV short Low byte	[REDACTED]	[REDACTED]	[REDACTED]	All d_v values from all SIS: Row2 SIS Left DV short	[REDACTED]	[REDACTED]	<table border="1"> <tr> <td>[REDACTED]</td> <td>All d_v values from all SIS: Row1 SIS Right DV short High byte (ROW1_L_DVSn)</td> <td>[REDACTED]</td> <td>[REDACTED]</td> </tr> <tr> <td>[REDACTED]</td> <td>All d_v values from all SIS: Row1 SIS Right DV short Low byte</td> <td>[REDACTED]</td> <td>[REDACTED]</td> </tr> </table>	[REDACTED]	All d_v values from all SIS: Row1 SIS Right DV short High byte (ROW1_L_DVSn)	[REDACTED]	[REDACTED]	[REDACTED]	All d_v values from all SIS: Row1 SIS Right DV short Low byte	[REDACTED]	[REDACTED]
[REDACTED]	All d_v values from all SIS: Row1 SIS Left DV short High byte (ROW1_L_DVSn)	[REDACTED]	[REDACTED]																			
[REDACTED]	All d_v values from all SIS: Row1 SIS Left DV short Low byte	[REDACTED]	[REDACTED]																			
[REDACTED]	All d_v values from all SIS: Row2 SIS Left DV short	[REDACTED]	[REDACTED]																			
[REDACTED]	All d_v values from all SIS: Row1 SIS Right DV short High byte (ROW1_L_DVSn)	[REDACTED]	[REDACTED]																			
[REDACTED]	All d_v values from all SIS: Row1 SIS Right DV short Low byte	[REDACTED]	[REDACTED]																			
SRS	<table border="1"> <tr> <td>[REDACTED]</td> <td>SRS_y delta_v for decision maps High byte (ECUY2kHz_DVn)</td> <td>[REDACTED]</td> <td>[REDACTED]</td> </tr> <tr> <td>[REDACTED]</td> <td>SRS_y delta_v for decision maps Low byte</td> <td>[REDACTED]</td> <td>[REDACTED]</td> </tr> </table>	[REDACTED]	SRS_y delta_v for decision maps High byte (ECUY2kHz_DVn)	[REDACTED]	[REDACTED]	[REDACTED]	SRS_y delta_v for decision maps Low byte	[REDACTED]	[REDACTED]	<table border="1"> <tr> <td>[REDACTED]</td> <td>SRS_y delta_v for decision maps High byte (ECUY2kHz_DVn)</td> <td>[REDACTED]</td> <td>[REDACTED]</td> </tr> <tr> <td>[REDACTED]</td> <td>SRS_y delta_v for decision maps Low byte</td> <td>[REDACTED]</td> <td>[REDACTED]</td> </tr> </table>	[REDACTED]	SRS_y delta_v for decision maps High byte (ECUY2kHz_DVn)	[REDACTED]	[REDACTED]	[REDACTED]	SRS_y delta_v for decision maps Low byte	[REDACTED]	[REDACTED]				
[REDACTED]	SRS_y delta_v for decision maps High byte (ECUY2kHz_DVn)	[REDACTED]	[REDACTED]																			
[REDACTED]	SRS_y delta_v for decision maps Low byte	[REDACTED]	[REDACTED]																			
[REDACTED]	SRS_y delta_v for decision maps High byte (ECUY2kHz_DVn)	[REDACTED]	[REDACTED]																			
[REDACTED]	SRS_y delta_v for decision maps Low byte	[REDACTED]	[REDACTED]																			
Crash recording	[REDACTED]	[REDACTED]																				

Key Points

- Continental’s analysis found no abnormal recording or performance of the parts returned from deployment units
- SRS crash data recordings shows high G-force from the side of door closing

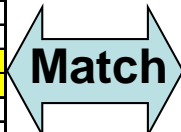
08M Accord 4dr – Door slam deployment

4. Recreation Testing



AQAO/HGT testing

Impact Side	Speed	Test Vehicle Condition	Deployment
-			OFF
-			OFF
L			OFF
L			OFF
L			ON
L			ON
L			OFF
R			OFF
R			ON
R			ON
R			OFF
R			OFF
R			OFF
R			OFF
R			ON
R			ON
R			OFF
R			ON
R			ON
R			OFF



MQ testing

Test #	Door Speed (m/s)	Deployment
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		No
1		Yes
2		No
2		No
2		No
2		No
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2		No
2		No
2		No
2		No
2		No
2		No
2		Yes

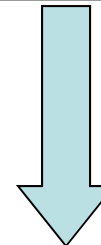
•MQ and AQAO/HGT recreation testing shows door speed must exceed ~ [redacted] m/s

08M Accord 4dr – Door slam deployment

5. Horizontal review

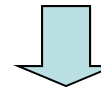
MY	Model	Door speed	Margin of G-force from deployment
2003	Accord 4Dr	█ m/s	HGT
	Accord 2Dr		
	Civic 2Dr		
	Civic 4Dr		
	Pilot		
	Element		
2004	TL		
2005	Accord 2Dr		
	Accord 4Dr (ACM)		
2006	TSX		
	RL		
	Odyssey		
2007	Civic 2Dr (BCM)		
	Civic 4Dr		
	Ridgeline		
	Element (CM LTD)		
2008	Civic 2Dr (CM)		
	CR-V		
	Element (TRW)		
	MDX		
	RDX		
2009	US Fit		
	Accord 4Dr		
2010	Accord 2Dr		
	Pilot		
2011	TL		
	TSX		
	US Fit		
2012	Accord Crossover		
	Acura Crossover (HCM)		
	Global IMA		

- 08M Accord 4dr had a █% margin above the █ m/s door speed test.
- Old Design guideline target for █ m/s test is +█% margin in G-force
- New Margin guideline is >█%



Last Open Item from HGT/AQAO/Video

- Left 1st Row - █%
- Right 1st Row - █%
- Left 2nd Row - █%
- Right 2nd Row - █%



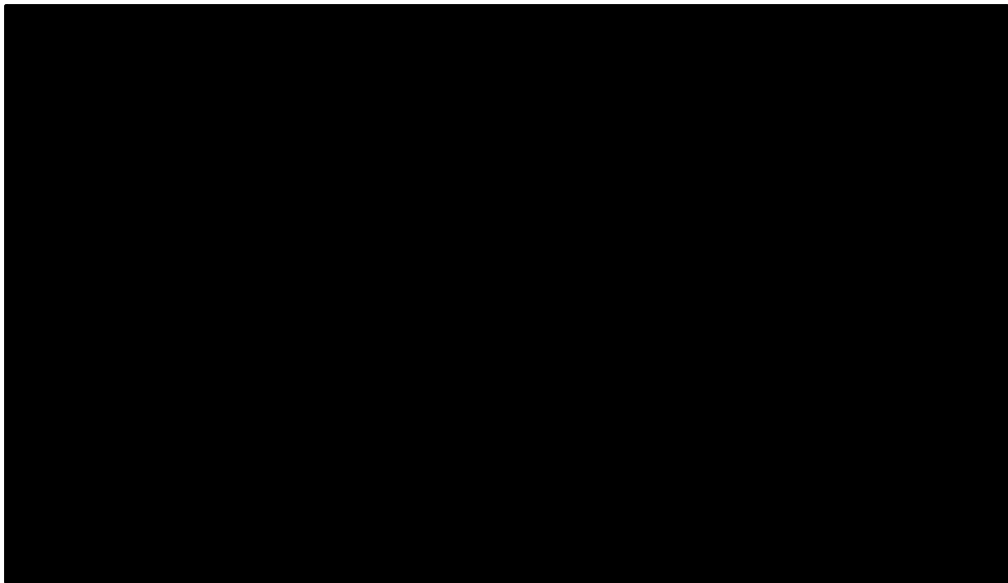
09TL Judgment: Okay

08M Accord 4dr – Door slam deployment

6. C/M

MASS PRODUCTION SPEC. NOTICE		WORK NO. F47-5209	Revision No. (1/2)
Dept. 4G2部課1 CE	Ueda	Issued By Sugamata Ishikara	Issue Date 23-APR-08
Cont. Dept. Osugi	Shindo	Related Request No. QAH2552	
TITLE 08M ACCORD KA/KC/KL/KX/KK SRS UNITの衝突パラメータ変更 08M ACCORD KA/KC/KL/KX/KK SRS UNIT CHANGE OF CRASH PARAMETER			
Content:		Related Request No.	
1. 標題に依り、See title.		QAH2552	
2. 下記用図を発行する。Issue for following Part:			
①	77960-1A0-8712-M4	DRUM UNIT ASSY SRS	
②	77960-1A0-1020-M4	UNIT ASSY SRS	
③	77962-1A0-A020-M4	SPEC. UNIT ASSY SRS	
④	77962-1A0-1020-M4	SPEC. UNIT ASSY SRS	

- New threshold level will result in a [redacted] % margin in [redacted] m/s door shut test (BC/M = [redacted] %)
- KA parts arrived line-side on 6/4/08
- Service parts have rotated with C/M parts



New threshold level

SRS vs SIS must be over this new level for deployment

Old threshold level

08M Accord 4dr – Door slam deployment

7. Problem Prevention

Table 8-21 Collision Judgment Performance Requirement

Type	Mode	Requirement	
		Target TTF	Target G Margin
	Door Slam Shut	OFF	
OFF Requirement	Drive System		
	Collision System		
On Requirement			

Development spec change for 11M: Margin increased from [redacted] to [redacted] [yellow background]

08M Accord 4dr – Door slam deployment

8. Next Step: Close QIS

MQ Proposal:
Close QIS with 'Recommended Field Action' as handle under normal due to low occurrence.

Similar issues were closed with same type 'Recommended Field Action'

- 06M Civic 2Dr – Door Slam
- 03-05M Element – Low Threshold
- 03M Accord 4Dr – Low Threshold

AQAO QIS

C/M TYPE	VEHICLE IDENTIFICATION NUMBER	C/M APPLICATION DATE	ENGINE NUMBER	TRANSMISSION NUMBER
Lasting	JHMCP26329C [REDACTED]	6/30/2008	-	-
RECOMMENDED FIELD ACTION	-No specific treatment will not be taken due to this is a rare case by related the user door slam speeds.			
COUNTERMEASURE EFFECTIVENESS	-Assess that it was effective due to new threshold setting valude could secure 100% margin for the door slam (5m/s).			
RESPONSIBLE DEPARTMENT CAUSE ANALYSIS				
CHIEF ENGINEER	Q.E.D. MANAGER	Q.C.C.STAFF ENGINEER		RESPONSIBLE DEPT.MANAGER
		REPLY	ISSUE	

HCM QIS for 06M Civic

				APPROVAL
COUNTERMEASURE EFFECTIVENESS				
TBD - BASED ON TESTING BY R&D.				
FIELD ACTION				
CIE MEETING - NO FIELD ACTION IS REQUIRED. OCCURENCE PREDICTION IS LOW.				
PROD DATE	TYPE	DEST	C/M FRAME #	NOTES
8/3/2007	PERM	KC	2HJFK16408H [REDACTED]	GROMMET ADDED TO RRS
1/1/2001	PERM	KA	2HJFK16448H500001	GROMMET ADDED TO RRS

END

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-1_QIS_TA5A08051202

Q8-12 - QIS

TA5A08051202_REDACTED



Design

HAM Frame Quality Dpts

Issued By HAM

QUALITY IMPROVEMENT SHEET (Q.I.S.)

COUNTERMEASURE CONTROL#	RESPONSIBLE SITE AND DEPARTMENT		Rank
TA5A08051202	HAM Frame	HAM MARKET QUALITY	A
INFORMATION SOURCE	Problem Definition ID	CBU Category	
TTB	PDHAM091221001	DENSO	
Supplier	Affected Model		RESPONSIBLE DPT ISSUE DATE
CONTINENTAL AUTOMOTIVE SYSTEMS	MAP-ACCORD		5/16/2008
Market Information Issuer	Lead Quality Investigator	Investigator Team	THEME UP DATE
Dana Davis	Norm Ruger	HAM Denso/OBD [old]	5/12/2008
Title			
08M Accord side SRS replaced.			
Customer Complaint			
Customer experiences an SRS deployment when the front door is closed.			
Dealer Repair			
<QIS from old system. No specific Dealer Repair text exists>			
Finish Date	1st COUNTERMEASURE APPLICATION DATE	C/M Target Date	
8/5/2008	6/5/2008	9/15/2008	
Market Data Investigation			
Per DAS MQD-HAM-FRAME-985. Five known occurrences of the side SRS deployment; five Techline entries (two with claims). 1HGCP26718A [REDACTED] - TL 2576877 - Claim 111893. 1HGCP26408A [REDACTED] - TL 2601024 - Claim 605010. 1HGCP26318A [REDACTED] - TL 2602740. 1HGCP267X8A [REDACTED] - TL 2600405. 1HGCP26828A [REDACTED] - TL 2602293.			
Investigation Cause Analysis			
MQ and Continental analyzed 2 SRS units and side impact sensors (SIS) from the market for deployment caused by slamming the door. Analysis: All units have crash data stored that indicate that the SIS and SRS detected a G-force from the side which door was shut. No abnormal defects found in the performance of the SIS and SRS units. Recreation testing: MQ compared KG parts to the parts that were returned for deployment. Found no difference in performance from suspect part to known good parts. SRS SIS Door speed for deployment KG KG [REDACTED] m/s Suspect KG [REDACTED] m/s KG Suspect [REDACTED] m/s Suspect Suspect [REDACTED] m/s MQ judges this to be a design issue.			

VIEW BEFORE COUNTERMEASURE		VIEW AFTER COUNTERMEASURE				
x		x				
Responsible Department Root Cause Analysis						
Customers were shutting the door with a higher force than the designed threshold level for a side impact. Threshold level did not meet market usage.						
COUNTERMEASURE BY		COUNTERMEASURE CONTROL#				
9/15/2008		TA5A08051202				
Recomnd Sold Product Treatment	Recomnd Stock Product Treatment	Recmd Part Stock Change	Design Change Number			
NORMAL WARRANTY	NO TREATMENT	PARTS CENTER STOCK	C4821702			
CoreMQ Problem Definition ID		CoreMQ Problem Definition Name				
2782		Accord side SRS replaced				
C/M Title		C/M Location	C/M Type			
Est date		Frame Factory	Other			
CM Details						
Crash parameter for side deployment was increased.						
D/C#: C48-2-1702 IPPAAR#: 0000016722 IPP tag# for 77960-TA0-A020-M4: 0000340230 IPP tag# for 77960-TA0-K020-M4: 0000334179 IPP tag# for 77960-TA0-X020-M4: 0000340281						
Reoccurrence prevention: Development guideline changed for 11M. Deployment margin for █ m/s door slam was increased from █% to █%.						
Date	Factory	Line	Year	Model	Engine/Trans	Tracking Tag
6/5/2008	MAP	1	2008	ACCORD		1HGCP26848A147110
6/9/2008	MAP	1	2008	ACCORD		1HGCP26878A815420
6/5/2008	MAP	1	9999	UNKNOWN		Est date
Recommended Field Action						
Handle under normal warranty due to low occurrence.						
Countermeasure Effectiveness						
The new threshold changed the deployment margin from █% to █% on the █ m/s door slam test. Recreation testing shows that the new margin will eliminate the unexpected deployments caused by a hard closing of the door.						

AH - Domestic			
Sales Division Engineer	Sold Product Treatment	Product Treatment	Part Stock Change
Service Action Report	Service Bulletin Number	After Service Part Number	
AH - Export			
Sales Division Engineer	Sold Product Treatment	Product Treatment	Part Stock Change
Service Action Report	Service Bulletin Number	After Service Part Number	
CH			
Sales Division Engineer	Sold Product Treatment	Product Treatment	Part Stock Change
Service Action Report	Service Bulletin Number	After Service Part Number	
Part Number List		Part Group/Subgroup List	
77960 - SRS UNIT		-	
77970 - SENSOR, SIDE IMPACT		-	
78870 - MOD, R. SI CURT AB		-	

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-4_2014-05-22 GQC WTY

Extension range expansion

REDACTED 20140521 GQC

Doc_Side Airbag Inadvertent

Deployment_E

03-04M Accord, 08M Accord for US Market Made by Css/HAM

Title: Accord Side Airbag Inadvertent Deployment (Additional affected vehicles)

QIS No : SDBA03100301, MV20080416135749, TA5A08051202

1. Proposal (Previous time)
2. Proposal (this time)
3. E-NASC / E-GQC results
4. Timeline
5. Additional affected vehicles
6. Detailed proposed action and schedule
7. Summary
8. Recurrence Prevention



GQC
Detailed Report



2014/05/22

<Chronology>

- GQC approval on 1/9/2014
After that additional affected VINs are necessary.
- E-NASC on 4/18/2014
- E-GQC on 5/12/2014

Today's purpose:
Explain outline of agenda approved by E-NASC/E=GQC.

AHサービス	HAM CIE	Css CIE
江口	渡辺	清水

1. Previous Proposal (Overview)

1. Customer Contention

The side airbag deploys when not expected.

2. Number of Occurrences

KA 2003 Accord – 112, 2004 Accord – 69, 2008 Accord 4dr – 200

KC 2003 Accord – 18, 2004 Accord – 8, 2008 Accord 4dr - 11

3. Causes of Occurrence

SRS system threshold setting too sensitive. Door slam or underbody contact can result in deployment.

4. Countermeasures

SRS calibration changed as running change in 2004 and 2008.

5. Market Action Proposal Based On Preliminary Court Approval

(1) Reimburse for prior inadvertent deployments that were not previously reimbursed for 03/04/08M (4dr only for 08) (90 day period)

(2) Warranty extension for 2008 Accord 4dr: repair future inadvertent deployments for a period of 2 years.

6. Reason for Proposal

To settle the class action lawsuit.

7. Action Details

Repair/reimburse members for confirmed occurrences.

8. Affected Range

KA/KC : 03~04 ACCORD、08 ACCORD 4D BCM

9. Number of affected vehicles

Past repair reimbursement (03/04/08M) : KA 253 units / KC 9 units

Warranty extension (08M only) : 308,217 units / KC 20,535 units

10. Cost of Market Action

KA: Up to \$818,000 (Approximately JPY 84 million) / KC \$35,1000 (Approximately JPY 3.6 million)

GQC approved settlement condition for class action on 1/9/2014.

<Proposal> 03/04/08M Accord : reimbursement / 08M Accord : Warranty extension for 2 yrs.

2. Proposal this time (Overview)

1. Customer Contention

The side airbag deploys when not expected.

2. Number of Occurrences

KA 2003 Accord – 112, 2004 Accord – 69, 2008 Accord 4Dr – 200, 2009 Accord 4Dr BCM Css - 0

KC 2003 Accord – 18, 2004 Accord – 8, 2008 Accord 4dr - 11

3. Causes of Occurrence

SRS system threshold setting too sensitive. Door slam or underbody contact can result in deployment.

4. Countermeasures

SRS calibration changed as running change in 2004 and 2008.

5. Market Action Proposal Based On Preliminary Court Approval

(1) Reimburse for prior inadvertent deployments that were not previously reimbursed for 03/04/08M (4dr only for 08) (90 day period)

(2) Warranty extension for 2008 Accord 4dr: repair future inadvertent deployments for a period of 2 years.

6. Reason for Proposal

To settle the class action lawsuit.

7. Action Details

Repair/reimburse members for confirmed occurrences.

8. Affected Range

KA/KC : 03~04 Accord, 08 Accord 4Dr, 09 Accord 4Dr BCM Css

9. Number of affected vehicles

Past repair reimbursement (03/04/08M) : KA 253 units / KC 9 units

Warranty extension (08M and 09M BCM Css) : KA 308,765 units / KC 20,535 units

10. Cost of Market Action

KA: Up to \$1.43 Million (Approximately JPY 150 million) / KC \$76,204 (Approximately JPY 7.9 million)

**Proposal this time: Add Css 09M BCM vehicles (548 units) for US market.
No other changes.**

NASC

Date : 12/19/2013
Revised 4/18/2014

NASC Present:

Committee Member: H. Eguchi (NASC Chairman), Bruce Smith (AH-Service), Ken Dick (CH), K.Nishizawa (AH-PRO)
K. Suzuki (HNAS), T. Yamamoto (HRA), N. Gruebmeier (AH-Parts)

Meeting Minutes by T.Ota (AH-Service)

Title: Accord Side Airbag Inadvertent Deployment

Symptom: The side airbag deploys when not expected.

Market Occurrence: KA 381 cases
KC 37 cases

< Details >	03M	04M	08M	09M
KA	112	69	200	0
KC	18	8	11	

Occurrence Cause: SRS system threshold setting too sensitive. Door slam or underbody contact can result in deployment.

Affected units:

	KA	KC
Past repair	253	9
Warranty extension	308,785	20,535


< Details >	MY	KA	KC
Settlement	03/04/08M	253	9
Past repair reimbursement	08M	308,217	20,535
Warranty extension	09M BCM	548	

NASC Discussion: NASC agreed to the proposal of (1) Reimburse for prior repair not reimbursed for 03/04 2dr/4dr and 08 4dr Accord for 90 days period from the date of customer notification completion and (2) Warranty extension for 08 4dr Accord and 09 4dr BCM Accord for future inadvertent deployments for 2 years from the date of final court approval.

NASC agreed to include 548 units of Csx BCM vehicles on April 18, 2014.

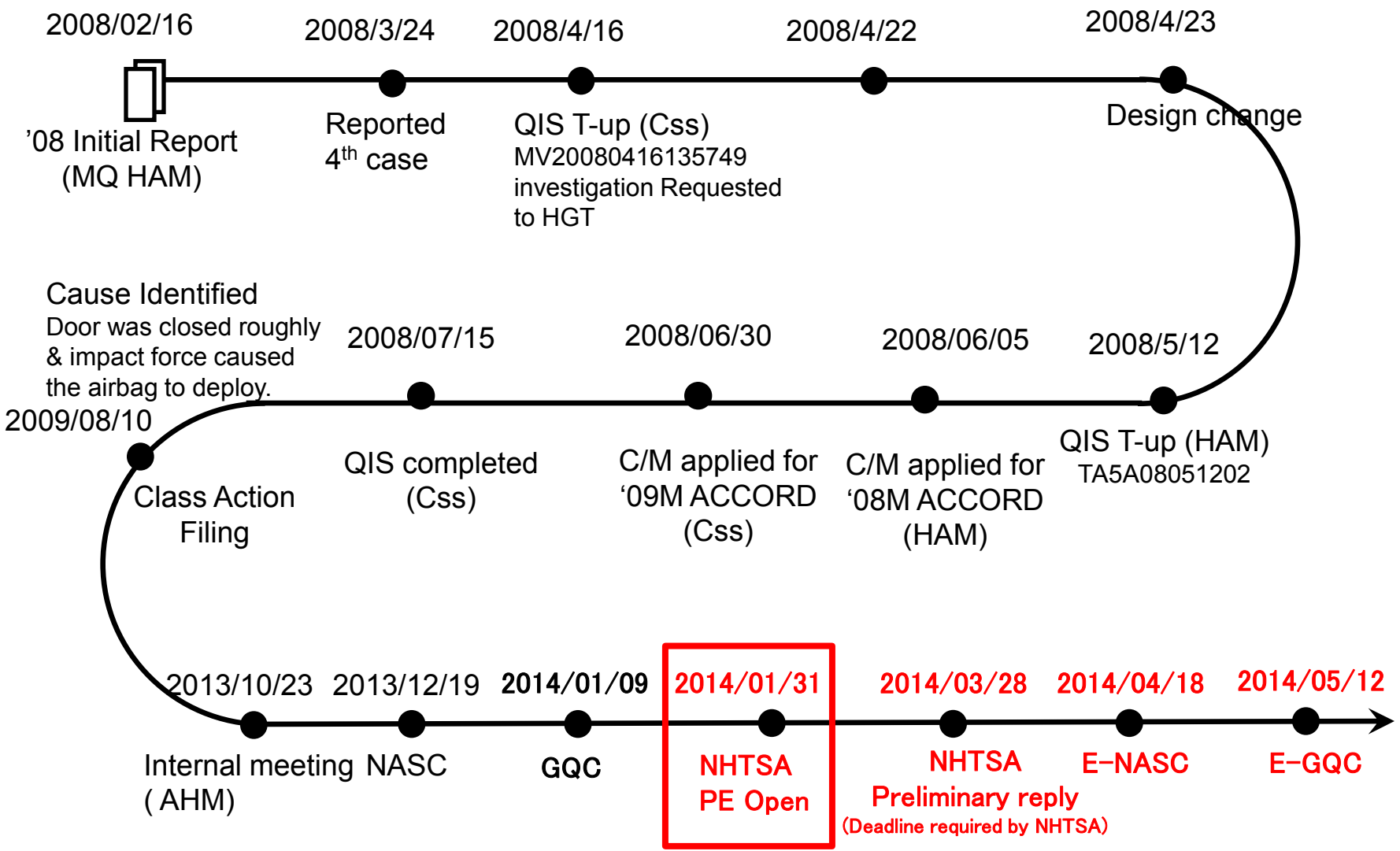
(1) Reimburse prior repair not reimbursed for 253 vehicles of 03/04/08 Accord for 90 days period from the date of customer notification completion.

(2) Warranty extension for 08/09 Csx BCM Accord for future inadvertent deployments for 2 years from the date of court approval.

グローバル品質委員会(四輪) 議事録		日時: 2014年5月12日	E 審議
議題: 09M ACCORD サイドエアバッグ/サイドカーテンエアバッグ展開不具合(対象範囲の追加)			
<u>出席者</u>		<u>議事者</u>	
グローバル品質監理部 栗田 部長(議長)	グローバル品質サービス部 観音寺 部長	AH	江口 VP
品質監理室 歌田 室長	部品部 東巻 部長	Css	清水 機主技
技術監理課 森山 課長	お客様部 久保 部長	<u>録音者</u>	
Css 清水 機主技	部品法規部 前田 部長	AH	江口 VP
Gss 市毛 機主技	法規部 水嶋 部長		
HGT 森 技評委員長	購買技術部 柳沢 主幹		
TAC 金島 室長	四輪品質保証部 石橋 部長		
<u>結論(決定事項)</u>			
・提案を承認し、アメリカ、カナダにおける市場措置を実施する。			
承認	品質監理部部長	【再発防止委員会報告: 実施 <input checked="" type="checkbox"/> 実施時期: 予定】	
		実施部門:	

E-GQC was held on 5/12/2014.
E-GQC approved proposal that 548 units of 09M Css BCM vehicles to be added to the affected units. No need for recurrence proposal for this additional proposal.

4. Timeline (for 08M)



Focus on class action settlement for GQC approval on 1/9/2014. However, NHTSA opened PE on 1/31/2014, then situation has changed.

5. Additional affected vehicles

Class vehicles summary

Low threshold deployments Determined by reviewing CRMS and Techline data.

Accord MYs	Production	Affected	Occurrences	Non-reimbursed	Warranty extension
2003 2dr	66,261	66,261	10	8	0
2003 4dr	230,429	230,429	102	88	0
2004 2dr	45,249	45,249	7	7	0
2004 4dr	227,178	227,178	62	56	0
2008 4dr	331,938	308,217*	200	94	308,217
Additional Proposal this time					
2009 4dr (Css)	18,253	548** (BCM)	0	N/A	548
Total	919,308	877,882	381	253**	308,765****

*Countermeasure applied to SRS control unit during 2008 HAM production.

**Countermeasure applied to SRS control unit during 2009 Css Production.

***Class size is 253 vehicles, class members are eligible for reimbursement.

128 of 381 occurrences received AH assistance

Excluded previously
Additional proposal
this time

Legal proposed class action settlement for 03M, 04M and 08M based on consideration of incident rates. 09M was not part of the settlement because the incident rate did not justify inclusion. However, NHTSA opened PE and situation has changed.=> Proposal to include 548 units.

6. Detailed proposed action and schedule

- 10-1 Market Action Proposal** Proactive market action fro class action settlement
- 10-2 Reason for Proposal** Market action will be conducted to address inadvertent deployments and settle a class action lawsuit.
- 10-3 Action details** (1) Reimburse prior inadvertent deployments that were not previously reimbursed for 03/04/08M (90 day period)
 (2) Warranty extension for 08 and 09 BCM Csx : repair future inadvertent deployments for a period of 2 years.
- 10-4 Affected Range** KA/KC : 03-04 Accord, 08 Accord 4Dr BCM, 09 Accord 4Dr BCM Csx
- 10-5 Number of affected vehicles** Past repair reimbursement (03/04/08M) : KA 253 units / KC 9 units
 Warranty extension (08M and 09M BCM Csx : 308,765 units / KC 20,535 units
- 10-6 Recurrence prevention** Completed
- 10-7 Schedule of Events**


	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15
NASC	★													
Preliminary Court Approval / 一次承認			★											
Class Notification / クラス通知						→								
Website Live / Webで告知					★									
Service Bulletin (preliminary)						★								
Final Court Approval/裁判所最終承認													★	
Service Bulletin (2008MY final)													★	
Service Bulletin (2009MY final)													★	
Claim Submission Process (prior deployments)過去発生 of 請求							→							
Claim Submission Process (future deployments)今後発生 of 請求														→
Reimbursement Process (prior deployments)過去発生分返金														→
Reimbursement Process (future deployments)今後発生分返金														→
Parts Arrangement/Procurement パーツ準備				→										
eNASC/eGQC (2009MY)					★	★								
2009MY Notification													→	

Timeline summary


Event date	Content
1-9-2014 GQC	<ul style="list-style-type: none">▪ Proposal to GQC The settlement terms of the class action were proposed to GQC and GQC approved the proposal.▪ We negotiated with the plaintiff side by limiting the affected models based on the failure rates. The 09M early production had no occurrences and we excluded those units from the class vehicles. A settlement was reached.
1-29-2014 PE issued	<ul style="list-style-type: none">▪ To verify possibility of safety defect
3-31-2014 Preliminary response to PE	<ul style="list-style-type: none">▪ Initial response to NHTSA for PE According to the GQC decision, it was explained that the problem was not a safety defect but AHM would conduct warranty extension and reimbursement for the past repairs in order to settle the class action. No response from NHTSA.
4-18-2014 E-NASC held	<ul style="list-style-type: none">▪ E-NASC held It was judged that NHTSA would not accept the thinking of class action settlement which excludes the pre C/M units from the class vehicles. An agreement was reached to include 548 of the 09M pre C/M Css built units to the class vehicles.
5-12-2014 E-GQC held	<ul style="list-style-type: none">▪ E-discussion held A proposal was made to add 548 of 09M Css built pre C/M units to the class vehicles.

Thank you for E-discussion & approving the addition of the C-ss built 09M (548 units) to the class vehicles.

[Honda in-house recurrence prevention for 03-04M]

	Issue	Measures	Schedule
Expansion	Add safing logic and LPF to SIS	<p>Add this Safing logic to other models with TRW system equipped, and also add LPF to SIS step by step.</p>  <p>This countermeasure is applied to all 05 models and later.</p>	Jan 2005

[Honda in-house recurrence prevention for 08M / 09M]

	Item	Action	Completion timing
Occurrence	Review OFF margin for strong door closing and reflect it in the setting	<p>Verify OFF margin for strong door closing using models in market, and from the verification results, reflect sufficient margin setting in the set threshold. Newly set +■% from current +■%.</p>  <p>Reflect the setting guide in the preliminary specifications for models after 11M.</p>	May 2007

END

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-4_2014-05-22 GQC WTY

Extension range expansion

REDACTED 20140521 GQC

Doc_Side Airbag Inadvertent

Deployment_J

03-04M Accord, 08M Accord 北米 Css/HAM

Accordサイドエアバッグ展開不具合 (対象範囲の追加)

QIS No : SDBA03100301, MV20080416135749, TA5A08051202

報告案件

1. 前回提案概要
2. 今回提案概要
3. E-NASC、GQC(E審議)結果
4. 経緯
5. 対象範囲の追加
6. 措置提案内容及び展開計画
7. まとめ
8. 再発防止



2014/05/21

<経緯>

- ・2014年1月9日 GQC承認
その後対象範囲追加が必要になり
- ・2014年4月18日 E-NASC承認
- ・2014年5月12日 E審議承認

本日の趣旨: E審議案件の概要報告

AHサービス

江口

HAM CIE

渡辺

Css CIE

清水

1. 概要 (前回提案)

1. 訴え事象

サイドエアバッグが突然展開する

2. 発生件数

KA 03 Accord 112件, 04 Accord 69件, 08 Accord 4dr 200件

KC 03 Accord 18件, 04 Accord 8件, 08 Accord 4dr 11件

3. 発生原因

SRSシステムの閾値が敏感な設定になっている。ドアを強く閉めたり車体下部への衝撃でエアバッグが展開する。

4. 対策

SRS Control ユニットのプログラムを変更

5. 市場措置提案

(1) 03/04/08YM Accord (08は4Drのみ): 過去のサイドエアバッグ展開不具合の修理費用の払い戻し(期間限定)

(2) 08M Accord 4Dr: 今後2年間の展開不具合に対する無償交換(保証延長)

6. 提案理由

クラスアクション和解対応のため

過去のサイドエアバッグ展開不具合に対する修理費用の返金

08年アコードセダンに対し、今後2年間の展開不具合に対する無償交換

7. 措置内容

エアバッグ展開不具合が発生したお客様への修理／返金

8. 対象範囲

USA/Canada : 03~04 ACCORD、08 ACCORD 4D

9. 対象台数

過去の修理費用払い戻し(03/04/08): KA 253台、KC 9台

保証延長(08のみ) : 308,217台、KC 20,535台(発生予測 KA 50台、KC 4台)

10. 措置費用

1.5百万ドル(1.6億円)

2014年1月9日、クラスアクション和解対応のためにGQC提案し、承認頂いた。

<提案内容> 03/04/08M Accord: 過去修理費用返金／08M Accord: 2年間の保証延長

2. 概要(今回提案)

1. 訴え事象

サイドエアバッグが突然展開する

2. 発生件数

KA 03 Accord 112件, 04 Accord 69件, 08 Accord 4dr 200件、09 Accord 4D対策前 Css 0件

KC 03 Accord 18件, 04 Accord 8件, 08 Accord 4dr 11件

3. 発生原因

SRSシステムの閾値が敏感な設定になっている。ドアを強く閉めたり車体下部への衝撃でエアバッグが展開する。

4. 対策

SRS Control ユニットのプログラムを変更

5. 市場措置提案

(1) 03/04/08YM Accord (08は4Drのみ): 過去のサイドエアバッグ展開不具合の修理費用の払い戻し(期間限定)

(2) 08M Accord 4Dr: 今後2年間の展開不具合に対する無償交換(保証延長)

6. 提案理由

クラスアクション和解応のため

過去のサイドエアバッグ展開不具合に対する修理費用の返金

7. 措置内容

08年アコードセダンに対し、今後2年間の展開不具合に対する無償交換

エアバッグ展開不具合が発生したお客様への修理/返金

8. 対象範囲

USA/Canada : 03~04 ACCORD、08 ACCORD 4D、09 Accord 4D対策前 Css

9. 対象台数

過去の修理費用払い戻し(03/04/08): KA 253 台、KC 9台

保証延長(08/09のCss対策前) : 308,765台、KC 20,535台

10. 措置費用

1.5百万ドル(約1.6億円)

**今回提案: USの措置対象台数にCss製09 Accord(対策前)の548台を追加提案
但し、措置内容、費用を含むその他項目は変化なし。**

NASC

Date : 12/19/2013

Revised 4/18/2014

NASC Present:

Committee Member: H. Eguchi (NASC Chairman), Bruce Smith (AH-Service), Ken Dick (CH), K.Nishizawa (AH-PRO)
K. Suzuki (HNAS), T. Yamamoto (HRA), N. Gruebmeier (AH-Parts)

Meeting Minutes by T.Ota (AH-Service)

Title: Accord Side Airbag Inadvertent Deployment

Symptom: The side airbag deploys when not expected.

Market Occurrence: KA 381 cases
KC 37 cases

< Details >	03M	04M	08M	09M
KA	112	69	200	0
KC	18	8	11	

Occurrence Cause: SRS system threshold setting too sensitive. Door slam or underbody contact can result in deployment.

Affected units:

	KA	KC
Past repair	253	9
Warranty extension	308,785	20,535

< Details >	MY	KA	KC
Settlement	03/04/08M	253	9
Past repair reimbursement	08M	308,217	20,535
Warranty extension	09M BCM	548	

NASC Discussion: NASC agreed to the proposal of (1) Reimburse for prior repair not reimbursed for 03/04 2dr/4dr and 08 4dr Accord for 90 days period from the date of customer notification completion and (2) Warranty extension for 08 4dr Accord and 09 4dr BCM Accord for future inadvertent deployments for 2 years from the date of final court approval.


2014年4月18日にE-NASCを実施し、09M C_{ss}製対策前車両548台を提案に含める事を合意

NASCは以下のクラスアクションの和解条件を承認する。

(1) 03/04/08 ACCORDで過去に事象発生し有償修理したお客様(253名)に対し、お客様への通知完了から90日以内の期限付きで払い戻しを行う。

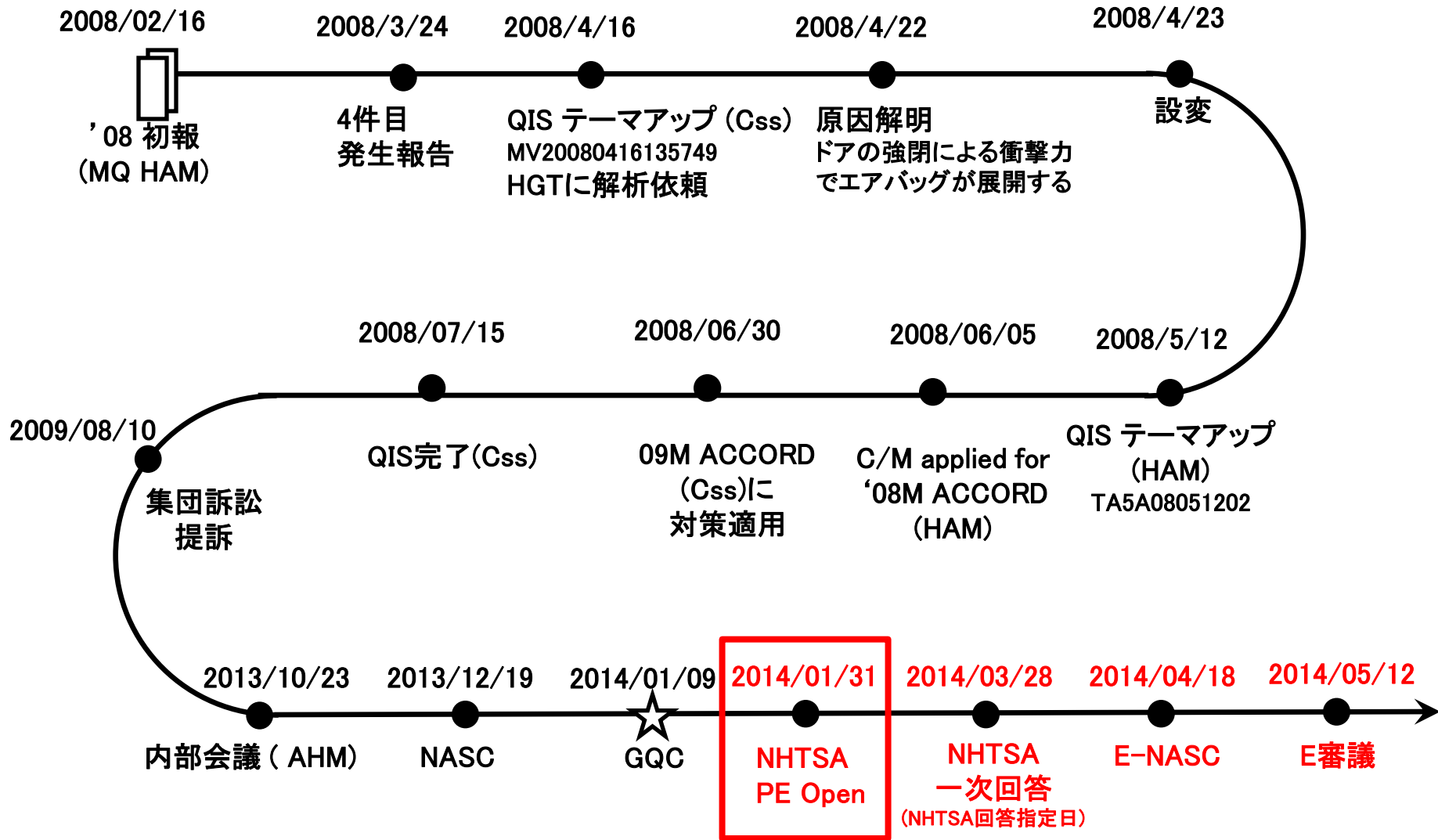
(2) 08/ 09 C_{ss}対策前 ACCORDに対し、裁判所承認から2年間保証延長を行う。

3. E審議結果

グローバル品質委員会(四輪) 議事録		日時: 2014年5月12日	E 審議
議題: 09M ACCORD サイドエアバッグ/サイドカーテンエアバッグ展開不具合(対象範囲の追加)			
<u>出席者</u>		<u>議事者</u>	
グローバル品質監理部 栗田 部長(議長)	グローバル品質サービス部 観音寺 部長	AH	江口 VP
品質監理室 歌田 室長	部品部 東巻 部長	Css	清水 機主技
技術監理課 森山 課長	お客様部 久保 部長	<u>録音者</u>	
Css 清水 機主技	課室法規部 前田 部長	AH	江口 VP
Gas 市毛 機主技	法務部 水嶋 部長		
HGT 森 技評委員長	購買技術部 柳沢 主幹		
TAC 金島 室長	四輪品質保証部 石橋 部長		
<u>結論(決定事項)</u>			
・提議を承認し、アメリカ、カナダにおける市場措置を実施する。			
承認	品質監理部部長 	【再発防止委員会報告: 実施 <input checked="" type="checkbox"/> 否 実施時期: 予定】	
		実施部門:	

2014年5月12日にE-GQC審議をを実施。

09M Css製対策前車両548台を対象範囲に追加し、アメリカ、カナダにおける市場措置を実施する事が承認された。尚、今回の提案に対する再発防止は否となった。



2014年1月9日のGQCまでは、クラスアクション和解対応のために推進。しかしながら、2014年1月31日、NHTSAからPEが発行され、事態が変化。

5. 対象範囲の追加

集団訴訟対象車両: AHの顧客管理システムの修理情報及びテックライン情報を精査し集計

Accord MY	製造台数	対象台数	発生件数	有償修理 件数	保証延長 台数
2003 2dr	66,261	66,261	10	8	0
2003 4dr	230,429	230,429	102	88	0
2004 2dr	45,249	45,249	7	7	0
2004 4dr	227,178	227,178	62	56	0
2008 4dr	331,938	308,217*	200	94	308,217
2009 4dr (Css)	18,253	548** (BCM)	0	N/A	548
Total	919,308	877,882	381	253***	308,765****

今回追加提案

* HAM生産車は、2008モデル後半から対策適用(ランチェン)。

** Css生産車は、2009モデルの途中から対策適用(ランチェン)。

*** 253件は過去に有償修理された台数で修理費用返金の対象

**** 308,765件: 訴訟の原告は2年間の保証延長の対象である

先回は対象から除外
今回は対象へ追加提案

リーガル部門が提案し、03,04,08Mは発生率を考慮してクラスアクションの和解を図った。Css製09M初期生産の548台は発生ゼロ件のため和解条件に含める理由が無く、除外した。

しかし、NHTSAからPE発行され事態が変化 ⇒ NHTSAへの説明上548台を対象へ追加

6. 措置提案内容及び展開計画

- 10-1 措置提案 積極市場措置(和解条件)を実施
- 10-2 提案理由 クラスアクション和解対応のため、NHTSA対応のため
- 10-3 措置内容 (1) 03/04/08M Accord : 過去のサイドエアバッグ展開不具合の修理費用の払い戻し
(2) 08M / 09M Accord **Css対策前**: 今後2年間の展開不具合に対し2年間限定無償交換(保証延長)
- 10-4 対象範囲 USA/Canada : 03~04 ACCORD、08 ACCORD 4D、**09 Accord 4D Css対策前**
- 10-5 対象台数 03/04/08 Accord 過去修理費用払い戻し : KA 253 台、KC 9 台
08 / 09 Css 対策前2年間保証延長 : **308,765**台、KC 20,535台(発生予測 KA 50台、KC 4台)
- 10-6 展開日程

	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15
NASC	★													
Preliminary Court Approval / 一次承認			★											
Class Notification / クラス通知						→								
Website Live / Webで告知					★									
Service Bulletin (preliminary)						★								
Final Court Approval/裁判所最終承認													★	
Service Bulletin (2008MY final)													★	
Service Bulletin (2009MY final)													★	
Claim Submission Process (prior deployments)過去発生 of 請求							→							
Claim Submission Process (future deployments)今後発生 of 請求														→
Reimbursement Process (prior deployments)過去発生分返金														→
Reimbursement Process (future deployments)今後発生分返金														→
Parts Arrangement/Procurement パーツ準備				→										
eNASC/eGQC (2009MY)					★	★								
2009MY Notification													→	


経緯まとめ

イベント日時	内容
2014年1月9日 GQC	<ul style="list-style-type: none">・GQC提案 クラスアクションの和解条件をGQC提案し、承認された。・発生率で対象モデルを限定して原告側と交渉、09M初期の対策前車両(Css製548台)は、発生件数ゼロ件であり、クラスアクション対象から除外、和解成立。
2014年1月29日 PE発行	<ul style="list-style-type: none">・安欠問題の可能性を確認
2014年3月31日 PEへ一次回答	<ul style="list-style-type: none">・NHTSAへPE一次回答 GQC決済に沿い、安欠問題でなく、クラスアクション和解のために保証延長と過去修理費用の払い戻しを行う方針を説明。 NHTSAから返答待ち。
2014年4月18日 E-NASC	<ul style="list-style-type: none">・E-NASC実施 対策前車両を措置対象から除外するクラスアクション和解の考え方は、当局に対し説明困難と判断、Css製09M対策前車両548台の対象追加を合意。
2014年5月12日 E-GQC	<ul style="list-style-type: none">・E審議実施 Css製の09M対策前車両の548台を対象追加を提案し、承認された。


Css製 09Mの対象台数の拡大(548台)をE審議、承認頂きましてありがとうございました。

8. 再発防止

【03-04 ACCORD】

	課題	対応内容	日程
拡大系	セーフイングロジック追加とSISへのLPF対応の適用拡大	<p>TRWシステムを使用する他機種において、今回のセーフイングロジック追加とSISへのLPF対応を順次拡大して適用する。</p> <p style="text-align: center;"></p> <p>全機種 05Mより対策適用する。</p>	2005年1月完

【08/09M ACCORD】

	課題	対応内容	日程
発生系	ドア強閉OFFマージンの見直しとセッティングへの反映	<p>市場実績の有る機種においてドア強閉でのOFFマージン調査を行い調査結果から十分なマージン設定量をセッティング閾値に反映する。従来の+■%から+■%を新たに設定する。</p> <p style="text-align: center;"></p> <p>セッティングガイドを11M以降の機能開発仕様書へ反映する。</p>	2007年5月完

以上

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-3_Control No. 90-40

Q8-3_20140109 030408 Acc

SAB [GQC]_English_Redacted

03-04M Accord, 08M Accord for US Market Made by Css/HAM

Title: Accord Side Airbag Inadvertent Deployment

QIS No : SDBA03100301, MV20080416135749, TA5A08051202

1. NASC results
2. Overview
3. Timeline
4. Number of occurrences
5. 03-04M Analysis results and C/M
6. 08M Analysis results and C/M
7. HNA Settlement
8. Canada situation
9. Cost Summary
10. Detailed proposed action and schedule
11. Prevention of reoccurrence



GQC



1/9/2014

AH Service
Eguchi

HAM CIE
Watanabe

Css CIE
Shimizu

1. NASC Discussion Results

NASC

Date : 12/19/2013
Revised 12/20/2013

NASC Present:
Committee Member: H. Eguchi (NASC Chairman), Bruce Smith (AH-Service), K.Nishizawa (AH-PRO)
K. Suzuki (HNAS), T. Yamamoto (HRA), N. Gruebmeier (AH-Parts)

Meeting Minutes by T.Ota (AH-Service)

Not Present:
Ken Dick (CH)

Title: Accord Side Airbag Inadvertent Deployment

Symptom: The side airbag deploys when not expected.

Market Occurrence:	KA	381 cases		03 Accord	04 Accord	08 Accord
	KC	37 cases	KA	112	69	200
			KC	18	8	11

Occurrence Cause: SRS system threshold setting too sensitive. Door slam or underbody contact can result in deployment.

Affected units:	KA	877,334 units		03 Accord	04 Accord	08 Accord
	KC	70,334 units	KA	296,690	272,427	308,217
			KC	35,583	14,216	20,535

NASC Discussion: NASC agreed to the proposal of (1) Reimburse for prior repair not reimbursed for 03/04 2dr/4dr and 08 4dr Accord for 90 days period from the date of customer notification completion and (2) Warranty extension for 08 4dr Accord for future inadvertent deployments for 2 years from the date of final court approval.

NASC agreed to the following class action settlement condition.

- (1) Reimburse prior repair not reimbursed for 253 vehicles of 03/04/08 Accord for 90 days period from the date of customer notification completion.
- (2) Warranty extension for 08 Accord for future inadvertent deployments for 2 years from the date of final court approval.

2. Overview

1. Customer Contention

The side airbag deploys when not expected. (Side airbag deployment is not safety issue.)

2. Number of Occurrences

KA 2003 Accord – 112, 2004 Accord – 69, 2008 Accord 4dr – 200

KC 2003 Accord – 18, 2004 Accord – 8, 2008 Accord 4dr - 11

3. Causes of Occurrence

SRS system threshold setting too sensitive. Door slam or underbody contact can result in deployment.

4. Countermeasures

SRS calibration changed as running change in 2004 and 2008.

5. Market Action Proposal Based On Preliminary Court Approval

(1) Warranty extension for 2008 Accord 4dr: repair future inadvertent deployments for a period of 2 years

(2) Reimburse for prior inadvertent deployments that were not previously reimbursed for 03/04/08M (4dr only for 08) (90 day period)

6. Reason for Proposal

To settle the class action lawsuit.

7. Action Details

Repair/reimburse members for confirmed occurrences.

8. Affected Range

KA/KC : 03~04 ACCORD、08 ACCORD 4D BCM

9. Number of affected vehicles

Warranty extension (08M only) : 308,217 units / KC 20,535 units

Past repair reimbursement (03/04/08M) : KA 253 units / KC 9 units

10. Cost of Market Action

Total : \$ 1.5 million (Approximately JPY 1.6 oku)

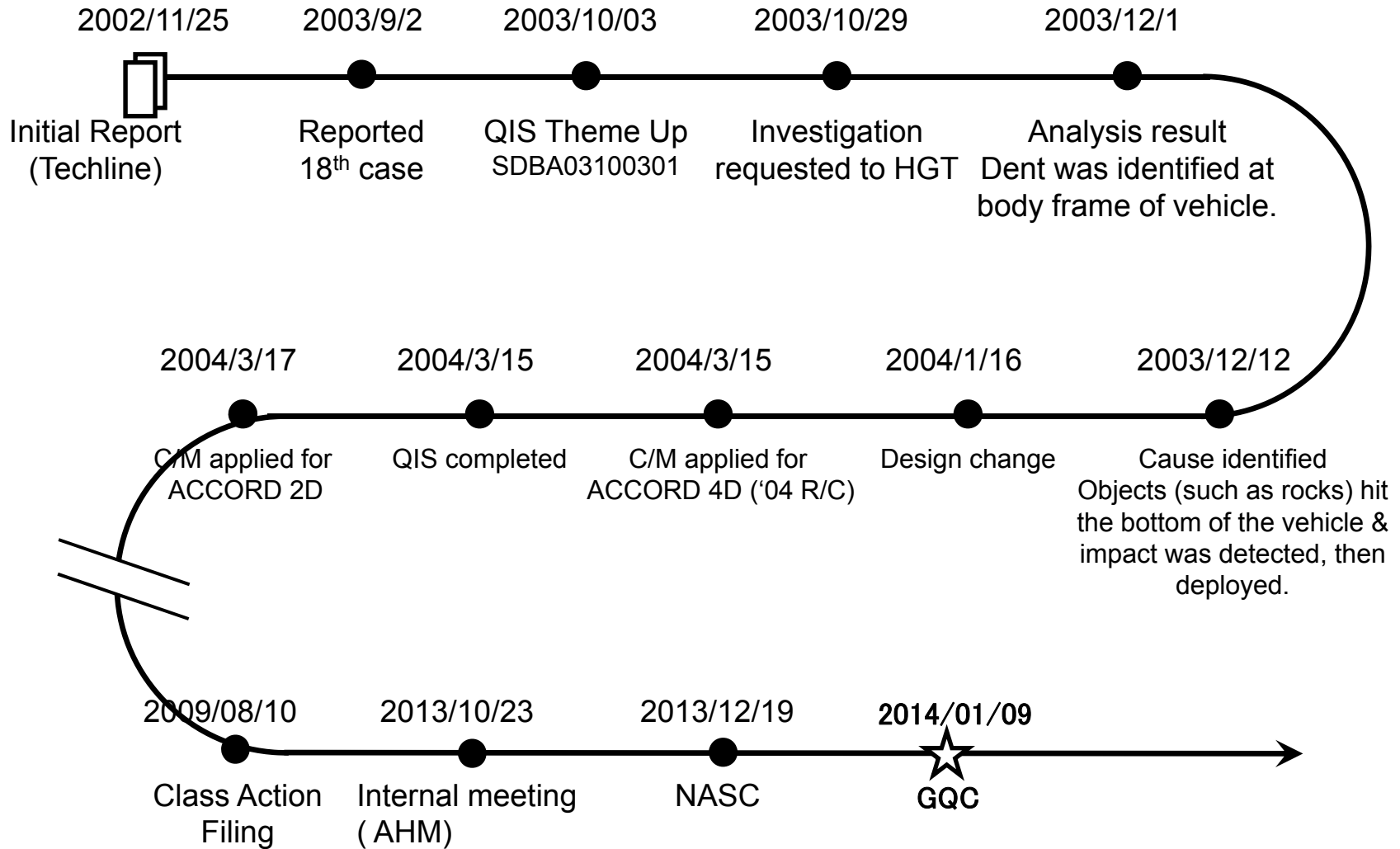
KA: Up to \$1.43 Million (Approximately JPY 150 million) / KC \$ 0.07 Million (Approximately JPY 8.0 million)

Up to \$1.19 Million (Approximately 122.3 million yen) – Plaintiffs' Attorney fee

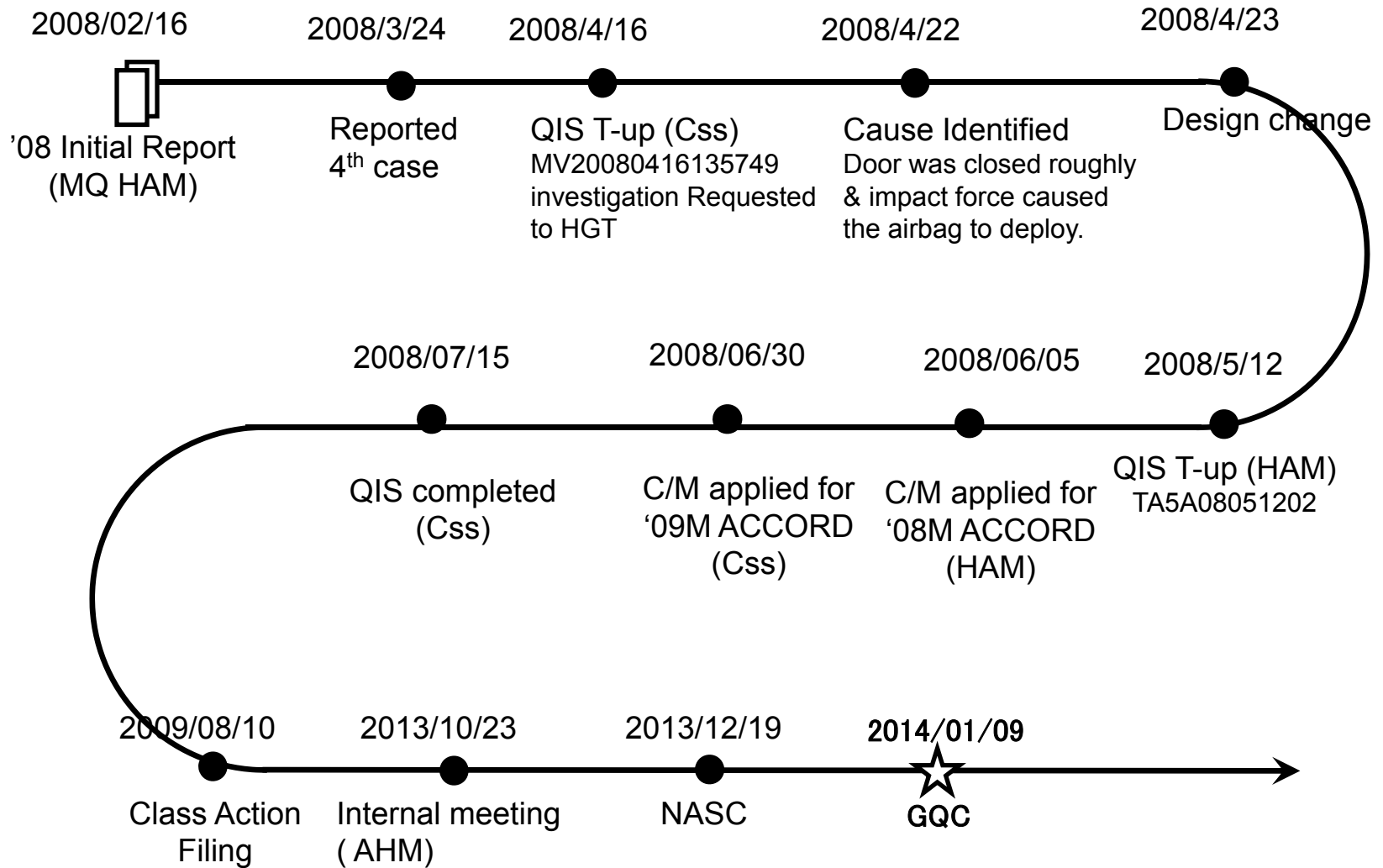
Up to \$5,000 (Approximately 514,000 yen) – Incentive award for named Plaintiff

Confidential - Attorney Work Product / Attorney - Client Privilege

3. Timeline (for 03-04M)



3. Timeline (for 08M)



4. Number of occurrences

2000 – 2012 Accord model years, Occurrences based on CRMS and Techline data.
 Year models included in class action are determined by HNA negotiation.

	00MY 2D	00MY 4D	01MY 2D	01MY 4D	02MY 2D	02MY 4D	03MY 2D	03MY 4D	04MY 2D	04MY 4D	05MY 2D	05MY 4D	06MY 2D	06MY 4D
Total Sales Volume	57,056	138,024	62,294	192,986	58,778	170,161	66,261	230,429	45,249	227,178	47,190	321,268	37,586	288,011
Number of the customer who replaced by Warranty or Goodwill	0	12	0	14	0	2	2	14	0	6	1	2	0	2
Number of the customer who replaced by own money	1	37	1	59	3	5	8	88	7	56	2	26	2	18
Total	1	49	1	73	3	7	10	102	7	62	3	28	2	20
Threshold	** For the '03/'04MYs, the threshold remained the same, but changes were made to the units by altering the safing logic, adding more filtering to the SIS, and making corresponding algorithm and calibration changes to account for underbody impacts.													
Incident Rate	0.0018%	0.0355%	0.0016%	0.0378%	0.0051%	0.0041%	0.0151%	0.0443%	0.0155%	0.0273%	0.0064%	0.0087%	0.0053%	0.0069%

	381											
	07MY 2D	07MY 4D	08MY 2D	08MY 4D	09MY 2D	09MY 4D	10MY 2D	10MY 4D	11MY 2D	11MY 4D	12MY 2D	12MY 4D
Total Sales Volume	32,373	376,426	47,536	331,938	38,936	273,374	32,319	247,106	26,009	193,563	10,246	82,883
Number of the customer who replaced by Warranty or Goodwill	0	8	2	106	3	5	0	0	0	0	1	0
Number of the customer who replaced by own money	0	25	10	94	1	4	2	2	1	0	0	0
Total	0	33	12	200	4	9	2	2	1	0	1	0
Threshold	** Door slam issues for the 08MY 4D. The original calibration for door slams resulted in an immunity level of 1.3X at 5 m/s. Testing for the fix was performed, resulting in an immunity range of 1.24X – 2X at door slam speeds of 5.5 m/s - 6.6 m/s. The change was successful.											
Incident Rate	0.0000%	0.0088%	0.0252%	0.0649%	0.0103%	0.0033%	0.0062%	0.0008%	0.0038%	0.0000%	0.0098%	0.0000%

4. Number of occurrences

Class vehicles summary

Low threshold deployments Determined by reviewing CRMS and Techline data.

Accord MYs	Production	Affected	Occurrences	Non-reimbursed	Warranty extension
2003 2dr	66,261	66,261	10	8	0
2003 4dr	230,429	230,429	102	88	0
2004 2dr	45,249	45,249	7	7	0
2004 4dr	227,178	227,178	62	56	0
2008 4dr	331,938	308,217*	200	94	308,217
Total	901,055	877,334	381	253**	308,217***

*Countermeasure applied to SRS control unit during 2008 production.

**Class size is 253 vehicles, class members are eligible for reimbursement.

128 of 381 occurrences received AH assistance.

***Class members eligible for 2yr warranty extension.

Data as of May 31, 2013

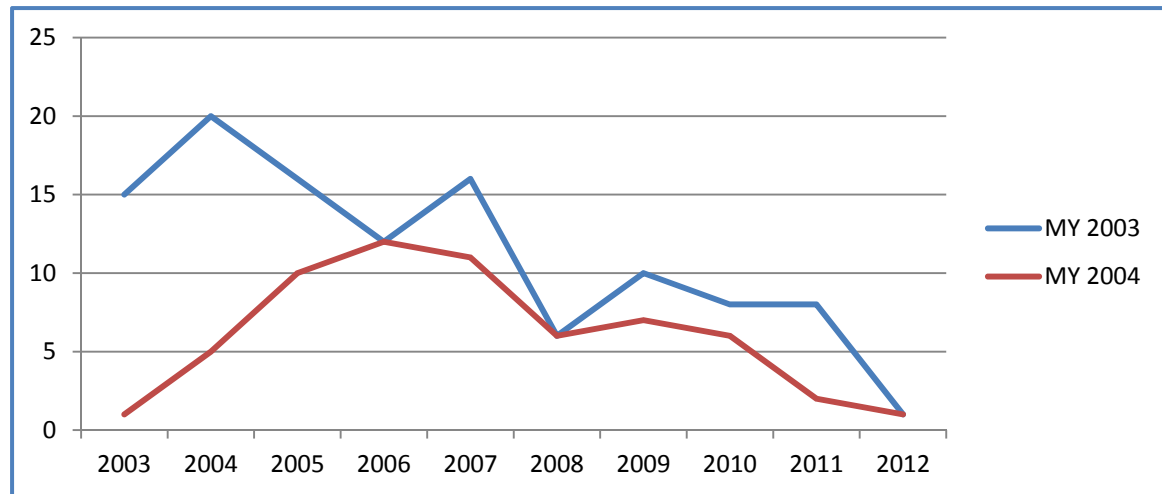
4. Number of occurrences

Number of occurrences per calendar year.

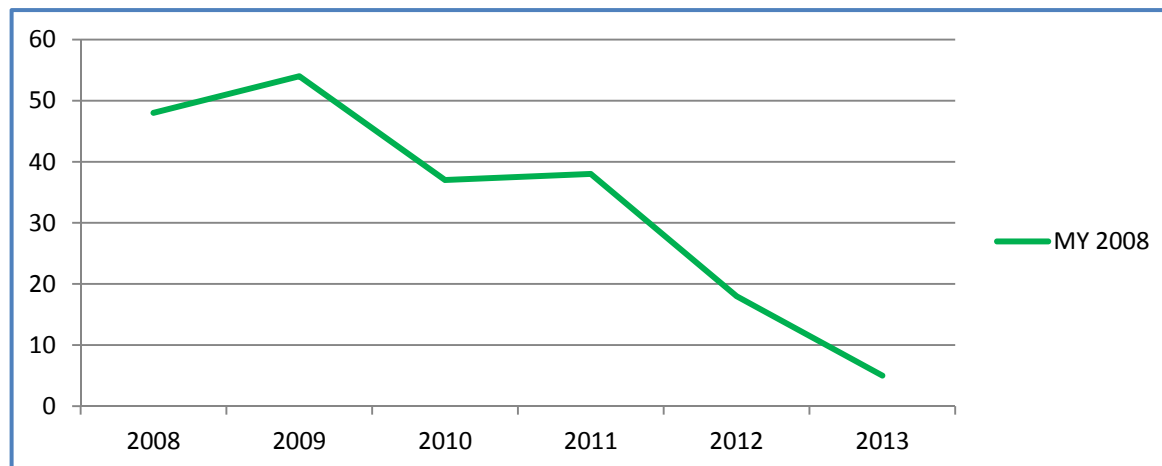
Occurrences are combined reimbursed and non-reimbursed.

Occurrences data was created by reading CRMS and Techline contacts.

2003, 2004 Trend
Occurrences by calendar year.



2008 Trend
Occurrences by calendar year.



Occurrence data shows decreasing trend year by year. Past 3 years average is 23/yr.

5. 03-04M Analysis and C/M

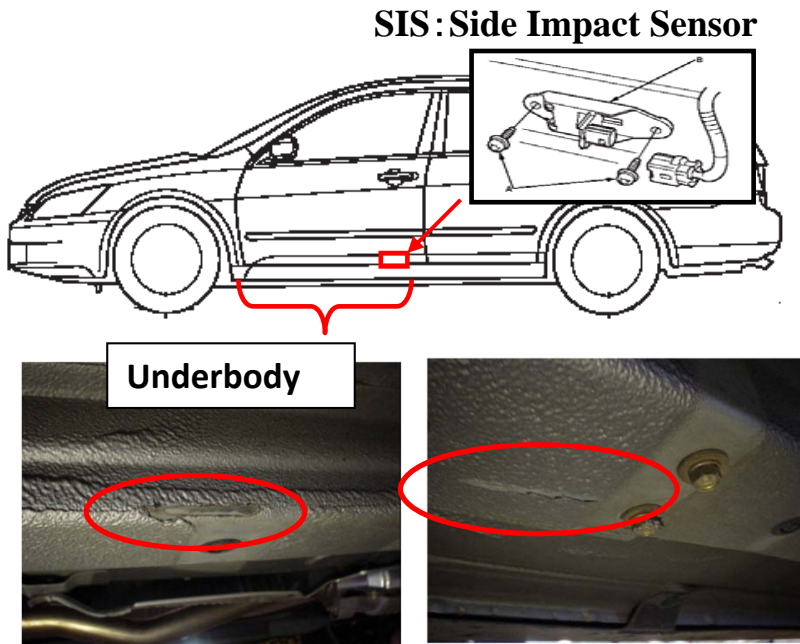
5-1 Returned part analysis results

- 1HGCM66553A [REDACTED] ACCORD 4D 03M

- While driving on a highway at 60mph, side airbag and seat-belt pretensioner deployed without collision.

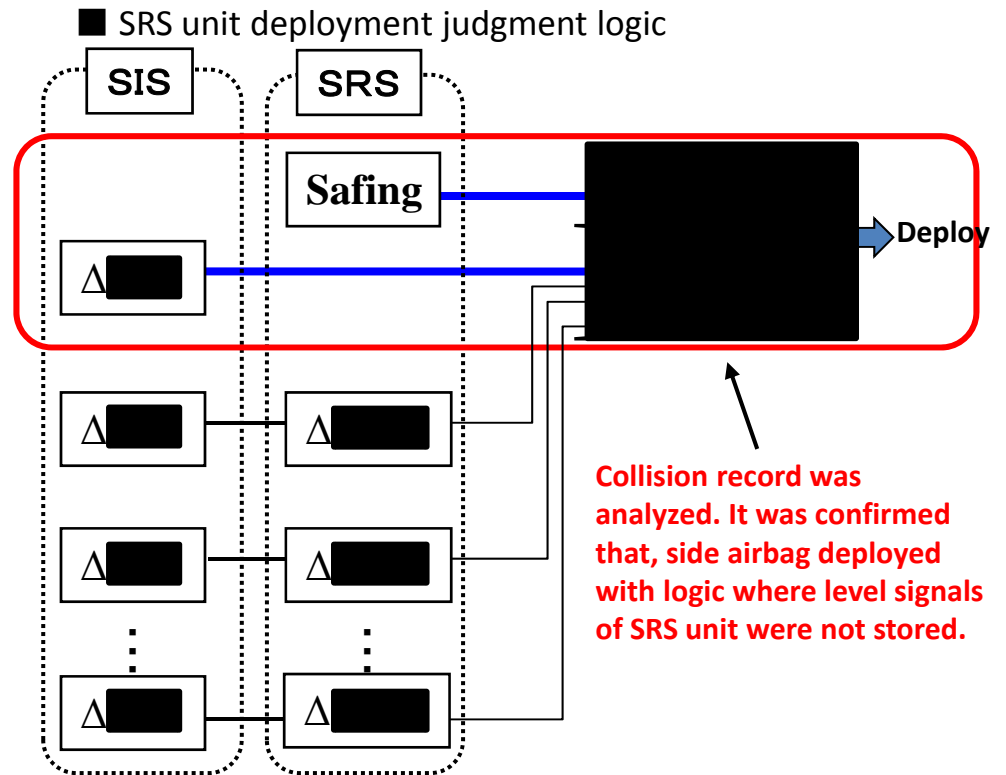
- Occurrence date: July 30, 2003

- Vehicle analysis result



Floor frame and side sill are confirmed to be deformed.

- SRS unit data analysis result



**2 signals (SIS impact signal and SRS safing) were stored in this vehicle's data.
(Level signals of SRS unit were not stored.)**

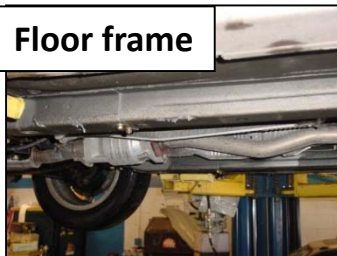
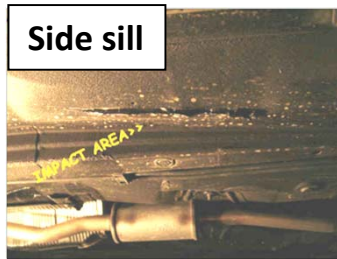
This vehicle did not collide but side airbag deployed due to [REDACTED] logic" which was a combination of SIS [REDACTED] and SRS unit safing ON.

5. 03-04M Analysis and C/M

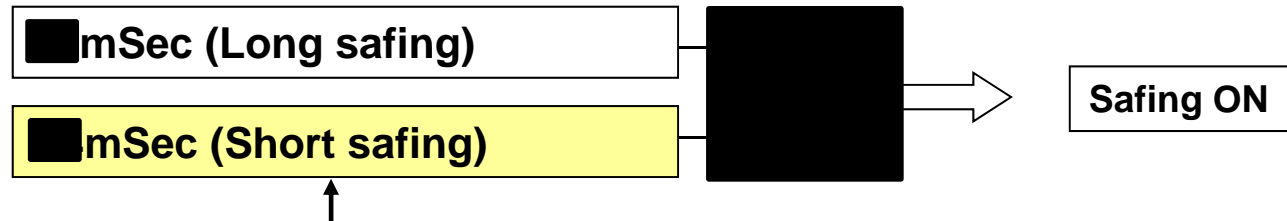
5-2 Recreation testing results

ACCORD 4D 03M Hammering testing results

Hammering point	Short safing duration █ msec	Long safing duration █ msec	SIS ΔV █	System result
Side sill	ON	OFF	ON	Deployed
Floor frame	ON	OFF	OFF	Not deployed



“Safing ON” is activated by short safing █ long safing.



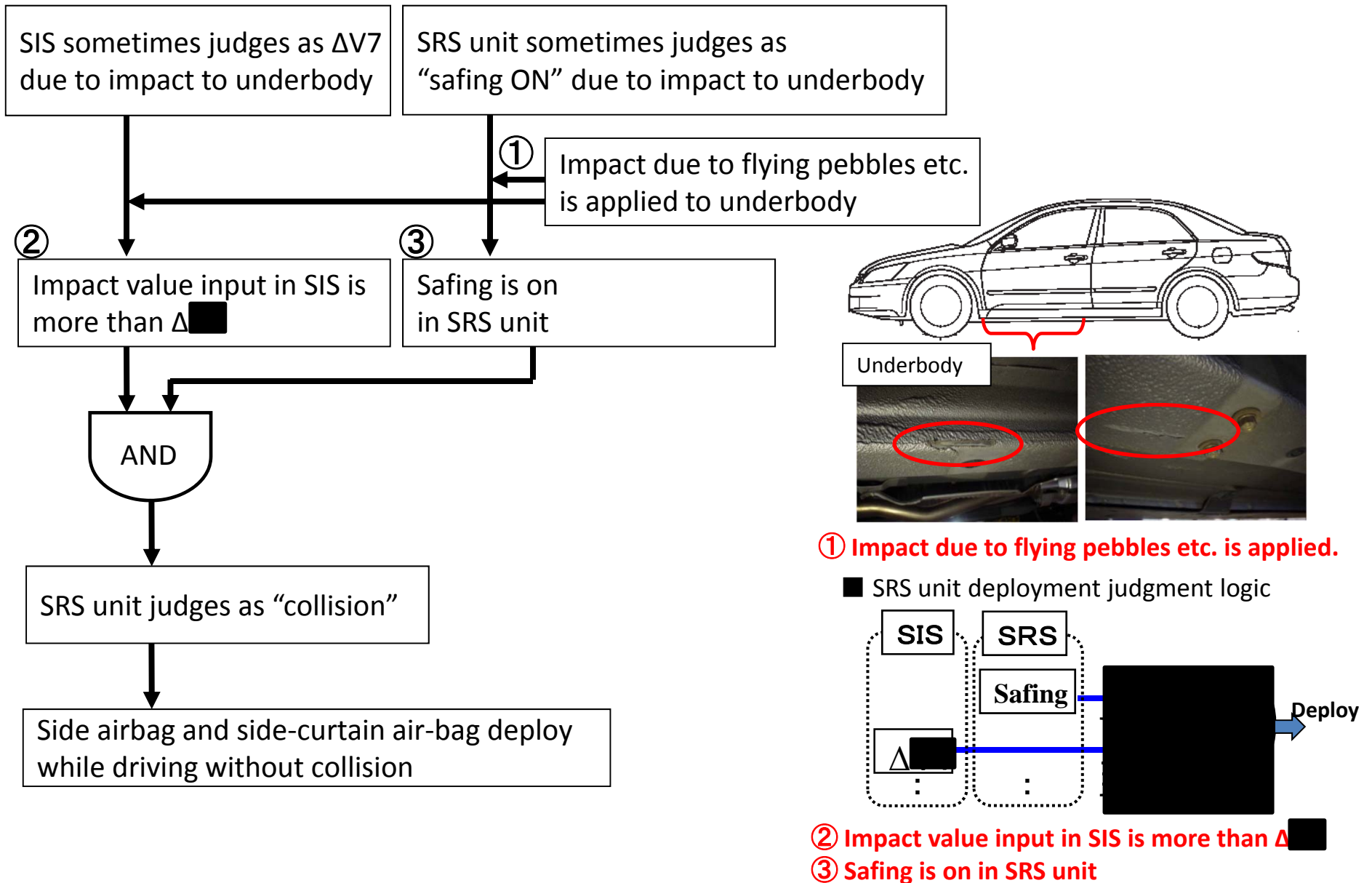
At the hammering testing, “safing ON” was activated by short safing (█ msec).

- “Safing ON” and “side airbag deployment” were recreated by hitting the side sill.
- We assume that these failures could have been recreated while driving even if hitting other areas.
- Short safing was on by hitting the side sill and the floor frame.
- Long safing was not on even if hitting the side sill and the floor frame.
- This vehicle did not collide, but SIS judged as Δ█.

“Safing ON” and “side airbag deployment” were recreated at the hammering testing.

5. 03-04M Analysis and C/M

5-3 Occurrence mechanism

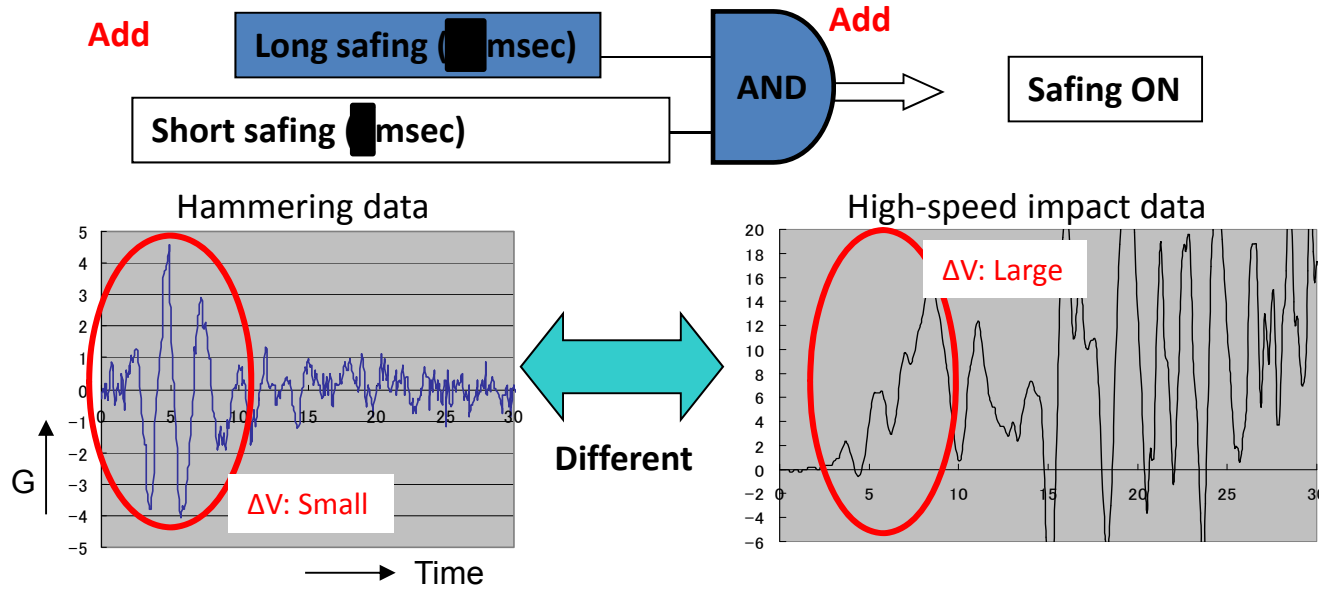


5. 03-04M Analysis and C/M

5-4 Countermeasure

① C/M for SRS unit

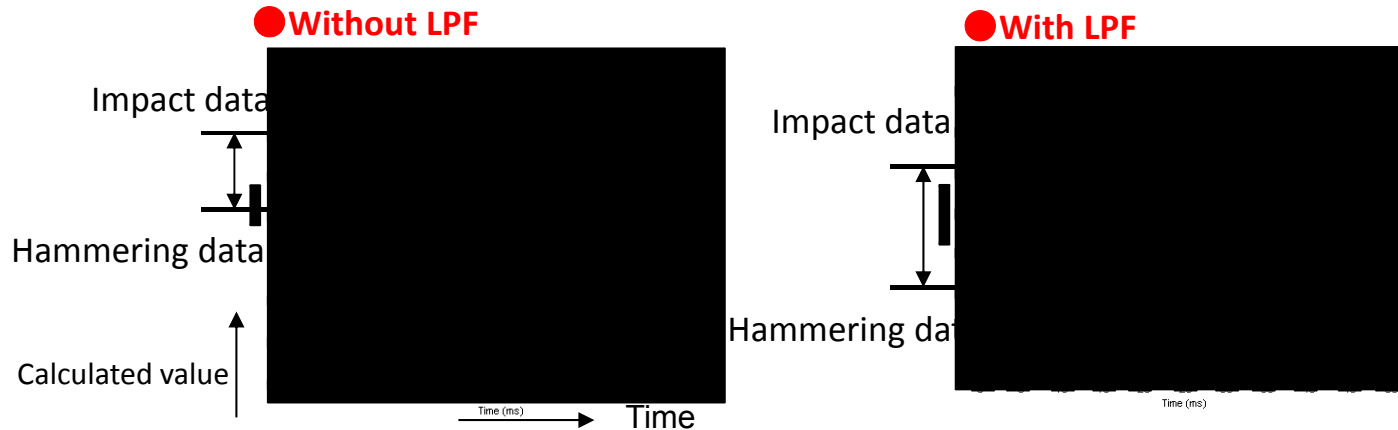
Add long safing in short safing logic.



This hammering data shows waveform of vibration. ΔV can be reduced by increasing duration.

② C/M for SIS

Add LPF (Low-Pass-Filter) to reduce a probability of Δ



By adding LPF, The difference can be large between the 2 waveforms (hammering data and impact data). (Toughness increases by 50%)

5. 03-04M Analysis and C/M

5-5 Countermeasure effect study

• Hammering test effect results

		Safing logic (OFF margin)	SIS Δ ████	System results
Test No1	ACCORD 4D 03M Pre-countermeasure	ON	ON	Deployed
	ACCORD 4D 03M Post-countermeasure	OFF (200%, or higher)	ON	Not deployed
	ACCORD 2D 03M	OFF (200%, or higher)	ON (ON is possible.)	Not deployed
Test No2	ACCORD 4D 03M Pre-countermeasure	ON	ON	Deployed
	ACCORD 4D 03M Post-countermeasure	OFF (181%)	ON	Not deployed
	ACCORD 2D 03M	OFF (132%)	ON (ON is possible.)	Not deployed

After-C/M'ed logic ensures sufficient off margin which is more than Accord 2D.

6. 08M Analysis and C/M

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6-1 Analysis results

- 1HGCP26718A [REDACTED] ACCORD 4D 08M
- Customer experiences an SRS deployment when the front door is closed.
- Occurrence date: May 18, 2008

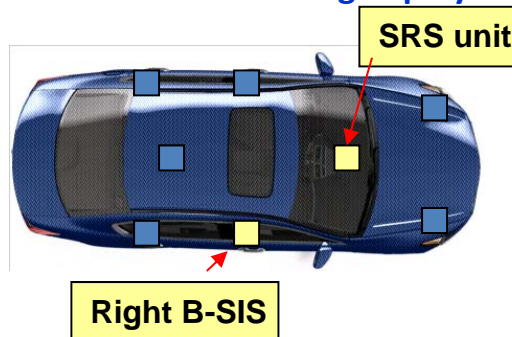
• Appearance of the vehicle



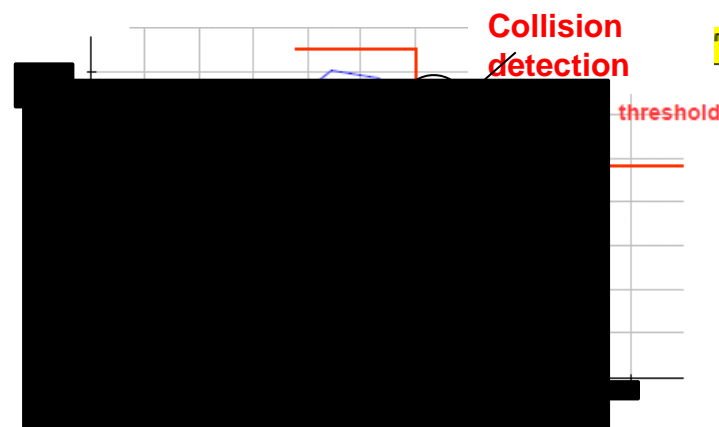
Deformation due to collision is not confirmed.

• SRS unit data recorded

- No defects.
- There is a record showing SRS unit and R-side B-SIS judged the vehicle as collided then airbag deployed.



• SRS unit record G data



The collision history and the record G data show that the SRS unit judged the vehicle as collided so side airbag and side-curtain air-bag deployed.

=> The airbag deployed based on normal collision detection.

Although the vehicle did not have an accident, the SRS unit detected collision and airbag deployed.

6. 08M Analysis and C/M

6-2 Recreation testing results

Recreation testing in strong door closing mode

1: Purpose

Conduct recreation testing in strong door closing mode which is more than required door closing speed (█ m/s) to check if the air bag deploys or not.

2: Test method:

08M ACCORD for North American market (produced by MAP)
Use a DANKAKU vehicle and close door(s) strongly.

3: Test results (under some test conditions)

Impacted side	Speed	Test car condition	Collision detection
-	█ m/s	█	OFF
-	█ m/s	↑	OFF
L	█ m/s	█	OFF
L	█ m/s	↑	OFF
L	█ m/s	↑	ON
L	█ m/s	↑	ON
L	█ m/s	█	OFF
R	█ m/s	█	OFF
R	█ m/s	↑	ON
R	█ m/s	↑	ON
R	█ m/s	↑	OFF
R	█ m/s	↑	OFF
R	█ m/s	↑	OFF
R	█ m/s	█	OFF
R	█ m/s	↑	ON
R	█ m/s	█	ON
R	█ m/s	↑	OFF
R	█ m/s	█	ON
R	█ m/s	↑	ON
R	█ m/s	↑	OFF

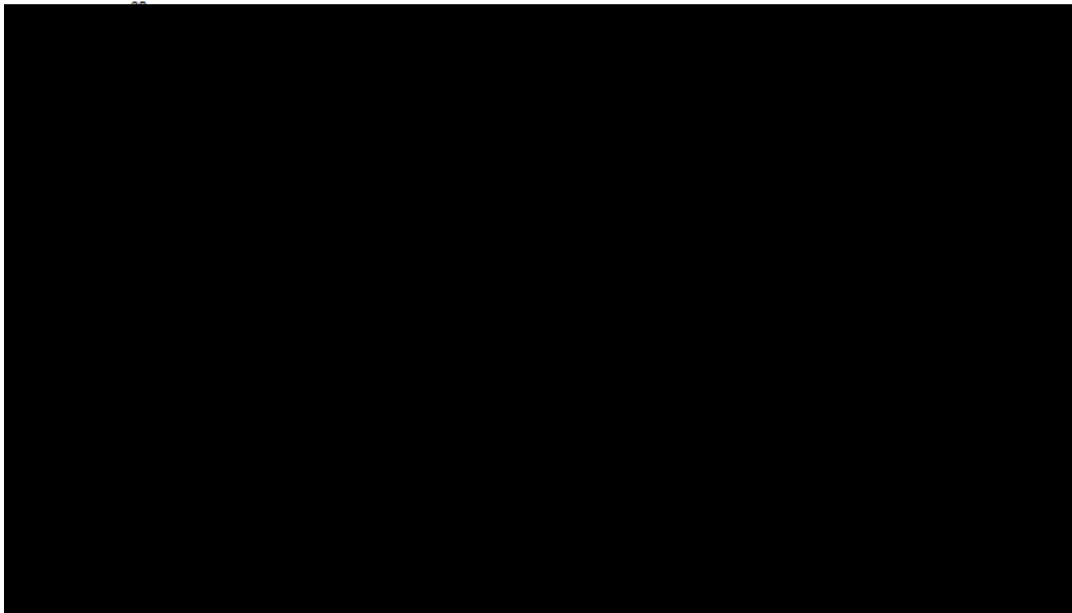
It was confirmed that SRS unit judged the vehicle as collided by strong door closing (more than █ m/s).

Failure was recreated by closing door strongly (more than █ m/s).

6. 08M Analysis and C/M

6-3 Causal analysis

- Set threshold before C/M (08M ACCORD 4D)



ECU_Y
 [redacted] buffer
 [g]

On ACCORD 4D, OFF margin is ensured by [redacted] % in A requirement mode (Strong door closing of [redacted] m/s) and T-TTF of SINCAP and SICE is ensured.

- Comparison with other models

Setting results

MY	Model	Speed	OFF margin
05	Accord 2Dr TS-X RL	[redacted] m/s	[redacted]
06	CMC4Dr CMC2Dr		[redacted]
07	CR-V US Fit		[redacted]
08	Accord 4Dr Accord 2Dr TS-X		[redacted]
09	US Fit		[redacted]

* OFF margin target [redacted] %

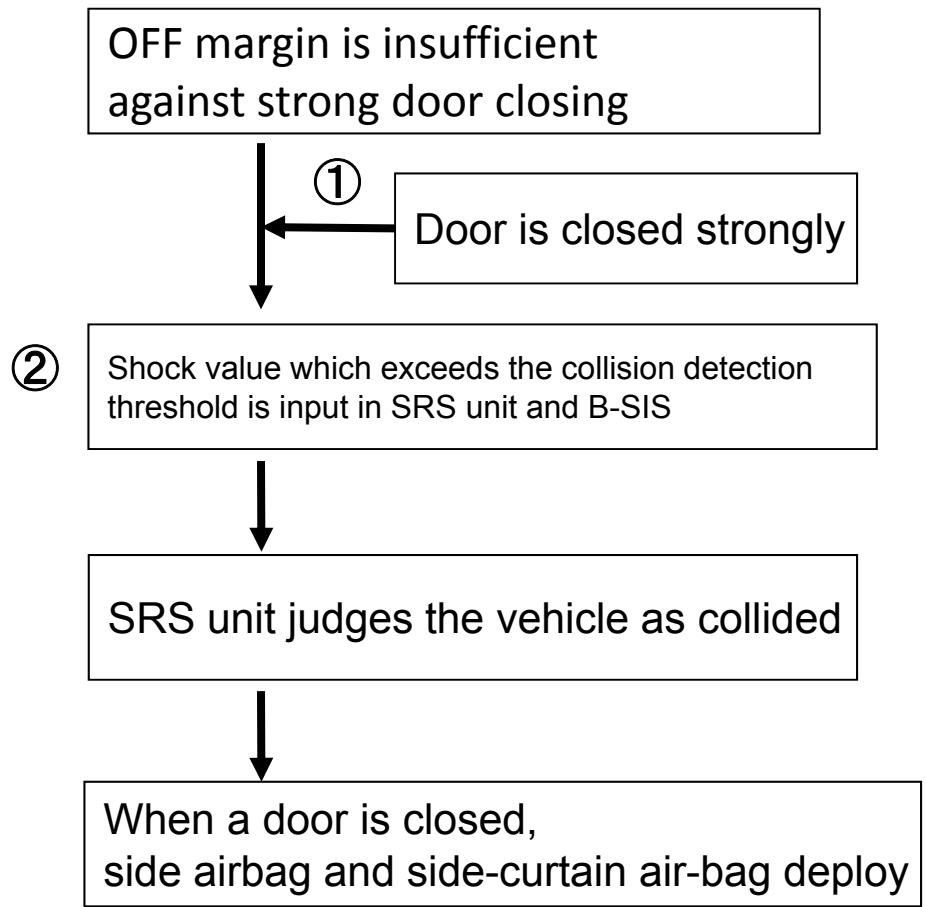
ACCORD 4D's OFF margin is less than other models.

On other models, OFF margin of more than [redacted] % is ensured with strong door closing of [redacted] m/s.

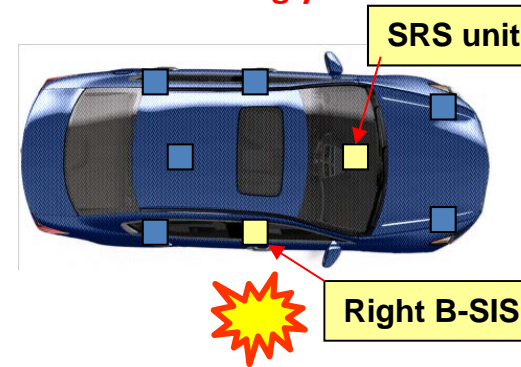
On 08M ACCORD 4D, OFF margin is insufficient against strong door closing.

6. 08M Analysis and C/M

6-4 Occurrence mechanism

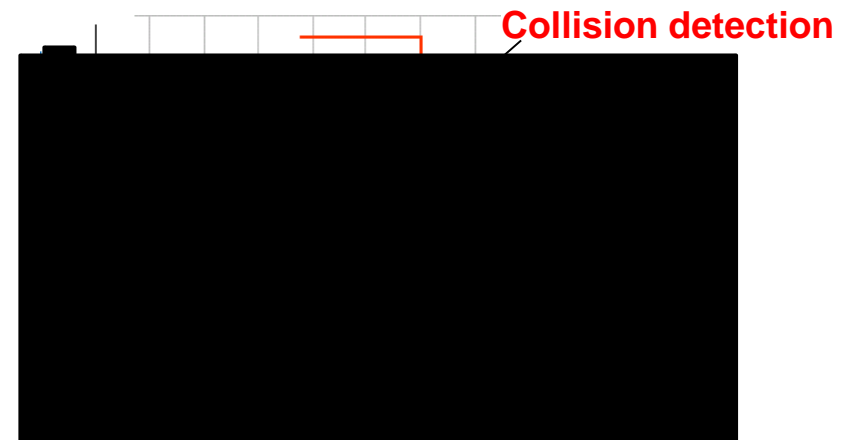


① Door is closed strongly



Strong door closing (More than ████ m/s)

② Shock input which exceeds the collision detection threshold



SRS unit record G data

6. 08M Analysis and C/M

6-5 Countermeasure

Countermeasure

Modify the threshold of collision detection.



C/M effectiveness verification

Recreation testing results with the modified threshold.

Impacted side	Speed	Test car condition	Old threshold	New threshold
-	m/s		OFF	OFF
-	m/s		OFF	OFF
L	m/s		OFF	OFF
L	m/s	↑	OFF	OFF
L	m/s	↑	ON	OFF
L	m/s	↑	ON	OFF
L	m/s		OFF	OFF
R	m/s		OFF	OFF
R	m/s	↑	ON	OFF
R	m/s	↑	ON	OFF
R	m/s	↑	OFF	OFF
R	m/s	↑	OFF	OFF
R	m/s	↑	OFF	OFF
R	m/s		OFF	OFF
R	m/s	↑	ON	OFF
R	m/s		ON	OFF
R	m/s	↑	OFF	OFF
R	m/s		ON	OFF
R	m/s	↑	ON	OFF
R	m/s	↑	OFF	OFF

- OFF margin is ensured [redacted] % with strong door closing of [redacted] m/s.
- Collision detection is OFF by the modified threshold.
- Airbag deployment timing was [redacted] ms late at the side impact testing, but there was no problem in passenger protection performance.

**Honda North America, Inc.
Law Department**

*SIDE AIRBAG INADVERTENT
DEPLOYMENT PRESENTATION*

Presented by:
Jim Oliva
Senior Counsel
December 19, 2013

Background

Case Name	<ul style="list-style-type: none">■ <u>Gutierrez, et al. v. AHM</u>, Case No. 5:09-cv-01517-JZ-OP (C.D. Cal.)
Suit Filed	<ul style="list-style-type: none">■ August 10, 2009
Jurisdiction	<ul style="list-style-type: none">■ United States District Court for the Central District of California, Riverside Division
Product	<ul style="list-style-type: none">■ Honda Accords with side airbags (Finally subject models were limited to 00-12MY Accord)
Allegation	<ul style="list-style-type: none">■ The side airbag system in Accords is defective in that it is prone to inadvertently deploy in circumstances not involving a crash or collision
Name of the Defendants	<ul style="list-style-type: none">■ American Honda Motor Co., Inc.
Honda Counsel	<ul style="list-style-type: none">■ Mark S. Mester, Latham & Watkins LLP■ Derek S. Whitefield, Dykema Gossett, PLLC

Terms of tentative settlement

Who	Benefit
Current owners of '08 Accord (sedan only) who have a future inadvertent deployment of side AB in the next 2 years.	Eligible to receive no cost side AB replacement at authorized Honda dealership.
Past and current owners of '03, '04 and '08 Accords who previously had inadvertent deployment of side AB (sedan only for '08 MY).	(A) No cost side AB replacement with proof of inadvertent deployment or (B) reimbursement from Honda for out-of-pocket expenses if customer paid for replacement (with proof of reimbursable deployment).

Repair Cost Estimate Projection for Future Deployments		
Affected vehicle population	Estimated Occurrences, (25 per year x 2years)	Average repair cost per vehicle (average cost of warranty/goodwill repairs per AHM's records is \$2,632.87)
308,217	50	\$2,700

Terms of tentative settlement

Who	Benefit
Current owners of '08 Accord (sedan only) who have a future inadvertent deployment of side AB in the next 2 years.	Eligible to receive no cost side AB replacement at authorized Honda dealership.
Past and current owners of '03, '04 and '08 Accords who previously had inadvertent deployment of side AB (sedan only for '08 MY).	(A) No cost side AB replacement with proof of inadvertent deployment or (B) reimbursement from Honda for out-of-pocket expenses if customer paid for replacement (with proof of reimbursable deployment).

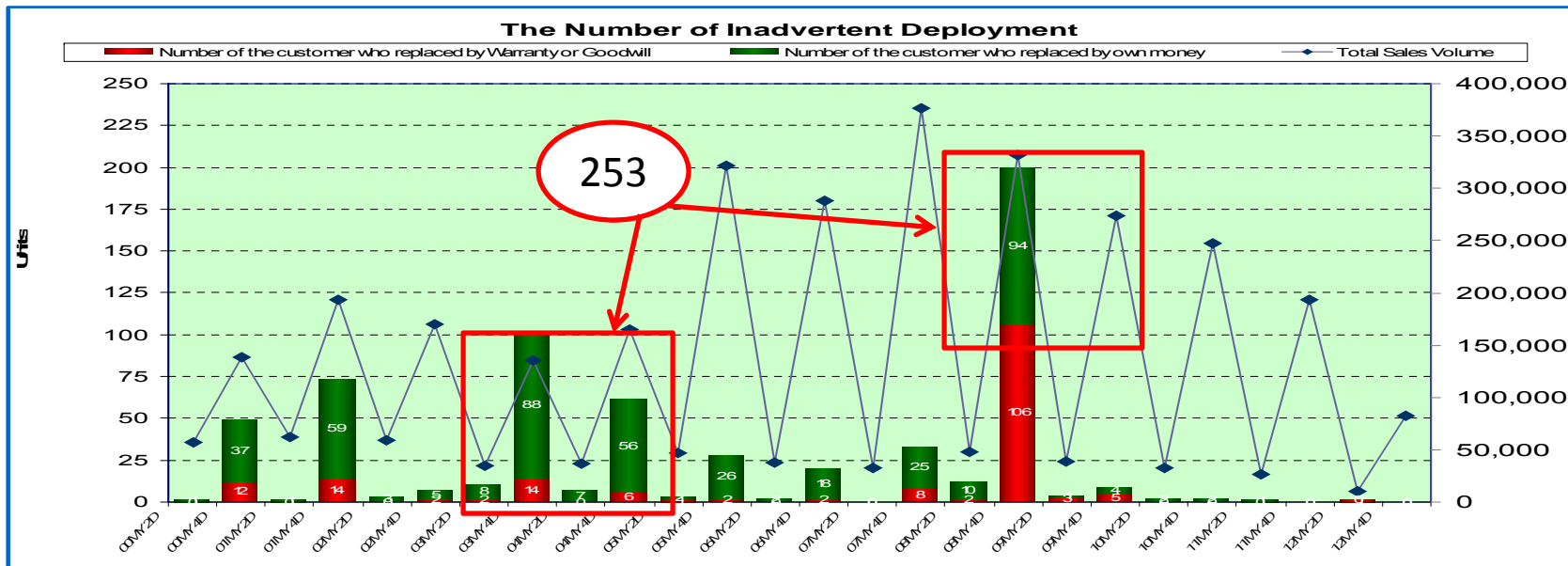
Repair Cost Estimate Projection for Prior Deployments		
Affected vehicle population	Affected vehicle population with no reimbursement	Average repair cost per vehicle (average cost of warranty/goodwill repairs per AHM's records is \$2,632.87)
381	253	\$2,700

Reimbursement Estimate for Prior Deployment

A total of 381 occurrences were identified, 253 occurrences were not reimbursed.

Claim-in Percentage	Quantity	Repair Cost	Total Qty x cost
100%*	253	\$2,700.00	\$683,100.00
67.5%	170.775	\$2,700.00	\$461,092.50
50%	126.5	\$2,700.00	\$341,550.00

* actual claim-in will be lower.



Reimbursement Process

Claim Form

Receipt



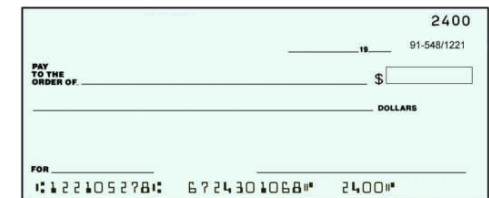
- ✓ Class Member complete the form and submit a reimbursement form along with the sales receipt to the Reimbursement Center .

- ✓ The claim center will review the receipt and the form. If proper documentation is submitted, the customer will be entitled to receive reimbursement based on the cost of the repair.
- ✓ Once the final approval is granted by the court, the claim center will process a check for the customer.

Claim Center



Illustration by Chris Gash



Reimbursement check is sent to the customer

7. HNA Settlement

7-6 Future Schedule

	2013	2014											
	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
NASC	★												
Preliminary Court Approval		★											
Class Notification			→										
Opt-out / Objections Deadline			→										
Website Live			★										
Service Bulletin										★			
Claim Submission Process* (Prior Deployments)			→										
Final Court Approval										★ Sep. 2014			
Reimbursement Processing** (Prior Deployments)											→ Dec. 2014		
Claim Submission Process*** (Future Deployments)											→ Oct. 2016		
Reimbursement Processing (Future Deployments)											→ Oct. 2016		

- (*) Customer must submit a claim within 90 days after mailing of class notice is completed to be eligible for reimbursement of prior deployment.
- (**) Payments to be made within 75 days of final court approval, assuming no appeal. If appeal is made, the dates can be pushed back by approximately 18 months.
- (***) Two year claims period for future deployment starts to run from the effective date of the settlement, which is 30 days after court’s final approval, assuming no appeal.

7. HNA Settlement

7-7 US Cost summary

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Repair Cost Estimate Projection for Future Deployments			
Affected vehicle population	Estimated Occurrences, (25 per year x 2years)	Average repair cost per vehicle (average cost of warranty / goodwill repairs per AHM's records is \$2,632.87)	Projected total repair cost , (est. 25 claims x 2 years x \$2700.00)
308,217	50	\$2,700.00	\$135,000

Repair Cost Estimate Projection for Prior Deployments			
Affected vehicle population	Affected vehicle population with no reimbursement	Average repair cost per vehicle (average cost of warranty / goodwill repairs per AHM's records is \$2,632.87)	Total (Based on 253 repairs)
381	253	\$2,700.00	\$683,100

- American Honda has agreed to not object to the Court awarding:
 - Up to \$1,190,000 in attorneys' fees and costs to Plaintiffs' counsel
 - Up to \$5,000 total in incentive awards to the named Plaintiffs
 - US estimated mailing cost \$617,395
 - US market action cost calculation $\$135,000 + \$683,000 + \$617,395 = \$1,435,495$

US market action cost is \$1.4 million (≒ approximately JPY 1.5 oku)
Other class action cost for plaintiff side is \$1.19mil (≒ approx JPY 1.2 oku)

8. Canada Situation - 8-1 Number of occurrences

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Low threshold deployments Determined by reviewing CR, Tech-line and Warranty data.

Accord MYs	Production	Affected	Occurrences	Non-reimbursed	Warranty extension
2003 2dr	6,122	6,122	0	NA	NA
2003 4dr	29,461	29,461	18	7	0
2004 2dr	1,739	1,739	0	0	0
2004 4dr	12,477	12,477	8	1	0
2008 4dr	22,832	20,535*	11	1	20,535
Total	72,631	70,334	37	9	20,535

*Countermeasure applied to SRS control unit during 2008 production.

No class action on this issue in Canada, but Canada will see same class action once settled in the US.

CH needs same market action as US. (CH legal comment)

Terms of tentative settlement

Who	Benefit
Current owners of '08 Accord (sedan only) who have a future inadvertent deployment of side AB in the next 2 years.	Eligible to receive no cost side AB replacement at authorized Honda dealership.
Past and current owners of '03, '04 and '08 Accords who previously had inadvertent deployment of side AB (sedan only for '08 MY).	(A) No cost side AB replacement with proof of inadvertent deployment or (B) reimbursement from Honda for out-of-pocket expenses if customer paid for replacement (with proof of reimbursable deployment).

Repair Cost Estimate Projection for Future Deployments		
Affected vehicle population	Estimated Occurrences, (11 / 6 years = 2 per year x 2years)	Average repair cost per vehicle (average cost of warranty/goodwill repairs per AHM's records is \$2,632.87)
20,535	4	\$2,700

Terms of tentative settlement

Who	Benefit
Current owners of '08 Accord (sedan only) who have a future inadvertent deployment of side AB in the next 2 years.	Eligible to receive no cost side AB replacement at authorized Honda dealership.
Past and current owners of '03, '04 and '08 Accords who previously had inadvertent deployment of side AB (sedan only for '08 MY).	(A) No cost side AB replacement with proof of inadvertent deployment or (B) reimbursement from Honda for out-of-pocket expenses if customer paid for replacement (with proof of reimbursable deployment).

Repair Cost Estimate Projection for Prior Deployments		
Affected vehicle population	Affected vehicle population with no reimbursement	Average repair cost per vehicle (average cost of warranty/goodwill repairs per AHM's records is \$2,632.87)
37	9	\$2,700

8. Canada 8-4 Canada Cost summary

Repair Cost Estimate Projection for Future Deployments			
Affected vehicle population	Estimated Occurrences, (11 / 6 = 2 per year x 2years)	Average repair cost per vehicle (average cost of warranty / goodwill repairs per AHM's records is \$2,632.87)	Projected total repair cost , (est. 2 claims x 2 years x \$2700.00)
20,535	4	\$2,700.00	\$10,800

Repair Cost Estimate Projection for Prior Deployments			
Affected vehicle population	Affected vehicle population with no reimbursement	Average repair cost per vehicle (average cost of warranty / goodwill repairs per AHM's records is \$2,632.87)	Total (Based on 9 repairs)
37	9	\$2,700.00	\$24,300

- Canada estimated mailing cost \$41,104
- Canada market action cost calculation \$10,800 + \$24,300 + \$41,104 = \$76,204

**Combined Total Estimate- \$76,204
No legal charge.**

9. Cost summary

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9-1 US

Repair Cost Estimate Projection for Future Deployments			
Affected vehicle population	Estimated Occurrences, (25 per year x 2years)	Average repair cost per vehicle (average cost of warranty / goodwill repairs per AHM's records is \$2,632.87)	Projected total repair cost , (est. 25 claims x 2 years x \$2700.00)
308,217	50	\$2,700.00	\$135,000

Repair Cost Estimate Projection for Prior Deployments			
Affected vehicle population	Affected vehicle population with no reimbursement	Average repair cost per vehicle (average cost of warranty / goodwill repairs per AHM's records is \$2,632.87)	Total (Based on 253 repairs)
381	253	\$2,700.00	\$683,100

US mailing cost \$617,395

9-2 CANADA

Repair Cost Estimate Projection for Future Deployments			
Affected vehicle population	Estimated Occurrences, (11 / 6 = 2 per year x 2years)	Average repair cost per vehicle (average cost of warranty / goodwill repairs per AHM's records is \$2,632.87)	Projected total repair cost , (est. 2 claims x 2 years x \$2700.00)
20,535	4	\$2,700.00	\$10,800

Repair Cost Estimate Projection for Prior Deployments			
Affected vehicle population	Affected vehicle population with no reimbursement	Average repair cost per vehicle (average cost of warranty / goodwill repairs per AHM's records is \$2,632.87)	Total (Based on 9 repairs)
37	9	\$2,700.00	\$24,300

Canada mailing cost \$41,104

NA total market action cost is \$1.47 million (≒ approximately JPY 1.58 oku)
 <Details> US:\$1.4 mil (JPY 1.5 oku) / CANADA: \$0.07 mil (JPY 0.08 oku)

10. Detailed proposed action and schedule

10-1 Market Action Proposal Proactive market action fro class action settlement

10-2 Reason for Proposal Market action will be conducted to address inadvertent deployments and settle a class action lawsuit.

10-3 Action details (1) Reimburse prior inadvertent deployments that were not previously reimbursed for 03/04/08M (90 day period)
(2) Warranty extension for 2008 Accord 4dr: repair future inadvertent deployments for a period of 2 years.

10-4 Affected Range KA/KC : 03~04 ACCORD、08 ACCORD 4D BCM

10-5 Number of affected vehicles Past repair reimbursement (03/04/08M) : KA 253 units / KC 9 units
Warranty extension (08M only) : 308,217 units / KC 20,535 units

10-6 Recurrence prevention Completed


10-7 Schedule of Events

	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14	Jun 14	Jul 14	Aug 14	Sep 14	Oct 14	Nov 14	Dec 14
NASC	★												
Preliminary Court Approval		★											
Class Notification			→										
Website Live			★										
Service Bulletin											★		
Claim Submission Process (prior deployments)						→							
Final Court Approval										★			
Claim Submission Process (future deployments)											→		
Reimbursement Processing (prior deployments)											→		
Reimbursement Processing (future deployments)											→		
Parts Arrangement / Procurement				→									


11. Recurrence prevention

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[Honda in-house recurrence prevention for 03-04M]

	Issue	Measures	Schedule
Expansion	Add safing logic and LPF to SIS	<p>Add this Safing logic to other models with TRW system equipped, and also add LPF to SIS step by step.</p> <p style="text-align: center;"></p> <p>This countermeasure is applied to all 05 models and later.</p>	Jan 2005

[Honda in-house recurrence prevention for 08M]

	Item	Action	Completion timing
Occurrence	Review OFF margin for strong door closing and reflect it in the setting	<p>Verify OFF margin for strong door closing using models in market, and from the verification results, reflect sufficient margin setting in the set threshold.</p> <p>Newly set +■% from current +■%.</p> <p style="text-align: center;"></p> <p>Reflect the setting guide in the preliminary specifications for models after 11M.</p>	May 2007

END

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-3_Control No. 90-40

Q8-3_20140109 030408 Acc

SAB

[GQC]_Japanese_Redacted

03-04M Accord, 08M Accord 4Dr 北米 Css/HAM

Accordサイドエアバッグ展開不具合

QIS No : SDBA03100301, MV20080416135749, TA5A08051202

グローバル品質委員会

1. 地域委員会検討結果
2. 概要
3. 経緯
4. 発生状況
5. 03-04M 解析結果及び対策内容
6. 08M 解析結果及び対策内容
7. HNA和解内容
8. カナダの状況
9. 発生費用まとめ
10. 措置提案内容及び展開計画
11. 再発防止



2014/01/09

AHサービス	HAM CIE	Css CIE
江口	渡辺	清水

1. 地域委員会結果

NASC

Date : 12/19/2013
Revised 12/20/2013

NASC Present:
Committee Member: H. Eguchi (NASC Chairman), Bruce Smith (AH-Service), K.Nishizawa (AH-PRO)
K. Suzuki (HNAS), T. Yamamoto (HRA), N. Gruebmeier (AH-Parts)

Meeting Minutes by T.Ota (AH-Service)

Not Present:
Ken Dick (CH)

Title: Accord Side Airbag Inadvertent Deployment

Symptom: The side airbag deploys when not expected.

Market Occurrence:	KA	381 cases		03 Accord	04 Accord	08 Accord
	KC	37 cases	KA	112	69	200
			KC	18	8	11

Occurrence Cause: SRS system threshold setting too sensitive. Door slam or underbody contact can result in deployment.

Affected units:	KA	877,334 units		03 Accord	04 Accord	08 Accord
	KC	70,334 units	KA	296,690	272,427	308,217
			KC	35,583	14,216	20,535

NASC Discussion: NASC agreed to the proposal of (1) Reimburse for prior repair not reimbursed for 03/04 2dr/4dr and 08 4dr Accord for 90 days period from the date of customer notification completion and (2) Warranty extension for 08 4dr Accord for future inadvertent deployments for 2 years from the date of final court approval.
AH/HNA legal to report to GQC on 1/8/2014 (US time) as a target date.

NASCは以下のクラスアクションの和解条件を承認する。

(1) 03/04/08 ACCORDで過去に事象発生し有償修理したお客様(253名)に対し、お客様への通知完了から90日以内の期限付きで払い戻しを行う。

(2) 08 ACCORDに対し、裁判所の最終承認から2年間保証延長を行う。

2. 概要

1. 訴え事象

サイドエアバッグが突然展開する。(サイドエアバッグの展開は、安全性に関わる事象ではない)

2. 発生件数

KA 03 Accord 112件, 04 Accord 69件, 08 Accord 4Dr 200件

KC 03 Accord 18件, 04 Accord 8件, 08 Accord 4Dr 11件

3. 発生原因

SRSシステムの閾値が敏感な設定になっていて、ドアを強く閉めたり車体下部への衝撃でエアバッグが展開する事がある。

4. 対策

SRS Control ユニットのプログラムを変更

5. 市場措置提案

(1) 08M Accord 4Dr : 今後2年間の展開不具合に対する無償交換(保証延長)

(2) 03/04/08YM Accord (08は4Drのみ): 過去のサイドエアバッグ展開不具合の修理費用の払い戻し(期間限定)

6. 提案理由

クラスアクション和解対応のため

7. 措置内容

エアバッグ展開不具合が発生したお客様への修理／返金

8. 対象範囲

USA/Canada : 03~04 ACCORD、08 ACCORD 4Dr

9. 対象台数

保証延長(08のみ) : 308,217台、KC 20,535台(発生予測 KA 50台、KC 4台)

過去の修理費用払い戻し(03/04/08): KA 253 台、KC 9台

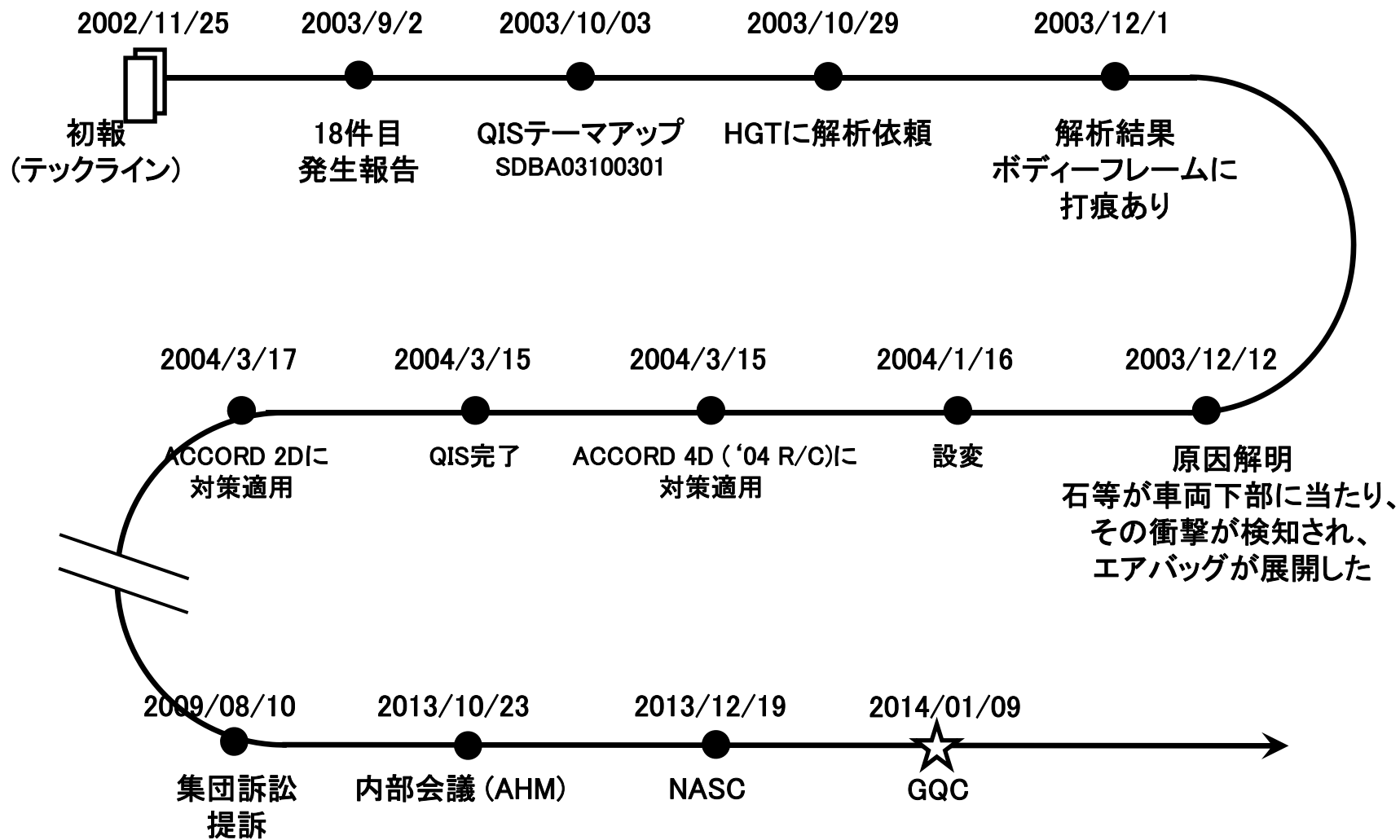
10. 措置費用

1.5百万ドル(1.6億円)

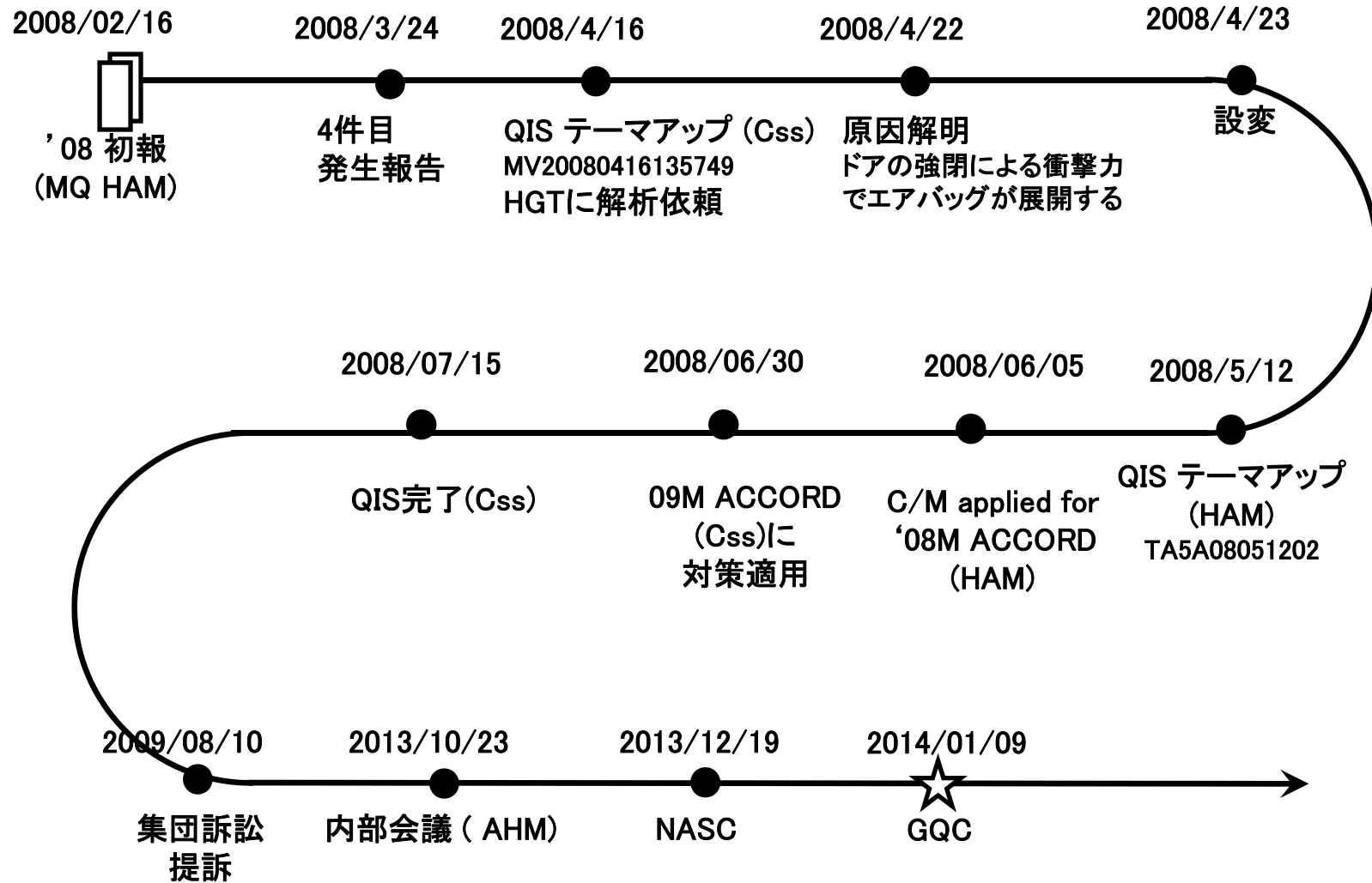
<内訳> US: \$1.4百万(約1.5億円)、Canada: \$0.07百万(約8百万円)

(参考: 原告弁護士費用: \$1.19 Million(約1.2億円)、賠償金: \$5,000(約50万円))

3. 経緯 ～03-04M ACCORD～



3. 経緯 ～08M ACCORD～



4. 発生件数 4-1 過去のエアバッグ展開不具合

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2000-2012 Accord AHの顧客管理システムの修理情報及びテックラインの情報に基づき集計
 集団訴訟の対象YMと対象台数は、原告側とHNA Legal間の交渉により決定

	00MY 2D	00MY 4D	01MY 2D	01MY 4D	02MY 2D	02MY 4D	03MY 2D	03MY 4D	04MY 2D	04MY 4D	05MY 2D	05MY 4D	06MY 2D	06MY 4D
販売台数	57,056	138,024	62,294	192,986	58,778	170,161	66,261	230,429	45,249	227,178	47,190	321,268	37,586	288,011
ワランティーや品サ費で 部品交換したお客様の人数	0	12	0	14	0	2	2	14	0	6	1	2	0	2
実費で部品交換した お客様の人数	1	37	1	59	3	5	8	88	7	56	2	26	2	18
合計	1	49	1	73	3	7	10	102	7	62	3	28	2	20
閾値	** 03/04MYの閾値は同じままだが、セーフティロジックの変更、SIS検索条件の追加、アルゴリズム及び校正の変更をアンダーボディーへの衝撃の説明と一致させる、といった変更を実施した													
発生率	0.0018%	0.0355%	0.0016%	0.0378%	0.0051%	0.0041%	0.0151%	0.0443%	0.0155%	0.0273%	0.0064%	0.0087%	0.0053%	0.0069%

			381									
	07MY 2D	07MY 4D	08MY 2D	08MY 4D	09MY 2D	09MY 4D	10MY 2D	10MY 4D	11MY 2D	11MY 4D	12MY 2D	12MY 4D
販売台数	32,373	376,426	47,536	331,938	38,936	273,374	32,319	247,106	26,009	193,563	10,246	82,883
ワランティーや品サ費で 部品交換したお客様の人数	0	8	2	106	3	5	0	0	0	0	1	0
実費で部品交換した お客様の人数	0	25	10	94	1	4	2	2	1	0	0	0
合計	0	33	12	200	4	9	2	2	1	0	1	0
閾値	** 08MY 4D: ドアの強閉が原因。強閉に対する元々の校正では耐性は5 m/sの時に1.3Xだった。校正を変更してテストを実施したところ、耐性は5.5 m/s ~ 6.6 m/sの時に1.24X ~ 2X だった。よって、校正の変更は効果的だった。											
発生率	0.0000%	0.0088%	0.0252%	0.0649%	0.0103%	0.0033%	0.0062%	0.0008%	0.0038%	0.0000%	0.0098%	0.0000%

データ精査の結果、03/04/08MYの381台で同事象が発生

4. 発生件数 4-2 修理費用未払い

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集団訴訟に関する車両

AHの顧客管理システムの修理情報及びテックライン情報を精査し集計

Accord MY	製造台数	対象台数	発生件数	有償修理 件数	保証延長 台数
2003 2dr	66,261	66,261	10	8	0
2003 4dr	230,429	230,429	102	88	0
2004 2dr	45,249	45,249	7	7	0
2004 4dr	227,178	227,178	62	56	0
2008 4dr	331,938	* 308,217	200	94	308,217
Total	901,055	877,334	381	** 253	*** 308,217

* 2008モデル後半から対策適用(ランチェン)のため、対策後車両は対象外。

** 253件:発生件数(修理件数)381件のうち、253件が有償修理(128台はワランティ修理済)

*** 308,217件:訴訟の原告は2年間の保証延長の対象である

<原告と合意した和解条件>

- ・03/04/08モデル:お客様が負担した有償修理253台分の修理費用払い戻し
- ・08モデル:今後2年間に発生する費用(2年間の保証延長)

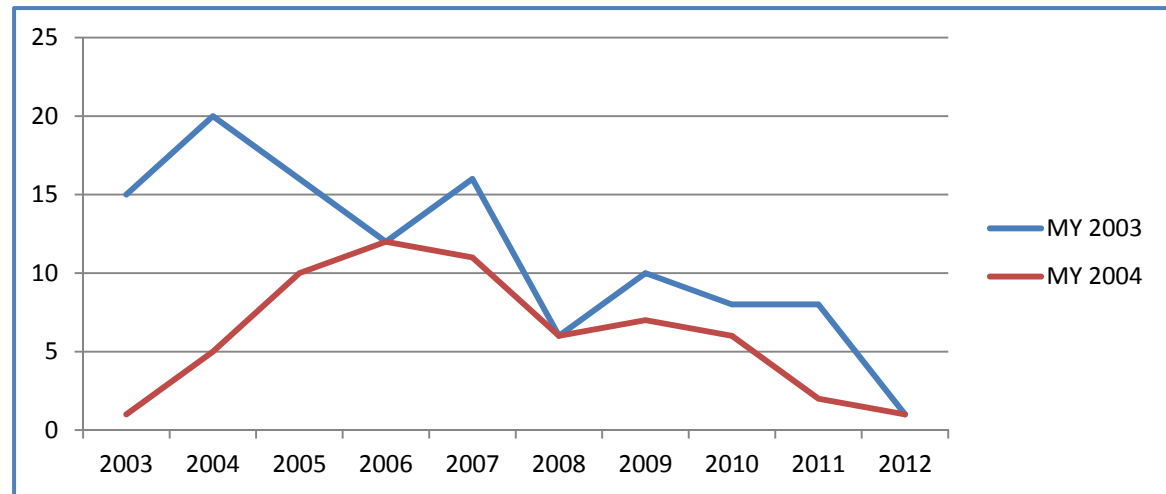
4. 発生件数 4-3 年度別発生推移

暦年別発生件数

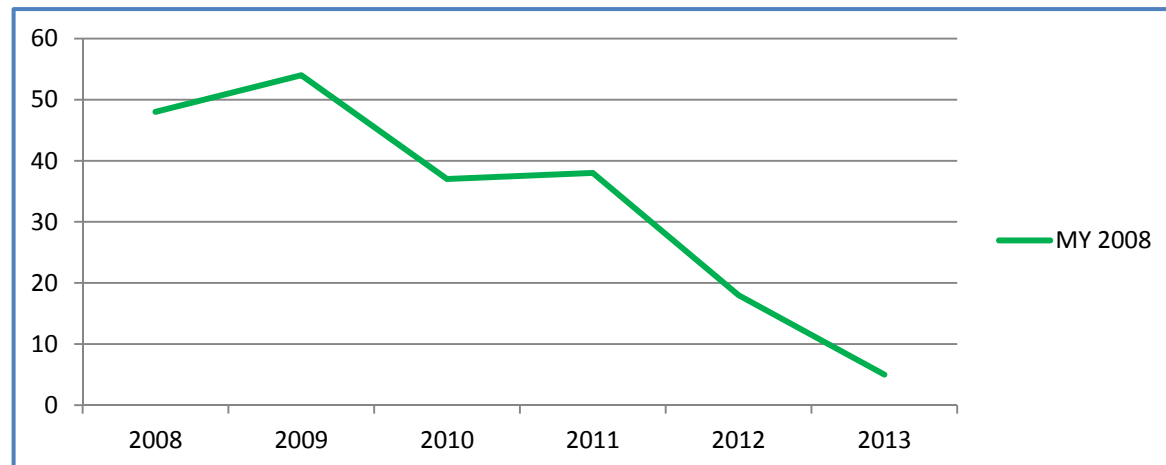
返金したもの及びしていないものを合わせて作成した

このデータはCRMS及びテックラインの情報に基づき作成した

2003M, 2004M
暦年別発生件数



2008M
暦年別発生件数



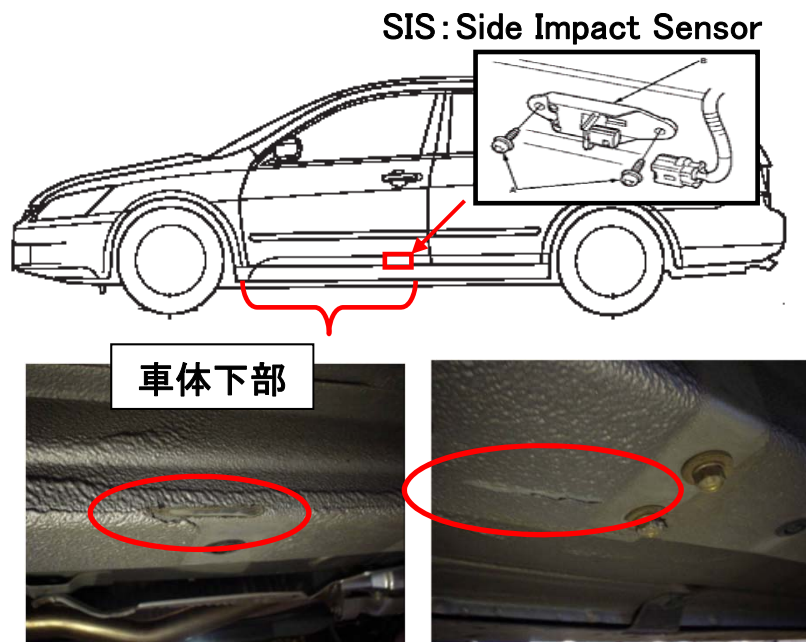
03/04/08Mの何れも発生件数は年々減少傾向。08Mの過去3年平均発生件数は23件。

5. 解析結果 5-1 現品解析結果 (03-04 ACCORD)

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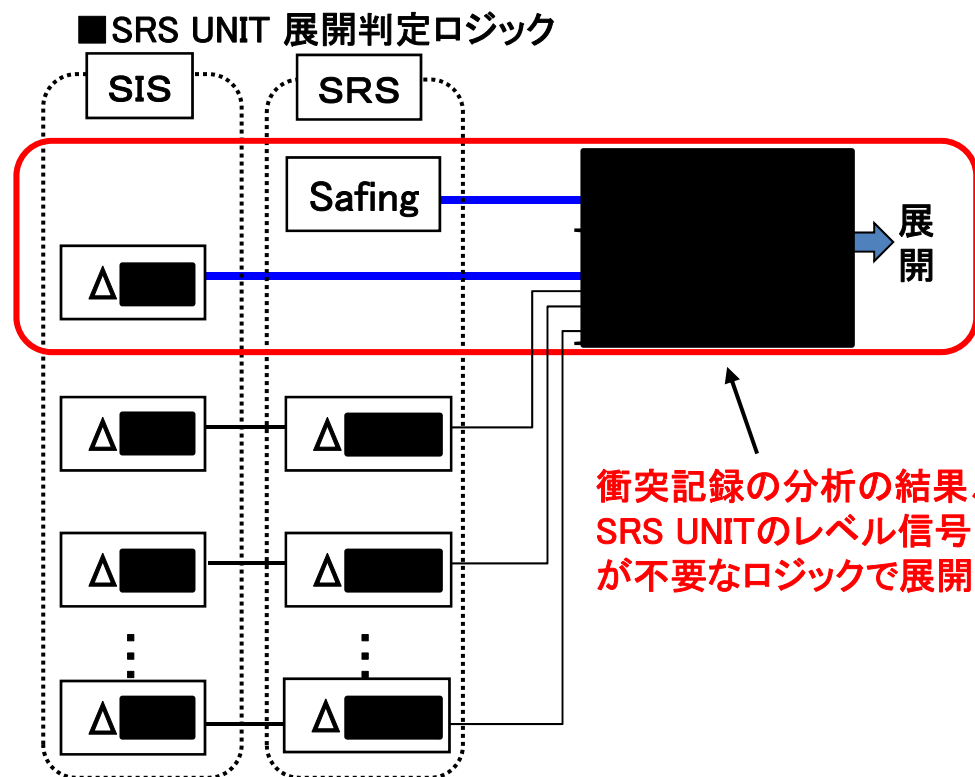
- ・1HGCM66553A ACCORD 4D 03M
- ・ハイウェイを60mphで走行中にサイドエアバッグとシートベルトプリテンショナーが衝突無しで展開した。
- ・2003年7月30日発生

・車両確認結果



フロアフレームとサイドシルに打痕、変形を確認。

・SRS UNIT 履歴データ分析結果



このロジックは、SISの衝撃信号とSRS UNIT内のセーフィングだけで展開する高速衝突用のロジック。
(SRS UNITのレベル信号は不要)

衝突していないにもかかわらず、SIS Δ判定とSRS UNITセーフィングONのロジックで展開した。

5. 解析結果 5-2 再現テスト結果 (03-04 ACCORD)

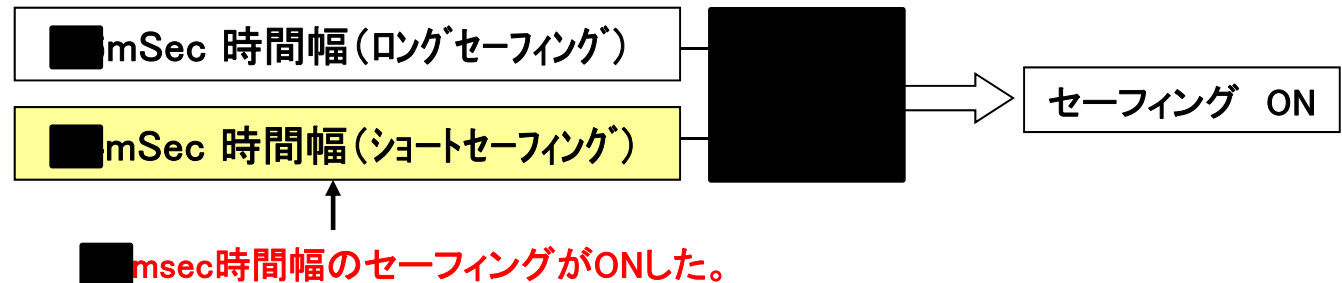
10/34

・ACCORD 4D 03M ハンマリングテスト結果

ハンマリング 打撃ポイント	ショートセーフィング 時間幅 ■msec	ロングセーフィング 時間幅 ■msec	SIS Δ ■	システム 結果
サイドシル	ON	OFF	ON	展開
フロアフレーム	ON	OFF	OFF	非展開



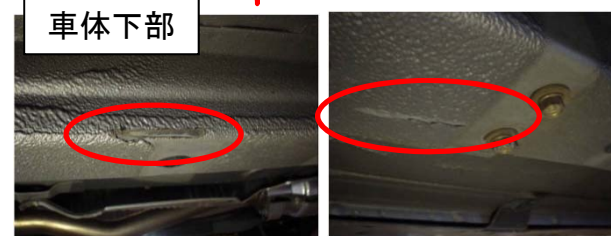
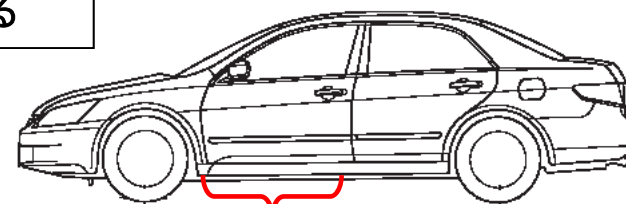
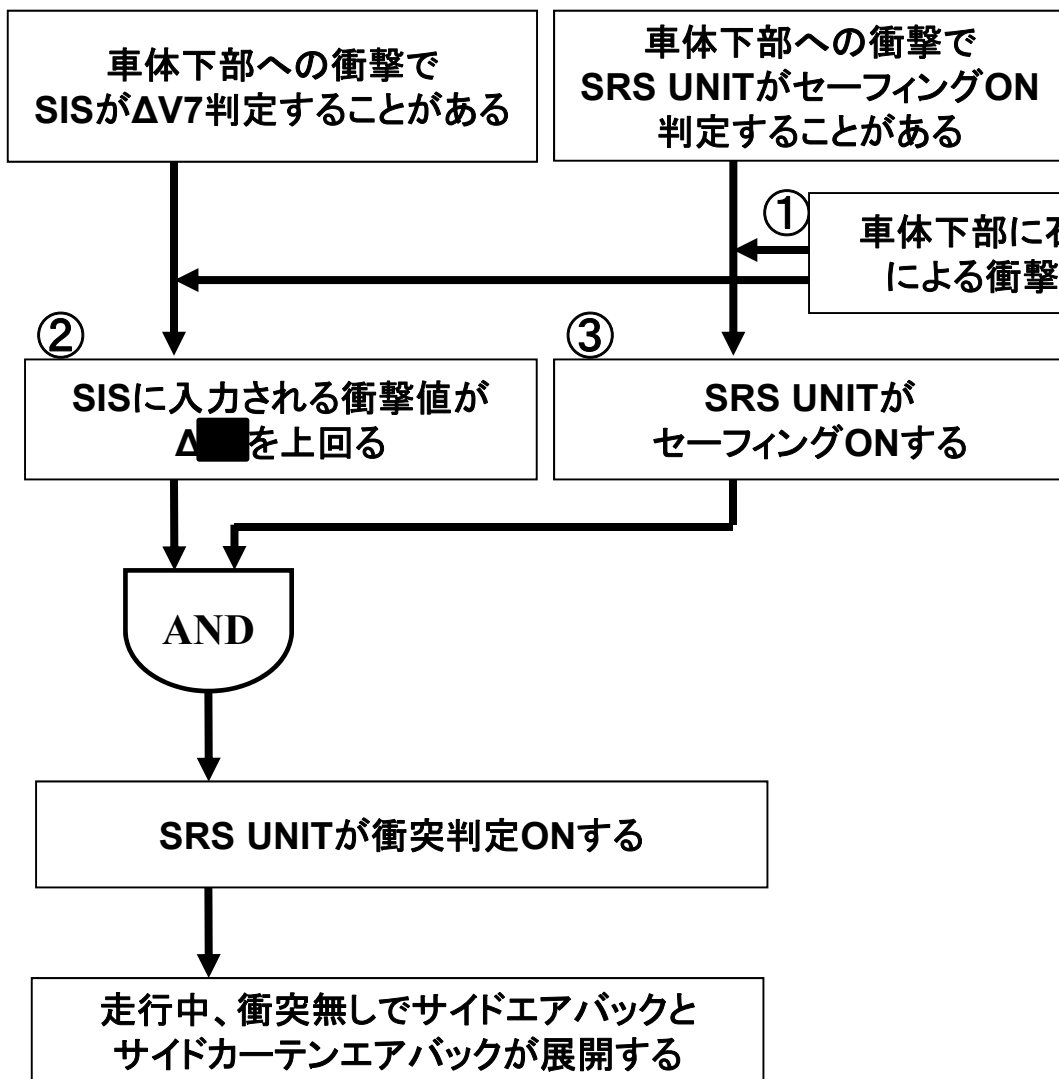
セーフィングロジックは ロングとショートの ■



- ・サイドシル打撃で不具合再現。走行時であれば、他ポイントも再現できたと推定。
- ・ショートセーフィングは、すべてのテスト条件でONした。
- ・時間幅の長いロングセーフィングは、ハンマリングに対しOFFタフネスがある。
- ・衝突していないにも関わらず、SISはΔ ■判定した。

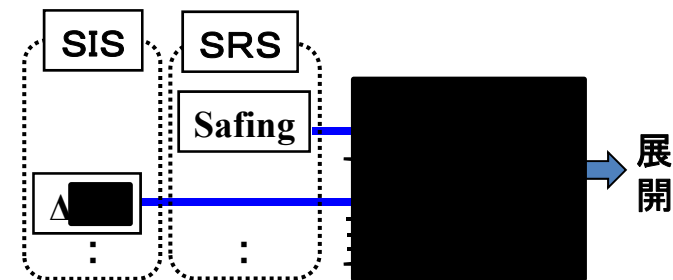
ハンマリングテストで、不具合再現

5. 解析結果 5-3 発生メカニズム (03-04 ACCORD)



①石はね等による衝撃が入る

■SRS UNIT 展開判定ロジック

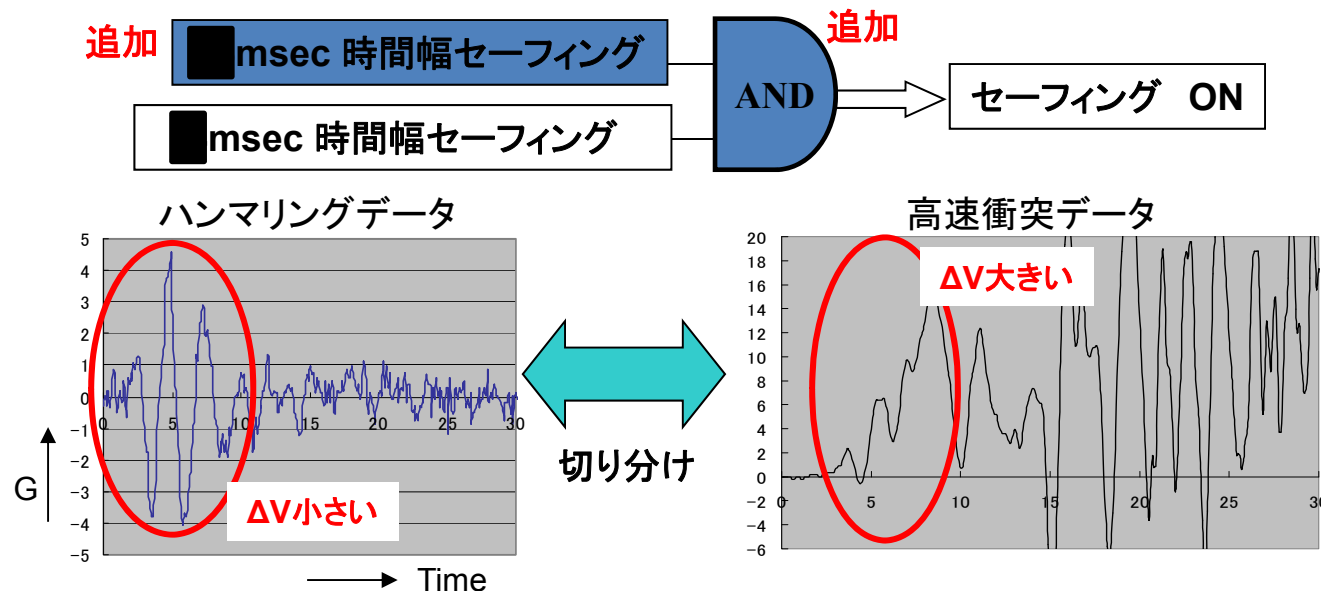


- ②SISに入力される衝撃値が Δ を上回る
- ③SRS UNITがセーフィングONする

5. 解析結果 5-4 対策内容 (03-04 ACCORD)

①SRS UNITの対策内容

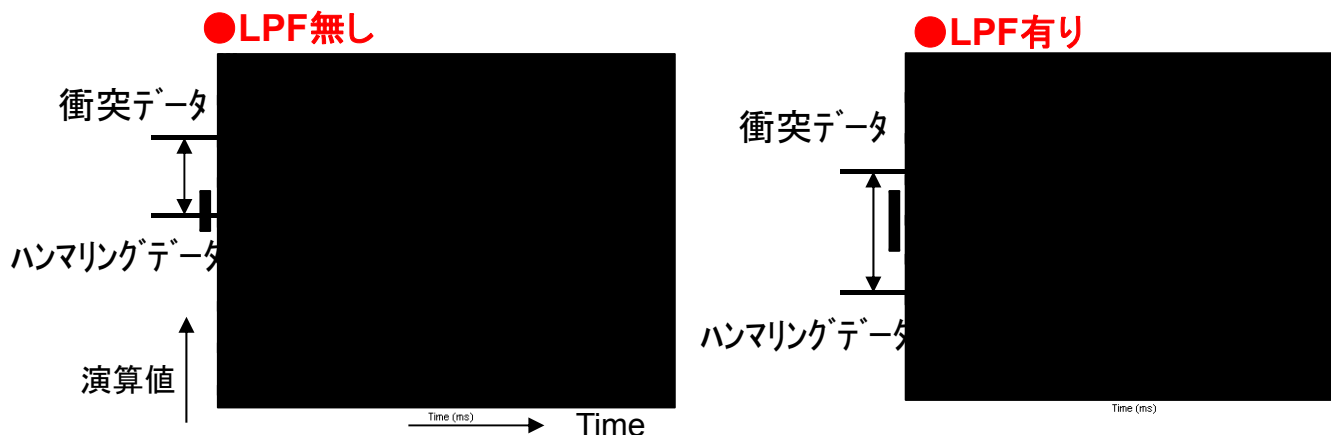
ショートセーフィングロジックに “時間幅の長いセーフィング” を “AND” で追加する。



ハンマリングデータは振動波形であり時間幅を長くすることで ΔV は減少する。

②SISの対策内容

LPF (Low-Pass-Filter) を追加して、ハンマリングでの Δ の可能性を低減する。



LPF追加により、ハンマリングデータと衝突データの2波形の差が広がる。(50%のタフネスUP)

5. 解析結果 5-5 対策効果確認 (03-04 ACCORD)

13/34

・ハンマリングテストによる効果確認結果

		セーフィングロジック (OFFマージン)	SIS Δ ■	システム結果
テスト No1	ACCORD 4D 03M 対策前	ON	ON	展開
	ACCORD 4D 03M 対策後	OFF (200%以上)	ON	非展開
	ACCORD 2D 03M	OFF (200%以上)	ON (ONの可能性あり)	非展開
テスト No2	ACCORD 4D 03M 対策前	ON	ON	展開
	ACCORD 4D 03M 対策後	OFF (181%)	ON	非展開
	ACCORD 2D 03M	OFF (132%)	ON (ONの可能性あり)	非展開

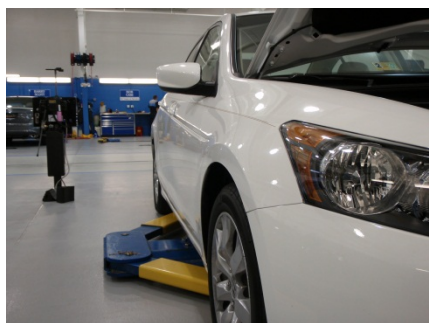
対策後のロジックでは、ACCORD 2Dのロジック以上のOFFタフネスが有る。

6. 解析結果 6-1 現品解析結果 (08 ACCORD)

14/34

- ・1HGCP26718A ACCORD 4D 08M
- ・お客様訴え：フロントドアを閉めた時にエアバッグが展開した
- ・2008年5月18日発生

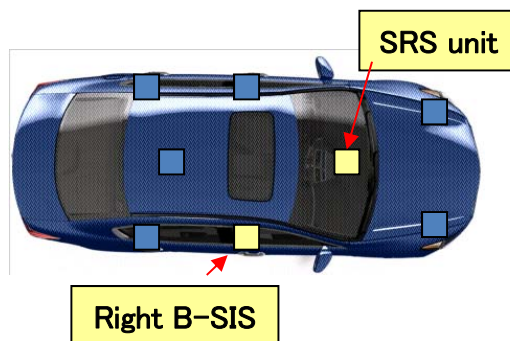
・車両外観



衝突による車体変形無し。

・SRS UNIT 履歴データ

- ・故障は無い。
- ・SRS UNITとR側 B-SISで衝突判定しエアバック展開した履歴有り。



・SRS UNIT レコードGデータ



定
hold
い値

衝突履歴データより、SRS UNITが衝突判定したことでエアバック(サイド/カーテン)が展開した。
⇒正常な衝突判定によりエアバック展開した。

事故は無かったにも関わらず、衝突検知しエアバック展開した。

6. 解析結果 6-2 再現テスト結果 (08 ACCORD)

15/34

・ドア強閉モード 再現テスト

1: 目的

要件で規定した速度 (■ m/s) 以上でのドア強閉テストを行い
展開判定の有無を確認する

2: テスト内容

・08M ACCORD 北米向け (MAP生産) 段確車を使用しドア強閉を行う

3: テスト結果 (様々な条件でドア強閉テストを実施)

インパクトサイド	速度	テスト車状況	点火判定
-	m/s	■	OFF
-	m/s	↑	OFF
L	m/s	■	OFF
L	m/s	↑	OFF
L	m/s	↑	ON
L	m/s	↑	ON
L	m/s	■	OFF
R	m/s	■	OFF
R	m/s	↑	ON
R	m/s	↑	ON
R	m/s	↑	OFF
R	m/s	↑	OFF
R	m/s	↑	OFF
R	m/s	■	OFF
R	m/s	↑	ON
R	m/s	■	ON
R	m/s	↑	OFF
R	m/s	■	ON
R	m/s	↑	ON
R	m/s	↑	OFF

ドア強閉操作 (■ m/s 以上)
で衝突判定 ON することを
確認した。

ドア強閉操作 (■ m/s 以上) で、不具合再現。

6. 解析結果 6-3 原因解析 (08 ACCORD)

・対策前の設定しきい値 (08M ACCORD 4D)



ACCORD 4Dでは、A要件モード(ドア強閉 \blacksquare m/s)でOFFマーヅンを \blacksquare %確保し、SINCAP、SICEのT-TTFを確保していた。

・他機種との比較

セッティング結果一覧

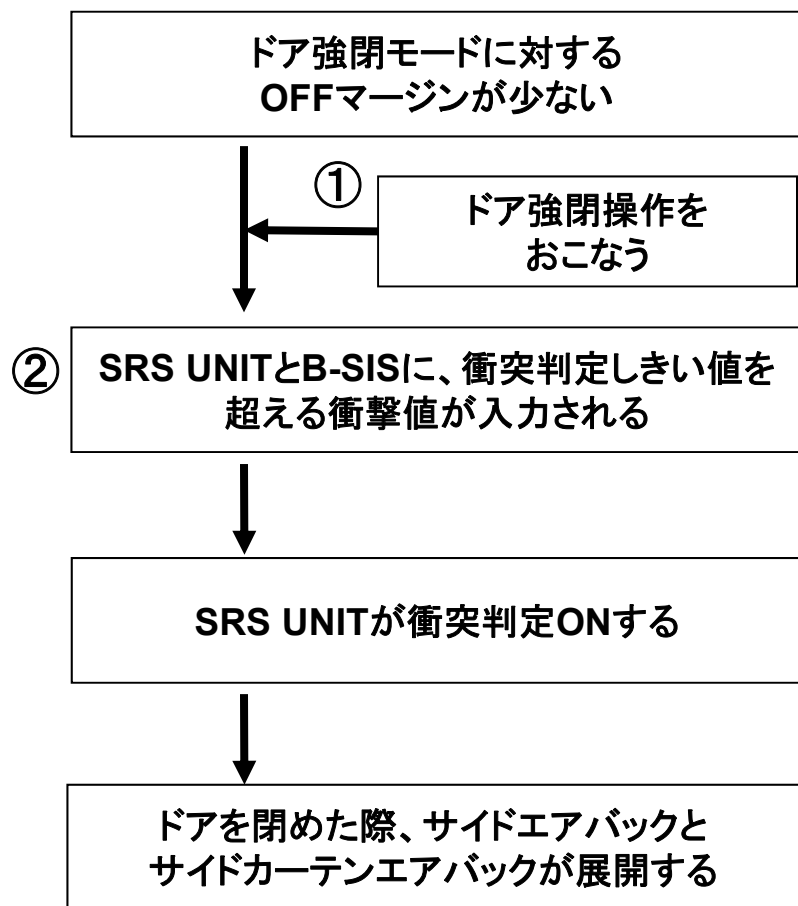
MY	機種	速度	OFFマーヅン
05	Accord 2Dr TS-X RL	\blacksquare m/s	\blacksquare %
06	CMC4Dr CMC2Dr		\blacksquare %
07	CR-V US Fit		\blacksquare %
08	Accord 4Dr Accord 2Dr TS-X		\blacksquare %
09	US Fit		\blacksquare %

*目標OFFマーヅン \blacksquare %

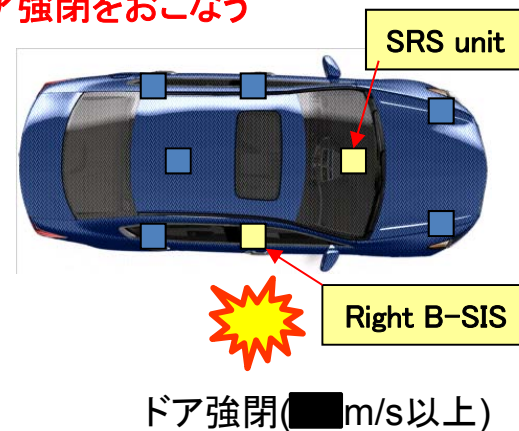
ACCORD 4Dは、他機種と比較するとOFFマーヅンが少ない。
市場実績のある他機種では、ドア強閉 \blacksquare m/sデータで \blacksquare %以上のOFFマーヅンが確保出来ている。

08M ACCORD 4Dは、ドア強閉モードに対するOFFマーヅンが少ない。

6. 解析結果 6-4 発生メカニズム (08 ACCORD)



① ドア強閉をおこなう



② 衝突判定しきい値を超える衝撃入力



6. 解析結果 6-5 対策内容 (08 ACCORD)

8-1 対策内容

衝突判定しきい値を変更する。



8-2 対策効果確認

変更後しきい値によるシミュレーション結果

インパクトサイド	速度	テスト車状況	旧閾値	新閾値
-	n/s	████████████████████	OFF	OFF
-	n/s	↑	OFF	OFF
L	n/s	████████████████████	OFF	OFF
L	n/s	↑	OFF	OFF
L	n/s	↑	ON	OFF
L	n/s	↑	ON	OFF
L	n/s	████████████████████	OFF	OFF
R	n/s	████████████████████	OFF	OFF
R	n/s	↑	ON	OFF
R	n/s	↑	ON	OFF
R	n/s	↑	OFF	OFF
R	n/s	↑	OFF	OFF
R	n/s	↑	OFF	OFF
R	n/s	████████████████████	OFF	OFF
R	n/s	↑	ON	OFF
R	n/s	████████████████████	ON	OFF
R	n/s	↑	OFF	OFF
R	n/s	████████████████████	ON	OFF
R	n/s	↑	ON	OFF
R	n/s	↑	OFF	OFF

- ・ドア強閉 █ n/s テストデータで █ のOFFマージンを確保
- ・再現テストデータ全てがOFF可能
- ・側突テストのエアバッグ展開タイミングが、 █ ms遅れるが乗員保護性能は問題無し

Honda North America, Inc.
法務部

**サイドエアバッグ展開不具合
提示資料**

提出者:
Jim Oliva
HNA社内弁護士
2013年12月19日

背景

案件名	<ul style="list-style-type: none">■ <u>Gutierrez, et al. v. AHM</u>, Case No. 5:09-cv-01517-JZ-OP (C.D. Cal.)
提訴日	<ul style="list-style-type: none">■ 2009年8月10日
管轄	<ul style="list-style-type: none">■ カリフォルニア州リバーサイド区、合衆国連邦地方裁判所
Product	<ul style="list-style-type: none">■ サイドエアバックを搭載するホンダAccord (最終的に限定された対象機種は12MY Accord)
原告の主張内容	<ul style="list-style-type: none">■ Accordのサイドエアバッグシステムに欠陥があるため、衝撃や衝突以外の状況でも展開不具合が発生する傾向がある。
被告	<ul style="list-style-type: none">■ American Honda Motor Co., Inc.
ホンダ側弁護士	<ul style="list-style-type: none">■ Mark S. Mester, Latham & Watkins LLP■ Derek S. Whitefield, Dykema Gossett, PLLC

7. HNA和解内容 7-2 今後の修理について 仮和解条件

21/34

対象者	ベネフィット
今後2年の間にサイドエアバッグの異常展開が認められた、08 Accord (セダン)のオーナー	ホンダディーラーにて、サイドエアバッグの無償交換を実施
以前にサイドエアバッグ異常展開が発生した03、04、08 Accord(08に関してはセダンに限る)の前および現オーナー	(A)異常展開の証明があり、未だサイドエアバッグを修理していない状態であれば、サイドエアバッグを無償交換、または(B)お客様が交換費用を支払って修理している場合は、当該金額の弁償(異常展開によるA/B修理費用の支払いの証明がある場合に限る)

サイドエアバッグ展開不具合の修理費用予測		
対象台数	推定発生数 (25件 x 2年)	台当たり修理費 (WTY/GW実績:\$2,632.87)
308,217	50	\$2,700

7. HNA和解内容 7-3 過去の修理費用の返金について 仮和解条件

22/34

対象者	ベネフィット
今後2年の間にサイドエアバッグの異常展開が認められた、08 Accord(セダン)のオーナー	ホンダディーラーにて、サイドエアバッグの無償交換資格を実施
以前にサイドエアバッグの異常展開を経験した03、04、08 Accord(08はセダンのみ)の前および現オーナー	(A)異常展開の証明があり、未だサイドエアバッグを修理していない状態であれば、サイドエアバッグを無償交換、または(B)お客様が交換費用を支払って修理している場合は、当該金額の弁償(異常展開によるA/B修理費用の支払いの証明がある場合に限る)

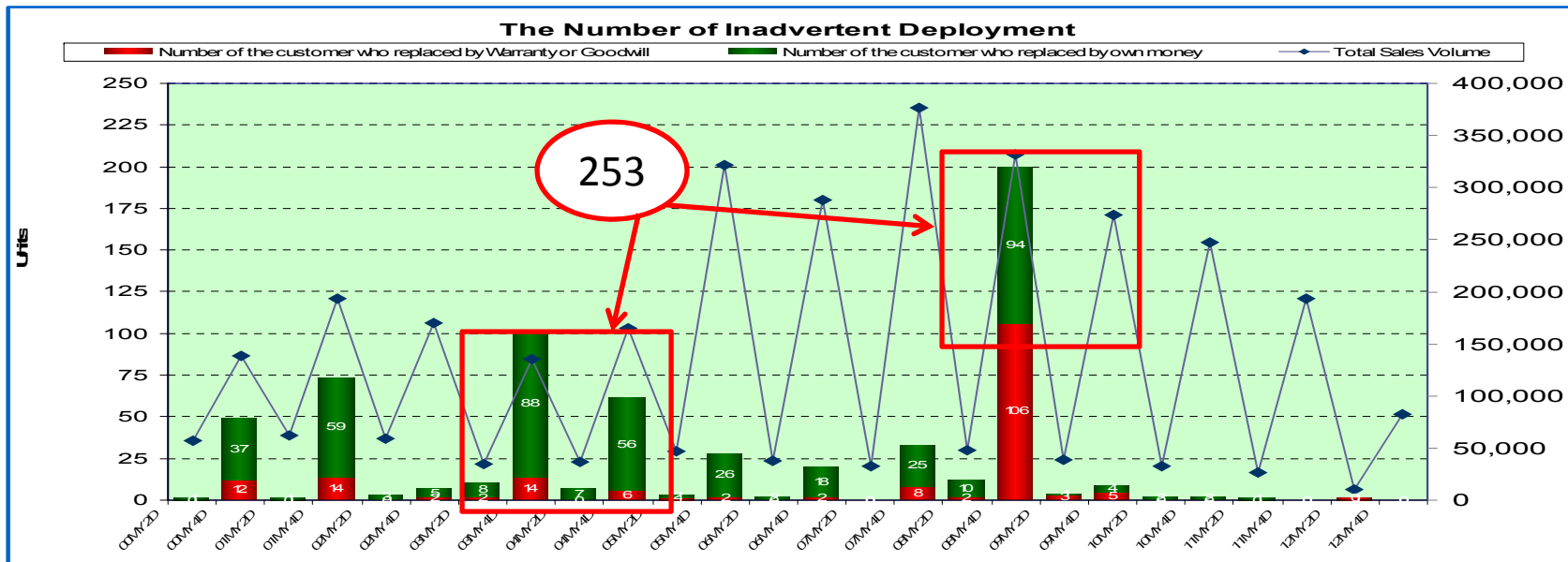
サイドエアバッグ展開不具合の修理費用予測		
対象台数	未返金台数	台当たり修理費 (WTY/GW実績:\$2,632.87)
381	253	\$2,700

過去の展開不具合に対する返金予測

合計で381件の発生が特定され、253件の発生は返金されていない。

クレーム数	件数	修理費用	合計 (件数 x 費用)
100%*	253	\$2,700.00	\$683,100.00
67.5%	170.775	\$2,700.00	\$461,092.50
50%	126.5	\$2,700.00	\$341,550.00

* 実際のクレームはより少ないことが予測される。



返金プロセス

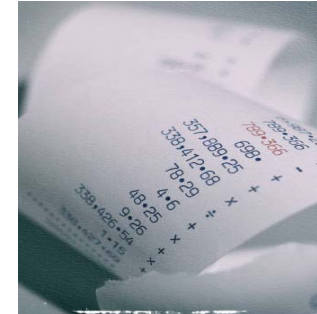
Claim Form

Receipt

- ✓ お客様は返金請求用紙に記入し、支払いの証明(レシート)を添えて、返金取扱いセンターに送付する。



+



- ✓ クレームセンターは、返金請求用紙とレシートを確認する。これらの書類に不備が無い場合、お客様に修理費用分の返金を行う。
- ✓ 最終承認後、クレームセンターはお客様を受取人とした小切手を発行する。

クレームセンター



Illustration by Chris Gash



		2400
		91-548/1221
PAY TO THE ORDER OF	\$	
		DOLLARS
FOR		
12 22 105278	6724301068	2400

返金額の小切手がお客様宛に送付される。

7. HNA和解内容 7-6 展開計画

	2013	2014											
	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
NASC / GQC	★ NASC	★ GQC											
裁判所仮承認		★											
クラス通知			→										
オプトアウト/ 申し立て期限			→										
ウェブサイトの開設			★										
サービスブリテンの発行										★			
クレーム提出期限* (過去発生分)			→										
裁判所最終承認										Sep. 2014 ★			
支払い手続き** (過去発生分)													Dec. 2014 →
クレーム提出期限*** (今後の発生分)													Oct. 2016 →
支払い手続き(今後の発生分)													Oct. 2016 →

- (*) クレーム提出期限: クラス通知が完了した後、90日以内にクレームを提出する。
- (**) 支払いは裁判所最終承認から75日以内に実行。 控訴の場合は約18か月延期することが可能。
- (***) 今後の発生分のクレーム提出期限は、和解の成立後(控訴がなければ、裁判所の最終承認日から30日後)、2年間に期間限定。

7. HNA和解内容 7-7 US市場発生費用

26/34

今後の発生分の修理費用			
対象台数	推定発生数 (25件/年 x 2年)	台当たり修理費 (WTY/GW実績: \$2,632.87)	推定修理費用 (クレーム25件 x 2年 x \$2700.00)
308,217	50	\$2,700.00	\$135,000

過去の発生分の修理費用			
対象台数	未返金台数	台当たり修理費 (WTY/GW実績: \$2,632.87)	合計
381	253	\$2,700.00	\$683,100

- AHは以下の条件に合意:
 - 原告側弁護士の弁護士費用として119万ドル。
 - 原告に対するインセンティブとして5千ドル。
- USのメールコスト: \$617,395

USの措置費用は、約 1.4百万ドル(≒約1.5億円)
その他訴訟費用(原告側へ支払う金額)は、1.19百万ドル(≒約1.2億円)

8. カナダ市場の状況 8-1 カナダ市場不具合実績

27/34

カスタマーリレーション、テックライン、ワランティータータを見直して決定した低い閾値展開

Accord MYs	製造数	対象台数	発生数	未返金	ワランティータ延長
2003 2dr	6,122	6,122	0	NA	NA
2003 4dr	29,461	29,461	18	7	0
2004 2dr	1,739	1,739	0	0	0
2004 4dr	12,477	12,477	8	1	0
2008 4dr	22,832	20,535*	11	1	20,535
合計	72,631	70,334	37	9	20,535

* 2008モデル後半から対策適用(ランチェン)のため、対策後車両は対象外。

カナダはクラスアクションに至っていないが、USでクラスアクションが発生すると、カナダでも同一のクラスアクションが発生する可能性が極めて高い。
USと同条件、同タイミングで積極措置を行う。(カナダホンダリーガル見解)

8. カナダ市場の状況

8-2 カナダ市場(今後の修理について)

28/34

対象者	利益
今後2年の間にサイドエアバッグの異常展開が認められた、08 Accord(セダン)のオーナー	ホンダディーラーにて、サイドエアバッグの無償交換資格を実施
以前にサイドエアバッグの異常展開を経験した03、04、08 Accord(08はセダンのみ)の前および現オーナー	(A)異常展開の証明があり、未だサイドエアバッグを修理していない状態であれば、サイドエアバッグを無償交換、または(B)お客様が交換費用を支払って修理している場合は、当該金額の弁償(異常展開によるA/B修理費用の支払いの証明がある場合に限る)

サイドエアバッグ展開不具合の修理費用予測		
対象台数	推定発生数 (11 / 6= 2件/年 x 2年)	台当たり修理費 (WTY/GW実績:\$2,632.87)
20,535	4	\$2,700

8. カナダ市場の状況

8-3 カナダ市場(過去の修理費用について)

29/34

対象者	利益
今後2年の間にサイドエアバッグの異常展開が認められた、08 Accord(セダン)のオーナー	ホンダディーラーにて、サイドエアバッグの無償交換資格を実施
以前にサイドエアバッグの異常展開を経験した03、04、08 Accord(08はセダンのみ)の前および現オーナー	(A)異常展開の証明があり、未だサイドエアバッグを修理していない状態であれば、サイドエアバッグを無償交換、または(B)お客様が交換費用を支払って修理している場合は、当該金額の弁償(異常展開によるA/B修理費用の支払いの証明がある場合に限る)

サイドエアバッグ展開不具合の修理費用予測		
対象台数	未返金台数	台当たり修理費 (WTY/GW実績:\$2,632.87)
37	9	\$2,700

8. カナダ市場の状況

8-4 カナダ市場発生費用

30/34

今後の発生分の修理費用			
対象台数	推定発生数 (11/6=2件/年 x 2年)	台当たり修理費 (WTY/GW実績: \$2,632.87)	推定修理費用 (クレーム2件 x 2年 x \$2700.00)
20,535	4	\$2,700.00	\$10,800

過去の発生分の修理費用			
対象台数	未返金台数	台当たり修理費 (WTY/GW実績: \$2,632.87)	合計
37	9	\$2,700.00	\$24,300

- カナダのメールコスト: \$ 41,104

**CANの措置費用は、約 0.07百万ドル(≒約800万円)
訴訟費用はなし**

9. 発生費用まとめ

31/34

9-1 US

今後の発生分の修理費用			
対象台数	推定発生数 (25件/年 x 2年)	台当たり修理費 (WTY/GW実績: \$2,632.87)	推定修理費用 (クレーム25件 x 2年 x \$2700.00)
308,217	50	\$2,700.00	\$135,000

過去の発生分の修理費用			
対象台数	未返金台数	台当たり修理費 (WTY/GW実績: \$2,632.87)	合計
381	253	\$2,700.00	\$683,100

US mailing cost

\$617,395

9-1 CANADA

今後の発生分の修理費用			
対象台数	推定発生数 (11/6=2件/年 x 2年)	台当たり修理費 (WTY/GW実績: \$2,632.87)	推定修理費用 (クレーム2件 x 2年 x \$2700.00)
20,535	4	\$2,700.00	\$10,800

過去の発生分の修理費用			
対象台数	未返金台数	台当たり修理費 (WTY/GW実績: \$2,632.87)	合計
37	9	\$2,700.00	\$24,300

Canada mailing cost

\$41,104

北米措置費用計は、1.47百万ドル(≒約1.58億円)
 内訳 US: 1.4百万ドル(≒約1.5億円) / CANADA: 0.07百万(≒約800万円)

10. 措置提案内容及び展開計画


- 10-1 措置提案 積極市場措置(和解条件)を実施
- 10-2 提案理由 クラスアクション和解対応のため
- 10-3 措置内容 (1) 03/04/08M Accord : 過去のサイドエアバッグ展開不具合の修理費用の払い戻し
(2) 08M Accord : 今後2年間の展開不具合に対する2年間限定無償交換(保証延長)
- 10-4 対象範囲 USA/Canada : 03~04 ACCORD、08 ACCORD 4D
- 10-5 対象台数 03/04/08 Accord 過去修理費用払い戻し : KA 253 台、KC 9台
08 Accord 2年間保証延長 : 308,217台、KC 20,535台(発生予測 KA 50台、KC 4台)
- 10-6 展開日程

	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14	Jun 14	Jul 14	Aug 14	Sep 14	Oct 14	Nov 14	Dec 14
NASC/GQC	★	★GQC											
裁判所仮承認		★											
クラス通知			→										
ウェブサイト開設			★										
サービスブリテン発行											★		
クレーム提出期限 (過去の展開)						→							
裁判所最終承認										★			
クレーム提出期限(今後の展開)											→		
)返金手続き(過去の展開)											→		
返金手続き(今後の展開)											→		
部品調整/調達				→									


11. 再発防止

33/34

【03-04 ACCORD】

	課題	対応内容	日程
拡大系	セーフイングロジック追加とSISへのLPF対応の適用拡大	<p>TRWシステムを使用する他機種において、今回のセーフイングロジック追加とSISへのLPF対応を順次拡大して適用する。</p> <p style="text-align: center;"></p> <p>全機種 05Mより対策適用する。</p>	2005年1月完

【08 ACCORD】

	課題	対応内容	日程
発生系	ドア強閉OFFマージンの見直しとセッティングへの反映	<p>市場実績の有る機種においてドア強閉でのOFFマージン調査を行い調査結果から十分なマージン設定量をセッティング閾値に反映する。従来の+■%から+■%を新たに設定する。</p> <p style="text-align: center;"></p> <p>セッティングガイドを11M以降の機能開発仕様書へ反映する。</p>	2007年5月完

以上

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Q8-

21_MV20080416135749_Engli
sh_Redacted

EVENT FLOW
RESPONSIBLE DEPARTMENT AND PERSON
COMPLETION DATE
↓
RECEPTION
Q 4Rin Hinkai Godo Tadayoshi Fujio
2008/04/03
↓
INFORMATION INVESTIGATION
Q 4Rin Hinkai Godo Takashi Tanimoto
2008/04/16
↓
INVESTIGATION AND ANALYSIS
Q 4Rin Hinkai Godo Junko Sakurada
2008/05/17
↓
COUNTERMEASURE REQUEST
Q 4Rin Hinkai Godo Junko Sakurada
2008/04/18
↓
INTERMEDIATE REPLY
↓
COUNTERMEASURE REPLY
↓
2008/07/08
↓
COUNTERMEASURE ISSUED
↓
COUNTERMEASURE APPLICATION
C Kikaku Kanri Watanabe Yuzuru
2008/06/30
↓
COMPLETED
Q 4Rin Hinkai Godo Junko Sakurada
2008/07/08

COUNTERMEASURE REQUEST

MODEL CODE YM/MODEL NAME	TITLE	QIS CONTROL #
CP2	Side Curtain and Seat Air Bag Deploy at Door Slam<QAH2552>	MV20080416135749
08/ACCORD/		
OCCURRENCE DESCRIPTION		

REPLY REPLY TO Q 4Rin Hinkai Godo VIA BY May 9

INVESTIGATION AND ANALYSIS RESULTS

Country of occurrence: USA

 [Information investigation result]
 1) There are 4 cases of side airbag and curtain airbag deployment when the customer closed the door. (2 Css and 2 HAM)
 2) SRS unit and side impact sensor had no problems for HAM build. Assess that airbag deployment was normal operation by crash.
 *From above results, we issued SHODO HATSUDOSHO to HGT to verify toughness of development at the time of the door close. (2008/4/18)
 [Actual part confirmation result]
 1) As a result of visual confirmation, no abnormalities such as damage or dent in the SRS unit and sid impact sensor identified.
 2) No bent connector or contaminants identified.
 [Record confirmation result]
 1) Confirmed R side airbag and curtain airbag deployment history.
 [Recreation test result]
 1) As a result of recreation test result, we confirmed that side airbag and curtain airbag deploy when the door is slammed at speeds over approx. █m/s.
 *See attachment for test conditions.
 [Deployment toughness comparison with other models]
 1) Confirmed 4Dr ACCORD for UA had █% OFF margine for the door slam at █m/s.
 2) Confimed other models with results in the maraket have █% OFF margine secured for the door slam at █m/s.
 *See attachment for the test result.
 *From the above results, assess that development toughness for 4Dr ACCORD for UA for the door close was insufficient for other models, and it led to side airbag and curtain airbag development by the door shut speeds by the user.

DATE	REPLY DEPARTMENT (IN-HOUSE)	APPROVAL	CHECK	CREATOR	DATE	REPLY DEPARTMENT (IN-HOUSE)	APPROVAL	CHECK	CREATOR	DATE	REPLY DEPARTMENT (OUTSIDE)	APPROVAL	CHECK	CREATOR
07/08														

ADDRESSEE		RECEPTION					

RANK	DATE:	APPROVAL	CHECK	CREATOR
A				

CAUSE ANALYSIS	[Cause of occurrence] -Assess that side airbag and curtin airbag were deployed by speeds of the door close by the user because the toughness for the door close was insufficient.																																																																													
COUNTERMEASURE	[C/M for the problem] -Setting threshold value for crash was changed. -D/C:2008/4/23 DC No. C48-2-1702																																																																													
TREATMENT FOR STOCK & SOLD UNITS & PARTS	-No specific treatment will not be taken due to this is a rare case by related the user door slam speeds. <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="7">COUNTERMEASURE APPLICATION INFORMATION</th> </tr> <tr> <th>DATE</th> <th>MODEL CODE (MODEL NAME)</th> <th>YM</th> <th>DEST.</th> <th>CATEGORY</th> <th colspan="2">PRODUCT #</th> </tr> <tr> <td>2008/06/30</td> <td>CP2</td> <td>2009</td> <td>AH</td> <td>F</td> <td colspan="2">C000551</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td colspan="2"> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td colspan="2"> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td colspan="2"> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td colspan="2"> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td colspan="2"> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td colspan="2"> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td colspan="2"> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td colspan="2"> </td></tr> </table>	COUNTERMEASURE APPLICATION INFORMATION							DATE	MODEL CODE (MODEL NAME)	YM	DEST.	CATEGORY	PRODUCT #		2008/06/30	CP2	2009	AH	F	C000551																																																									
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COUNTERMEASURE EFFECTIVENESS	-Assess that it was effective due to new threshold setting valude could secure █% margin for the door slam █(m/s).																																																																													
FEED BACK TO THE SOURCE																																																																														

QUALITY IMPROVEMENT SHEET
[Q I S]

ISSUED BY
Q 4Rin Hinkai Godo

OCCURRENCE MARKET	
REPORT #	AHOS2008040301-00
FRAME #	JHMCP263880
ENGINE #	K24Z2
TRANSMISSION #	
TRANSMISSION CATEGORY	5AT
MILEAGE OR HOURS	2317 Mile
REGISTRATION DATE	2008/02/25
OCCURRENCE DATE	2008/03/24
PRODUCT DATE	2008/01/09

SERVICE PART #	
MAIN CAUSAL PART #	77960-TA0
CAUSAL PART SYMPTOM CODE AND DESCRIPTION	
MODEL CODE	
CAUSE CATEGORY	Specification
RES. DEPARTMENT	
SUPPLIER	HONDA RESERCH AND CODE 6530
COUNTERMEASURE CATEGORY	Closed
COUNTERMEASURE PART SYMPTOM CODE AND DESCRIPTION	3207 change of th
OCCURRENCE FORECAST	Sporadic
COUNTERMEASURE PART AVAILABILITY	IV Yes
REVISED ITEM	DRAWING OPERATION STANDARD

ISSUE	DATE	VERSION	APPROVAL	CHECK	CHECK	CREATOR
3	2008/07/15	REVISE	Junich i Miy		Satoru Yosh	Junko Saku
2	2008/07/10	FINISH	Junich i Miy		Satoru Yosh	Junko Saku
1	2008/05/16	TENT. FI	Junich i Miy		Satoru Yosh	Junko Saku
0	2008/04/16	NEW	Junich i Miy			Takash i Tan

INVESTIGATION RESULTS

*Detailed analysis requested to the SPLY (Continental)

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Q8-

21_MV20080416135749_Japan
ese_Redacted

イベント
担当部門氏名
完了年月日
↓
受付
Q四輪品改合同 藤尾 忠義 2008/04/03
↓
情報調査
Q四輪品改合同 谷本 孝 2008/04/16
↓
調査解析
Q四輪品改合同 櫻田 純子 2008/05/17
↓
対策要求
Q四輪品改合同 櫻田 純子 2008/04/18
↓
中間回答
↓
対策回答
合同解析室 櫻田純子 2008/07/08
↓
出図
↓
対策実施
C企画管理BL 渡辺 譲 2008/06/30
↓
完了
Q四輪品改合同 櫻田 純子 2008/07/08

対策要求	宛先	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">合同解析室</td><td style="text-align: center;">經由殿</td><td style="text-align: center;">受付</td><td style="text-align: center;">/</td><td style="width: 20px;"></td><td style="width: 20px;"></td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;">經由殿</td><td style="text-align: center;">受付</td><td style="text-align: center;">/</td><td></td><td></td></tr> </table>	合同解析室	經由殿	受付	/				經由殿	受付	/			重要度	A	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">年</td><td style="text-align: center;">月</td><td style="text-align: center;">日</td></tr> <tr><td style="text-align: center;">承認</td><td style="text-align: center;">確認</td><td style="text-align: center;">作成</td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	年	月	日	承認	確認	作成			
合同解析室	經由殿	受付	/																							
	經由殿	受付	/																							
年	月	日																								
承認	確認	作成																								
型式/YM・通称名	件名		推進 No.																							
CP2 08/ACCORD/	(AHOS) ドア閉めた際 サイドカーテンSRSとサイドSRS展開<QAH2552>		MV20080416135749																							
発生状況	停車時に助手席側のドアを閉めた際、助手席側のサイドカーテンSRSとサイドSRSが展開した。 <JHMCP263880[REDACTED]> お客様が助手席側のドアを閉めたとき、助手席のサイドカーテンSRSとサイドSRSが展開した。 走行距離は2,000マイルでスクラッチなどの跡は見られない。																									

回答 5月9日 までに 経由 Q四輪品改合同 宛に回答願います。

調査結果	発生国：アメリカ合衆国 <hr/> 【情報調査結果】 ①ユーザーがドアを閉めた際に、サイド及びカーテンエアバッグが展開するという訴えが4件発生。(Css製車両 2台、HAM製車両 2台) ②HAM製車両に取り付けられていたSRSユニット及びサイドインパクトセンサーに異常は無く、衝撃が印加されたことによる正常展開と判断。 ※以上より、ドア閉めの際の展開タフネスを検証する為HGTに初動発動する。(2008/4/18) 【現品確認結果】 ①SRSユニット及びサイドインパクトセンサーの外観に傷や凹み等の異常無し。 ②コネクタの端子曲がり、異物付着等の異常無し。 【記録内容確認結果】 ①R側サイドエアバッグ及びカーテンエアバッグの展開履歴を確認。 ※取引先(コンチネンタル)に詳細解析を依頼する。 【記録内容確認結果】 ①R側サイドエアバッグ及びカーテンエアバッグの展開履歴を確認。 ②入力された衝撃波形から、ドア閉めの際に発生する衝撃と判断。 【再現試験結果】 ①再現試験結果、約[REDACTED]m/s以上のスピードでドアを閉めた際、サイド及びカーテンエアバッグが展開に至る場合があることを確認。 ※試験条件は添付資料参照 【他機種との展開タフネス比較】 ①北米向け4Dr ACCORDのドア強閉([REDACTED]m/s)に対するOFFマージンは[REDACTED]%であることを確認。 ②市場実績のある他機種のドア強閉([REDACTED]m/s)に対するOFFマージン検証結果[REDACTED]%確保出来ている事を確認。 ※テスト結果は添付資料参照 ※以上より、北米向け4drACCORDのドア強閉に対する展開タフネスは他機種に対し不足していたため、ユーザーのドア閉めの速度によりサイド及びカーテンエアバッグの展開に至ったと判断する。
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月日	回答部門(所内)	承認	確認	作成	月日	回答部門(所内)	承認	確認	作成	月日	回答部門(所外)	承認	確認	作成
07/08	合同解析室			櫻田純子										

原因	【発生原因】 ・ドア強閉に対する展開タフネスが不足していたため、ユーザーのドア閉めの速度により、サイド及びカーテンエアバッグの展開に至ったと判断する。																																																																		
対	【発生対策】 ・側突に対する設定閾値の変更。 ・2008/4/23設変 設変No. C48-2-1702																																																																		
策	既販車及び在庫品の処置 ・本事象の発生は、ユーザーのドア閉め速度に依存する稀な強閉に起因することから特別な措置は行わない。 対策適用号機 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>年月日</th> <th>型式(通称名)</th> <th>年式</th> <th>仕向地</th> <th>区分</th> <th>号機</th> </tr> </thead> <tbody> <tr> <td>2008/06/30</td> <td>CP2</td> <td>2009</td> <td>AH</td> <td>F</td> <td>C000551</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	年月日	型式(通称名)	年式	仕向地	区分	号機	2008/06/30	CP2	2009	AH	F	C000551																																																						
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2008/06/30	CP2	2009	AH	F	C000551																																																														
源流へのフィードバック	対策効果確認 ・新閾値の設定により、ドア強閉([REDACTED]m/s)に対し[REDACTED]%のOFFマージンを確保出来ることから対策の効果があると判断する。																																																																		

市場品質情報 [Q I S]	
発行部門	
Q四輪品改合同	
発生場所	
フレーム No.	JHMCP263880[REDACTED]
エンジン No.	K24Z2-[REDACTED]
ミッション No.	
ミッション区分	5AT
走行距離、時間	2317 Mile
登録年月日	2008/02/25
発生年月日	2008/03/24

新部品番号	
主部品番号	
77960-TA0	
症状コード	
EDP KEY 型式名	
原因区分	
仕様	
責任区	部門
	取引先名
(株) 本田技術研究j	
コードNo.	
6530	
対策区分	
完了	
対策内容コード	
3207 仕様変更	
発生予測	
あり(散発)	
対策パーツ	
IV 有	
見直し項目	
図面 作業標準	

発行年月日	記事	承認	確認	確認	作成
2008/07/15	改訂発行	三宅準一		吉田悟	櫻田純子
2008/07/10	完了発行	三宅準一		吉田悟	櫻田純子
2008/05/16	一次完了	三宅準一		吉田悟	櫻田純子
2008/04/16	新規	三宅準一			谷本孝

受付月日	/
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EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Q8-22_MV20080416135749

Analysis Request to
Continental_English_Redacted

Market Quality Information

[Analysis/Countermeasure Request Form]

Control No:

Issued date: 5/12/2008

T 0	Quality Assurance, Continental Automotive Japan	Receipt	/	May 2	Rank A	Issuer	Automotive Quality Innovation Operat Automotive Quality Analysis Of
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Type/YM/Model name	Title	Approved	Checked	Created
CP2				
08M Accord	Side curtain SRS, and side SRS deployment when door closed	Kamata	Yoshida	Sakurada

Occurrence situation


Side curtain SRS, and side SRS of the passenger side are deployed when the car is stopped, and its passenger side door is closed.
 Side curtain SRS, and side SRS are deployed when the passenger side door is closed.
 Its travel distance is 2000miles, and there is no scratch on the car.
 * This has happened from nine vehicles of the North American market.(Three from HAM built, and three from Csx)

Preliminary Analysis Results/Requests

<Affected parts inspection>

SRS unit visual inspection

1. No scar, or deformation is seen on the outer of SRS unit.



SRS unit performance check

1. No failure is found from the past, or current record.

Failure

x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	xA	xB	xC	xD	xE	xF
0x:	00	00	00	00	00	00	0C	00	00	00	00	00	00	AA	4A
1x:	[REDACTED]														

Deployment record

8x: [REDACTED] 00 00 00 00 00 00 00 00 00 00

L side: G trigger R side: side airbag, and curtain airbag deployment

Transmission	response due date
Frame No. JHMCP26388 [REDACTED]	5/22/2008
ENG No.	Respond to
Transmission No.	Automotive Quality Innovation Operations
Part name	Automotive Quality Analysis Office
Part No. 77960-1A0-L010-M4	Response with
Prod. Date 1/9/2008	Analysis report
Reg. date 2/25/2008	- Others ()
Failure occ. Date 3/24/2008	Contact
Mileage 2317 miles / h	Sakurada, AQAO, Automotive Quality Innovation Operations, QCT, Honda Motor Co., Ltd.
Location United States	Address
Use Commute Leisure Commercial()	E-mail: junko_sakurada@hm.honda.co.jp
Equipment	Phone #
Others (Parts returned, attachment, etc.)	TEL: +81-28-081-2104, FAX: +81-28-081-2112
Market returned parts is available.	Please submit interim report if response is delayed.
	Please attach necessary documents as well.
	Please implement IP control to C/M parts.

Date	Response received by (Div.)	Checked	PIC
18-Jun	AQAO	Yoshida	Sakurada

Market Quality Information [Analysis/Countermeasure Request Form]

Control No:

Issued date: 5/12/2008

T 0	Quality Assurance, Continental Automotive Japan	Receipt	/	May 2	Rank A	Issuer	Automotive Quality Innovation Operat Automotive Quality Analysis Of
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Type/YM/Model name	Title	Approved	Checked	Created
CP2				
08M Accord	Side curtain SRS, and side SRS deployment when door closed	Kamata	Yoshida	Sakurada

Occurrence situation


Side curtain SRS, and side SRS of the passenger side are deployed when the car is stopped, and its passenger side door is closed.
Side curtain SRS, and side SRS are deployed when the passenger side door is closed.
Its travel distance is 2000miles, and there is no scratch on the car.
* This has happened from nine vehicles of the North American market.(Three from HAM built, and three from Csx)

Preliminary Analysis Results/Requests


<Affected parts inspection>

Side impact sensor visual inspection


1. No scar, or corrosion is seen on the outer of SRS unit.




Parts: Side impact sensor



1. No scar, or corrosion is seen on the outer of SRS unit.




Parts: Side impact sensor
Parts No.: 7790-TA0-A11




Satellite safing sensor

1. No scar, or corrosion is seen on the outer of SRS unit.



Parts: Satellite safing sensor



*Analyze SRS unit detailed record, and provide G data recorded in the unit.
Use the market returned SRS unit, side impact sensor, and satellite safing sensor when you conduct

Transmission	response due date
Frame No. JHMCP26388	5/22/2008
ENG No.	Respond to
Transmission No.	Automotive Quality Innovation Operations
Part name Side impact sensor/Satellite safing sensor	Automotive Quality Analysis Office
Part No. 77970-1A0-A11/77975-1A0-A11	Response with
Prod. Date 1/9/2008	Analysis report
Reg. date 2/25/2008	- Others ()
Failure occ. Date 3/24/2008	Contact
Mileage 2317 miles / h	Sakurada, AQAO, Automotive Quality Innovation
Location United States	Operations, QCT, Honda Motor Co., Ltd.
Use Commute Leisure Commercial()	Address
Equipment	E-mail: junko_sakurada@hm.honda.co.jp
Others (Parts returned, attachment, etc.)	Phone #
Market returned parts is available.	TEL: +81-28-081-2104, FAX: +81-28-081-2112

Please submit interim report if response is delayed.
Please attach necessary documents as well.
Please implement IP control to C/M parts.

Date	Response received by (Div.)	Checked	PIC
18-Jun	AQAO	Yoshida	Sakurada

Market Quality Information [Analysis/Countermeasure Request Form]

Control No:

Issued date: 5/23/2008

T 0	Quality Assurance, Continental Automotive Japan	Receipt	/	May 26	Rank	A	Issuer	Automotive Quality Innovation Operat
								Automotive Quality Analysis Of

Type/YM/Model name	Title	Approved	Checked	Created
CP2		Miyake	Yoshida	Sakurada
08M Accord	Side curtain SRS, and side SRS deployment when door closed			

Occurrence situation

Side curtain SRS, and side SRS of the passenger side are deployed when the car is stopped, and its passenger side door is closed.
 Side curtain SRS, and side SRS are deployed when the passenger side door is closed.
 Its travel distance is 2000miles, and there is no scratch on the car.
 * This has happened from nine vehicles of the North American market.(Three from HAM built, and three from Csx)

Preliminary Analysis Results/Requests

<Affected parts inspection>

[Actual part confirmation result]
 - Outside looking confirmation result
 (Parts number) 77960-TA0-L010-M4
 (Serial No.) COFD01EM53%

SRS unit visual inspection

1. No scar, or deformation is seen on the outer of SRS unit.
2. No bent, or contaminant adhesion is seen



SRS unit performance check

1. No failure is found from the past, or current record.
2. There is a deployment history for side

Failure																																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td><td>x0</td><td>x1</td><td>x2</td><td>x3</td><td>x4</td><td>x5</td><td>x6</td><td>x7</td><td>x8</td><td>x9</td><td>xA</td><td>xB</td><td>xC</td><td>xD</td><td>xE</td><td>xF</td> </tr> <tr> <td>0x:</td><td>00</td><td>00</td><td>00</td><td>00</td><td>00</td><td>00</td><td>0C</td><td>00</td><td>00</td><td>00</td><td>00</td><td>00</td><td>00</td><td>00</td><td>AA</td><td>4A</td> </tr> <tr> <td>1x:</td><td colspan="16" style="background-color: black; color: black;">[REDACTED]</td> </tr> </table>		x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	xA	xB	xC	xD	xE	xF	0x:	00	00	00	00	00	00	0C	00	00	00	00	00	00	00	AA	4A	1x:	[REDACTED]															
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8x:	[REDACTED]																																																		

L side: G trigger

R side: side airbag, and curtain airbag deployment recorded

Transmission	
Frame No.	JHMCP26828 [REDACTED]
ENG No.	
Transmission No.	
Part name	
Part No.	77960-TA0-L010-M4
Prod. Date	1/10/2008
Reg. date	2/18/2008
Failure occ. Date	3/24/2008
Mileage	1948miles / h
Location	United States
Use	Commute Leisure Commercial()
Equipment	
Others (Parts returned, attachment, etc.)	Market returned parts is available.

Response due date	6/2/2008
Respond to	Automotive Quality Innovation Operations Automotive Quality Analysis Office
Response with	Analysis report - Others ()
Contact	Sakurada, AQAO, Automotive Quality Innovation Operations, QCT, Honda Motor Co., Ltd.
Address	E-mail: junko_sakurada@hm.honda.co.jp
Phone #	TEL: +81-28-081-2104, FAX: +81-28-081-2112

Please submit interim report if response is delayed.
 Please attach necessary documents as well.
 Please implement IP control to C/M parts.

Date	Response received by (Div.)	Checked	PIC
18-Jun	AQAO	Yoshida	Sakurada

Market Quality Information [Analysis/Countermeasure Request Form]

Control No:

Issued date: 5/23/2008

T 0	Quality Assurance, Continental Automotive Japan	Receipt	/	May 26	Rank	A	Issuer	Automotive Quality Innovation Operat Automotive Quality Analysis Of
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Type/YM/Model name	Title	Approved	Checked	Created
CP2				
08M Accord	Side curtain SRS, and side SRS deployment when door closed	Miyake	Yoshida	Sakurada

Occurrence situation

Side curtain airbag in the right side was deployed when my husband closed the door after my daughter got in the car.
 * This has happened from nine vehicles of the North American market.(Three from HAM built, and three from Csx built vehicles.)

Preliminary Analysis Results/Requests

<Affected parts inspection>

<p>[Side impact sensor] (Parts number) 7790-TA0-A111-M4 (Parts name) Side impact sensor (Serial No.) G0WW0LVUZP0</p> <p>1. No scar, or corrosion is seen on the outer of SRS unit. 2. No bent, or contaminant adhesion is</p>	<p style="text-align: center;">Parts: Side impact</p> 
<p>(Parts number) 7790-TA0-A111-M4 (Parts name) Side impact sensor (Serial No.) G0WW0LVW4\$0</p> <p>1. No scar, or corrosion is seen on the outer of SRS unit. 2. No bent, or contaminant adhesion is seen on the connector terminal.</p>	<p style="text-align: center;">Parts: Side impact</p> 
<p>[Satellite safing sensor] (Parts number) 7790-TA0-A111-M4 (Parts name) Satellite safing sensor (Serial No.) LOZs04GW9G00</p> <p>1. No scar, or corrosion is seen on the outer of SRS unit.</p>	<p style="text-align: center;">Satellite safing sensor</p> 

*Analyze SRS unit detailed record, and provide G data recorded in the unit.
 Use the market returned SRS unit, side impact sensor, and satellite safing sensor when you conduct impact

Transmission	response due date 6/2/2008
Frame No. JHMCP26828	Respond to Automotive Quality Innovation Operations
ENG No.	Automotive Quality Analysis Office
Transmission No.	Response with <u>Analysis report</u>
Part name	- Others ()
Part No. 7790-TA0-L010-M4	Contact Sakurada, AQAO, Automotive Quality Innovation Operations, QCT, Honda Motor Co., Ltd.
Prod. Date 1/10/2008	Address E-mail: junko_sakurada@hm.honda.co.jp
Reg. date 2/18/2008	Phone # TEL: +81-28-081-2104, FAX: +81-28-081-2112
Failure occ. Date 3/24/2008	Please submit interim report if response is delayed.
Mileage 1948 miles / h	Please attach necessary documents as well.
Location United States	Please implement IP control to C/M parts.
Use Commute Leisure Commercial()	
Equipment	
Others (Parts returned, attachment, etc.) Market returned parts is available.	

Date	Response received by (Div.)	Checked	PIC
18-Jun	AQAO	Yoshida	Sakurada

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Q8-22_MV20080416135749

Analysis Request to
Continental_Japanese_Redacted

市場品質情報〔解析・対策 依頼書〕

管理No; MV20080416135749

発行日; 2008年5月12日

宛先	コンティネンタル・オートモーティブ・ジャパン株式会社	受付	/
	品質保証責任者 殿	受付	5/12 敬上

重要度	A
-----	---

発行部門	四輪品質改革部
合同解析室	

型式/YM・通称名	件 名	承認	確認	作成
CP2	ドア閉めた際 サイドカーテンSRSとサイドSRS展開<QAH2552>	鎌田	吉田	櫻田
08M ACCORD				

発生状況
 停車時に助手席側のドアを閉めた際、助手席側のサイドカーテンSRSとサイドSRSが展開した。
 お客様が助手席側のドアを閉めたとき、助手席のサイドカーテンSRSとサイドSRSが展開した。
 走行距離は2,000マイルでスクラッチなどの跡は見られない。
 ※北米で9件発生。(HAM製:6件 Ccss製:3件)

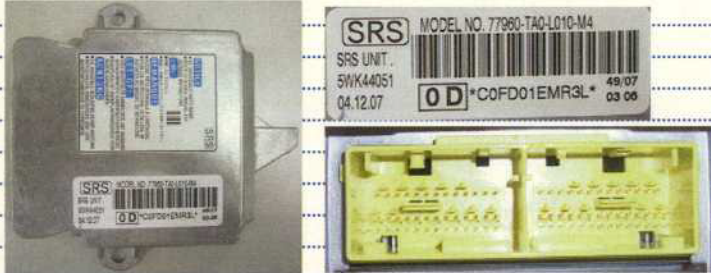
一次解析結果/依頼事項

【現品確認結果】

【SRSユニット】

■外観確認結果

- ①SRSユニットの外観に傷や変形等の異常無し。
- ②コネクタの端子曲がり、異物付着等の異常無し。



■動作確認結果

- ①記録内容確認結果、現在及び過去故障の記録は無し。
- ②R側サイドエアバッグ及びカーテンエアバッグの展開履歴あり。

故障記録

	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	xA	xB	xC	xD	xE	xF
0x:	00	00	00	00	00	00	0C	00	00	00	00	00	00	00	AA	4A
1x:	[REDACTED]															

展開記録

8x: [REDACTED] 00 00 00 00 00 00 00 00 00

L側:GTリガ履歴あり R側:サイドエアバッグ及びカーテンエアバッグ展開履歴あり

ミッションタイプ	
フレーム No.	JHMC26388C [REDACTED]
エンジン No.	
ミッション No.	
部品名	77960-TA0-L010-M4
部品 No.	
製造日	2008年1月9日
登録日	2008年2月25日
不具合発生日	2008年3月24日
距離又は時間	2317 Mile
発生地区	アメリカ合衆国
用途	通勤 レジャー 商用
装 備	
その他	
無, 添付資料等)	現品有り

回答期限	2008年5月22日
回答宛先	四輪品質改革部 合同解析室
回答形式	・解析レポート ・その他()
問合せ先	本田技研工業(株) 品質改革センター 四輪品質改革部 合同解析室 櫻田 TEL;028-687-2104, FAX:028-687-2112 Eメール;junko_sakurada@hm.honda.co.jp

* 回答が遅れる場合は、中間報告をお願いします。
 * 回答時は必要関連資料も添付して下さい。
 * 対策品は初物管理を実施して下さい。

月/日	回答受理部門名	確認	担当
6/8	合同解析室	吉田	櫻田

市場品質情報〔解析・対策 依頼書〕




管理No; MV20080416135749

発行日; 2008年5月12日

宛先	コンティネンタル・オートモーティブ・ジャパン株式会社 品質保証責任者	受付	/	
	殿	受付	5/12	敬上

重要度
A

発行部門	四輪品質改革部 合同解析室
------	------------------

型式/YM・通称名	件名	承認	確認	作成
CP2 08M ACCORD	ドア閉めた際 サイドカーテンSRSとサイドSRS展開<QAH2552>			

発生状況

停車時に助手席側のドアを閉めた際、助手席側のサイドカーテンSRSとサイドSRSが展開した。
 お客様が助手席側のドアを閉めたとき、助手席のサイドカーテンSRSとサイドSRSが展開した。
 走行距離は2,000マイルでスクラッチなどの跡は見られない。
 ※北米で9件発生。(HAM製:6件 Csx製:3件)

一次解析結果/依頼事項

【現品確認結果】

【サイドインパクトセンサー】

- ①外観に、傷、サビ等の異常無し。
- ②コネクタの端子曲がり、異物付着等の異常無し。



部品名: サイドインパクトセンサー
 部番: 77970-TA0-A11
 シリアルNo.: GOWWOLYMN80



- ①外観に、傷、サビ等の異常無し。
- ②コネクタの端子曲がり、異物付着等の異常無し。



部品名: サイドインパクトセンサー
 部番: 77970-TA0-A11
 シリアルNo.: GOWWOM03V70



【サテライトセーフィングセンサー】

- ①外観に、傷、サビ等の異常無し。
- ②コネクタの端子曲がり、異物付着等の異常無し。



部品名: サテライトセーフィングセンサー
 部番: 77975-TA0-A11
 シリアルNo.: LOZ04GZX0





※SRSユニットの詳細な記録内容の解析をお願いします。ユニットに入力されたGデータを提出して下さい。
 衝撃感度試験実施の際は、返却したSRSユニット及びサイドインパクトセンサー、サテライトセーフィングセンサーを使用して下さい。

ミッションタイプ	
フレーム No.	JHMCP26388C
エンジン No.	
ミッション No.	
部品名	77970-TA0-A11
部品名	77975-TA0-A11
部品 No.	サイドインパクトセンサー
部品 No.	サテライトセーフィングセンサー
製造日	2008年1月9日
登録日	2008年2月25日
不具合発生日	2008年3月24日
距離又は時間	2317 Mile
発生地区	アメリカ合衆国
用途	通勤 レジャー 商用
その他	
(現品の有無、添付資)	現品有り

回答期限	2008年5月22日
回答宛先	四輪品質改革部 合同解析室
回答形式	・解析レポート ・その他()
問合せ先	本田技研工業(株) 品質改革センター 四輪品質改革部 合同解析室 櫻田 TEL; 028-687-2104, FAX; 028-687-2112 Eメール; junko_sakurada@hm.honda.co.jp

- * 回答が遅れる場合は、中間報告をお願いします
- * 回答時は必要関連資料も添付して下さい。
- * 対策品は初物管理を実施して下さい。

月/日	回答受理部門名	確認	担当
6/18	合同解析室		

原本保存期限: 2018年5月

市場品質情報〔解析・対策 依頼書〕

管理No: MV20080416135749

発行日: 2008年5月23日

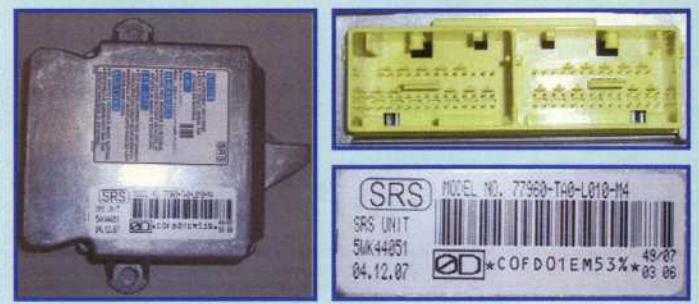
宛先	コンティネンタル・オートモーティブ・ジャパン株式会社 品質保証責任者	受付 /	受付 5/26	重要度	A	発行部門	四輪品質改革部
	殿	受付	5/26		合同解析室		

型式/YM・通称名	件名	承認	確認	作成
CP2 08M ACCORD	ドア閉めた際 サイドカーテンSRSとサイドSRS展開<QAH2552>			

発生状況
 車輦に娘が乗り込み夫がドアと閉めたところ、R側のカーテンエアバッグが展開した。
 ※北米で9件発生。(HAM製:6件 Csx製:3件)

一次解析結果/依頼事項

【現品確認結果】
■外観確認結果
 《部番》77960-TA0-L010-M4
 《部品名》SRSユニット
 《シリアルNo.》C0FD01EM53%
 《製造日》2007/12/04



- ①SRSユニットの外観に傷や変形等の異常無し。
- ②コネクタの端子曲がり、異物付着等の異常無し。

■動作確認結果

- ①現在及び過去故障の記録無し。
- ②R側カーテンエアバッグの展開履歴あり。

故障記録															
x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	xA	xB	xC	xD	xE	xF
0x:	00	00	00	00	00	0C	00	00	00	00	00	00	00	AA	4A
1x:															
展開記録															
8x:															
L側:Gトリガ履歴あり R側:カーテンエアバッグ展開履歴あり															

ミッションタイプ	
フレーム No.	JHMCP26828C
エンジン No.	
ミッション No.	
部品名	77960-TA0-L010-M4
部品 No.	
製造日	2008年1月10日
登録日	2008年2月18日
不具合発生日	2008年3月24日
距離又は時間	1948 Mile
発生地区	アメリカ合衆国
用途	通勤 レジャー 商用
その他	
無, 添付資料等)	現品有り

回答期限	2008年6月2日
回答宛先	四輪品質改革部 合同解析室
回答形式	・解析レポート ・その他()
問合せ先	本田技研工業(株) 品質改革センター 四輪品質改革部 合同解析室 櫻田 TEL:028-687-2104, FAX:028-687-2112 Eメール:junko_sakurada@hm.honda.co.jp

- * 回答が遅れる場合は、中間報告をお願いします。
- * 回答時は必要関連資料も添付して下さい。
- * 対策品は初物管理を実施して下さい。

月/日	回答受理部門名	確認	担当
6/18	合同解析室		

市場品質情報〔解析・対策 依頼書〕

管理No; MV20080416135749

発行日; 2008年5月23日

宛先	コンティネンタル・オートモーティブ・ジャパン株式会社 品質保証責任者	受付 /	重要度 A	発行部門 四輪品質改革部 合同解析室
	殿	受付 5/26 桜田		

型式/YM・通称名	件名	承認	確認	作成
CP2	ドア閉めた際 サイドカーテンSRSとサイドSRS展開<QAH2552>			
08M ACCORD				
発生状況				

車輦に娘が乗り込み夫がドアと閉めたところ、R側のカーテンエアバッグが展開した。
※北米で9件発生。(HAM製:6件 Csx製:3件)

一次解析結果/依頼事項

【現品確認結果】

【サイドインパクトセンサー】

《部番》77970-TA0-A111-M4

《部品名》サイドインパクトセンサー

《シリアルNo.》G0WW0LVUZP0

- ①外観に、傷、サビ等の異常無し。
- ②コネクタの端子曲がり、異物付着等の異常無し。

サイドインパクトセンサー



サイドインパクトセンサー

《部番》77970-TA0-A111-M4

《部品名》サイドインパクトセンサー

《シリアルNo.》G0WW0LVW4\$0

- ①外観に、傷、サビ等の異常無し。
- ②コネクタの端子曲がり、異物付着等の異常無し。



【サテライトセーフィングセンサー】

《部番》77975-TA0-A111-M4

《部品名》サテライトセーフィングセンサー

《シリアルNo.》L0ZS04GW9G0

- ①外観に、傷、サビ等の異常無し。
- ②コネクタの端子曲がり、異物付着等の異常無し。

サテライトセーフィングセンサー



※SRSユニットの記録内容の解析をお願いします。ユニットに入力されたGデータを提出して下さい。

衝撃感度試験実施の際は、返却したSRSユニット及びサイドインパクトセンサー、サテライトセーフィングセンサーを使用して下さい。

ミッションタイプ	
フレーム No.	JHMCP26828C
エンジン No.	
ミッション No.	
部品名	77960-TA0-L010-M4
部品 No.	
製造日	2008年1月10日
登録日	2008年2月18日
不具合発生日	2008年3月24日
距離又は時間	1948 Mile
発生地区	アメリカ合衆国
用途	通勤 レジャー 商用
装備	
その他	
無, 添付資料等)	現品有り

回答期限	2008年6月2日
回答宛先	四輪品質改革部 合同解析室
回答形式	・解析レポート ・その他()
問合せ先	本田技研工業(株) 品質改革センター 四輪品質改革部 合同解析室 櫻田 TEL; 028-687-2104, FAX; 028-687-2112 Eメール; junko_sakurada@hm.honda.co.jp

- * 回答が遅れる場合は、中間報告をお願いします。
- * 回答時は必要関連資料も添付して下さい。
- * 対策品は初物管理を実施して下さい。

月/日	回答受理部門名	確認	担当
6/18	合同解析室		

原本保存期限: 2018年6月

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Q8-25_Urgent action request
form(MV20080416135749)_En
glish_Redacted

□QPD:8-3-42950 □Sss:8-24-2375 □Mss:8-23-2180 □Ccs:8-21-3609 □Kss:8-25-1926

4727

Request to
Takayama SMG, HGT Quality Planning GR
Uechi, Nakajima, Tadokoro, Tsuru kan MG

H Purchase
H Quality Information
H Customer Office
STC

Request
Reply

Request from AQAO
Denso Gr. Audio/Nav/SRS
Issued: 4/17/2008
PIC: Junko Sakurada
Manager: Junichi Kamata
Tel: 8-28-781
Fax: 8-29-7791
+81-29-687-2112

Request
Reply

Request from
Denso Gr. Audio/Nav/SRS
Issued:
PIC:
Manager:
Tel:
Fax:

PESC

Urgent Shodosho
A

Scramble
Analysis result
Investigation
analysis
S/O

Please reply within 20 days after you receive market returned part. If it takes you more than 20days to reply, please provide us with midterm report, or progress state in the Reception Division comment column of this form including possible reply date.

Title	Side curtain SRS, and side SRS deployment when door closing<QAH2552>		
Model	08M ACCORD		
Type: VIN	JHMCP263880	Mileage	2317 mile
Audit Officer	---	Market	USA
Audit Date	---	Plant	Css
Audit Location	---	QIS No : MV20080416135749	
Meeting time	---	QIC No :	
Meeting Location	---		
Customer Audit	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Auditor	---

Request
This problem has occurred from two Ccs built units, and two HAM built units in the US market.
Analysis shows that the side impact sensor, and SRS unit from HAM built units have no anomaly.
Please study toughness to airbag deployment for door closing.
*That is coordinated with Sindo CE from HGT 4G4, and Ohmoto CE on 4/16/ 2008.

Shodo Meeting on April 17

Request by AQAO

Please promote this issue. Yasunaga on April 17 Yasunaga 4/17

Comment from HGT Please promote this issue by 4G4, and 4G2-1 Ishima 4G	Function Division	Quality Planning Division
		AOKI

Promotion division comment(Study, and analysis reply) Replied on April 18

We'll immediately review toughness increase to airbag deployment for strong door closing force.
We'll handle drawing, and determine a countermeasure. Ohmoto 4G2-1

4G2HG Tsurumiya	Function Division manager	Quality Planning Division manager
	Shindo	Tamura

Expert dispatch	Reply date
Answer by (mark) HGT()SS Customer HDS	PIC of Scramble activity
Function Division	Division/expert
Quality Planning Division	Division/expert
Manager	

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Q8-25_Urgent action request
form(MV20080416135749)_Ja
panese_Redacted

□QPD:8-3-42950 □Sss:8-24-2375 □Mss:8-23-2180 □Css:8-21-3609 □Kss:8-25-1926

4727

依頼先	
HGT 品企GR	高山 SMG殿
HGT 上地	494 492-1 494 494 494 494 494 494
	SMG殿 MG殿
H購買	PESC殿
() SS	殿
H品情報	殿
H客相室	殿
STC	所長殿

依頼元 合同解析室	
電装Gr AUDIO/NAVI/SRS sec	
発信日	08年 4月 17日
担当者	榎田 純子
責任者	鎌田 淳一
TEL	(内) 8-29-7791
FAX	(内) 8-29-7791 (外) 028-687-2112

依頼元 管理No()	
発信日	
発信部署	
担当者	
責任者	
TEL	
FAX	

緊急 初動発動書

A

スクランブル依頼

解析回答依頼

調査解析依頼

S/O

* 回答の期間は現品着後、20日以内にお願いいたします。
尚、20日以上遅れる場合は途中結果および進捗状況を当用紙の「受信部門コメント」欄に理由と回答予定日を入れ、FAX願います

件名	ドア閉めた際 サイドカーテンSRSとサイドSRS展開<QAH2552>		
機種名-Y/M	08M ACCORD		
型式-車台番号	JHMCP26388C	走行距離	2317 mile
立会官庁	—	打上げ国	アメリカ合衆国
立会日時	—	製造工場	Css
立会場所	—	QIS No : MV20080416135749	
集合日時	—	QIC No :	
集合場所	—		
お客様立会の有無	有-無	立会者名	—

依頼事項(依頼元)

本件、US市場にて、Css製車両で2件、HAM製車両で2件発生してます。
HAM製車両のSRSユニット及びサイドインパクトセンサーを解析した結果、製品には異常が無いことを確認済みです。ドアを開めた際の展開タフネスについて対応を検討願います。

※2008/4/16 HGT 4G4 新藤主研 / 4G2 大本主研と整合済み

初動会議日 4月 17日

依頼事項(合同解析室)

よろしくお願ひします。安永 7/7

コメント(HGT)	4G4, 4G2-1に? 対応よろしく願ひます。	17/APR'08 4G4技管 石田	機能部門	品企GR

推進部門コメント(調査解析-解析回答) 回答日 4月 18日

ドア強閉に対しての展開タフネスアップを至急検討致します

ユニットでの対策仕様Fixしたの出国処理を推進します (4G2) 大本

494 責任者		
4G2HG	機能MG	品企GR
	新藤	田村

エキスパート出動回答		回答日	年	月	日
回答部門 (O印)		スクランブル推進担当者			
HGT () SS・客相・HDS		部門	エキスパート名		
責任者	機能MG				
	品企GR				

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Q8-26_Continental ATMTV

JPN Initial Production Parts

Tag_English

該当箇所の丸を○印する。CIRCLE APPLICABLE NO.

- ① 仕様変更初物 INITIAL PRODUCTION PARTS OF SPEC. CHANGE
- 2. 品質改善初物 QUALITY IMPROVEMENT ACTIVITY
- 3. 自主管理初物 VOLUNTARY INITIAL PARTS CONTROL
- (1. 先行確認 ADVANCED QUALITY CONFIRMATION)
- (2. 初物提示 SUBMIT ACTUAL INITIAL PARTS)

本欄以外は、取引先又は発行部門で記入して下さい。
TO BE COMPLETED BY SUPPLIER EXCEPT WHERE INDICATED IN BOLD LINES

初物管理 [初物品] INITIAL PRODUCTION PARTS	管 理 NO. CSC 08H 021 IPP	④
	控 制 NO.	
発 行 年 月 日 2008. 6. 18		
DATE OF ISSUE		

取引先又は発行部門と最終納入取引先が同一の場合上段を斜線のこと。
WHERE "A" AND "B" ARE COMMON, STRIKE OUT "A".

A	取引先又は発行部門 SUPPLIER OF DEPARTMENT ISSUING	発行者 PERSON ISSUING	DATE	納入数 QUANTITY	LOT NO.
---	---	-----------------------	------	-----------------	---------

B	最終納入取引先 FIRST SUPPLIER	発行者 PERSON ISSUING	DATE	納入数 QUANTITY	LOT NO.
Continental Automotive Japan		藤上	6/27	5457	

部 番 PART NO.	71960-TAO-LOZD-MA	初物内容 HOW CHANGED
部 品 名 PART NAME	UNIT ASSY. SRS	
仕様通知 SPEC NOTICE NO.	C48-2-170Z	

Initial parts delivery for specification change.

1 仕様変更: SPEC. CHANGE	6 機械変更: MACHINE CHANGE
2 新規取引先: NEW SUPPLIER	7 治工具変更: JIG/TOOL CHANGE
3 材料変更: MATERIAL CHANGE	8 金型変更: DIE/MOLD CHANGE
4 加工条件・方法変更: MANUFACTURING METHOD CHANGE	9 検査方法変更: INSPECTION METHOD CHANGE
5 工程系列変更: MANUFACTURING PROCESS ORDER CHANGE	10 搬送方法・別変更: TRANSPORTATION METHOD/TYPE OF PACKING CHANGE

- 初物品には、検査成績表を添付し納入して下さい。
DELIVER INITIAL PRODUCTION PARTS WITH INSPECTION RESULT SHEETS.
- 本エフの①は、取引先又は発行部門控。SHEET ① MUST BE KEPT BY SUPPLIER OR DEPARTMENT ISSUING.
 - 本エフの②③④は、各工程、取引先責任者のサインをして次工程に流して下さい。
SHEETS ②③④ MUST BE PASSED TO NEXT PROCESS WITH SIGNATURE OF RESPONSIBLE PERSON FOR THE PROCESS.

該当箇所の丸を○印する。
CIRCLE APPLICABLE NO.

責任者署名: SIGNATURE OF RESPONSIBLE PERSON						批准/移行判定 可 否 PRODUCTION LINE SUPPLY JUDGMENT PASS - FAIL
① 発行取引先 FOURTH SUPPLIER	DATE	② 中間工程取引先 THIRD SUPPLIER	DATE	③ 中継工程取引先 SECOND SUPPLIER	DATE	
④ 最終納入取引先 FIRST SUPPLIER	DATE	⑤ 本廠直取受付 HONDA RECEIPT	DATE	⑥ 本廠直取検査 HONDA INSPECTOR	DATE	合格 合格
藤上 2008.6.18				井 6/24		

03011 ④ 初物管理部門控 保存期限: 2013 年
DUPLICATES FOR INITIAL PRODUCTION CONTROL DEPARTMENT RETENTION PERIOD: YEARS

✓ 了了了

初物管理 (初物品)
INITIAL PRODUCTION PARTS

確認結果
INSPECTION RESULT

機種 MODEL: TA0ZAA6
初検月日: DATE OF APPLICATION
H20.6.30



ENG.-NO:

FRM.-NO: CP2-0000551

()-NO:

判定 JUDGEMENT	合格 ACCEPTED	不合格 REJECTED	<input type="checkbox"/> 暫定使用 TEMPORARY USE <input type="checkbox"/> 修正・選別 REPAIR-SELECTION <input type="checkbox"/> 特 採 SPECIAL ACCEPTANCE
-----------------	----------------	-----------------	--

備考
REMARK
Apply 3/04

社内ルート ROUTE	AF2Mo SI-2A							検査部長 PERSON IN CHARGE OF FINAL INSPECTION 6/30	定検責任者 RESPONSIBLE PERSON FOR FINAL INSPECTION	生産部門長 TO BE RETURNED TO MANUFACTURING DEPARTMENT
判定 JUDGEMENT	OK									
サイン SIGNATURE	永瀬									

完検判定 RESULT OF FINAL INSPECTION	合格 ACCEPTED	不合格 REJECTED	<input type="checkbox"/> 暫定使用 TEMPORARY USE <input type="checkbox"/> 組替実施 REPLACEMENT WITH CORRECT PART	備考: REMARK
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EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Q8-26_Continental ATMTV

JPN Initial Production Parts

Tag_Japanese

該当箇所のNoを○印する。CIRCLE APPLICABLE NO.

- ① 仕様変更初物 INITIAL PRODUCTION PARTS OF SPEC. CHANGE
- 2. 品質改善初物 QUALITY IMPROVEMENT ACTIVITY
- 3. 自主管理初物 VOLUNTARY INITIAL PARTS CONTROL
 - (1. 先行確認 ADVANCED QUALITY CONFIRMATION)
 - (2. 初物提示 SUBMIT ACTUAL INITIAL PARTS)

本紙以外は、取引先又は、発行部門で記入して下さい。
TO BE COMPLETED BY SUPPLIER EXCEPT WHERE INDICATED IN BOLD LINES

初物管理 [初物品] INITIAL PRODUCTION PARTS	管理 NO. CONTROL NO.	CSC 08H 021 IPP	④
	発行年月日 DATE OF ISSUE	2008. 6. 18	

取引先又は発行部門と最終納入取引先が同一の場合上段を斜線のこと。
WHERE "A" AND "B" ARE COMMON, STRIKE OUT "A".

A	取引先又は発行部	発行者	DATE	数量	LOT NO.
	SUPPLIER OF DEPARTMENT ISSUING	PERSON ISSUING			

B	最終納入取引先	発行者	DATE	数量	LOT NO.
	FIRST SUPPLIER	PERSON ISSUING			
	コニエニケル・オートモティブ システム株式会社	数上	4/27	5457	

部番 PART NO.	77960-TAD-LOZD-MA	初物内容 HOW CHANGED
部品名 PART NAME	UNIT ASSY. SRS	
仕様通知 SPEC NOTICE NO.	C48-2-170Z	

仕様変更による初物納入のため

1 仕様変更: SPEC. CHANGE	6 機械変更: MACHINE CHANGE
2 新規取引先: NEW SUPPLIER	7 治工具変更: JIG/TOOL CHANGE
3 材料変更: MATERIAL CHANGE	8 金型変更: DIE/MOLD CHANGE
4 加工条件・方法変更: MANUFACTURING METHOD CHANGE	9 検査方法変更: INSPECTION METHOD CHANGE
5 工程系列変更: MANUFACTURING PROCESS ORDER CHANGE	10 搬送方法・荷姿変更: TRANSPORTATION METHOD/TYPE OF PACKING CHANGE

初物品には、検査成績表を添付し納入して下さい。
DELIVER INITIAL PRODUCTION PARTS WITH INSPECTION RESULT SHEETS.

1) 本エフの①は、取引先又は発行部門控、SHEET ① MUST BE KEPT BY SUPPLIER OR DEPARTMENT ISSUING.
2) 本エフの②③④は、各工程、取引先責任者のサインをして次工程に渡して下さい。
SHEETS ②③④ MUST BE PASSED TO NEXT PROCESS WITH SIGNATURE OF RESPONSIBLE PERSON FOR THE PROCESS.

責任者署名: SIGNATURE OF RESPONSIBLE PERSON			生産移行判定 可 否 PRODUCTION LINE SUPPLY JUDGEMENT PASS · FAIL 合 お	
① 発行取引先 FOURTH SUPPLIER	DATE	② 中間工程取引先 THIRD SUPPLIER		DATE
		③ 中間工程取引先 SECOND SUPPLIER		DATE
④ 最終納入取引先 FIRST SUPPLIER	DATE	⑤ 本廠検収受付 HONDA RECEIPT		DATE
		⑥ 本廠検収検査 HONDA INSPECTION		DATE

03011 ④ 初物主管部門控
DUPLICATES FOR INITIAL PRODUCTION CONTROL DEPARTMENT

保存期限: 2023 年
RETENTION PERIOD: YEARS

該当箇所のNoを○印する。
CIRCLE APPLICABLE NO.

✓ 了了了

初物管理 [初物品]
INITIAL PRODUCTION PARTS

確認結果
INSPECTION RESULT

機種 MODEL TA02AA6
切替月日: DATE OF APPLICATION
H20.6.30

ENG.-NO:			備考 REMARK
FRM.-NO: CP2-0000551			
()-NO:			
判定 JUDGEMENT	合格 ACCEPTED	不具合 REJECTED	投入 3104
		<input type="checkbox"/> 暫定使用 TEMPORARY USE <input type="checkbox"/> 修正・選別 REPAIR-SELECTION <input type="checkbox"/> 特採 SPECIAL ACCEPTANCE	

社内ルート ROUTE	AF2Mo DI-2A					完検担当 PERSON IN CHARGE OF FINAL INSPECTION	完検責任者 RESPONSIBLE PERSON FOR FINAL INSPECTION	主管部門(局) TO BE RETURNED TO MAIN CONTROL DEPARTMENT
判定 JUDGEMENT	OK					6/30		
サイン SIGNATURE	永瀬							

完検判定 RESULT OF FINAL INSPECTION			備考: REMARK
合格 ACCEPTED	不具合 REJECTED	<input type="checkbox"/> 暫定使用 TEMPORARY USE <input type="checkbox"/> 組替実施 REPLACEMENT WITH CORRECT PART	

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Q8-27_Side curtain SRS and
Side SRS deployed when doors
are

shut_QAH2552_English_Redac
ted

New & Closing Proposal

Model: 08M Accord

[Side Curtain SRS and Side SRS
Deployed when Door is Shut
<QAH2552>]

Emergency Shodo Issuance

2/14

Urgent Shodosho Analysis result Investigation analysis S/O

A

Title	Side curtain SRS, and side SRS deployment when door closing<QAH2552>		
Model	08M ACCORD		
Type: VIN	JHMCP26388C	Mileage	2317 mile
Audit Officer	---	Market	USA
Audit Date	---	Plant	Css
Audit Location	---	QIS No :	MV20080416135749
Meeting time	---	QIC No :	
Meeting Location	---		
Customer Audit	Yes/No	Auditor	

Request
This problem has occurred from two Csg built units, and two HAM built units in the US market.
Analysis shows that the side impact sensor, and SRS unit from HAM built units have no anomaly.
Please study toughness to airbag deployment for door closing.
*That is coordinated with Sindo CE from HGT4G4, and Ohmoto CE on 4/16/ 2008.

Shodo Meeting on April 17

Request by AQAO

Please promote this issue. Yasunaga on April 17 Yasunaga 4/17

Comment from HGT Please promote this issue by 4G4, and 4G2-1 Ishima 4G	Function Division	Quality Planning Division
		AOKI

Promotion division comment(Study, and analysis reply) Replied on April 18

We'll immediately review toughness increase to airbag deployment for strong door closing force.

We'll handle drawing, and determine a countermeasure. Ohmoto 4G2-1

Function Division manager	Quality Planning Division manager
Tsurumiya	Shindo Tamura

Regarding this issue, there are 2 cases with Csg CBU, and 2 cases with HAM CBU in US market.
Analysis of HAM CBU SRS unit and side impact sensor found no anomalies.
Please develop countermeasures for toughness against deployment when door is slammed shut.

- HG Start Date: April 17
- Completion Target Date: Plan: May 16 (Emergency Shodo Target: 1 month)

- Occurrence Status
- Root Cause Analysis
- Action Schedule
- Proposed Countermeasure

Occurrence Status

4/14

- **Claimed Symptom**

Customer claimed that side airbag and side curtain airbag were deployed when door was shut.

- **Unique Points and Affected Vehicle Investigation Result**

1: Subject Vehicles

08M Accord 4Dr for NA Market

MAP CBU: 2 units, Csa CBU: 2 units, total of 4 units

2: NA Market List of Affected Vehicles

CASE	VIN	AF date	Occurrence date	R or L	SRS UNIT Supplier
1	1HGCP26718A [REDACTED]	Feb/ 7/'08	Mar/18?/'08	R	Continental
2	1HGCP26738A [REDACTED]	Feb/ 8/'08	Feb/16/'08	L	Continental
3	JHMCP26388C [REDACTED]	Jan/ 9/'08	Mar/24?/'08	R	Continental
4	JHMCP26828C [REDACTED]	Jan/10/'08	Mar/24?/'08	?	Continental

- Feb. 2008@MAP, Jan. 2008@Sayama CBU had experienced this symptom ? : No information
- Happened by Fr door opening/closing. Happened with left and right side, respectively
→ No regularity found
- Case 1 and 2: Affected SRS units were sent back to Continental
(No additional information received for 2 CBUs built in Sayama)

No unique points found in terms of production plant and the side of airbag deployed

Occurrence Status

- WTY Investigation Result and Returned Parts Confirmation Result**

Case 1 : VIN: 1HGCP26738A [REDACTED]

1: Appearance



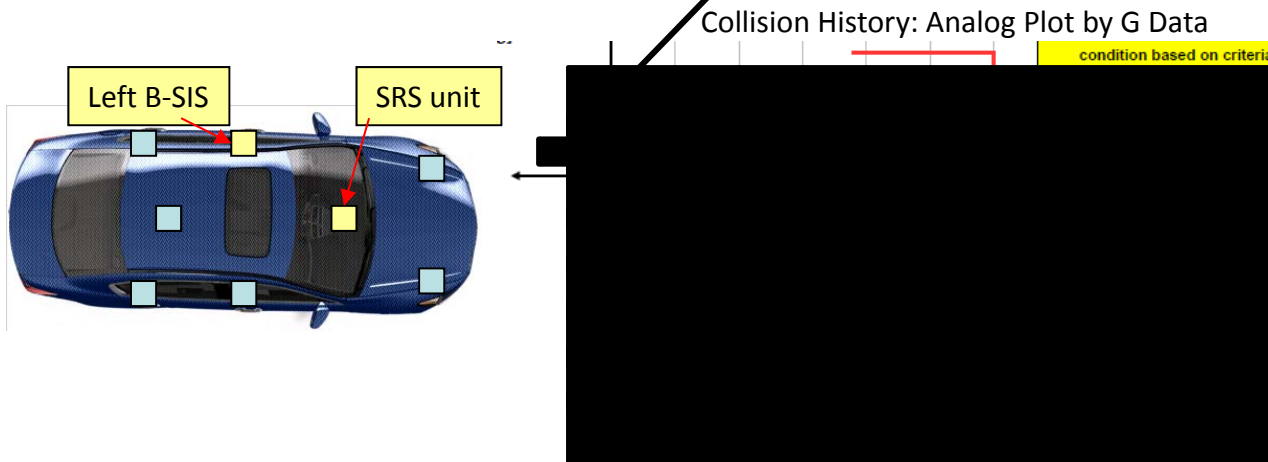
Side Airbag
Side Curtain Airbag
Both of them were deployed

Side airbag and side curtain airbag were deployed by collision without vehicle deformation

2: SRS Unit Collision History Analysis

[REDACTED]	All d_v values from all SIS: Row1 SIS Left DV short High byte (ROW1_L_DVSp)	[REDACTED]	[REDACTED]	[REDACTED]	SRS_y delta_v for decision maps High byte (ECU1Y2kHz_DVh)	[REDACTED]	[REDACTED]
[REDACTED]	All d_v values from all SIS: Row1 SIS Left DV short Low byte	[REDACTED]	[REDACTED]	[REDACTED]	SRS_y delta_v for decision maps Low byte	[REDACTED]	[REDACTED]

NTF: Ignition judgment is made by SRS Unit and Left side B-SIS



Based on collision history + History G data, SRS unit determined it as collision and side airbag/side curtain airbag were deployed

Occurrence Status

- WTY Investigation Result and Returned Parts Analysis Result

Case2:VIN: 1HGCP26718A [REDACTED]

1: Appearance

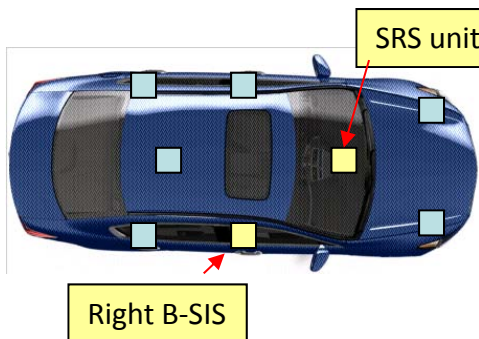


Same as Case 1, no body deformation by collision

2: SRS Unit Collision History Analysis

[REDACTED]	All d_v values from all SIS: Row1 SIS Right DV short High byte (ROW1_L_DVSn)	[REDACTED]	[REDACTED]	[REDACTED]	SRS_y delta_v for decision maps High byte (EGUY2kHz_DVn)	[REDACTED]	[REDACTED]
[REDACTED]	All d_v values from all SIS: Row1 SIS Right DV short Low byte	[REDACTED]	[REDACTED]	[REDACTED]	SRS_y delta_v for decision maps Low byte	[REDACTED]	[REDACTED]

NTF: Ignition judgment is made by SRS Unit and Right side B-SIS



Collision History: Analog Plot by G Data



Based on collision history + History G data, SRS unit determined it as collision and side airbag/side curtain airbag were deployed

Root Cause Analysis

- **Recreation Test Result**

1 : Purpose

Conduct a test to slam the door shut with the speed exceeding the requirement (█ m/s) to see if ignition judgment will be made.

2 : Test

- Use 2PX 4Dr NA market (MAP CBU) DAN vehicle to slam the door shut
- Verify ignition judgment by door slammed shut using warning lamp and collision history

3 : Test Result

Impact Side	Speed	Test Vehicle Condition	Deployment
-	m/s	█	OFF
-	m/s	↑	OFF
L	m/s	Pu █ ket	OFF
L	m/s	↑	OFF
L	m/s	↑	ON
L	m/s	↑	ON
L	m/s	█	OFF
R	m/s	█	OFF
R	m/s	↑	ON
R	m/s	↑	ON
R	m/s	↑	OFF
R	m/s	↑	OFF
R	m/s	↑	OFF
R	m/s	Bo █ (g.)	OFF
R	m/s	↑	ON
R	m/s	4 pass █ (23kg)	ON
R	m/s	↑	OFF
R	m/s	Bo █ (g.)	ON
R	m/s	↑	ON
R	m/s	↑	OFF

Regardless of test vehicle status or condition, ON judgment is made near █ m/s.

Based on recreation test result, for claimed 4 cases, it seems that the speed was █ m/s or more when the door was shut.

Root Cause Analysis

- **Threshold Setting**

Current Threshold Setting



A Requirement mode (door strong shut \blacksquare m/s) to ensure OFF margin by \blacksquare % to insure SINCAP and SICE T-TTF

Root Cause Analysis

9/14

- **Comparison with other models**

List of Setting Result

MY	Model	Speed	OFF margin
05	Accord 2Dr TS-X RL	■ m/s	■
06	CMC4Dr CMC2Dr		■
07	CR-V US Fit		■
08	Accord 4Dr Accord 2Dr TS-X		■
09	US Fit		■

*Target OFF Margin ■

Target margin of ■% is achieved when the door is shut strongly, but comparing to other models, OFF margin is smaller.

Other models that have proved track record ensure over ■% OFF margin with ■m/S data.

- **Countermeasure Options**

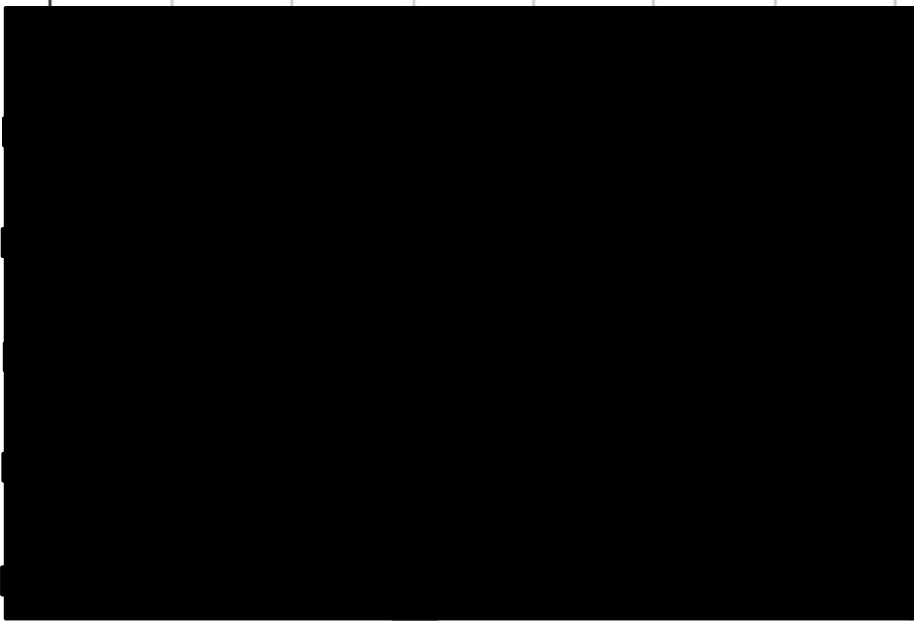
Modify the setting of threshold to ensure OFF margin over ■% when door is slammed shut

Root Cause Analysis

- Countermeasure Options

New Threshold Setting

SIS1_L



Simulation Result with New Threshold

Impact Side	Speed	Test Vehicle Condition	Threshold	
			Old	New
-	m/s	[REDACTED]	OFF	OFF
-	m/s	↑	OFF	OFF
L	m/s	[REDACTED]	OFF	OFF
L	m/s	↑	OFF	OFF
L	m/s	↑	ON	OFF
L	m/s	↑	ON	OFF
L	m/s	[REDACTED]	OFF	OFF
R	m/s	[REDACTED]	OFF	OFF
R	m/s	↑	ON	OFF
R	m/s	↑	ON	OFF
R	m/s	↑	OFF	OFF
R	m/s	↑	OFF	OFF
R	m/s	↑	OFF	OFF
R	m/s	[REDACTED]	OFF	OFF
R	m/s	↑	ON	OFF
R	m/s	[REDACTED]	ON	OFF
R	m/s	↑	OFF	OFF
R	m/s	[REDACTED]	ON	OFF
R	m/s	↑	ON	OFF
R	m/s	↑	OFF	OFF

- Ensured [REDACTED] % OFF margin with door slammed shut [REDACTED] m/s test data
- All recreation test data can be OFF
- If SINCAP TTF is the worst condition, there will be [REDACTED] ms delay but no passenger safety concern

Root Cause Analysis

11/14

- **Summary**

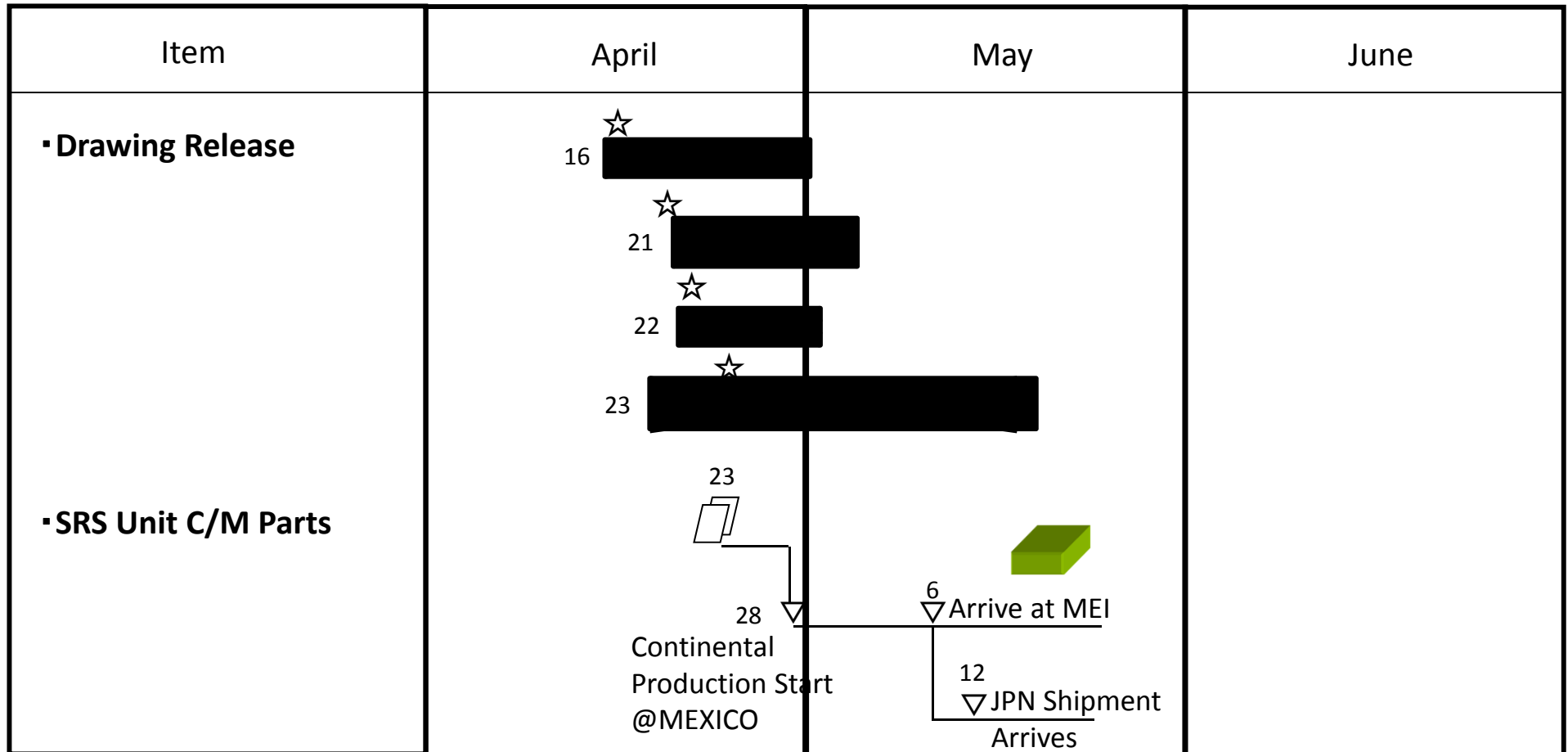
- SRS Unit/SIS were not defective
- Based on collision history and inner G data analog plot, collision judgment was properly made
- Based on recreation test result, when door is slammed shut with over [REDACTED] m/s speed, judgment is made as ON
- As for other models with proven track record in the market, [REDACTED] % OFF margin is secured with door strong shut [REDACTED] m/s data
- New threshold setting ensures [REDACTED] % OFF margin when door is slammed shut with [REDACTED] m/s

MP design change shall be implemented with new threshold

Action Schedule

12/14

- C/M Parts Schedule



To be delivered to US MEI: May 6, Sayama JPN Shipment: May 12

Proposed Countermeasure

13/14

Report on 2PX Side Airbag Inadvertent Deployment by Slamming Door Shut

*See attached for details.

■ Occurrence Status

4 cases (HAM die: 2 cases, Css CBU: 2 cases) * Production days are close

■ Analysis Result

Problem recreated when door is shut with [REDACTED] m/s force

■ Countermeasure

Modify existing threshold (For Css, Parts to be delivered on 5/12)

■ Actions for Sold Vehicles

No market action. Supply C/M parts once inventories are consumed.

■ Chief Inspection Engineer's Comment

Agree to the contents above.
Make sure to revisit requirement for the margin doors strongly closed.

Css Product Planning Meeting
Room B
2008/4/21

Attendee

Chief Inspection Engineer: Usui

HGT Shindo, Oomoto
Sugamata

Css Tanaka, Nozaki
Matsumoto, Yamamoto

• Proposed Countermeasure

- **Failure Impact**

- This is product marketability issue

- **Occurrence Frequency**

- As of end of March, occurrence prediction of side airbag/side curtain airbag deployment with strong door closing is 0.0029% and low.
(4 cases out of production volume 137903 units).

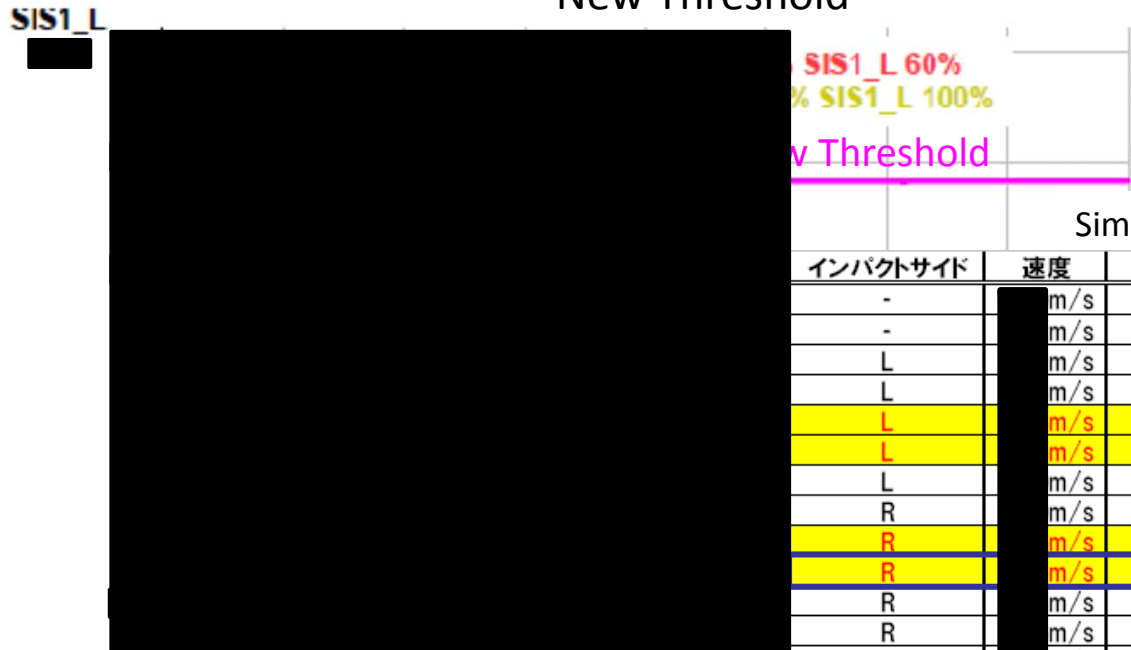
**1: Since this is a marketability issue and occurrence is expected to be low, we would like to monitor the market instead of proactive market action
→ CSS Agreed**

**2: As for the existing inventory at Sayama and MAP, use them as is and when old inventories are exhausted, then switch to new C/M parts
→ CSS, MAP Agreed**

Root Cause Analysis

- Performance after C/M

New Threshold



Simulation Result by New Threshold

インパクトサイド	速度	テスト車状況	旧閾値	新閾値	OFFマージン
-	m/s	████████████████████	OFF	OFF	
-	m/s	↑	OFF	OFF	
L	m/s	████████████████████	OFF	OFF	
L	m/s	↑	OFF	OFF	
L	m/s	↑	ON	OFF	███%
L	m/s	↑	ON	OFF	███%
L	m/s	████████████████████	OFF	OFF	
R	m/s	████████████████████	OFF	OFF	
R	m/s	↑	ON	OFF	███%
R	m/s	↑	ON	OFF	███%
R	m/s	↑	OFF	OFF	
R	m/s	↑	OFF	OFF	
R	m/s	████████████████████	OFF	OFF	
R	m/s	↑	ON	OFF	███%
R	m/s	████████████████████	ON	OFF	███%
R	m/s	↑	OFF	OFF	
R	m/s	████████████████████	ON	OFF	███%
R	m/s	↑	ON	OFF	███%
R	m/s	↑	OFF	OFF	

- ███% OFF margin is ensured with door slammed shut by ███m/s test data
- All recreation test data can be OFF
- With door closing force ███m/s, ███% OFF margin is ensured

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Q8-27_Side curtain SRS and
Side SRS deployed when doors
are

shut_QAH2552_Japanese_Redacted

新規 & 完了提案

機種・08M ACCORD

[ドア閉めた際 サイドカーテン
SRSとサイドSRS展開
＜QAH2552＞]

緊急初動発動書

2/14

緊急初動発動書		解析回答依頼 <input type="checkbox"/>	いしませう。 尚、20日以上遅れる場合は途中結果および進捗状況を当用紙の「受信部門コメント」欄に理由と回答予定日を入れ、FAX願います	
A		調査解析依頼 <input checked="" type="radio"/>		
		S/O <input type="checkbox"/>		
件名	ドア閉めた際 サイドカーテンSRSとサイドSRS展開<QAH2552>			
機種名-Y/M	08M ACCORD			
型式-車台番号	JHMCP26388C	走行距離	2317 mile	
立会官庁	—	打上げ国	アメリカ合衆国	
立会日時	—	製造工場	Css	
立会場所	—	QIS No.	MV20080416135749	
集会日時	—	QIC No.	—	
集会場所	—			
お客様立会の有無	有-無	立会者名	—	
依頼事項(依頼元)				
本件、US市場にて、Css製車両で2件、HAM製車両で2件発生しています。 HAM製車両のSRSユニット及びサイドインパクトセンサーを解析した結果、製品には異常が無いことを確認済みです。ドアを開めた際の展開タフネスについて対応を検討願います。				
※2008/4/16 HGT 4G4 新藤主研 / 4G2 大本主研と整合済み				
初動会議日 4月 17日				
依頼事項(合同解析室)				
よろしく願います。安永 7/7				
コメント(HGT)	17/APR'08 4G4, 4G2-1 に? 4G4投管 対応よろしく願います。 石田	機能部門	品企GR	
推進部門コメント(調査解析・解析回答)		回答日	4月 18日	
ドア強閉に対しての展開タフネスアップを至急検討致します ユニットでの対策仕様Fixの出国処理を推進します。(4G2) 大本		4G4 責任者		
		4G2HG	機能MG	品企GR
		新藤	田	村

本件、US市場にて、Css製車両で2件、HAM製車両で2件発生して
HAM製車両のSRSユニット及びサイドインパクトセンサーを解析した結果、製品には異常が無いことを確認済みです。
ドアを開めた際の展開タフネスについて対応を検討願います。

- HG開始日: 4月17日
- 完了目標日: 5月16日 予定 (緊急初動目標: 1ヶ月)

- 発生状況
- 要因解析
- 展開日程
- 対応提案

発生状況

4/14

- 訴え内容、事象

ドアを閉めた際にサイドエアバック、サイドカーテンエアバックが展開したとの訴えが発生。

- 特異点 及び 事象発生車調査結果

1:発生対象

08M Accord 4Dr 北米向け

MAP生産車2台、狭山生産車2台の計4台

2:北米向け 発生車一覧

CASE	VIN	組立日	発生日	展開サイド	SRS UNITメーカー
1	1HGCP26718A [REDACTED]	Feb/ 7/'08	Mar/18?/'08	R	Continental
2	1HGCP26738A [REDACTED]	Feb/ 8/'08	Feb/16/'08	L	Continental
3	JHMCP26388C [REDACTED]	Jan/ 9/'08	Mar/24?/'08	R	Continental
4	JHMCP26828C [REDACTED]	Jan/10/'08	Mar/24?/'08	?	Continental

・08年2月@MAP、08年1月@狭山 組み立て車にて発生

?:情報入手未

・FRドアの開閉で発生 左側、右側それぞれにて発生
→規則性無し

・Case1、2 当該SRS UNITはコンチネンタルへ送付済
(狭山生産車の2台については追加情報無し)

生産拠点 及び 展開サイドにおいて特異点 無し

発生状況

ワランティー調査結果 と 不具合現品確認結果

Case1: VIN: 1HGCP26738A [REDACTED]

1: 外観



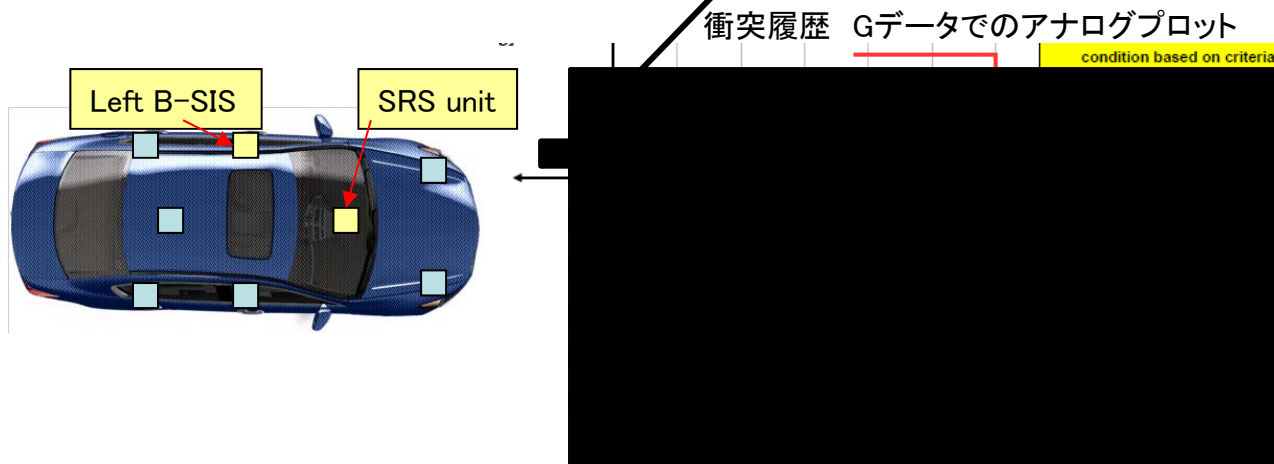
サイドエアバック
サイドカーテンエアバック
共に展開

衝突による車体変形無しでサイドエアバック
サイドカーテンエアバックが展開

2: SRS UNIT 衝突履歴解析

[REDACTED]	All d_v values from all SIS: Row1 SIS Left DV short High byte (ROW1_L_DVSp)	[REDACTED]	[REDACTED]	[REDACTED]	SRS_y delta_v for decision maps High byte (ECU1Y2kHz_DVh)	[REDACTED]	[REDACTED]
[REDACTED]	All d_v values from all SIS: Row1 SIS Left DV short Low byte	[REDACTED]	[REDACTED]	[REDACTED]	SRS_y delta_v for decision maps Low byte	[REDACTED]	[REDACTED]

故障は無く、SRS UNITとL側 B-SISにて点火判定している



衝突履歴+履歴Gデータから
SRS UNITが衝突判定した為
サイドエアバック
サイドカーテンエアバックが
展開した事が分かる

発生状況

- ワランティー調査結果 と 不具合現品確認結果

Case2: VIN: 1HGCP26718A [REDACTED]

1: 外観

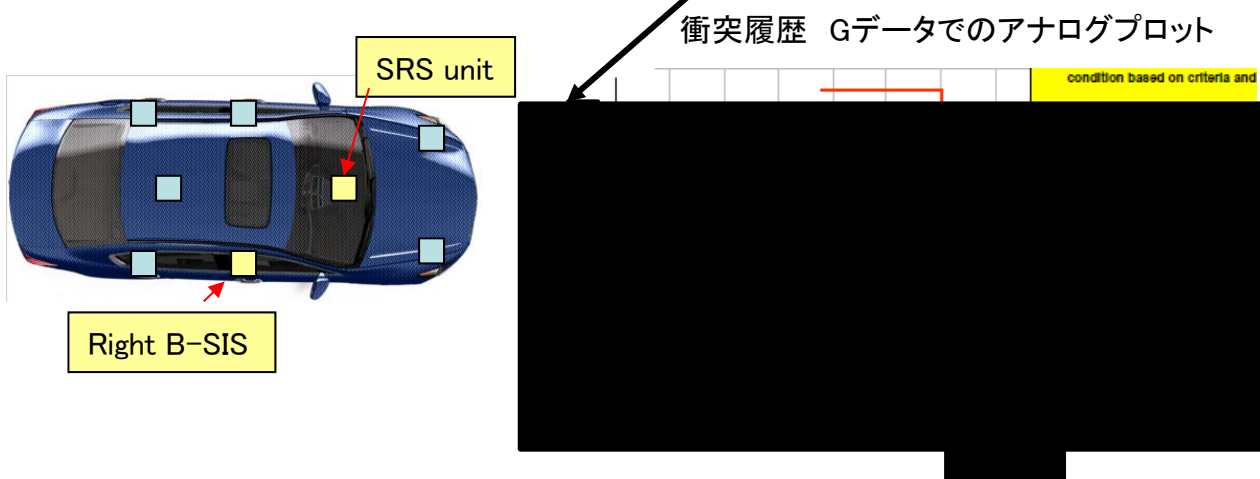


Case1と同様に衝突による車体変形無し

2: SRS UNIT 衝突履歴解析

[REDACTED]	All d_v values from all SIS: Row1 SIS Right DV short High byte (ROW1_L_DVS _n)	[REDACTED]	[REDACTED]	[REDACTED]	SRS_y delta_v for decision maps High byte (ECU1Y2kHz_DV _n)	[REDACTED]	[REDACTED]
[REDACTED]	All d_v values from all SIS: Row1 SIS Right DV short Low byte	[REDACTED]	[REDACTED]	[REDACTED]	SRS_y delta_v for decision maps Low byte	[REDACTED]	[REDACTED]

故障は無く、SRS UNITとR側 B-SISにて点火判定している



衝突履歴+履歴Gデータから SRS UNITが衝突判定した為 サイドエアバック サイドカーテンエアバックが 展開した事が分かる

要因解析

- 再現テスト結果

1:目的

要件で規定した速度 (■m/s) 以上でのドア強閉テストを行い
点火判定の有無を確認する

2:テスト

- ・2PX4Dr 北米向け(MAP生産) 段確車を使用しドア強閉を行う
- ・ドア強閉による点火判定をワーニングランプ及び衝突履歴より確認する

3:テスト結果

インパクトサイド	速度	テスト車状況	点火判定
-	m/s	■	OFF
-	m/s	↑	OFF
L	m/s	■	OFF
L	m/s	↑	OFF
L	m/s	↑	ON
L	m/s	↑	ON
L	m/s	■	OFF
R	m/s	■	OFF
R	m/s	↑	ON
R	m/s	↑	ON
R	m/s	↑	OFF
R	m/s	↑	OFF
R	m/s	↑	OFF
R	m/s	■	OFF
R	m/s	↑	ON
R	m/s	■	ON
R	m/s	↑	OFF
R	m/s	■	ON
R	m/s	↑	ON
R	m/s	↑	OFF

テスト車状況、状態に関
わらず ■m/s前後から
ON判定が発生

再現テスト結果から
訴えのあった4件は
■m/s以上のスピードで
ドアを閉めていると
思われる

要因解析

8/14

- 閾値設定

現行 設定閾値



A要件モード(ドア強閉 \blacksquare m/s)でOFFマーヅンを \blacksquare %確保し
SINCAP、SICEのT-TTFを確保

要因解析

9/14

- 他機種との比較

セッティング結果一覧

MY	機種	速度	OFFマージン
05	Accord 2Dr TS-X RL	■ m/s	■%
06	Civic 4Dr Civic 2Dr		■%
07	CR-V US Fit		■%
08	Accord 4Dr		■%
	Accord 2Dr TS-X		■%
09	US Fit		■%

*目標OFFマージン ■%

ドア強閉での目標マージン ■%
は達成出来ているが他機種と
比較するとOFFマージンが少ない

市場実績のある他機種ではドア強閉
■m/sデータで ■%以上のOFFマージン
が確保出来ている

- 対策案

ドア強閉でのOFFマージンが ■%以上確保出来るように閾値を再設定する

要因解析

10/14

- 対策案

新閾値設定

SIS1_L

新閾値によるシミュレーション結果

インパクトサイド	速度	テスト車状況	旧閾値	新閾値
-	m/s	████████████████████	OFF	OFF
-	m/s	↑	OFF	OFF
L	m/s	████████████████████	OFF	OFF
L	m/s	↑	OFF	OFF
L	m/s	↑	ON	OFF
L	m/s	↑	ON	OFF
L	m/s	████████████████████	OFF	OFF
R	m/s	████████████████████	OFF	OFF
R	m/s	↑	ON	OFF
R	m/s	↑	ON	OFF
R	m/s	↑	OFF	OFF
R	m/s	↑	OFF	OFF
R	m/s	↑	OFF	OFF
R	m/s	████████████████████	OFF	OFF
R	m/s	↑	ON	OFF
R	m/s	████████████████████	ON	OFF
R	m/s	↑	OFF	OFF
R	m/s	████████████████████	ON	OFF
R	m/s	↑	ON	OFF
R	m/s	↑	OFF	OFF

- ・ドア強閉 m/sテストデータで %のOFFマージンを確保
- ・再現テストデータ全てがOFF可能
- SINCAPのTTFが最悪の場合 ms遅れるが乗員保護性能上問題なし

要因解析

11/14

- まとめ
 - SRS UNIT/SISは故障していなかった
 - 衝突履歴と内部Gデータアナログプロットから正常に衝突判定をしている事が分かった
 - 再現テスト結果から■■■m/s以上のスピードでドアを強閉するとON判定する事が分かった
 - 市場実績のある他機種ではドア強閉■■■m/sデータで■■■のOFFマージンが確保出来ている
 - 新閾値はドア強閉■■■m/sデータで■■■%のOFFマージンを確保出来ている

新閾値での量産設変を行いたい

展開日程

・ 対作品の展開と適用日程

項目	4月	5月	6月
<p>・出図 対応</p>	<p>☆ 16 [Redacted]</p> <p>☆ 21 [Redacted]</p> <p>☆ 22 [Redacted]</p> <p>☆ 23 [Redacted]</p>		
<p>・SRS UNIT 対策品</p>	<p>23 [Redacted]</p> <p>28 ▽ Continental 製造スタート @MEXICO</p>	<p>6 MEI着</p> <p>12 ▽ 日本梱包着</p>	

・US MEIへ5月6日、狭山 日本梱包へ5月12日に納入予定

対応提案

13/14

2P X トP強肉=FB サトエパソ7 層南不具合報告

※詳細別紙参照

■ 茶室状況

4件 (HAM型 2件, Ccs製 2件) ※但し生産日が近い。

■ 解体結果

1P強肉 ■ m/s F=C 茶室

■ 対策

設定値を変更する。(Ccs向けは5/2F目録記入予定)

■ 取組方針

本番設置は行わず、在庫品で先行通用する

■ 検査コメント

了解した。但し、今後、トP強肉マシに灯り零件を製造して頂く。

Ccs 企画部 会議室B, 2009/4/21

薄井 検査班

HGT 新藤班、大木班
菅又班

Ccs 田中段幹 野崎主
不審班 山本班

- 不具合の影響

- ・商品性上の問題である

- 発生頻度

- ・ドア強閉でのサイドエアバック、サイドカーテンエアバック展開の発生確率は3月末時点で0.0029%(生産台数137903台に対し4件)と発生頻度が低い

1:商品性上の問題である事、発生頻度が低い事から
積極的 市場措置は行わず市場監視としたい
→CSS 了解済

2:狭山、MAPの在庫はそのままラインへ投入し
旧品なくなり次第対策品へ切り替えとする
→CSS、MAP 合意済み

要因解析

15/14

対策後の性能

新閾値

SIS1_L

SIS1_L 60%
% SIS1_L 100%
閾値

新閾値によるシミュレーション結果

インパクトサイト	速度	テスト車状況	旧閾値	新閾値	OFFマージン
-	m/s	■■■■■	OFF	OFF	
-	m/s	↑	OFF	OFF	
L	m/s	■■■■■	OFF	OFF	
L	m/s	↑	OFF	OFF	
L	m/s	↑	ON	OFF	■■■%
L	m/s	↑	ON	OFF	■■■%
L	m/s	■■■■■	OFF	OFF	
R	m/s	■■■■■	OFF	OFF	
R	m/s	↑	ON	OFF	■■■%
R	m/s	↑	ON	OFF	■■■%
R	m/s	↑	OFF	OFF	
R	m/s	↑	OFF	OFF	
R	m/s	■■■■■	OFF	OFF	
R	m/s	↑	ON	OFF	■■■%
R	m/s	■■■■■	ON	OFF	■■■%
R	m/s	↑	OFF	OFF	
R	m/s	■■■■■	ON	OFF	■■■%
R	m/s	↑	ON	OFF	■■■%
R	m/s	↑	OFF	OFF	

- ・ドア強閉 ■■■ m/s テストデータで ■■■% のOFFマージンを確保
- ・再現テストデータ全てがOFF可能
- ・ドア閉 ■■■ m/s で ■■■% のOFFマージンを確保

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Supplier Report

Q8-23_MV20080416135749

Conti Analysis Report

English_REDACTED

[Analysis report]

Title	Side-curtain SRS and side SRS deploy when closing door (QAH2552)
Part No.	77960-TA0-L010-M4
Part name	SRS unit
Control No.	MV20080416135749

9		4	
8		3	
7		2	2008/06/18
6		1	2008/06/02
5		1 st edition	2008/05/29
Revised	Date	Revised	Date

GSC_08_0099_H08050036_B080618		June 18, 2008	
Continental Automotive Japan Chassis & Safety Passive Safety & ADAS Quality Assurance			
Approved by	Checked by	Issued by	

Occurrence information (Symptom, No. of occurrences, Treatment)

1. Title	: Side-curtain SRS and side SRS deploy when closing door (QAH2552)
2. Model	: CP2 / 08M ACCORD
3. Part No.	: 77960-TA0-L010-M4
4. Part production date	: December 4, 2007
5. Serial No. of the part	: C0FD01EMR3L
6. VIN	: JHMCP26388C
7. Mileage	: 2,317 Mile
8. Vehicle production date	: January 9, 2008
9. Vehicle registration date	: February 25, 2008
10. Occurrence date	: March 24, 2008
11. Location	: U.S.A.
12. Occurrence situation	- When the customer closed a passenger-side door while the car stopped, passenger-side side-curtain SRS and side SRS deployed. - Passenger-side side-curtain SRS and side SRS deployed when the customer closed a passenger-side door. Mileage was 2,000 miles when the symptom occurred. Marks such as scratches are not confirmed. * North America: 9 cases (HAM unit: 6 cases, Css unit: 3 cases)
13. HONDA AQAO analysis results	[SRS unit] Appearance check results (1) Abnormality such as scratch or deformation etc. is not found on appearance. (2) Abnormality such as connector terminal bend or contaminant attachment etc. is not confirmed. Operation check results (1) Any operational failures are not recorded. (2) There are records of R-side side-airbag and curtain airbag deployments.

Comprehension of facts (Failed parts analysis, Factor analysis, Product quality)

[Failed parts analysis results (Analyzed in Regensburg in Germany)]

[Appearance check]
SRS unit appearance check
Connector housing is broken.
Abnormality such as connector terminal bend or contaminant attachment etc. is not confirmed.
Side impact sensor and satellite safing sensor appearance check
Abnormality such as scratch or rust etc. is not confirmed.
Abnormality such as connector terminal bend or contaminant attachment etc. is not confirmed.
(Refer to attachments.)

[SRS unit records check]
Records in memory

	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	xA	xB	xC	xD	xE	xF
0x	00	00	00	00	00	00	00	00	00	00	00	00	00	00	AA	4A
1x	[Redacted]															
8x	[Redacted]															

L-side G trigger recorded R-side side-airbag and curtain-airbag deployments recorded

Failure record (Fault memory)
Any failures are not recorded in the fault memory.

Crash record (Crash memory)
R-side side-airbag and R-side curtain airbag deployments are recorded.
L-side G trigger is recorded.

[Electrical function verification]
Function verification at each voltage and temperature
SRS unit and each sensor are confirmed to operate normally at each voltage and each temperature.
* Normal condition: Warning lamp shall turn off, and DTC shall not be stored.

Temperature	Voltage	Function test result		
		SIS-1	SIS-2	SSS
Low temp -30°C	10.5V	Normal	Normal	Normal
	13.5V	Normal	Normal	Normal
	15.5V	Normal	Normal	Normal
Normal temp	10.5V	Normal	Normal	Normal
	13.5V	Normal	Normal	Normal
	15.5V	Normal	Normal	Normal
High temp +80°C	10.5V	Normal	Normal	Normal
	13.5V	Normal	Normal	Normal
	15.5V	Normal	Normal	Normal

G sensor sensitivity verification using a shaker (thrusting device)
Any abnormalities are not confirmed in crash recording function, ignition abilities (ignition timing, ignition ON time) and G sensor sensitivity.
(Refer to attachments.)
Results: Ignition timing/ignition ON duration

Test condition	Seat position sensor (NOT NEAR)			
	Ignition timing		Ignition ON duration	
	Spec	Result	Spec	Result
Item	Unit [ms]	Unit [ms]	Unit [ms]	Unit [ms]
R-side airbag - 1 st		57.3		2.2
L-side airbag - 1 st		57.3		2.2
R-side airbag - 2 nd		97.4		2.1
L-side airbag - 2 nd		97.4		2.1
R-side retractor pre-tensioner		49.8		2.2
L-side retractor pre-tensioner		31.8		2.1
R-side side-curtain airbag		49.8		2.2
L-side side-curtain airbag		31.8		2.1
R-side side-airbag		49.8		2.1
L-side side-airbag		31.8		2.1

Results: G sensor sensitivity

Unit name, Sensor name	Sensor sensitivity		Sensor offset	
	Spec	Result	Spec	Result
SRS unit X direction	Impact testing waveform	-4.73 %	On sensing axis	-1 digits
SRS unit Y direction	Impact testing waveform	0.51 %	On sensing axis	±0 digits
Side impact sensor 1	Impact testing waveform	-3.62 %	On sensing axis	±0 digits
Side impact sensor 2	Impact testing waveform	-2.51 %	On sensing axis	±0 digits
Satellite safing sensor	Impact testing waveform	-2.24 %	On sensing axis	±0 digits

[Visual inspection for the inside of the unit]
Any abnormalities such as contaminant attachment or solder joints etc. are not confirmed inside the unit.
(Refer to the attachments.)

[Conclusion]
From the testing results above, the unit is determined to have operated normally without abnormality.
Failure is not recorded.

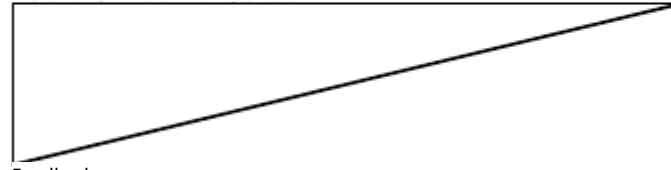
Cause identification (Occurrence mechanism, Recreation testing, Why-Why analysis)

We checked data recorded in the SRS unit. From the data, we have determined that, The level of sensed acceleration by door closing exceeded high-speed side crash judgment level, thus, the SRS unit judged to deploy the side-curtain airbag.

Countermeasure (Countermeasure contents, Countermeasure effectiveness, PPA)

Change threshold of SRS unit side impact by design change
(Design change No.: C48-2-1702 Issued on April 23, 2008)

Countermeasure effectiveness confirmation



Why-Why analysis

Step	1	2	3	4	5
Content	Side-curtain SRS and side airbag deployed when the customer closed a door.	The level of sensed acceleration by door closing exceeded high-speed side crash judgment level, thus, the SRS unit judged to deploy the side-curtain airbag.	Occurrence		
			Outflow		

Feedback



Visual check results

1. SRS unit

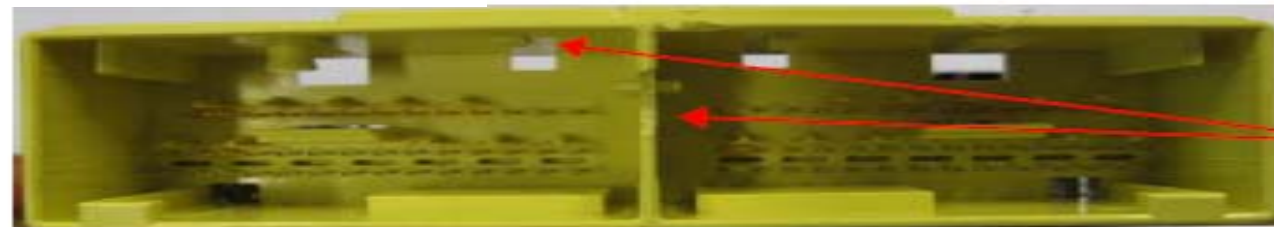
Unit TOP view



Bottom view



Connector



Breakage on the housing connector

2. Side impact sensor



3. Satellite safing sensor

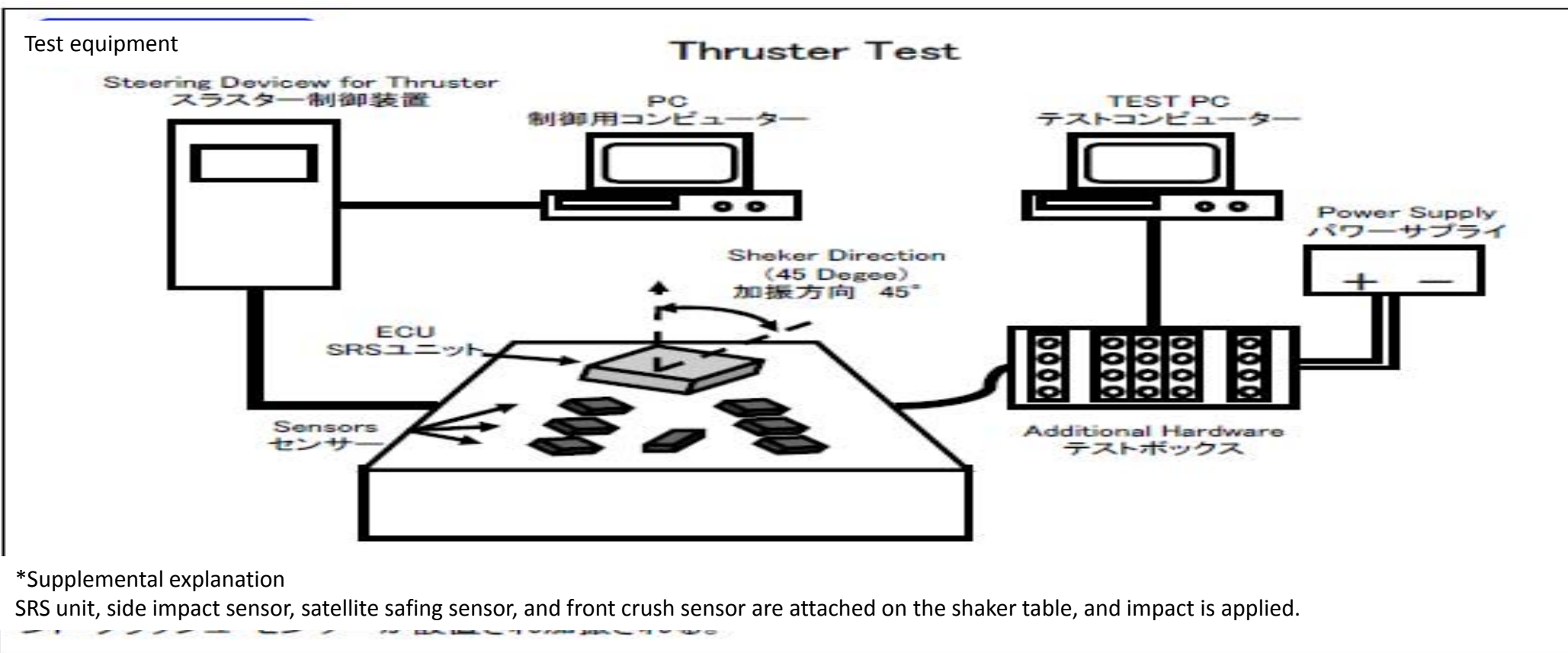
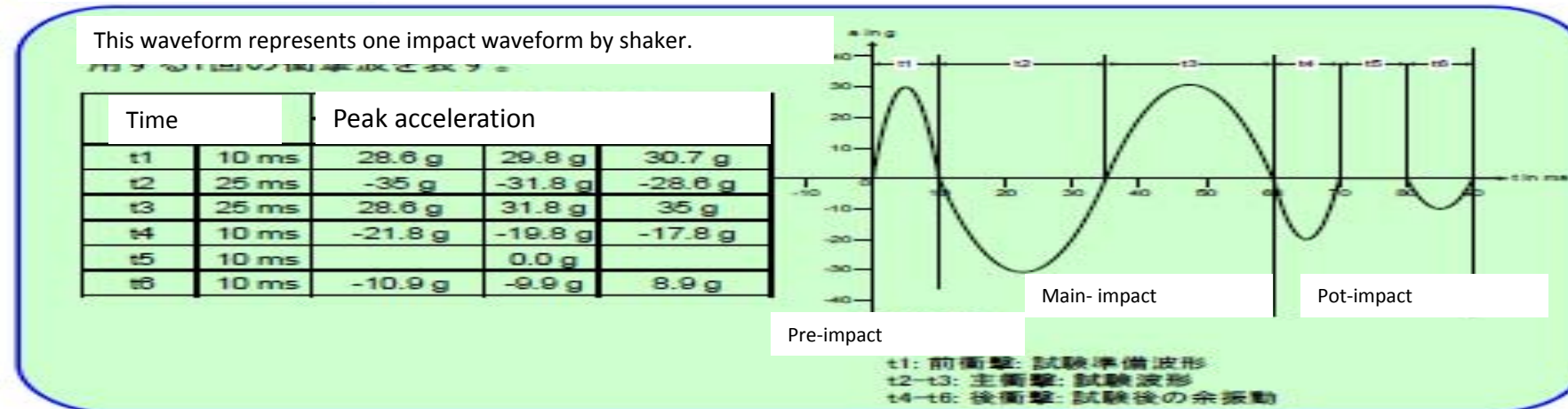


Shaker test

Method

Market returned parts are attached to shaker equipment at 45 degrees against the X, and Y axis. Then the following waveform is applied. Impact is applied once to confirm sensitivity of X, and Y axis.

Impact test waveforms



Shaker test results

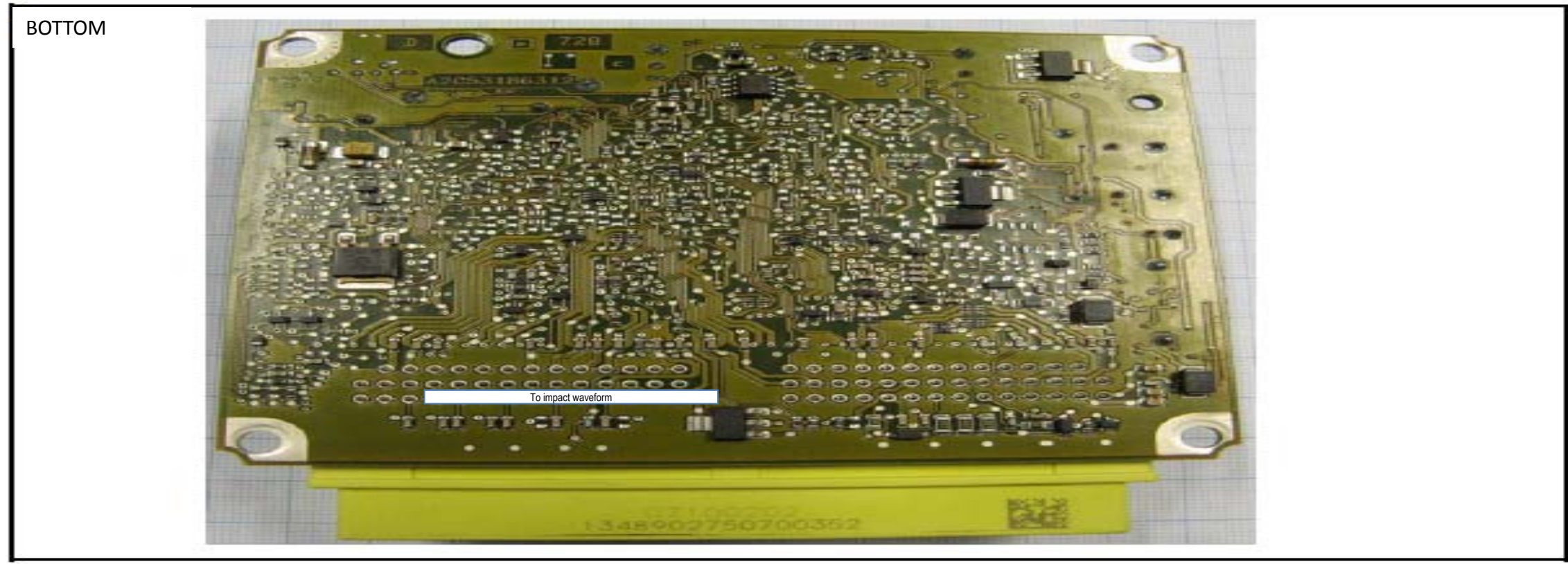
Ignition timing/ignition on duration						
Test conditions		seat position sensor - NOT NEAR				Judgment
Items	Ignition timing		Ignition ON duration			
	Spec	Measuring data	Spec	Measuring data		
	単位[ms]	単位[ms]	単位[ms]	単位[ms]		
R side airbag 1 st stage		57.3		2.2	Normal	
L side airbag 1 st stage		57.3		2.2	Normal	
R side airbag 2nd stage		97.4		2.1	Normal	
L side airbag 2nd stage		97.4		2.1	Normal	
R side retractor pretensioner		49.8		2.2	Normal	
L side retractor pretensioner		31.8		2.1	Normal	
R side curtain airbag		49.8		2.2	Normal	
L side curtain airbag		31.8		2.1	Normal	
R side airbag		49.8		2.1	Normal	
L side airbag		31.8		2.1	Normal	

seat position sensor - NEAR						
Test conditions		Ignition timing		Ignition ON duration		Judgment
Items	Spec	Measuring data	Spec	Measuring data		
	単位[ms]	単位[ms]	単位[ms]	単位[ms]		
R side airbag 1 st line		57.1		2.1	Normal	
L side airbag 1 st line		57.1		2.1	Normal	
R side airbag 2nd line		97.1		2.2	Normal	
L side airbag 2nd line		157.1		2.1	Normal	
R side retractor pretensioner		49.6		2.1	Normal	
L side retractor pretensioner		32.1		2.1	Normal	
R side curtain airbag		49.6		2.1	Normal	
L side curtain airbag		32		2.2	Normal	
R side airbag		49.6		2.1	Normal	
L side airbag		32		2.2	Normal	

Buckle switch for detecting fastening seat belt - OFF						
Test conditions		Ignition timing		Ignition ON duration		Judgment
Items	Spec	Measuring data	Spec	Measuring data		
	単位[ms]	単位[ms]	単位[ms]	単位[ms]		
R side airbag 1 st line		56.5		2.2	Normal	
L side airbag 1 st line		56.5		2.2	Normal	
R side airbag 2nd line		96.6		2.2	Normal	
L side airbag 2nd line		96.6		2.2	Normal	
R side retractor pretensioner		No ignition		No ignition	Normal	
L side retractor pretensioner		No ignition		No ignition	Normal	
R side curtain airbag		49.5		2.2	Normal	
L side curtain airbag		32		2.2	Normal	
R side airbag		49.5		2.2	Normal	
L side airbag		32		2.2	Normal	

Result: G sensor sensitivity					
Unit name, sensor name	Sensor sensitivity		Sensor offset		Judgment
	Spec	Measuring data	Spec (digit)	Measuring data (digit)	
	To impact waveform		To axis		
SRS unit X direction		-4.73 %		-1 度	Normal
SRS unit Y direction		0.51 %		±0 度	Normal
Side impact sensor 1		-3.62 %		±0 度	Normal
Side impact sensor 2		-2.51 %		±0 度	Normal
Satellite safing sensor		-2.24 %		±0 度	Normal

Board



Attachment : revision history

No.	Date	Contents
初版	2008/05/29	Initial version issued
1	2008/06/02	Design change number added to the C/M. Parts change date at C/s updated.
2	2008/06/18	C/M parts application planned date deleted. Analysis report misword corrected.
3		
4		
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6		
7		
8		

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Supplier Report

Q8-23_MV20080416135749

Conti Analysis

Report_Japanese_REDACTED

テーマ	ドア閉めた際 サイドカーテンSRSとサイドSRS展開<QAH2552>
部番	77960-TA0-L010-M4
部品名	SRSユニット
管理No	MV20080416135749

解析記録

〔解析レポート〕

9		4	
8		3	
7		2	2008/06/18
6		1	2008/06/02
5		初版	2008/05/29
改定	日付	改定	日付

作成	CSC_08_0099_H08050036_B080618 2008年6月18日 コンティネンタル・オートモーティブ・ジャパン株式会社		
成	シャシー&セーフティー パッシブセーフティー&ADAS		
部	品質保証	承認	確認
門			作成

発生状況 (現象・訴え内容・発生件数・処置内容)

1 件名	: ドア閉めた際 サイドカーテンSRSとサイドSRS展開<QAH2552>
2 機種	: CP2 / 08M ACCORD
3 品番	: 77960-TA0-L010-M4
4 部品製造日	: 2007年12月04日
5 部品シリアル番号	: C0FD01EMR3L
6 フレーム番号	: JHMCP263880
7 走行距離	: 2,317 Mile
8 車両製造日	: 2008年01月09日
9 車両登録日	: 2008年02月25日
10 不具合発生日	: 2008年03月24日
11 発生場所	: アメリカ合衆国
12 発生状況	<p>停車時に助手席側のドアを閉めた際、助手席側のサイドカーテンSRSとサイドSRSが展開した。 お客様が助手席側のドアを閉めたとき、助手席側のサイドカーテンSRSとサイドSRSが展開した。 走行距離は2,000マイルでスクラッチなどの跡は見られない。 ※発生件数発生 (HMM型: 6件, C00型: 3件)</p>
13 本田技研AQAO様での確認結果	<p>【SRSユニット】 外観確認結果 ①SRSユニットの外観に傷や変形等の異常無し。 ②コネクタの端子曲がり、異物の付着等の異常無し。 動作確認結果 ①記録内容確認結果、現在及び過去故障の記録は無し。 ②R側サイドエアバッグ及びカーテンエアバッグの展開履歴あり。</p>

事実の把握 (部品の確認結果・要因分析・生産品の品質状況)

【現品の確認結果(弊社ドイツ レーゲンスブルグにて解析)】

【外観確認】
SRSユニットの外観確認
外観にコネクタハウジングの破損が確認された。
コネクタ端子曲がり、異物の付着等の異常は無し。
サイドインパクトセンサー、サテライトセーフィングセンサーの外観確認
外観に、傷、サビ等の異常無し。
コネクタ端子曲がり、異物の付着等の異常は無し。
(添付資料の外観確認参照)

【SRSユニット記録内容確認】
メモリー内部の記録内容

x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	xA	xB	xC	xD	xE	xF
0x:	00	00	00	00	00	0C	00	00	00	00	00	00	00	AA	4A
1x:	←故障記録無し														
8x:	←故障記録無し														

左側Gトリガ履歴 右側サイドエアバッグおよび右側カーテンエアバッグの展開履歴

故障記録(フォルトメモリー)
フォルトメモリーには、故障の記録はありませんでした。
クラッシュ記録(クラッシュメモリー)
右側サイドエアバッグおよび右側カーテンエアバッグの展開履歴が記録されていました。
左側Gトリガ履歴が記録されていました。

【電氣的機能確認】
各電圧・各温度での機能確認
SRSユニット、各センサーを電圧、温度それぞれ3条件下にて正常動作する事を確認した。
※正常: ワーニングランプが消灯し、故障コードが記録されない事。

温度	電圧	機能検査結果		
		SRSユニット	SIS-1	SIS-2
低温 -30°C	10.5V	正常	正常	正常
	13.5V	正常	正常	正常
	15.5V	正常	正常	正常
常温	10.5V	正常	正常	正常
	13.5V	正常	正常	正常
	15.5V	正常	正常	正常
高温 +85°C	10.5V	正常	正常	正常
	13.5V	正常	正常	正常
	15.5V	正常	正常	正常

シェーカー(加振機)でのGセンサー感度確認
シェーカーを用いて確認した結果、クラッシュ記録の書込み、点火能力(点火タイミング、点火ON時間)、Gセンサーの感度に異常はありませんでした。
(添付資料のシェーカー試験参照)
結果: 点火タイミング / 点火ON時間

項目	シート・ポジション・センサー非近接			
	点火タイミング		点火ON時間	
	規格	測定データ	規格	測定データ
右側エアバッグ1段目	単位[ms]	57.3	単位[ms]	2.2
左側エアバッグ1段目	単位[ms]	57.3	単位[ms]	2.2
右側エアバッグ2段目	単位[ms]	97.4	単位[ms]	2.1
左側エアバッグ2段目	単位[ms]	97.4	単位[ms]	2.1
右側リトラクタ・プリテンション	単位[ms]	49.8	単位[ms]	2.2
左側リトラクタ・プリテンション	単位[ms]	31.8	単位[ms]	2.1
右側サイド・カーテン・エアバッグ	単位[ms]	49.8	単位[ms]	2.2
左側サイド・カーテン・エアバッグ	単位[ms]	31.8	単位[ms]	2.1
右側サイドエアバッグ	単位[ms]	49.8	単位[ms]	2.1
左側サイドエアバッグ	単位[ms]	31.8	単位[ms]	2.1

結果: G-センサー感度

ユニット・センサー名	センサー感度		センサーオフセット	
	規格	測定データ	規格	測定データ
SRSユニット X方向	衝撃試験波形の %	-4.73 %	軸に対して 度	-1 度
SRSユニット Y方向	衝撃試験波形の %	0.51 %	軸に対して 度	±0 度
サイド・インパクト・センサー 1	衝撃試験波形の %	-3.62 %	軸に対して 度	±0 度
サイド・インパクト・センサー 2	衝撃試験波形の %	-2.51 %	軸に対して 度	±0 度
サテライト・セーフィング・センサー	衝撃試験波形の %	-2.24 %	軸に対して 度	±0 度

【ユニット内部の目視確認】
ユニット内部に、異物の付着や半田不良等の異常はみられませんでした。
(添付資料の基板写真参照)

【結論】
上記の試験の結果、本ユニットに異常はなく正常に動作していたものと判断いたします。
故障記録は記録されていませんでした。

原因の究明 (発生のメカニズム・再現テスト・ナゼ・ナゼ・分析)

SRSユニットに記録されているデータより確認したところ、ドア閉によって検出された加速度が高速側突の展開判定閾値を超えていたため、SRSユニットはサイドエアバッグおよびサイドカーテンエアバッグを展開させる判定をしたものと判断いたします。

適切な対策 (対策内容・効果予測・PPA)

設定によりSRSユニットの側突の閾値変更
(設定番号: C48-2-1702 2008年4月23日発行済み)

対策効果の確認 (効果実績)

源流へのフィードバック(体制・仕組みへの反映内容)

ナゼ・ナゼ分析

ステップ	1	2	3	4	5
内容	ドア閉めた際 サイドカーテンSRSとサイドエアバッグが展開した。	ドア閉によって検出された加速度が高速側突閾値を超えていたため展開にいたったものと思われる。	発生		
			流出		

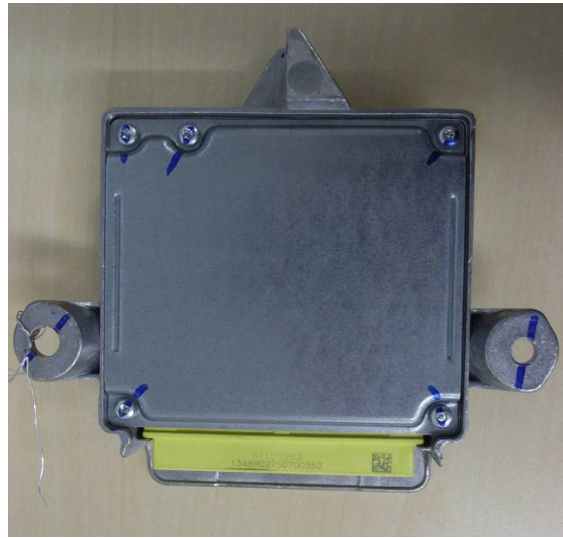
外観確認結果

1. SRSユニット

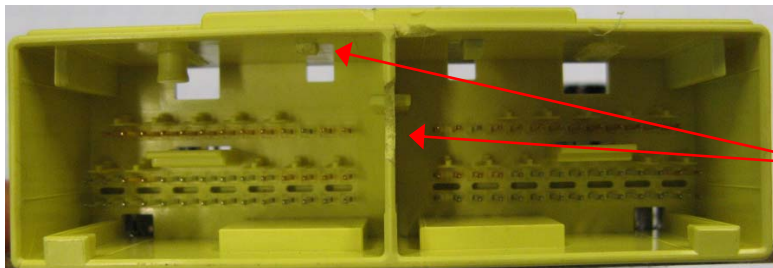
ユニット表



ユニット裏



コネクター



コネクタ ハウジングに破損あり。

2. サイドインパクトセンサー

シリアルNo. G0WWOLYMN80



シリアルNo. G0WWOM03V70



3. サテライトセーフィングセンサー

シリアルNo. L0ZS04GZNX0



シェーカー試験内容

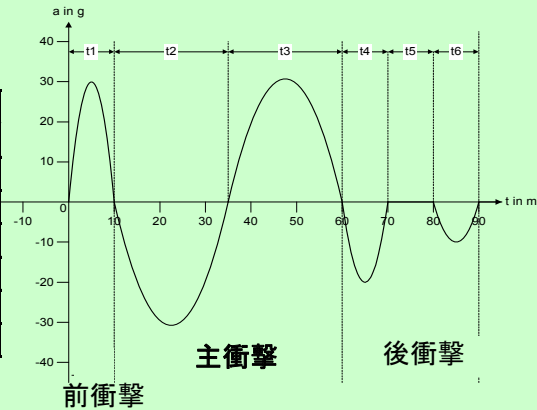
試験方法

シェーカー試験機に、現品(SRSユニット)をX、Y軸方向に対して45°に取り付け、下記の試験波形を加える。45°に取り付け下記のX、Y両軸方向の感度を確認する為に1回の衝撃を加える。

衝撃試験波形

本波形はシェーカーによる衝撃試験に使用する1回の衝撃波を表す。

時間	ピーク加速度			
	min	nom	max	
t1	10 ms	28.6 g	29.8 g	30.7 g
t2	25 ms	-35 g	-31.8 g	-28.6 g
t3	25 ms	28.6 g	31.8 g	35 g
t4	10 ms	-21.8 g	-19.8 g	-17.8 g
t5	10 ms		0.0 g	
t6	10 ms	-10.9 g	-9.9 g	8.9 g



t1: 前衝撃: 試験準備波形
t2-t3: 主衝撃: 試験波形
t4-t6: 後衝撃: 試験後の余振動

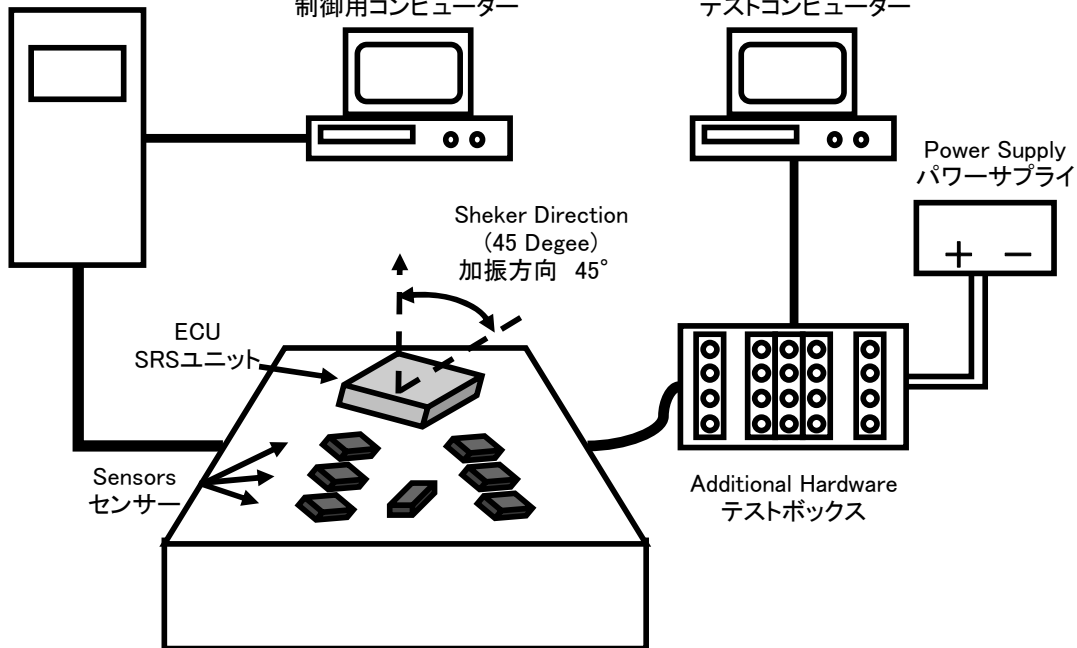
試験設備

Thruster Test

Steering Device for Thruster
スラスター制御装置

PC
制御用コンピューター

TEST PC
テストコンピューター



* 補足説明

シェーカー試験台上にはSRSユニット、サイド・インパクト・センサー、サテライト・セーフィング・センサー、フロント・クラッシュ・センサーが設置され加振される。

シエーカー試験結果

結果： 点火タイミング / 点火ON時間

試験条件 項目	シート・ポジション・センサー非近接				判定
	点火タイミング		点火ON時間		
	規格 単位[ms]	測定データ 単位[ms]	規格 単位[ms]	測定データ 単位[ms]	
右側エアバッグ1段目	■	57.3	■	2.2	正常
左側エアバッグ1段目	■	57.3	■	2.2	正常
右側エアバッグ2段目	■	97.4	■	2.1	正常
左側エアバッグ2段目	■	97.4	■	2.1	正常
右側リトラクタ・プリテンショナ	■	49.8	■	2.2	正常
左側リトラクタ・プリテンショナ	■	31.8	■	2.1	正常
右側サイド・カーテン・エアバッグ	■	49.8	■	2.2	正常
左側サイド・カーテン・エアバッグ	■	31.8	■	2.1	正常
右側サイドエアバッグ	■	49.8	■	2.1	正常
左側サイドエアバッグ	■	31.8	■	2.1	正常

試験条件 項目	シート・ポジション・センサー近接				判定
	点火タイミング		点火ON時間		
	規格 単位[ms]	測定データ 単位[ms]	規格 単位[ms]	測定データ 単位[ms]	
右側エアバッグ1段目	■	57.1	■	2.1	正常
左側エアバッグ1段目	■	57.1	■	2.1	正常
右側エアバッグ2段目	■	97.1	■	2.2	正常
左側エアバッグ2段目	■	157.1	■	2.1	正常
右側リトラクタ・プリテンショナ	■	49.6	■	2.1	正常
左側リトラクタ・プリテンショナ	■	32.1	■	2.1	正常
右側サイド・カーテン・エアバッグ	■	49.6	■	2.1	正常
左側サイド・カーテン・エアバッグ	■	32	■	2.2	正常
右側サイドエアバッグ	■	49.6	■	2.1	正常
左側サイドエアバッグ	■	32	■	2.2	正常

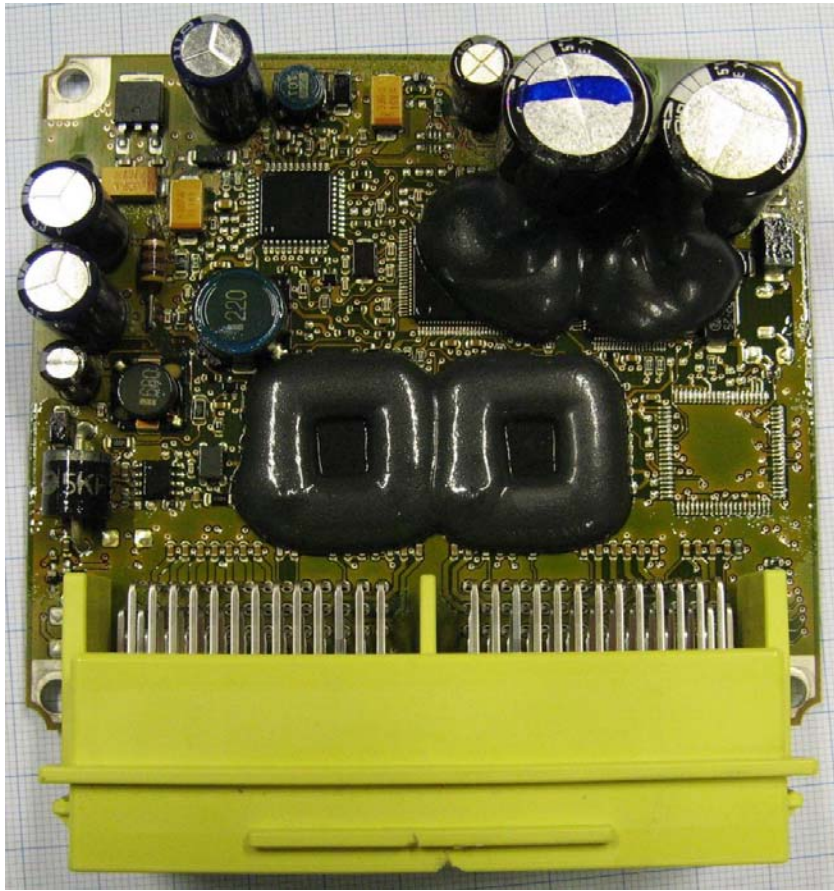
試験条件 項目	シートベルト装着検知用バックルスイッチ・オフ				判定
	点火タイミング		点火ON時間		
	規格 単位[ms]	測定データ 単位[ms]	規格 単位[ms]	測定データ 単位[ms]	
右側エアバッグ1段目	■	56.5	■	2.2	正常
左側エアバッグ1段目	■	56.5	■	2.2	正常
右側エアバッグ2段目	■	96.6	■	2.2	正常
左側エアバッグ2段目	■	96.6	■	2.2	正常
右側リトラクタ・プリテンショナ	■	点火なし	■	点火なし	正常
左側リトラクタ・プリテンショナ	■	点火なし	■	点火なし	正常
右側サイド・カーテン・エアバッグ	■	49.5	■	2.2	正常
左側サイド・カーテン・エアバッグ	■	32	■	2.2	正常
右側サイドエアバッグ	■	49.5	■	2.2	正常
左側サイドエアバッグ	■	32	■	2.2	正常

結果： G-センサー感度

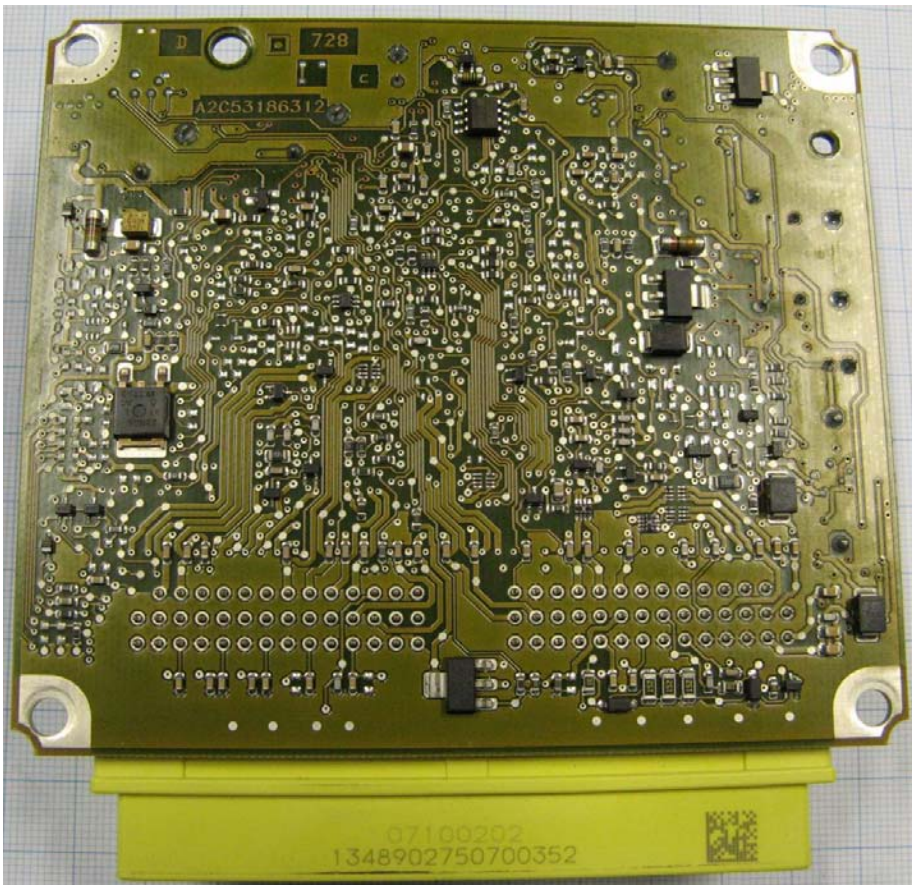
ユニット・センサー名	センサー感度		センサーオフセット		判定
	規格	測定データ	規格	測定データ	
SRSユニット X方向	衝撃試験波形の ■ %	-4.73 %	軸に対して ■ 度	-1 度	正常
SRSユニット Y方向	衝撃試験波形の ■ %	0.51 %	軸に対して ■ 度	±0 度	正常
サイド・インパクト・ センサー 1	衝撃試験波形の ■ %	-3.62 %	軸に対して ■ 度	±0 度	正常
サイド・インパクト・ センサー 2	衝撃試験波形の ■ %	-2.51 %	軸に対して ■ 度	±0 度	正常
サテライト・セーフィング・ センサー	衝撃試験波形の ■ %	-2.24 %	軸に対して ■ 度	±0 度	正常

基板写真

表



裏



添付資料 改定履歴

番号	日付	改定内容
初版	2008/05/29	初版発行
1	2008/06/02	適切な対策へ設変番号を追記、埼玉製作所切替え予定日を更新
2	2008/06/18	適切な対策の切替え予定日削除、解析レポート 誤字訂正
3		
4		
5		
6		
7		
8		

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Supplier Report

Q8-24_MV20080416135749

Conti Analysis Report

English_REDACTED

[Analysis report]

Title	Side-curtain SRS and side SRS deploy when closing door (QAH2552)
Part No.	77960-TA0-L010-M4
Part name	SRS unit
Control No.	MV20080416135749

9		4	
8		3	
7		2	
6		1	2008/06/18
5		1st edition	2008/06/06
Revised	Date	Revised	Date

CSC_08_0106_H08050039_A080618		June 18, 2008	
Department: Continental Automotive Japan Chassis & Safety Passive Safety & ADAS Quality Assurance			
Approved by	Checked by	Issued by	

Occurrence information (Symptom, No. of occurrences, Treatment)

- Title: Side-curtain SRS and side SRS deploy when closing door (QAH2552)
- Model: CP2 / 08M ACCORD
- Part No.: 77960-TA0-L010-M4
- Part production date: December 4, 2007
- Serial No. of the part: C0FD01EM53%
- VIN: JHMCP268280
- Mileage: 1,948 Mile
- Vehicle production date: January 10, 2008
- Vehicle registration date: February 18, 2008
- Occurrence date: March 24, 2008
- Location: U.S.A.
- Occurrence situation: When the customer closed a door, R-side side-curtain airbag deployed.
* North America: 9 cases (HAM unit: 6 cases, Css unit: 3 cases)
- HONDA AQAO analysis results [SRS unit]
Appearance check results
(1) Abnormality such as scratch or deformation etc. is not found on appearance.
(2) Abnormality such as connector terminal bend or contaminant attachment etc. is not confirmed.
Operation check results
(1) Any operational failures are not recorded.
(2) There are records of R-side side-airbag and curtain airbag deployments.

Comprehension of facts (Failed parts analysis, Factor analysis, Product quality)

[Failed parts analysis results (Analyzed in Regensburg in Germany)]

[Appearance check]
SRS unit appearance check
Abnormality such as external damages or deformations etc. is not confirmed.
Abnormality such as connector terminal bend or contaminant attachment etc. is not confirmed.
Side impact sensor and satellite safing sensor appearance check
Abnormality such as scratch or rust etc. is not confirmed.
Abnormality such as connector terminal bend or contaminant attachment etc. is not confirmed.
(Refer to attachments.)
[SRS unit records check]
Records in memory

x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	xA	xB	xC	xD	xE	xF
0x	00	00	00	00	00	00	00	00	00	00	00	00	00	AA	4A

L-side G trigger recorded: R-side curtain-airbag deployment recorded:

Failure record (Fault memory)
Any failures are not recorded in the fault memory.
Crash record (Crash memory)
R-side curtain airbag deployment is recorded.
L-side G trigger is recorded.
[Electrical function verification]
Function verification at each voltage and temperature
SRS unit and each sensor are confirmed to operate normally at each voltage and each temperature.
* Normal condition: Warning lamp shall turn off, and DTC shall not be stored.

Temperature	Voltage	Function test result		
		SIS-1	SIS-2	SSS
Low temp -30°C	10.5V	Normal	Normal	Normal
	13.5V	Normal	Normal	Normal
	15.5V	Normal	Normal	Normal
Normal temp	10.5V	Normal	Normal	Normal
	13.5V	Normal	Normal	Normal
	15.5V	Normal	Normal	Normal
High temp +80°C	10.5V	Normal	Normal	Normal
	13.5V	Normal	Normal	Normal
	15.5V	Normal	Normal	Normal

G sensor sensitivity verification using a shaker (thrusting device)

Any abnormalities are not confirmed in crash recording function, ignition abilities (ignition timing, ignition ON time) and G sensor sensitivity.
(Refer to attachments.)
Results: Ignition timing/Ignition ON duration

Test condition	Seat position sensor (NOT NEAR)			
	Ignition timing		Ignition ON duration	
	Spec	Result	Spec	Result
R-side airbag - 1st	Unit [ms]	56.7	Unit [ms]	2.2
L-side airbag - 1st	Unit [ms]	56.7	Unit [ms]	2.2
R-side airbag - 2nd	Unit [ms]	96.8	Unit [ms]	2.1
L-side airbag - 2nd	Unit [ms]	96.8	Unit [ms]	2.1
R-side retractor pre-tensioner	Unit [ms]	49.7	Unit [ms]	2.2
L-side retractor pre-tensioner	Unit [ms]	31.7	Unit [ms]	2.1
R-side side-curtain airbag	Unit [ms]	49.7	Unit [ms]	2.2
L-side side-curtain airbag	Unit [ms]	31.7	Unit [ms]	2.1
R-side side-airbag	Unit [ms]	49.7	Unit [ms]	2.1
L-side side-airbag	Unit [ms]	31.7	Unit [ms]	2.1

Results: G sensor sensitivity

Unit name, Sensor name	Sensor sensitivity		Sensor offset	
	Spec	Result	Spec	Result
SRS unit X direction	Impact testing waveform	-3.12 %	On sensing axis	±0 digits
SRS unit Y direction	Impact testing waveform	0.05 %	On sensing axis	±0 digits
Side impact sensor 1	Impact testing waveform	-3.05 %	On sensing axis	±0 digits
Side impact sensor 2	Impact testing waveform	-1.18 %	On sensing axis	±0 digits
Satellite safing sensor	Impact testing waveform	0.61 %	On sensing axis	±0 digits

Cause identification (Occurrence mechanism, Recreation testing, Why-Why analysis)

We checked data recorded in the SRS unit. From the data, we have determined that, The level of sensed acceleration by door closing exceeded high-speed side crash judgment level, thus, the SRS unit judged to deploy the side-curtain airbag.

Countermeasure (Countermeasure contents, Countermeasure effectiveness, PPA)

Change threshold of SRS unit side impact by design change
(Design change No.: C48-2-1702 Issued on April 23, 2008)

Countermeasure effectiveness confirmation



Why-Why analysis

Step	1	2	3	4	5
Content	Side-curtain airbag deployed when the customer closed a door.	A-The level of sensed acceleration by door closing exceeded high-speed side crash judgment level, thus, the SRS unit judged to deploy the side-curtain airbag.	Occurrence		
			Outflow		

Feedback



Visual check results

1. SRS unit

Unit TOP view



Bottom view



Connector



2. Side impact sensor

シリアルNo. G0WWOLVUZP0



シリアルNo. G0WWOLVW4\$0



3. Satellite safing sensor

シリアルNo. L0ZS04GW9G0

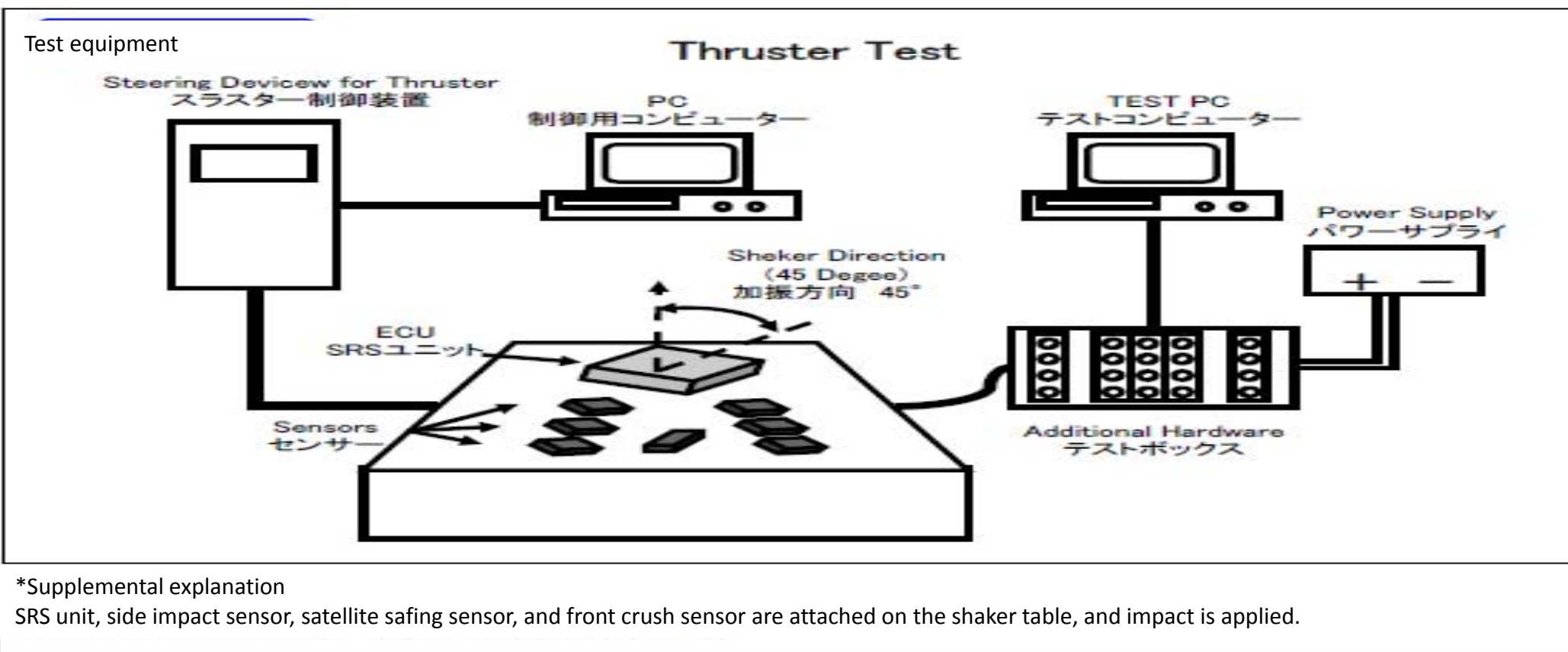
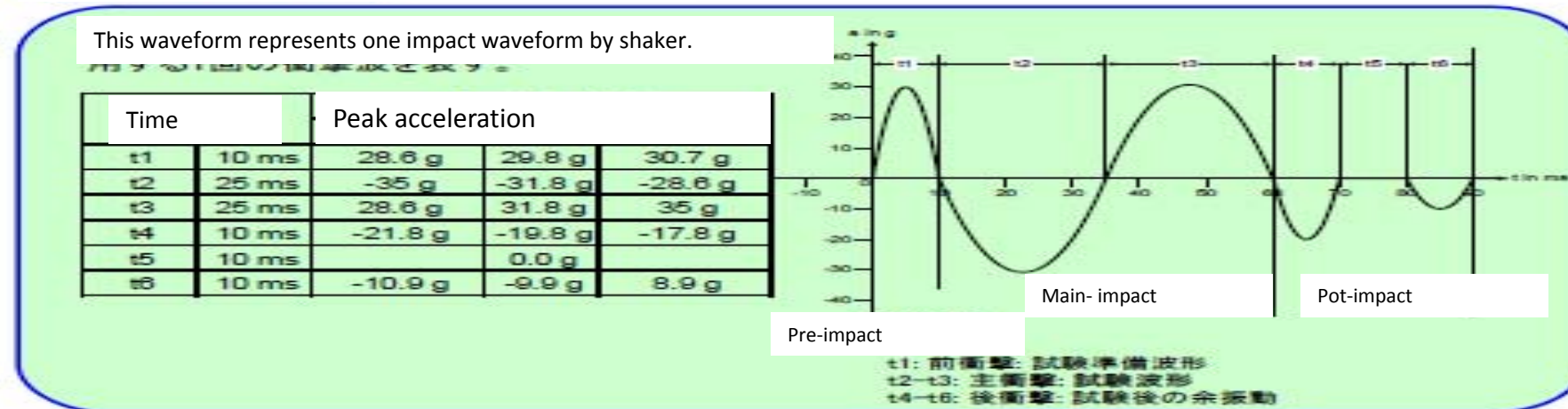


Shaker test

Method

Market returned parts are attached to shaker equipment at 45 degrees against the X, and Y axis. Then the following waveform is applied. Impact is applied once to confirm sensitivity of X, and Y axis.

Impact test waveforms



Shaker test results

Ignition timing/ignition on duration						
Test conditions		seat position sensor - NOT NEAR				Judgment
Items	Ignition timing		Ignition ON duration			
	Spec	Measuring data	Spec	Measuring data		
	単位[ms]	単位[ms]	単位[ms]	単位[ms]		
R side airbag 1st stage		56.7		2.2	Normal	
L side airbag 1st stage		56.7		2.2	Normal	
R side airbag 2nd stage		96.8		2.1	Normal	
L side airbag 2nd stage		96.8		2.1	Normal	
R side retractor pretensioner		49.7		2.2	Normal	
L side retractor pretensioner		31.7		2.1	Normal	
R side curtain airbag		49.7		2.2	Normal	
L side curtain airbag		31.7		2.1	Normal	
R side airbag		49.7		2.1	Normal	
L side airbag		31.7		2.1	Normal	

seat position sensor - NEAR						
Test conditions		Ignition timing		Ignition ON duration		Judgment
Items	Spec	Measuring data	Spec	Measuring data		
	単位[ms]	単位[ms]	単位[ms]	単位[ms]		
R side airbag 1st line		56.5		2.2	Normal	
L side airbag 1st line		56.5		2.2	Normal	
R side airbag 2nd line		96.6		2.1	Normal	
L side airbag 2nd line		156.5		2.2	Normal	
R side retractor pretensioner		49.5		2.2	Normal	
L side retractor pretensioner		32		2.1	Normal	
R side curtain airbag		49.5		2.2	Normal	
L side curtain airbag		32		2.1	Normal	
R side airbag		49.5		2.1	Normal	
L side airbag		32		2.1	Normal	

Buckle switch for detecting fastening seat belt - OFF						
Test conditions		Ignition timing		Ignition ON duration		Judgment
Items	Spec	Measuring data	Spec	Measuring data		
	単位[ms]	単位[ms]	単位[ms]	単位[ms]		
R side airbag 1st line		56.9		2.2	Normal	
L side airbag 1st line		56.9		2.2	Normal	
R side airbag 2nd line		97		2.2	Normal	
L side airbag 2nd line		97		2.2	Normal	
R side retractor pretensioner		No ignition		No ignition	Normal	
L side retractor pretensioner		No ignition		No ignition	Normal	
R side curtain airbag		49.9		2.2	Normal	
L side curtain airbag		31.9		2.2	Normal	
R side airbag		49.9		2.2	Normal	
L side airbag		31.9		2.2	Normal	

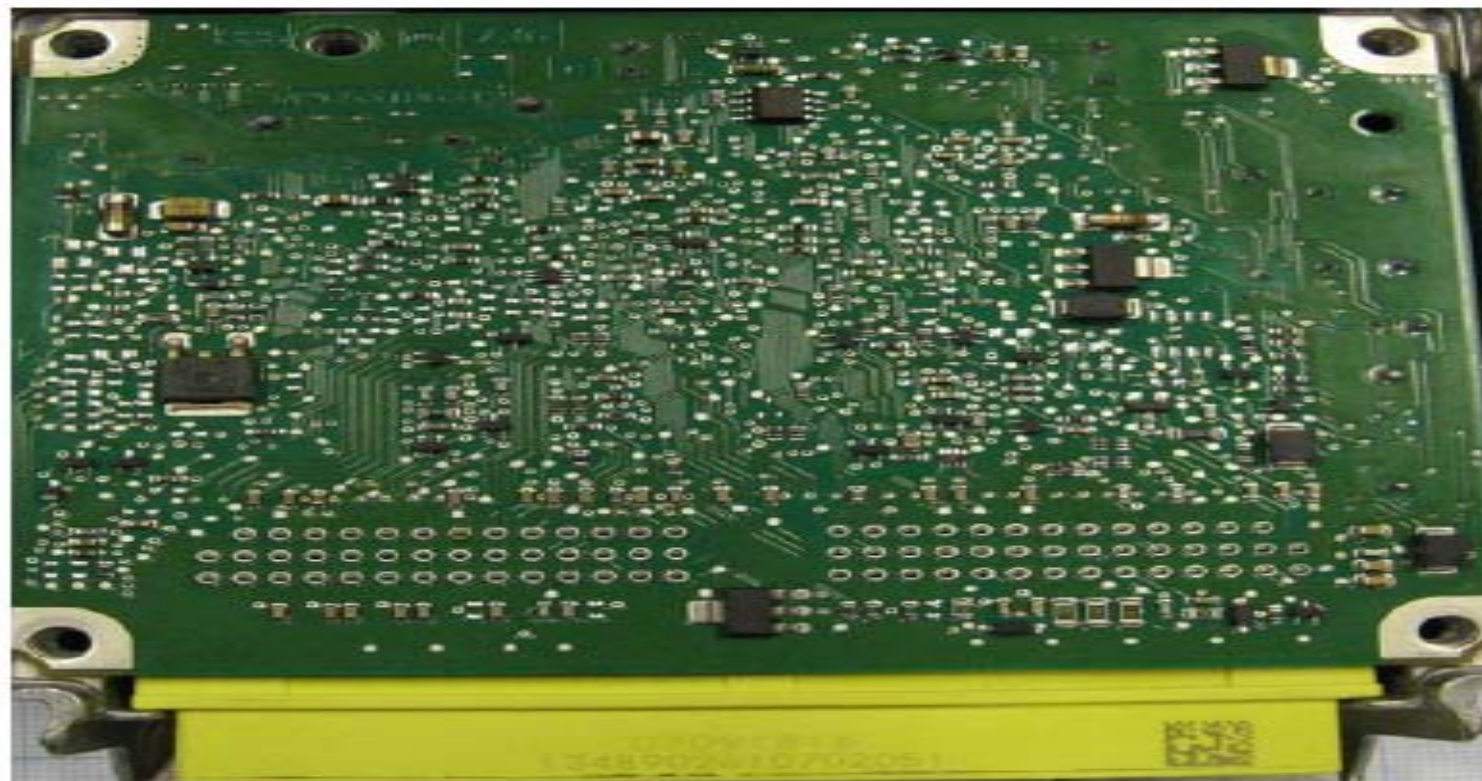
Result: G sensor sensitivity					
Unit name, sensor name	Sensor sensitivity		Sensor offset		Judgment
	Spec	Measuring data	Spec (digit)	Measuring data(digit)	
SRS unit X direction	To impact waveform	-3.12 %	To axis	±0 度	Normal
SRS unit Y direction	To impact waveform	0.05 %	To impact waveform	±0 度	Normal
Side impact sensor 1	To impact waveform	-3.05 %	To impact waveform	±0 度	Normal
Side impact sensor 2	To impact waveform	-1.18 %	To impact waveform	±0 度	Normal
Satellite seating sensor	To impact waveform	0.61 %	To impact waveform	±0 度	Normal

Board

TOP



BOTTOM



Attachment : revision history

No.	Date	Contents
初版	2008/06/06	Initial version issued
1	2008/06/18	C/M parts application planned date deleted.
2		
3		
4		
5		
6		
7		
8		

EA14-004

HONDA

11/10/2014

QUESTION 8

Q8-2_MV200504161357749

Supplier Report

Q8-24_MV20080416135749

Conti Analysis

Report_Japanese_REDACTED

テーマ	ドア開めた際 サイドカーテンSRSとサイドSRS展開<QAH2552>
部番	77960-TA0-L010-M4
部品名	SRSユニット
管理No	MV20080416135749

解析記録

〔解析レポート〕

9		4	
8		3	
7		2	
6		1	2008/06/18
5		初版	2008/06/06
改定	日付	改定	日付

作成	CSC_08_0106_H08050039_A080618 2008年6月18日 コンティネンタル・オートモーティブ・ジャパン株式会社		
成	シャシー&セーフティー パッシブセーフティー&ADAS		
部	品質保証	承認	確認
門		作成	

発生状況 (現象・訴え内容・発生件数・処置内容)

1 件名	: ドア開めた際 サイドカーテンSRSとサイドSRS展開<QAH2552>
2 機種	: CP2 / 08M ACCORD
3 品番	: 77960-TA0-L010-M4
4 部品製造日	: 2007年12月04日
5 部品シリアル番号	: C0FD01EM53%
6 フレーム番号	: JHMCP268280
7 走行距離	: 1,948 Mile
8 車両製造日	: 2008年01月10日
9 車両登録日	: 2008年02月18日
10 不具合発生日	: 2008年03月24日
11 発生場所	: アメリカ合衆国
12 発生状況	車両に娘が乗り込み夫がドアを開めたところ、R側のカーテンエアバッグが展開した。 ※北米で9件発生。(HAM製: 6件 C _{ss} 製: 3件)
13 本田技研AQAO様での確認結果	【SRSユニット】 外観確認結果 ①SRSユニットの外観に傷や変形等の異常無し。 ②コネクタの端子曲がり、異物の付着等の異常無し。 動作確認結果 ①現在及び過去故障の記録無し。 ②R側カーテンエアバッグの展開履歴あり。

事実の把握 (部品の確認結果・要因分析・生産品の品質状況)

【現品の確認結果(弊社ドイツ レーゲンスブルグにて解析)】

【外観確認】
SRSユニットの外観確認
外観に傷や変形等の異常は無し。
コネクタ端子曲がり、異物の付着等の異常は無し。
サイドインパクトセンサー、サテライトセーフィングセンサーの外観確認
外観に、傷、サビ等の異常無し。
コネクタ端子曲がり、異物の付着等の異常は無し。
(添付資料の外観確認参照)

【SRSユニット記録内容確認】
メモリー内部の記録内容

x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	xA	xB	xC	xD	xE	xF
0x:	00	00	00	00	00	0C	00	00	00	00	00	00	00	AA	4A
1x:	[Redacted]														
8x:	[Redacted]														

←故障記録無し

左側Gトリガ履歴 右側カーテンエアバッグの展開履歴

故障記録(フォルトメモリー)
フォルトメモリーには、故障の記録はありませんでした。
クラッシュ記録(クラッシュメモリー)
右側カーテンエアバッグの展開履歴が記録されていました。
左側Gトリガ履歴が記録されていました。

【電氣的機能確認】
各電圧・各温度での機能確認
SRSユニット、各センサーを電圧、温度それぞれ3条件下にて正常動作する事を確認した。
※正常: ワーニングランプが消灯し、故障コードが記録されない事。

温度	電圧	機能検査結果			温度	電圧	機能検査結果		
		SRSユニット	SIS-1	SIS-2			SSS		
低温 -30°C	10.5V	正常			低温 -40°C	7.7V	正常	正常	正常
	13.5V	正常				9V	正常	正常	正常
	15.5V	正常				12V	正常	正常	正常
常温	10.5V	正常			常温	7.7V	正常	正常	正常
	13.5V	正常				9V	正常	正常	正常
	15.5V	正常				12V	正常	正常	正常
高温 +80°C	10.5V	正常			高温 +85°C	7.7V	正常	正常	正常
	13.5V	正常				9V	正常	正常	正常
	15.5V	正常				12V	正常	正常	正常

シェーカー(加振機)でのGセンサー感度確認
シェーカーを用いて確認した結果、クラッシュ記録の書込み、点火能力(点火タイミング、点火ON時間)、Gセンサーの感度に異常はありませんでした。
(添付資料のシェーカー試験参照)
結果: 点火タイミング / 点火ON時間

項目	シート・ポジション・センサー非近接			
	点火タイミング		点火ON時間	
	規格	測定データ	規格	測定データ
右側エアバッグ1段目	[Redacted]	56.7	[Redacted]	2.2
左側エアバッグ1段目	[Redacted]	56.7	[Redacted]	2.2
右側エアバッグ2段目	[Redacted]	96.8	[Redacted]	2.1
左側エアバッグ2段目	[Redacted]	96.8	[Redacted]	2.1
右側リトラクタ・プリテンション	[Redacted]	49.7	[Redacted]	2.2
左側リトラクタ・プリテンション	[Redacted]	31.7	[Redacted]	2.1
右側サイド・カーテン・エアバッグ	[Redacted]	49.7	[Redacted]	2.2
左側サイド・カーテン・エアバッグ	[Redacted]	31.7	[Redacted]	2.1
右側サイドエアバッグ	[Redacted]	49.7	[Redacted]	2.1
左側サイドエアバッグ	[Redacted]	31.7	[Redacted]	2.1

結果: G-センサー感度

ユニット・センサー名	センサー感度		センサーオフセット	
	規格	測定データ	規格	測定データ
SRSユニット X方向	衝撃試験波形の [Redacted] %	-3.12 %	軸に対して [Redacted] 度	±0 度
SRSユニット Y方向	衝撃試験波形の [Redacted] %	0.05 %	軸に対して [Redacted] 度	±0 度
サイド・インパクト・センサー 1	衝撃試験波形の [Redacted] %	-3.05 %	軸に対して [Redacted] 度	±0 度
サイド・インパクト・センサー 2	衝撃試験波形の [Redacted] %	-1.18 %	軸に対して [Redacted] 度	±0 度
サテライト・セーフィング・センサー	衝撃試験波形の [Redacted] %	0.61 %	軸に対して [Redacted] 度	±0 度

【ユニット内部の目視確認】
ユニット内部に、異物の付着や半田不良等の異常はみられませんでした。
(添付資料の基板写真参照)

【結論】
上記の試験の結果、本ユニットに異常はなく正常に動作していたものと判断いたします。
故障記録は記録されていませんでした。

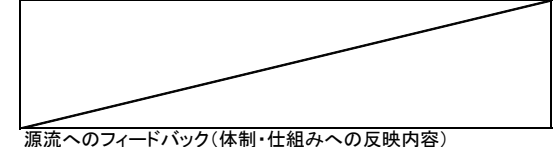
原因の究明 (発生のメカニズム・再現テスト・ナゼ・ナゼ・分析)

SRSユニットに記録されているデータより確認したところ、ドア閉によって検出された加速度が高速側突の展開判定閾値を超えていたため、SRSユニットはサイドカーテンエアバッグを展開させる判定をしたものと判断いたします。

適切な対策 (対策内容・効果予測・PPA)

設定によりSRSユニットの側突の閾値変更
(設定番号: C48-2-1702 2008年4月23日発行済み)

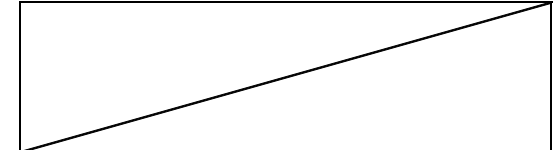
対策効果の確認 (効果実績)



ナゼ・ナゼ分析

ステップ	1	2	3	4	5
内容	ドア開めた際 サイドカーテンエアバッグが展開した。	ドア閉によって検出された加速度が高速側突閾値を超えていたため展開にいたったものと思われる。	発生		
			流出		

源流へのフィードバック (体制・仕組みへの反映内容)



外観確認結果

1. SRSユニット

ユニット表



ユニット裏



コネクター



2. サイドインパクトセンサー

シリアルNo. G0WWOLVUZP0



シリアルNo. G0WWOLVW4\$0



3. サテライトセーフィングセンサー

シリアルNo. L0ZS04GW9G0



シェーカー試験内容

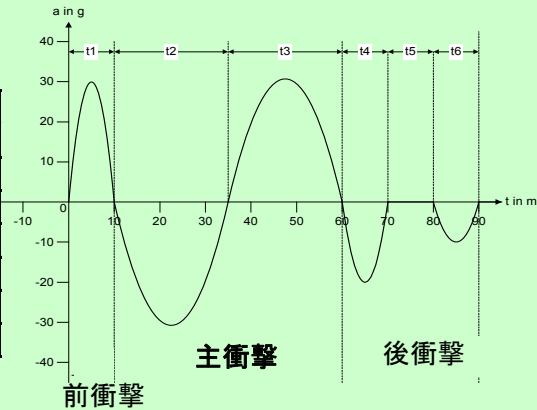
試験方法

シェーカー試験機に、現品(SRSユニット)をX、Y軸方向に対して45°に取り付け、下記の試験波形を加えX、Y両軸方向の感度を確認する為に1回の衝撃を加える。

衝撃試験波形

本波形はシェーカーによる衝撃試験に使用する1回の衝撃波を表す。

時間	ピーク加速度			
	min	nom	max	
t1	10 ms	28.6 g	29.8 g	30.7 g
t2	25 ms	-35 g	-31.8 g	-28.6 g
t3	25 ms	28.6 g	31.8 g	35 g
t4	10 ms	-21.8 g	-19.8 g	-17.8 g
t5	10 ms		0.0 g	
t6	10 ms	-10.9 g	-9.9 g	8.9 g



t1: 前衝撃: 試験準備波形
t2-t3: 主衝撃: 試験波形
t4-t6: 後衝撃: 試験後の余振動

試験設備

Thruster Test

Steering Device for Thruster
スラスター制御装置

PC
制御用コンピューター

TEST PC
テストコンピューター

Power Supply
パワーサプライ

Shaker Direction
(45 Degree)
加振方向 45°

ECU
SRSユニット

Sensors
センサー

Additional Hardware
テストボックス

* 補足説明

シェーカー試験台上にはSRSユニット、サイド・インパクト・センサー、サテライト・セーフイング・センサー、フロント・クラッシュ・センサーが設置され加振される。

シエーカー試験結果

結果： 点火タイミング / 点火ON時間

試験条件	シート・ポジション・センサー非近接				判定
	点火タイミング		点火ON時間		
	規格	測定データ	規格	測定データ	
項目	単位[ms]	単位[ms]	単位[ms]	単位[ms]	
右側エアバッグ1段目	■	56.7	■	2.2	正常
左側エアバッグ1段目	■	56.7	■	2.2	正常
右側エアバッグ2段目	■	96.8	■	2.1	正常
左側エアバッグ2段目	■	96.8	■	2.1	正常
右側リトラクタ・プリテンショナ	■	49.7	■	2.2	正常
左側リトラクタ・プリテンショナ	■	31.7	■	2.1	正常
右側サイド・カーテン・エアバッグ	■	49.7	■	2.2	正常
左側サイド・カーテン・エアバッグ	■	31.7	■	2.1	正常
右側サイドエアバッグ	■	49.7	■	2.1	正常
左側サイドエアバッグ	■	31.7	■	2.1	正常

試験条件	シート・ポジション・センサー近接				判定
	点火タイミング		点火ON時間		
	規格	測定データ	規格	測定データ	
項目	単位[ms]	単位[ms]	単位[ms]	単位[ms]	
右側エアバッグ1段目	■	56.5	■	2.2	正常
左側エアバッグ1段目	■	56.5	■	2.2	正常
右側エアバッグ2段目	■	96.6	■	2.1	正常
左側エアバッグ2段目	■	156.5	■	2.2	正常
右側リトラクタ・プリテンショナ	■	49.5	■	2.2	正常
左側リトラクタ・プリテンショナ	■	32	■	2.1	正常
右側サイド・カーテン・エアバッグ	■	49.5	■	2.2	正常
左側サイド・カーテン・エアバッグ	■	32	■	2.1	正常
右側サイドエアバッグ	■	49.5	■	2.1	正常
左側サイドエアバッグ	■	32	■	2.1	正常

試験条件	シートベルト装着検知用バックルスイッチ・オフ				判定
	点火タイミング		点火ON時間		
	規格	測定データ	規格	測定データ	
項目	単位[ms]	単位[ms]	単位[ms]	単位[ms]	
右側エアバッグ1段目	■	56.9	■	2.2	正常
左側エアバッグ1段目	■	56.9	■	2.2	正常
右側エアバッグ2段目	■	97	■	2.2	正常
左側エアバッグ2段目	■	97	■	2.2	正常
右側リトラクタ・プリテンショナ	■	点火なし	■	点火なし	正常
左側リトラクタ・プリテンショナ	■	点火なし	■	点火なし	正常
右側サイド・カーテン・エアバッグ	■	49.9	■	2.2	正常
左側サイド・カーテン・エアバッグ	■	31.9	■	2.2	正常
右側サイドエアバッグ	■	49.9	■	2.2	正常
左側サイドエアバッグ	■	31.9	■	2.2	正常

結果： G-センサー感度

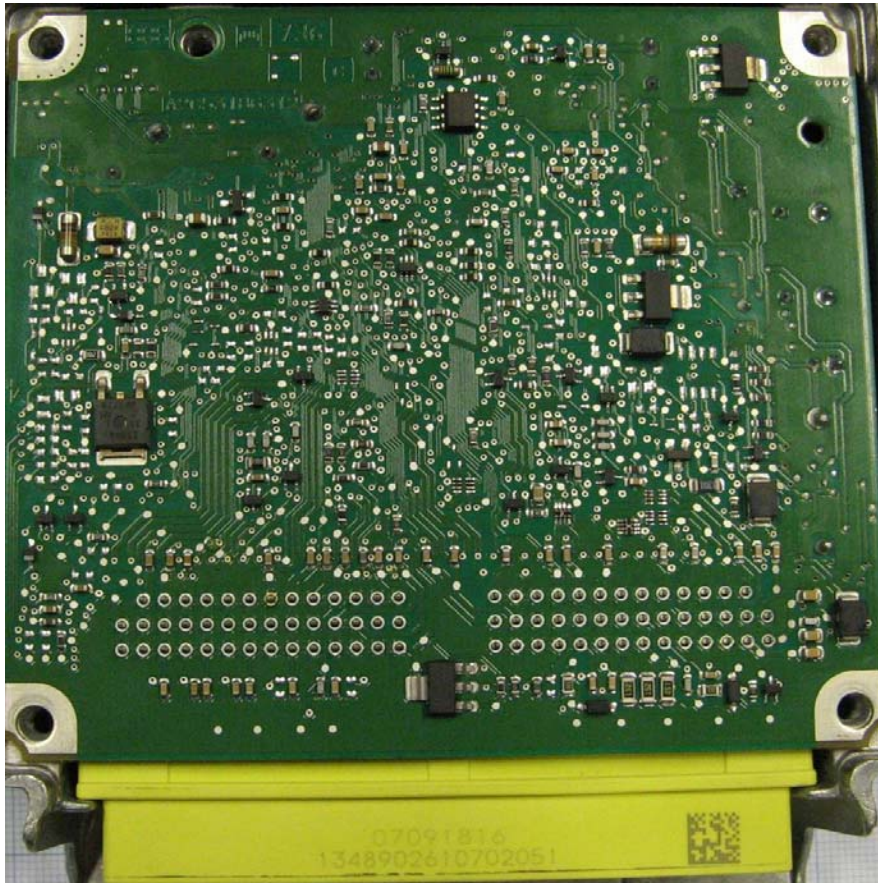
ユニット・センサー名	センサー感度		センサーオフセット		判定
	規格	測定データ	規格	測定データ	
SRSユニット X方向	衝撃試験波形の ■ %	-3.12 %	軸に対して ■ 度	±0 度	正常
SRSユニット Y方向	衝撃試験波形の ■ %	0.05 %	軸に対して ■ 度	±0 度	正常
サイド・インパクト・ センサー 1	衝撃試験波形の ■ %	-3.05 %	軸に対して ■ 度	±0 度	正常
サイド・インパクト・ センサー 2	衝撃試験波形の ■ %	-1.18 %	軸に対して ■ 度	±0 度	正常
サテライト・セーフィング・ センサー	衝撃試験波形の ■ %	0.61 %	軸に対して ■ 度	±0 度	正常

基板写真

表



裏



添付資料 改定履歴

番号	日付	改定内容
初版	2008/06/06	初版発行
1	2008/06/18	適切な対策の切替え予定日削除
2		
3		
4		
5		
6		
7		
8		

EA14-004

HONDA

11/10/2014

QUESTION 9

08ACMOU-01

TEST REPORT

TEST REPORT NO. : 08ACMOU-01

SIDE IMPACT PROTECTION

LABORATORY :

Name : Certification & Regulation Compliance Division, Tochigi Office, Honda Motor Co., Ltd.
Address : 1-10-1 Shin-Sayama, Sayama City, Saitama Prefecture, Japan

DATE OF TEST : May 9, 2007 to May 15, 2007

TEST VEHICLE IDENTIFICATION :

Model Year : 2008
Make : HONDA
Model : ACCORD SEDAN
Transmission : 5A/T
Vehicle Identification Number : JHMCP26748C [REDACTED]

TEST DESCRIPTION :

STATIC TEST

Test Type: Seat-mounted:
Side-mounted:
Roof-rail-mounted:

Side Air Bag System:

	Front Row	Second Row	Third Row
Seat-mounted:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Side-mounted:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roof-rail-mounted:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Symmetrical:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DYNAMIC TEST

In Accordance With: FMVSS No.214 Report No.: [REDACTED]
 ECE No.95 Report No.: [REDACTED]

TEST RESULT :

PASS

FAIL

SIGNATURE : Kei Misonou

DATE : Aug. 3, 2007

NAME : Kei Misonou

TITLE : Manager of Vehicle Testing Department, Sayama Laboratory

ADDRESS : 1-10-1 Shin-Sayama, Sayama City, Saitama Prefecture, Japan

SIDE IMPACT PROTECTION

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SIDE IMPACT PROTECTION

TEST VEHICLE SPECIFICATIONS AND CONDITIONS

HYBRID III 3-YEAR-OLD CHILD DUMMY

<input checked="" type="checkbox"/> FRONT ROW		FORWARD FACING ON BOOSTER SEAT	REARWARD FACING	OUTBOARD FACING	INBOARD FACING	LYING ON SEAT, HEAD ON ARMREST	LYING ON SEAT
AIR BAG SELECTION							
<input checked="" type="checkbox"/>	Seat-Mounted	X*1	X			X	X
	Side-Mounted			*1 The side air bag is deactivated through conductive cloth fitted on the dummy whose neck is modified for easy bending, thus simulating real human being, but the side curtain air bag remains activated and contacts the head of the dummy.			
	Roof-Rail-Mounted						
	Dummy ID Number	3391	3391			3391	3391
	Temperature (°C)	21.0	21.3			21.5	21.2
	Humidity (%)	56	30			47	35
	Soak Time (hours)	4	4	4	4		
Seat	Seat Slide	14 detents rearward from the first locking detent	9 detents rearward from the first locking detent			24 detents rearward from the first locking detent	24 detents rearward from the first locking detent
	Seat Height	Fixed					
	Seat Back	4 detents rearward from the first locking detent					

<input type="checkbox"/> SECOND ROW		FORWARD FACING ON BOOSTER SEAT	REARWARD FACING	OUTBOARD FACING	INBOARD FACING	LYING ON SEAT, HEAD ON ARMREST	LYING ON SEAT
AIR BAG SELECTION							
	Seat-Mounted						
	Side-Mounted						
	Roof-Rail-Mounted						
	Dummy ID Number						
	Temperature (°C)						
	Humidity (%)						
	Soak Time (hours)						
Seat	Seat Slide						
	Seat Height						
	Seat Back						

SIDE IMPACT PROTECTION

TEST VEHICLE SPECIFICATIONS AND CONDITIONS

HYBRID III 3-YEAR-OLD CHILD DUMMY

<input type="checkbox"/> THIRD ROW		FORWARD FACING ON BOOSTER SEAT	REARWARD FACING	OUTBOARD FACING	INBOARD FACING	LYING ON SEAT, HEAD ON ARMREST	LYING ON SEAT
AIR BAG SELECTION							
	Seat-Mounted						
	Side-Mounted						
	Roof-Rail-Mounted						
Dummy ID Number							
Temperature (°C)							
Humidity (%)							
Soak Time (hours)							
Seat	Seat Slide						
	Seat Height						
	Seat Back						

SIDE IMPACT PROTECTION

TEST VEHICLE SPECIFICATIONS AND CONDITIONS

HYBRID III 6-YEAR-OLD CHILD DUMMY

<input checked="" type="checkbox"/> FRONT ROW		FORWARD FACING ON BOOSTER SEAT	INBOARD FACING ON BOOSTER SEAT
AIR BAG SELECTION			
<input checked="" type="checkbox"/>	Seat-Mounted	X*1	*1 The side air bag is deactivated through conductive cloth fitted on the dummy whose neck is modified for easy bending, thus simulating real human being, but the side curtain air bag remains activated and contacts the head of the dummy.
	Side-Mounted		
	Roof-Rail-Mounted		
Dummy ID Number		3691	
Temperature (°C)		21.8	
Humidity (%)		47	
Soak Time (hours)		4	
Seat	Seat Slide	13 detents rearward from the first locking detent	
	Seat Height	Fixed	
	Seat Back	4 detents rearward from the first locking detent	

<input type="checkbox"/> SECOND ROW		FORWARD FACING ON BOOSTER SEAT	INBOARD FACING ON BOOSTER SEAT
AIR BAG SELECTION			
	Seat-Mounted		
	Side-Mounted		
	Roof-Rail-Mounted		
Dummy ID Number			
Temperature (°C)			
Humidity (%)			
Soak Time (hours)			
Seat	Seat Slide		
	Seat Height		
	Seat Back		

SIDE IMPACT PROTECTION

TEST VEHICLE SPECIFICATIONS AND CONDITIONS

HYBRID-III 6-YEAR-OLD CHILD DUMMY

<input type="checkbox"/> THIRD ROW		FORWARD FACING ON BOOSTER SEAT	INBOARD FACING ON BOOSTER SEAT
AIR BAG SELECTION			
	Seat-Mounted		
	Side-Mounted		
	Roof-Rail-Mounted		
Dummy ID Number			
Temperature (°C)			
Humidity (%)			
Soak Time (hours)			
Seat	Seat Slide		
	Seat Height		
	Seat Back		

SIDE IMPACT PROTECTION

TEST VEHICLE SPECIFICATIONS AND CONDITIONS

SID-IIs

<input checked="" type="checkbox"/> FRONT ROW		INBOARD FACING	FORWARD FACING	FORWARD FACING ON RAISED SEAT	INBOARD FACING ON RAISED SEAT
AIR BAG SELECTION					
<input checked="" type="checkbox"/>	Seat-Mounted	X			
	Side-Mounted				
	Roof-Rail-Mounted				
Dummy ID Number		6991			
Temperature (°C)		21.0			
Humidity (%)		50			
Soak Time (hours)		4			
Seat	Seat Slide	24 detents rearward from the first locking detent			
	Seat Height	Fixed			
	Seat Back	4 detents rearward from the first locking detent			

<input type="checkbox"/> SECOND ROW		INBOARD FACING	FORWARD FACING	FORWARD FACING ON RAISED SEAT	INBOARD FACING ON RAISED SEAT
AIR BAG SELECTION					
	Seat-Mounted				
	Side-Mounted				
	Roof-Rail-Mounted				
Dummy ID Number					
Temperature (°C)					
Humidity (%)					
Soak Time (hours)					
Seat	Seat Slide				
	Seat Height				
	Seat Back				

SIDE IMPACT PROTECTION

TEST VEHICLE SPECIFICATIONS AND CONDITIONS

SID-IIs

<input type="checkbox"/> THIRD ROW		INBOARD FACING	FORWARD FACING	FORWARD FACING ON RAISED SEAT	INBOARD FACING ON RAISED SEAT
AIR BAG SELECTION					
	Seat-Mounted				
	Side-Mounted				
	Roof-Rail-Mounted				
Dummy ID Number					
Temperature (°C)					
Humidity (%)					
Soak Time (hours)					
Seat	Seat Slide				
	Seat Height				
	Seat Back				

SIDE IMPACT PROTECTION

TEST RESULTS

HYBRID III 3-YEAR-OLD CHILD DUMMY

<input checked="" type="checkbox"/> FRONT ROW		Forward facing on booster seat	Rearward facing	Outboard facing	Inboard facing	Lying on seat, head on armrest	Lying on seat
AIR BAG SELECTION							
<input checked="" type="checkbox"/>	Seat-Mounted	X*1	X	*1 The side air bag is deactivated through conductive cloth fitted on the dummy whose neck is modified for easy bending, thus simulating real human being, but the side curtain air bag remains activated and contacts the head of the dummy.		X	X
	Side-Mounted						
	Roof-Rail-Mounted						
Suppression System		Suppressed	Not Suppressed			Not Suppressed	Not Suppressed
Head	HIC Max 570	0.7	13.9			25.9	33.3
Upper Neck	Nij Max 1.0	0.08	0.53			0.13	0.16
	Tension Max 1130N	14.1	278.9			40.5	101.8
	Compression Max 1380N	164.1	392.5			224.9	136.3
Thorax	Deflection Max 36mm	/	2.6			/	/
	Deflection rate Max 8.0m/s	/	1.20			/	/
Photo No.	Pre Test	1	3			5	7
	Post Test	2	4			6	8

<input type="checkbox"/> SECOND ROW		Forward facing on booster seat	Rearward facing	Outboard facing	Inboard facing	Lying on seat, head on armrest	Lying on seat
AIR BAG SELECTION							
	Seat-Mounted						
	Side-Mounted						
	Roof-Rail-Mounted						

Suppression System							
Head	HIC Max 570						
Upper Neck	Nij Max 1.0						
	Tension Max 1130N						
	Compression Max 1380N						
Thorax	Deflection Max 36mm	/				/	/
	Deflection rate Max 8.0m/s	/				/	/
Photo No.	Pre Test						
	Post Test						

SIDE IMPACT PROTECTION

TEST RESULTS

HYBRID III 3-YEAR-OLD CHILD DUMMY

THIRD ROW		Forward facing on booster seat	Rearward facing	Outboard facing	Inboard facing	Lying on seat, head on armrest	Lying on seat
AIR BAG SELECTION							
	Seat-Mounted						
	Side-Mounted						
	Roof-Rail-Mounted						

Suppression System							
Head	HIC Max 570						
Upper Neck	Nij Max 1.0						
	Tension Max 1130N						
	Compression Max 1380N						
Thorax	Deflection Max 36mm	/			/	/	/
	Deflection rate Max 8.0m/s	/			/	/	/
Photo No.	Pre Test						
	Post Test						

SIDE IMPACT PROTECTION

TEST RESULTS

HYBRID III 6-YEAR-OLD CHILD DUMMY

<input checked="" type="checkbox"/> FRONT ROW		Forward facing on booster seat	Inboard facing on booster seat
AIR BAG SELECTION			
<input checked="" type="checkbox"/>	Seat-Mounted	X*1	*1 The side air bag is deactivated through conductive cloth fitted on the dummy whose neck is modified for easy bending, thus simulating real human being, but the side curtain air bag remains activated and contacts the head of the dummy.
<input type="checkbox"/>	Side-Mounted		
<input type="checkbox"/>	Roof-Rail-Mounted		
Suppression System		Suppressed	
Head	HIC Max 723	0.9	
	Nij Max 1.0	0.15	
Upper Neck	Tension Max 1490N	23.7	
	Compression Max 1820N	261.2	
Photo No.	Pre Test	9	
	Post Test	10	

<input type="checkbox"/> SECOND ROW		Forward facing on booster seat	Inboard facing on booster seat
AIR BAG SELECTION			
<input type="checkbox"/>	Seat-Mounted		
<input type="checkbox"/>	Side-Mounted		
<input type="checkbox"/>	Roof-Rail-Mounted		

Suppression System			
Head	HIC Max 723		
	Nij Max 1.0		
Upper Neck	Tension Max 1490N		
	Compression Max 1820N		
Photo No.	Pre Test		
	Post Test		

SIDE IMPACT PROTECTION

TEST RESULTS

HYBRID III 6-YEAR-OLD CHILD DUMMY

<input type="checkbox"/>	THIRD ROW		
	AIR BAG SELECTION	Forward facing on booster seat	Inboard facing on booster seat
	Seat-Mounted		
	Side-Mounted		
	Roof-Rail-Mounted		

Suppression System			
Head	HIC Max 723		
Upper Neck	Nij Max 1.0		
	Tension Max 1490N		
	Compression Max 1820N		
Photo No.	Pre Test		
	Post Test		

SIDE IMPACT PROTECTION

TEST RESULTS

SID-IIs

<input checked="" type="checkbox"/>	FRONT ROW				
	AIR BAG SELECTION	Inboard Facing	Forward Facing	Forward Facing on Raised Seat	Inboard Facing on Raised Seat
<input checked="" type="checkbox"/>	Seat-Mounted	X			
	Side-Mounted				
	Roof-Rail-Mounted				

Suppression System		Not Suppressed			
Head	HIC Max 779	2.9			
	Nij Max 1.0	0.41			
Upper Neck	Tension Max 2070N	6.7			
	Compression Max 2520N	922.5			
Thorax	Deflection Max 34mm	13.8			
	Deflection rate Max 8.2m/s	2.26			
Photo No.	Pre Test	11			
	Post Test	12			

<input type="checkbox"/>	SECOND ROW				
	AIR BAG SELECTION	Inboard Facing	Forward Facing	Forward Facing on Raised Seat	Inboard Facing on Raised Seat
	Seat-Mounted				
	Side-Mounted				
	Roof-Rail-Mounted				

Suppression System					
Head	HIC Max 779				
	Nij Max 1.0				
Upper Neck	Tension Max 2070N				
	Compression Max 2520N				
Thorax	Deflection Max 34mm				
	Deflection rate Max 8.2m/s				
Photo No.	Pre Test				
	Post Test				

SIDE IMPACT PROTECTION

TEST RESULTS

SID-IIs

THIRD ROW		Inboard Facing	Forward Facing	Forward Facing on Raised Seat	Inboard Facing on Raised Seat
AIR BAG SELECTION					
	Seat-Mounted				
	Side-Mounted				
	Roof-Rail-Mounted				

Suppression System					
Head	HIC Max 779				
Upper Neck	Nij Max 1.0				
	Tension Max 2070N				
	Compression Max 2520N				
Thorax	Deflection Max 34mm			/	/
	Deflection rate Max 8.2m/s			/	/
Photo No.	Pre Test				
	Post Test				

SIDE IMPACT PROTECTION

PHOTOGRAPHS

HYBRID III 3-YEAR-OLD CHILD DUMMY
FORWARD FACING ON BOOSTER SEAT



Photo No.1
Pre-Test

The activation of the suppression system was confirmed by using a dummy with conductive cloth on it, which enables the suppression system to operate in the same manner as by real human beings.

HYBRID III 3-YEAR-OLD CHILD DUMMY
FORWARD FACING ON BOOSTER SEAT

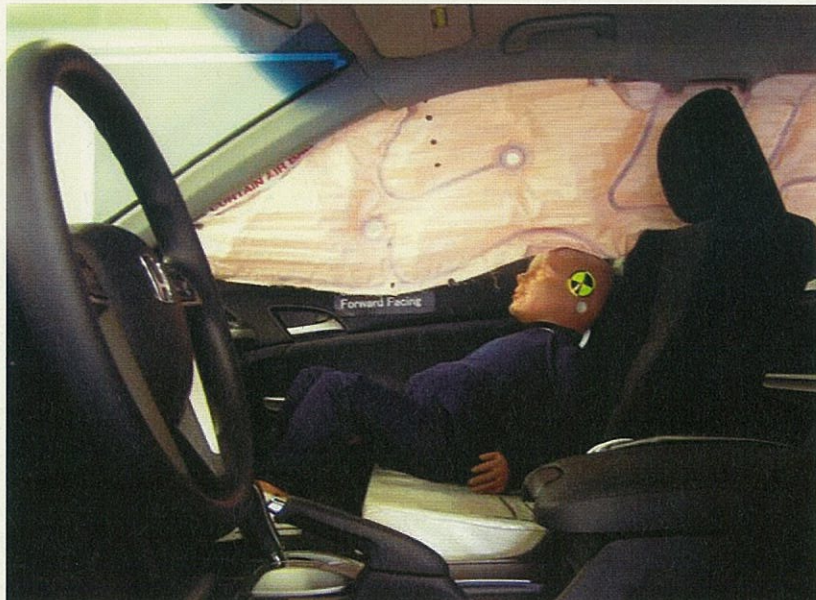


Photo No.2
Post-Test

SIDE IMPACT PROTECTION

PHOTOGRAPHS

HYBRID III 3-YEAR-OLD CHILD DUMMY
REARWARD FACING

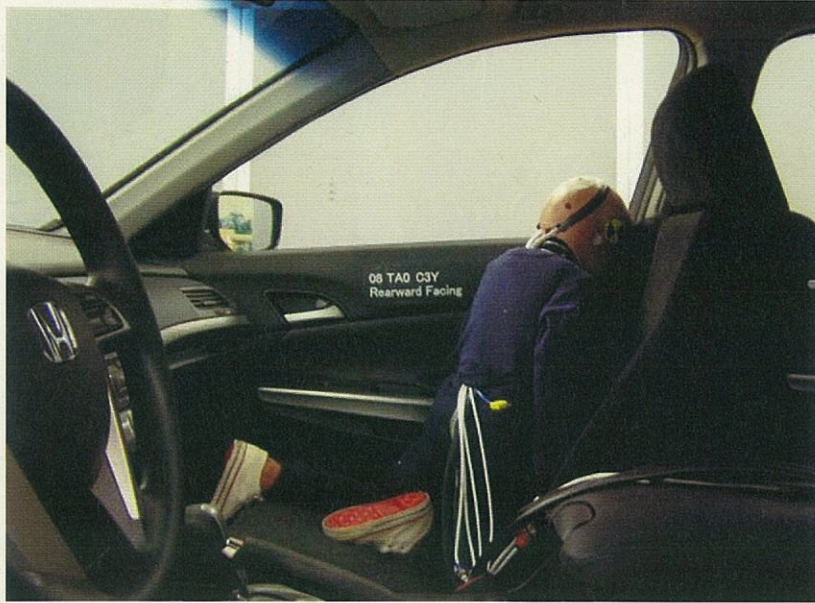


Photo No.3
Pre-Test

HYBRID III 3-YEAR-OLD CHILD DUMMY
REARWARD FACING



Photo No.4
Post-Test

SIDE IMPACT PROTECTION

PHOTOGRAPHS

HYBRID III 3-YEAR-OLD CHILD DUMMY
LYING ON SEAT, HEAD ON ARMREST



Photo No.5
Pre-Test

HYBRID III 3-YEAR-OLD CHILD DUMMY
LYING ON SEAT, HEAD ON ARMREST



Photo No.6
Post-Test

SIDE IMPACT PROTECTION

PHOTOGRAPHS

HYBRID III 3-YEAR-OLD CHILD DUMMY
LYING ON SEAT

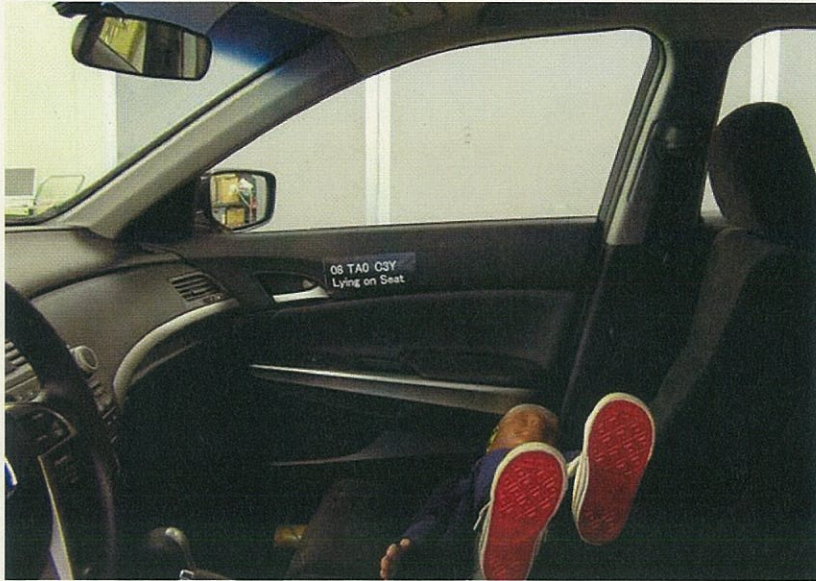


Photo No.7
Pre-Test

HYBRID III 3-YEAR-OLD CHILD DUMMY
LYING ON SEAT



Photo No.8
Post-Test

SIDE IMPACT PROTECTION

PHOTOGRAPHS

HYBRID III 6-YEAR-OLD CHILD DUMMY
FORWARD FACING ON BOOSTER SEAT

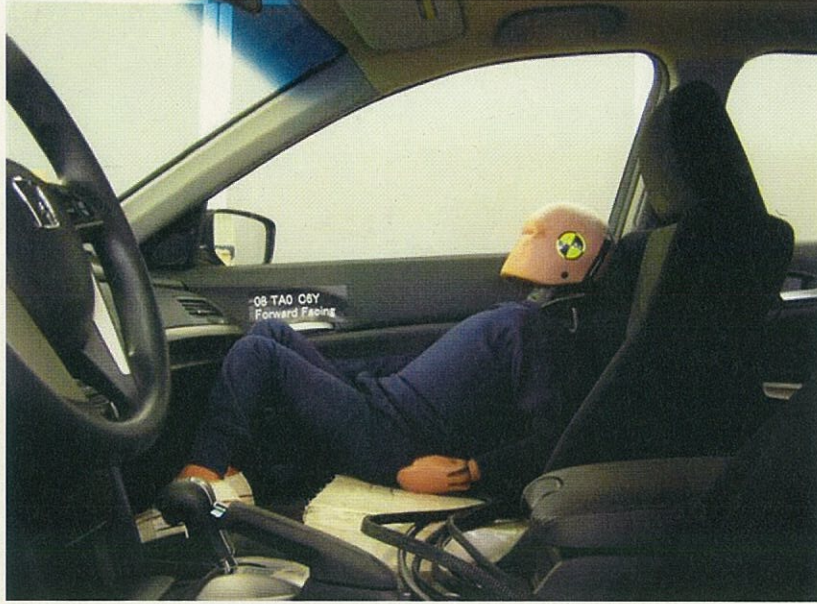


Photo No.9
Pre-Test

The activation of the suppression system was confirmed by using a dummy with conductive cloth on it, which enables the suppression system to operate in the same manner as by real human beings.

HYBRID III 6-YEAR-OLD CHILD DUMMY
FORWARD FACING ON BOOSTER SEAT



Photo No.10
Post-Test

SIDE IMPACT PROTECTION

PHOTOGRAPHS

SID-IIs
INBOARD FACING

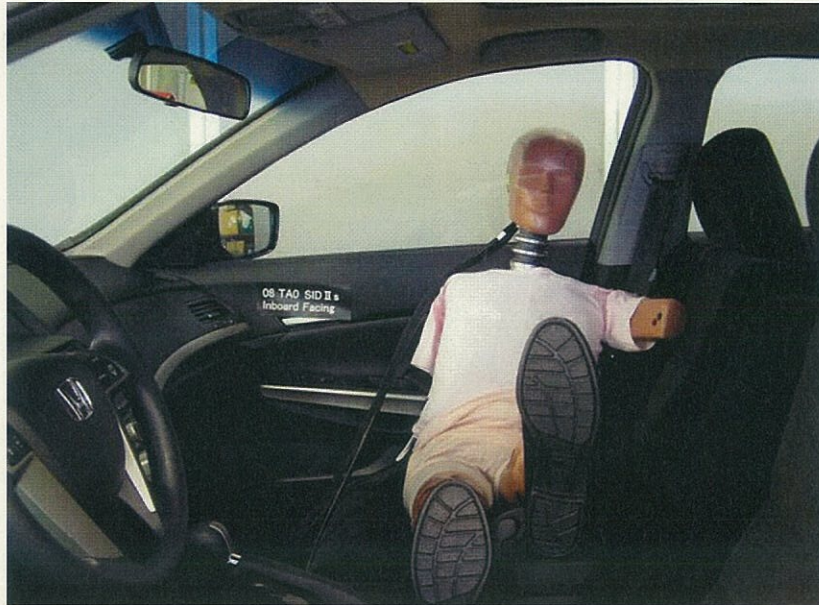


Photo No.11
Pre-Test

SID-IIs
INBOARD FACING



Photo No.12
Post-Test

EA14-004

HONDA

11/10/2014

QUESTION 9

08ACMOU-02

TEST REPORT

TEST REPORT NO. : 08ACMOU-02

SIDE IMPACT PROTECTION

LABORATORY :

Name : Certification & Regulation Compliance Division, Tochigi Office, Honda Motor Co., Ltd.
Address : 1-10-1 Shin-Sayama, Sayama City, Saitama Prefecture, Japan

DATE OF TEST : May 9, 2007 to May 15, 2007

TEST VEHICLE IDENTIFICATION :

Model Year : 2008
Make : HONDA
Model : ACCORD SEDAN
Transmission : 5A/T
Vehicle Identification Number : JHMCP267480 [REDACTED]

TEST DESCRIPTION :

STATIC TEST

Test Type: Seat-mounted:
Side-mounted:
Roof-rail-mounted:

Side Air Bag System:

	Front Row	Second Row	Third Row
Seat-mounted:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Side-mounted:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roof-rail-mounted:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Symmetrical:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DYNAMIC TEST

In Accordance With: FMVSS No.214 Report No.: 08AC214-03/05
 ECE No.95 Report No.: _____

TEST RESULT :

PASS

FAIL

SIGNATURE : Kei Misonou

DATE : Aug. 3, 2007

NAME : Kei Misonou

TITLE : Manager of Vehicle Testing Department, Sayama Laboratory

ADDRESS : 1-10-1 Shin-Sayama, Sayama City, Saitama Prefecture, Japan

SIDE IMPACT PROTECTION

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SIDE IMPACT PROTECTION

TEST VEHICLE SPECIFICATIONS AND CONDITIONS

HYBRID III 3-YEAR-OLD CHILD DUMMY

<input checked="" type="checkbox"/> FRONT ROW		FORWARD FACING ON BOOSTER SEAT	REARWARD FACING	OUTBOARD FACING	INBOARD FACING	LYING ON SEAT, HEAD ON ARMREST	LYING ON SEAT
AIR BAG SELECTION							
	Seat-Mounted						
	Side-Mounted						
<input checked="" type="checkbox"/>	Roof-Rail-Mounted						
Dummy ID Number							
Temperature (°C)							
Humidity (%)							
Soak Time (hours)							
Seat	Seat Slide						
	Seat Height						
	Seat Back						

<input checked="" type="checkbox"/> SECOND ROW		FORWARD FACING ON BOOSTER SEAT	REARWARD FACING	OUTBOARD FACING	INBOARD FACING	LYING ON SEAT, HEAD ON ARMREST	LYING ON SEAT
AIR BAG SELECTION							
	Seat-Mounted						
	Side-Mounted						
<input checked="" type="checkbox"/>	Roof-Rail-Mounted						
Dummy ID Number							
Temperature (°C)							
Humidity (%)							
Soak Time (hours)							
Seat	Seat Slide						
	Seat Height						
	Seat Back						

SIDE IMPACT PROTECTION

TEST VEHICLE SPECIFICATIONS AND CONDITIONS

HYBRID III 3-YEAR-OLD CHILD DUMMY

<input type="checkbox"/> THIRD ROW		FORWARD FACING ON BOOSTER SEAT	REARWARD FACING	OUTBOARD FACING	INBOARD FACING	LYING ON SEAT, HEAD ON ARMREST	LYING ON SEAT
AIR BAG SELECTION							
	Seat-Mounted						
	Side-Mounted						
	Roof-Rail-Mounted						
Dummy ID Number							
Temperature (°C)							
Humidity (%)							
Soak Time (hours)							
Seat	Seat Slide						
	Seat Height						
	Seat Back						

SIDE IMPACT PROTECTION

TEST VEHICLE SPECIFICATIONS AND CONDITIONS

HYBRID III 6-YEAR-OLD CHILD DUMMY

<input checked="" type="checkbox"/> FRONT ROW		FORWARD FACING ON BOOSTER SEAT	INBOARD FACING ON BOOSTER SEAT
AIR BAG SELECTION			
	Seat-Mounted		
	Side-Mounted		
<input checked="" type="checkbox"/>	Roof-Rail-Mounted		X
Dummy ID Number			3691
Temperature (°C)			21.0
Humidity (%)			44
Soak Time (hours)			4
Seat	Seat Slide		24 detents rearward from the first locking detent
	Seat Height	Fixed	
	Seat Back	4 detents rearward from the first locking detent	

<input checked="" type="checkbox"/> SECOND ROW		FORWARD FACING ON BOOSTER SEAT	INBOARD FACING ON BOOSTER SEAT
AIR BAG SELECTION			
	Seat-Mounted		
	Side-Mounted		
<input checked="" type="checkbox"/>	Roof-Rail-Mounted		X
Dummy ID Number			3691
Temperature (°C)			21.7
Humidity (%)			44
Soak Time (hours)			4
Seat	Seat Slide		Fixed
	Seat Height	Fixed	
	Seat Back	Fixed	

SIDE IMPACT PROTECTION

TEST VEHICLE SPECIFICATIONS AND CONDITIONS

HYBRID III 6-YEAR-OLD CHILD DUMMY

<input type="checkbox"/> THIRD ROW		FORWARD FACING ON BOOSTER SEAT	INBOARD FACING ON BOOSTER SEAT
AIR BAG SELECTION			
<input type="checkbox"/>	Seat-Mounted		
<input type="checkbox"/>	Side-Mounted		
<input type="checkbox"/>	Roof-Rail-Mounted		
Dummy ID Number			
Temperature (°C)			
Humidity (%)			
Soak Time (hours)			
Seat	Seat Slide		
	Seat Height		
	Seat Back		

SIDE IMPACT PROTECTION

TEST VEHICLE SPECIFICATIONS AND CONDITIONS

SID-IIs

<input checked="" type="checkbox"/> FRONT ROW		INBOARD FACING	FORWARD FACING	FORWARD FACING ON RAISED SEAT	INBOARD FACING ON RAISED SEAT
AIR BAG SELECTION					
	Seat-Mounted				
	Side-Mounted				
<input checked="" type="checkbox"/>	Roof-Rail-Mounted			X	X
Dummy ID Number				6991	6992
Temperature (°C)				21.0	20.6
Humidity (%)				38	49
Soak Time (hours)				4	4
Seat	Seat Slide			150 mm rearward from the forwardmost position	240 mm rearward from the forwardmost position
	Seat Height	Highest position			
	Seat Back	20 degrees rearward from the forwardmost position			

<input checked="" type="checkbox"/> SECOND ROW		INBOARD FACING	FORWARD FACING	FORWARD FACING ON RAISED SEAT	INBOARD FACING ON RAISED SEAT
AIR BAG SELECTION					
	Seat-Mounted				
	Side-Mounted				
<input checked="" type="checkbox"/>	Roof-Rail-Mounted			X	X
Dummy ID Number				6991	6992
Temperature (°C)				21.0	21.0
Humidity (%)				38	56
Soak Time (hours)				4	4
Seat	Seat Slide			Fixed	Fixed
	Seat Height	Fixed			
	Seat Back	Fixed			

SIDE IMPACT PROTECTION

TEST VEHICLE SPECIFICATIONS AND CONDITIONS

SID-IIs

<input type="checkbox"/> THIRD ROW		INBOARD FACING	FORWARD FACING	FORWARD FACING ON RAISED SEAT	INBOARD FACING ON RAISED SEAT
AIR BAG SELECTION					
<input type="checkbox"/>	Seat-Mounted				
<input type="checkbox"/>	Side-Mounted				
<input type="checkbox"/>	Roof-Rail-Mounted				
Dummy ID Number					
Temperature (°C)					
Humidity (%)					
Soak Time (hours)					
Seat	Seat Slide				
	Seat Height				
	Seat Back				

SIDE IMPACT PROTECTION

TEST RESULTS

HYBRID III 3-YEAR-OLD CHILD DUMMY

<input checked="" type="checkbox"/> FRONT ROW	Forward facing on booster seat	Rearward facing	Outboard facing	Inboard facing	Lying on seat, head on armrest	Lying on seat
AIR BAG SELECTION						
Seat-Mounted						
Side-Mounted						
<input checked="" type="checkbox"/> Roof-Rail-Mounted						

Suppression System						
Head	HIC Max 570					
Upper Neck	Nij Max 1.0					
	Tension Max 1130N					
	Compression Max 1380N					
Thorax	Deflection Max 36mm	/		/	/	/
	Deflection rate Max 8.0m/s	/		/	/	/
Photo No.	Pre Test					
	Post Test					

<input checked="" type="checkbox"/> SECOND ROW	Forward facing on booster seat	Rearward facing	Outboard facing	Inboard facing	Lying on seat, head on armrest	Lying on seat
AIR BAG SELECTION						
Seat-Mounted						
Side-Mounted						
<input checked="" type="checkbox"/> Roof-Rail-Mounted						

Suppression System						
Head	HIC Max 570					
Upper Neck	Nij Max 1.0					
	Tension Max 1130N					
	Compression Max 1380N					
Thorax	Deflection Max 36mm	/		/	/	/
	Deflection rate Max 8.0m/s	/		/	/	/
Photo No.	Pre Test					
	Post Test					

SIDE IMPACT PROTECTION

TEST RESULTS

HYBRID III 3-YEAR-OLD CHILD DUMMY

THIRD ROW		Forward facing on booster seat	Rearward facing	Outboard facing	Inboard facing	Lying on seat, head on armrest	Lying on seat
AIR BAG SELECTION							
	Seat-Mounted						
	Side-Mounted						
	Roof-Rail-Mounted						

Suppression System							
Head	HIC Max 570						
Upper Neck	Nij Max 1.0						
	Tension Max 1130N						
	Compression Max 1380N						
Thorax	Deflection Max 36mm	/			/	/	/
	Deflection rate Max 8.0m/s	/			/	/	/
Photo No.	Pre Test						
	Post Test						

SIDE IMPACT PROTECTION

TEST RESULTS

HYBRID III 6-YEAR-OLD CHILD DUMMY

<input checked="" type="checkbox"/>	FRONT ROW		
AIR BAG SELECTION		Forward facing on booster seat	Inboard facing on booster seat
	Seat-Mounted		
	Side-Mounted		
<input checked="" type="checkbox"/>	Roof-Rail-Mounted		X

Suppression System			Not Suppressed
Head	HIC Max 723		9.1
Upper Neck	Nij Max 1.0		0.43
	Tension Max 1490N		62.7
	Compression Max 1820N		713.0
Photo No.	Pre Test		1
	Post Test		2

<input checked="" type="checkbox"/>	SECOND ROW		
AIR BAG SELECTION		Forward facing on booster seat	Inboard facing on booster seat
	Seat-Mounted		
	Side-Mounted		
<input checked="" type="checkbox"/>	Roof-Rail-Mounted		X

Suppression System			Not Suppressed
Head	HIC Max 723		0.6
Upper Neck	Nij Max 1.0		0.24
	Tension Max 1490N		9.3
	Compression Max 1820N		405.9
Photo No.	Pre Test		3
	Post Test		4

SIDE IMPACT PROTECTION

TEST RESULTS

HYBRID III 6-YEAR-OLD CHILD DUMMY

<input type="checkbox"/>	THIRD ROW		
AIR BAG SELECTION		Forward facing on booster seat	Inboard facing on booster seat
<input type="checkbox"/>	Seat-Mounted		
<input type="checkbox"/>	Side-Mounted		
<input type="checkbox"/>	Roof-Rail-Mounted		

Suppression System			
Head	HIC Max 723		
Upper Neck	Nij Max 1.0		
	Tension Max 1490N		
	Compression Max 1820N		
Photo No.	Pre Test		
	Post Test		

SIDE IMPACT PROTECTION

TEST RESULTS

SID-IIs

<input checked="" type="checkbox"/>	FRONT ROW				
	AIR BAG SELECTION	Inboard Facing	Forward Facing	Forward Facing on Raised Seat	Inboard Facing on Raised Seat
	Seat-Mounted				
	Side-Mounted				
<input checked="" type="checkbox"/>	Roof-Rail-Mounted			X	X

Suppression System				Not Suppressed	Not Suppressed
Head	HIC Max 779			8.4	14.4
Upper Neck	Nij Max 1.0			0.34	0.82
	Tension Max 2070N			75.7	152.0
	Compression Max 2520N			966.6	1518.9
Thorax	Deflection Max 34mm			/	/
	Deflection rate Max 8.2m/s			/	/
Photo No.	Pre Test			5	7
	Post Test			6	8

<input checked="" type="checkbox"/>	SECOND ROW				
	AIR BAG SELECTION	Inboard Facing	Forward Facing	Forward Facing on Raised Seat	Inboard Facing on Raised Seat
	Seat-Mounted				
	Side-Mounted				
<input checked="" type="checkbox"/>	Roof-Rail-Mounted			X	X

Suppression System				Not Suppressed	Not Suppressed
Head	HIC Max 779			0.7	2.1
Upper Neck	Nij Max 1.0			0.19	0.26
	Tension Max 2070N			7.3	28.5
	Compression Max 2520N			615.7	478.9
Thorax	Deflection Max 34mm			/	/
	Deflection rate Max 8.2m/s			/	/
Photo No.	Pre Test			9	11
	Post Test			10	12

SIDE IMPACT PROTECTION

TEST RESULTS

SID-IIs

THIRD ROW		Inboard Facing	Forward Facing	Forward Facing on Raised Seat	Inboard Facing on Raised Seat
AIR BAG SELECTION					
	Seat-Mounted				
	Side-Mounted				
	Roof-Rail-Mounted				

Suppression System					
Head	HIC Max 779				
Upper Neck	Nij Max 1.0				
	Tension Max 2070N				
	Compression Max 2520N				
Thorax	Deflection Max 34mm				
	Deflection rate Max 8.2m/s				
Photo No.	Pre Test				
	Post Test				

SIDE IMPACT PROTECTION

PHOTOGRAPHS

HYBRID III 6-YEAR-OLD CHILD DUMMY
INBOARD FACING ON BOOSTER SEAT

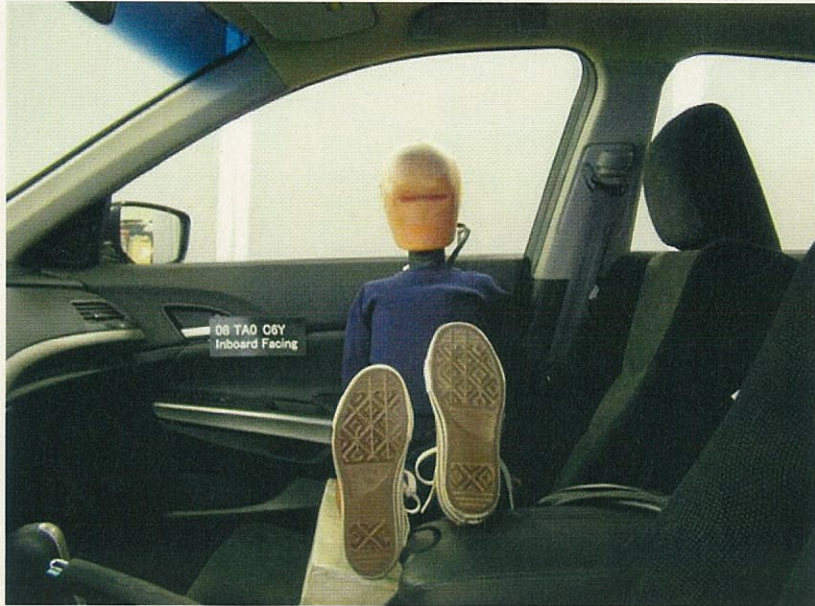


Photo No.1
Pre-Test

HYBRID III 6-YEAR-OLD CHILD DUMMY
INBOARD FACING ON BOOSTER SEAT



Photo No.2
Post-Test

SIDE IMPACT PROTECTION

PHOTOGRAPHS

HYBRID III 6-YEAR-OLD CHILD DUMMY
INBOARD FACING ON BOOSTER SEAT

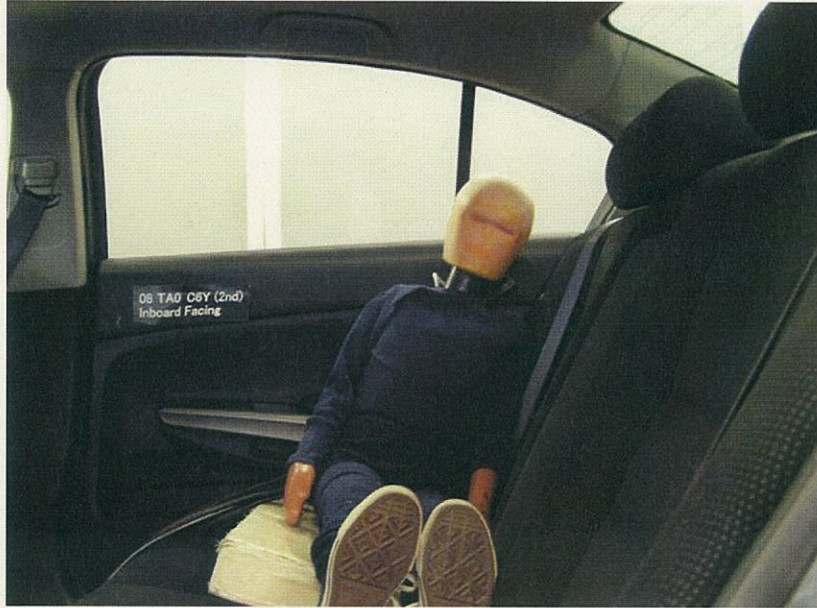


Photo No.3
Pre-Test

HYBRID III 6-YEAR-OLD CHILD DUMMY
INBOARD FACING ON BOOSTER SEAT



Photo No.4
Post-Test

SIDE IMPACT PROTECTION

PHOTOGRAPHS

SID-IIs
FORWARD FACING ON RAISED SEAT



Photo No.5
Pre-Test

SID-IIs
FORWARD FACING ON RAISED SEAT



Photo No.6
Post-Test

SIDE IMPACT PROTECTION

PHOTOGRAPHS

SID-IIs
INBOARD FACING ON RAISED SEAT

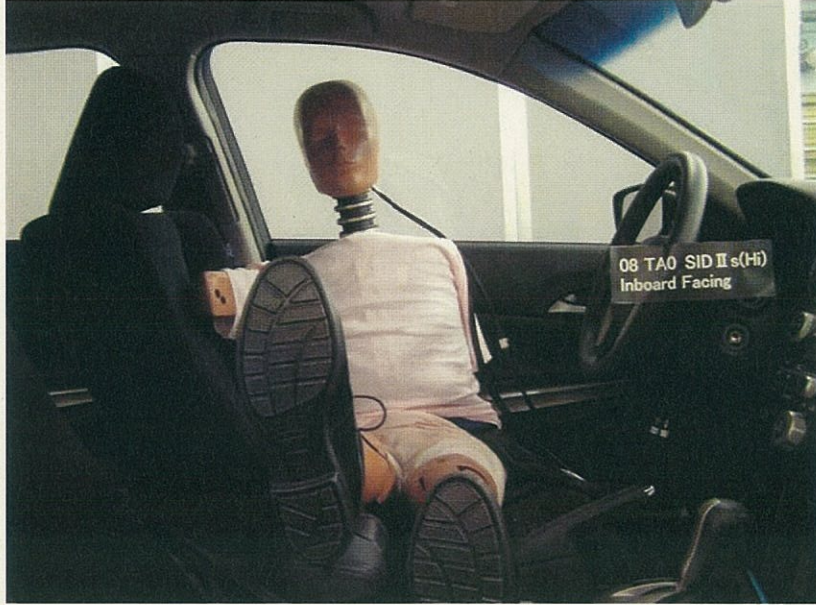


Photo No.7
Pre-Test

SID-IIs
INBOARD FACING ON RAISED SEAT



Photo No.8
Post-Test

SIDE IMPACT PROTECTION

PHOTOGRAPHS

SID-IIs
FORWARD FACING ON RAISED SEAT

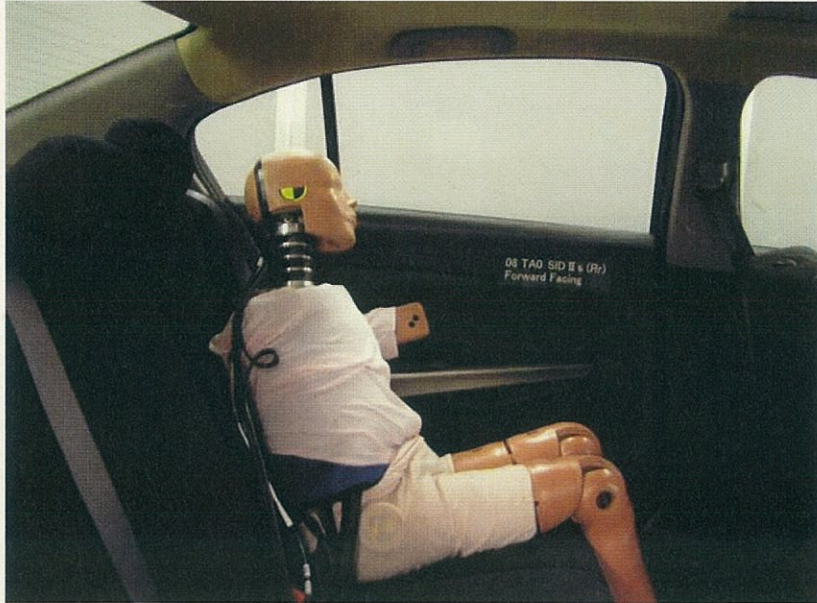


Photo No.9
Pre-Test

SID-IIs
FORWARD FACING ON RAISED SEAT



Photo No.10
Post-Test

SIDE IMPACT PROTECTION

PHOTOGRAPHS

SID-IIs
INBOARD FACING ON RAISED SEAT



Photo No.11
Pre-Test

SID-IIs
INBOARD FACING ON RAISED SEAT



Photo No.12
Post-Test

EA14-004

HONDA

11/10/2014

QUESTION 10

Q10 a-h

a	The date or approximate date on which the modification or change was incorporated into vehicle production;	Css Production: June 30th, 2008 HAM Production: June 5th, 2008
b	A detailed description of the modification or change;	Changing of the crash parameters
c	The reason(s) for the modification or change;	Product improvement
d	The part number(s) (service and engineering) of the original component;	77960-TA0-A01 UNIT ASSY,SRS 77960-TA0-L01 UNIT ASSY,SRS
e	The part number(s) (service and engineering) of the modified component;	77960-TA0-A02 UNIT ASSY,SRS 77960-TA0-L02 UNIT ASSY,SRS
f	Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;	77960-TA0-A01: withdrawn date 07/06/2009 77960-TA0-L01: withdrawn date 11/12/2008
g	When the modified component was made available as a service component;	77960-TA0-A02: available date 06/09/2008 77960-TA0-L02: available date 06/24/2008
h	Whether the modified component can be interchanged with earlier production components.	Yes

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11/10/2014

QUESTION 10

Q10 Mass Production Spec
Notice Supplemental Sheet

仕様通知附表

DESIGN CHANGE NOTICE

CTL.BLOCK

製作所 作成
C PLANT 08-06-23 AS OF

FAMILY	通知 D/C	PAGE
C42	C48-2-1702	1

LEVEL	NEW PART No. OLD PART No. PART NAME	S P : S N : C 互換 I/C.ABILITY 概略 REASON 種類 DRW.ID:SIZE	BLOCK SECTION ITEM No. 個/親 QTY.	手配区分 LOC.GR. 新:旧 NEW:OLD	切 換 順 位 機 種 S MODEL	E / F O P	派生 上 桁 T Y P E	派生機種 TYPE										手配区分 LOC.GR. 新:旧 NEW:OLD	切 換 順 位 機 種 S MODEL	E / F O P	派生 上 桁 T Y P E	派生機種 TYPE										適用指示 APPL-INSTRUC.											
								0	1	2	3	4	5	6	7	8	9					0	1	2	3	4	5	6	7	8	9	順位 SEQ/T/F	版本 EFFECTIVE	切換年月	等級 RANK/LOT								
1	A	77960-TA0 -A020-M4			**SE		TE	"APPLICATION/QUANTITY CHANGE"																																			
	B	77960-TA0 -A011-M4			AA		AA	1										AA		AA	1																						
	C	UNIT ASSY,SRS			AA		AC	1										AA		AD	1																						
	D				AA		CA	1										AA		CB	1																						
2	A	7796Z-TA0 -A020-M4			AA		CC	1									AA		CD	1																							
	B	7796Z-TA0 -A011-M4			AA		LA	1									AA		LB	1																							
	C	SPEC.UNIT ASSY SRS			AA		LC										AA		LD																								
	D				AA		LE	1									AA		LF																								
3	A	77960-TA0 -ZZ12-M4			AA		LG	1								AA		LH	1																								
	B	77960-TA0 -ZZ11-M4			AA		AA	1								AA		AB	1																								
	C	DWG.UNIT ASSY SRS			AA		AC	1								AA		AD	1																								
	D				AA		CA	1								AA		CB	1																								
4	A				AA		CC	1							AA		CD	1																									
	B				AA		LA	1							AA		LB	1																									
	C				AA		LC								AA		LD																										
	D				AA		LE	1							AA		LF																										
5	A				AA		LG	1						AA		LH	1																										
	B				AA		AA							AA		AB	1																										
	C				AA		CA							AA		CB	1																										
	D				AA		LA							AA		LB	1																										
6	A				AA		AA							AA		AB	1																										
	B				AA		CA							AA		CB	1																										
	C				AA		LA							AA		LB	1																										
	D				AA		LA							AA		LB	1																										
7	A				AA		LG	1						AA		LH	1																										
	B				AA		AA							AA		AB	1																										
	C				AA		CA							AA		CB	1																										
	D				AA		LA							AA		LB	1																										

手配系	D/C PART	LOC.GR. PT	連 依 存 度 SHR%	実施年月日 BEINING DATE	手配記号 LOCATION	P 属 色 T	M 属 色 A	段 L	G	*
手配系	77960-TA0 -A020-M4	C	AA	1100	080424	LP		4		*
	7796Z-TA0 -A020-M4	C	AA	1100	080424	LP		4		*
	77960-TA0 -ZZ12-M4	C	CC	1100	080424	LP		4		*
PROCESS LOCATION										

概略コード D/C REASON 01変更 02改訂 03新設新図 04流用 05量試 06暫定 07部番変更 08材質変更 09名 10廃止 11設変中止 12旧図復活 13整備図 14適用変更 15個数変更 17管理修正 18未出図発行 25部番統合
 31廃止部品の変更 32廃止部品の改訂 33割込新設 40構成変更 41構成流用復活 50次変A-B 60改廢設変 70親離れ 71親新設 72ケ/親変更 73Cマーク新設 74Cマーク廃止 802/4/汎内廃止 81SS/2/4/汎内廃止 82色別親変更 83素材共用新設
 84素材共用廃止 85適用機種指定 86使用先親設定 90手配系列変更 91内外作変更 92色別適用変更 93KD現調変更 94ベース機種適用流用 95機種廃止 96適用日程変更 97M/L変更 98OP適用変更 99部番区分変更 【700】

仕様通知附表

DESIGN CHANGE NOTICE

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CTL.BLOCK

LEVEL	NEW PART No. OLD PART No. PART NAME	S P : S N : C 互換 I/C.ABILITY 概略 REASON 種類 DRW.ID:SIZE	BLOCK SECTION ITEM No. 個/親 QTY.	手配区分 LOC.GR. 新:旧 NEW:OLD	切 換 順 位 S MODEL	基 本 機 種 E / F OP	派 生 上 桁 T Y P E	派生機種 TYPE										手配区分 LOC.GR. 新:旧 NEW:OLD	切 換 順 位 S MODEL	基 本 機 種 E / F OP	派 生 上 桁 T Y P E	派生機種 TYPE										適用指示 APPL-INSTRUC.					
								0	1	2	3	4	5	6	7	8	9					0	1	2	3	4	5	6	7	8	9	順位 SEQ/T/F	本 切 換 年 月 EFFECTIVE	等級 RANK	引 出 欄 LOT		
1	A	77960-TA0 -K020-M4			**SE	PPEN	TEKIYO	"APPLICATION/QUANTITY CHANGE"										**																			
	B	77960-TA0 -K011-M4		NY	F47	BB	1TA5A2	KA	1										BB	1TA5A2	KB	1							1	2	080616	Y					
	C	UNIT ASSY,SRS			77960	BB	1TA5A2	KC	1				1						BB	1TA5A2	KD	1															
	D		S	M	M	BB	1TA5A2	KE	1				1						BB	1TA5A2	KF	1															
2	A	7796Z-TA0 -A020-M4		N		BB	1TA5Z2	KA	1				1						BB	1TA5Z2	KB	1															
	B	7796Z-TA0 -A011-M4		NY		BB	1TA5Z2	KC	1				1						BB	1TA5Z2	KD	1	1														
	C	SPEC,UNIT ASSY SRS				BB	1TA5Z2	KE	1				1						BB	1TA5Z2	KF	1															
	D		Z		4	1M	BB	1TA6A2	KA					1					BB	1TA6A2	KB																
3	A	77960-TA0 -ZZ12-M4		N		BB	1TA6Z2	KA					1						BB	1TA6Z2	KB																
	B	77960-TA0 -ZZ11-M4		YY																																	
C	DWG,UNIT ASSY SRS				BB	1TA6Z2	KA																														
D		S	Z		5	1M																															

手配系列	D/C PART	LOC.GR.	連依存度	実施年月日	手配記号	P属色	M	段	手配記号	P属色	M	段	手配記号	P属色	M	段	手配記号	P属色	M	段	手配記号	P属色	M	段	手配記号	P属色	M	段	手配記号	P属色	M	段					
		PT	CURNEWS	SHR%	BEINING DATE	LOCATION	T	A	C	L	G	LOCATION	T	A	C	L	G	LOCATION	T	A	C	L	G	LOCATION	T	A	C	L	G	LOCATION	T	A	C	L	G		
	77960-TA0 -K020-M4	C	BB	1100	080424	LP		4																													
	7796Z-TA0 -A020-M4	C	AA	1100	080424	LP		4																													
	77960-TA0 -ZZ12-M4	C	CC	1100	080424	LP		4																													

概略コード D/C REASON 01変更 02改訂 03新設新図 04流用 05量試 06暫定 07部番変更 08材質変更 09名 10廃止 11設変中止 12旧図復活 13整備図 14適用変更 15個数変更 17管理修正 18未出図発行 25部番統合
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仕様通知附表

DESIGN CHANGE NOTICE

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CTL.BLOCK

LEVEL	NEW PART No. OLD PART No. PART NAME	S P 互換 I/C.ABILITY 概略 REASON 種類 DRW.ID:SIZE	S N : C SECTION ITEM No. 個/親 QTY.	BLOCK	手配区分 LOC.GR. 新:旧	切 換 順 位	基 本 機 種	E / F	派 生 上 桁 T Y P E	派生機種 TYPE										手配区分 LOC.GR. 新:旧	切 換 順 位	基 本 機 種	E / F	派 生 上 桁 T Y P E	派生機種 TYPE										適用指示 APPL-INSTRUC.						
										0	1	2	3	4	5	6	7	8	9						0	1	2	3	4	5	6	7	8	9	順位 SEQ/T/F	版本 EFFECTIVE	切換年月	等級 RANK	引 出 順 位 LOT		
1 A B C D	77960-TA0 -L020-M4 77960-TA0 -L010-M4 UNIT ASSY,SRS	4 S 01 NY S Z 5	F47 77960		**SEPPEN		TEKIYO			"APPLICATION/QUANTITY CHANGE"																									1	2	080714	D			
2 A B C D	7796Z-TA0 -L020-M4 7796Z-TA0 -L010-M4 SPEC.UNIT ASSY SRS	4 N 01 NY Z 4	1M		**KYUU		TEKIYO			"PREVIOUS APPLICATION"																									2	2	080721	Y			
3 A B C D																																									
4 A B C D			F47 77960																																						
5 A B C D																																									
6 A B C D																																									
7 A B C D																																									

手配系列	D/C PART	LOC.GR.	連依存度	実施年月日	手配記号	P属色	M	段	手配記号	P属色	M	段	手配記号	P属色	M	段	手配記号	P属色	M	段	手配記号	P属色	M	段	手配記号	P属色	M	段	手配記号	P属色	M	段	
		PT	CURNEWS	SHR%	BEINING DATE	LOCATION	T	A	C	L	G	LOCATION	T	A	C	L	G	LOCATION	T	A	C	L	G	LOCATION	T	A	C	L	G	LOCATION	T	A	C
	77960-TA0 -L020-M4	C	AA	1100	080424	3261	1		AF	2																							
	7796Z-TA0 -L020-M4	C	AA	1100	080424	3261	3																										

概略コード D/C REASON 01変更 02改訂 03新設新図 04流用 05量試 06暫定 07部番変更 08材質変更 09名 10廃止 11設変中止 12旧図復活 13整備図 14適用変更 15個数変更 17管理修正 18未出図発行 25部番統合
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EA14-004

HONDA

11/10/2014

QUESTION 10

Q10-1 Mass Production Spec
Notice English_Redacted

Revision No.

48-2-1702

2/2

SUPPLEMENTAL

No.	Part Name	Description												
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QUESTION 10

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No.	Part Name	Description																
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QUESTION 11

Specifications (need to make
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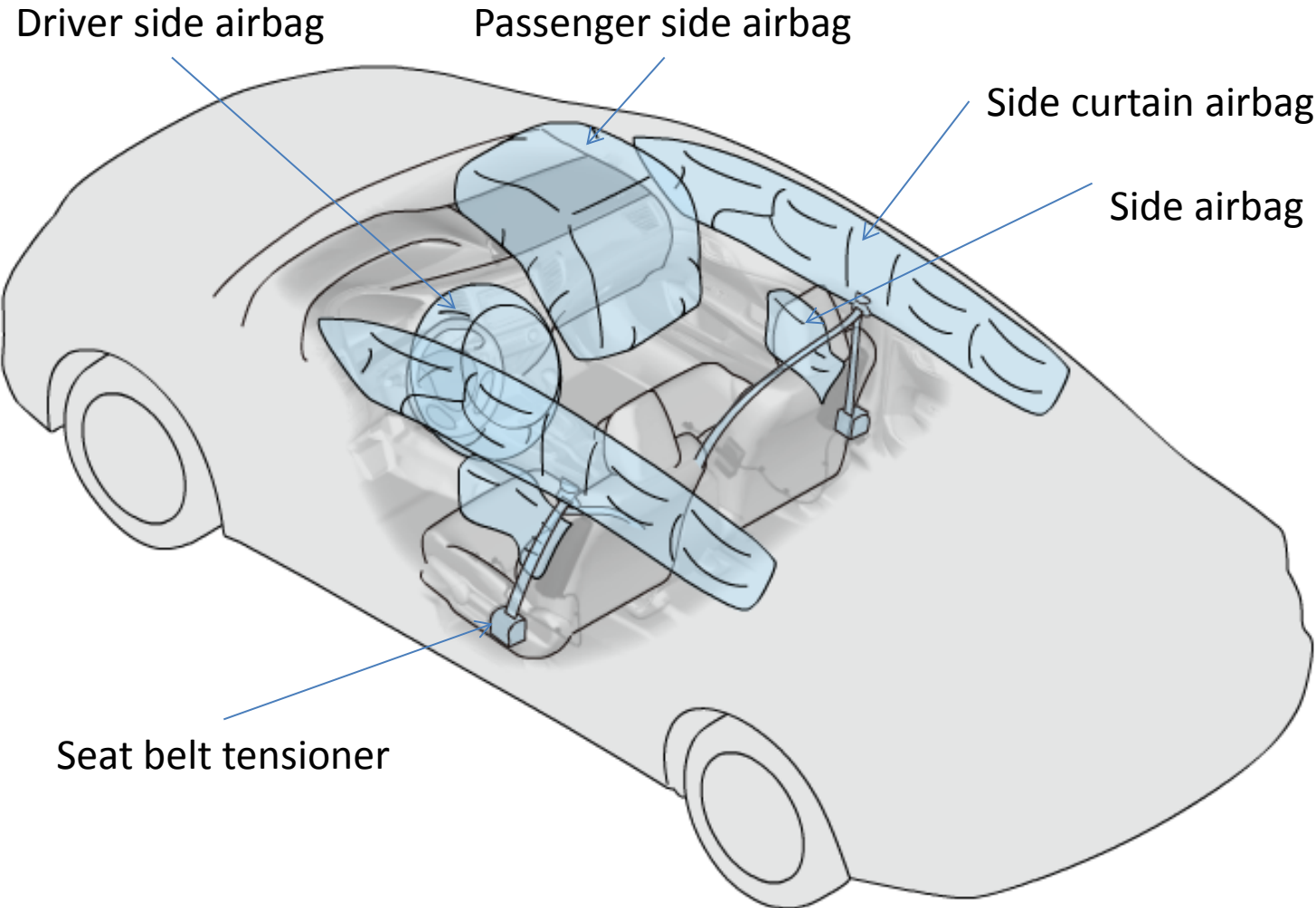
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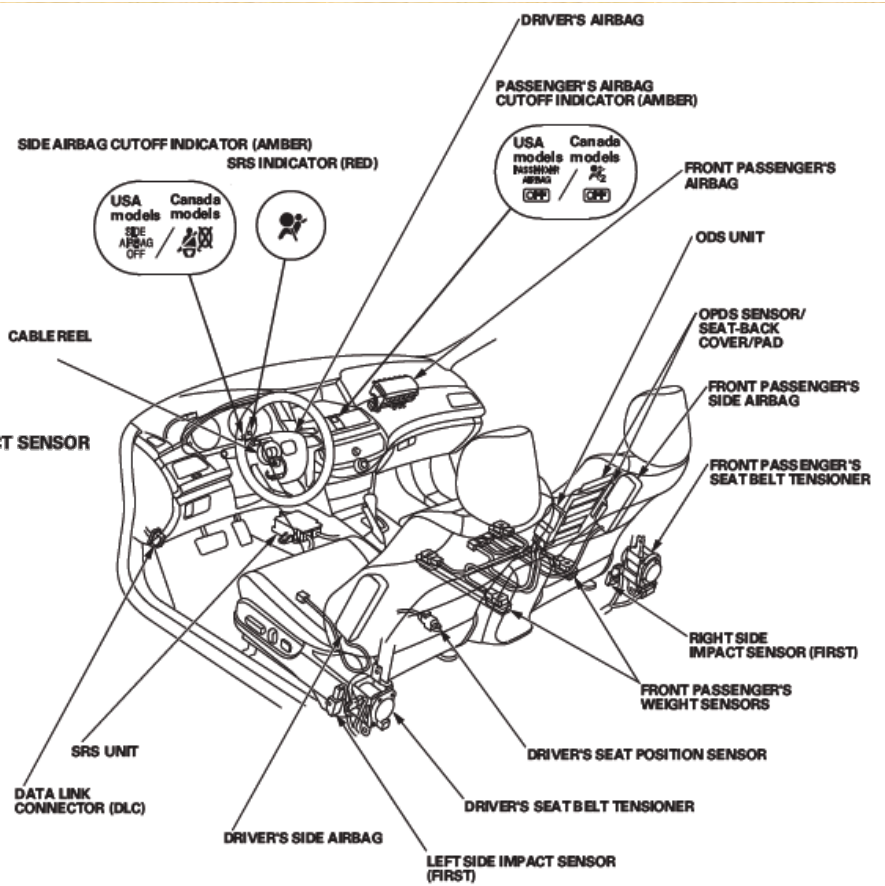
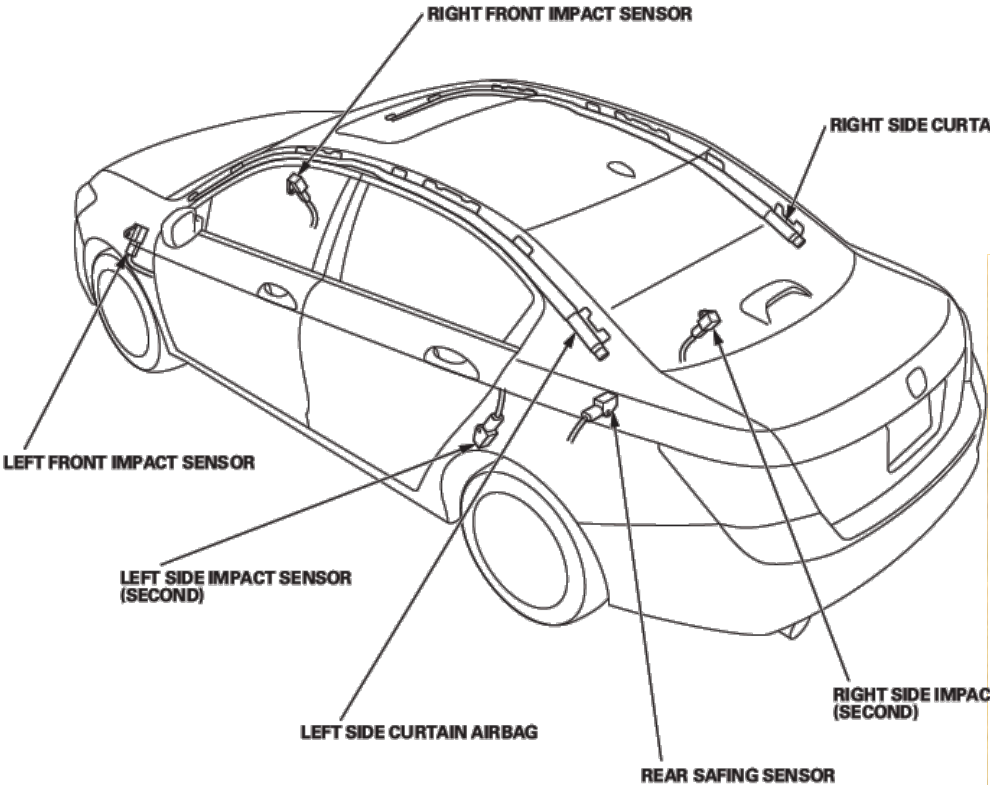
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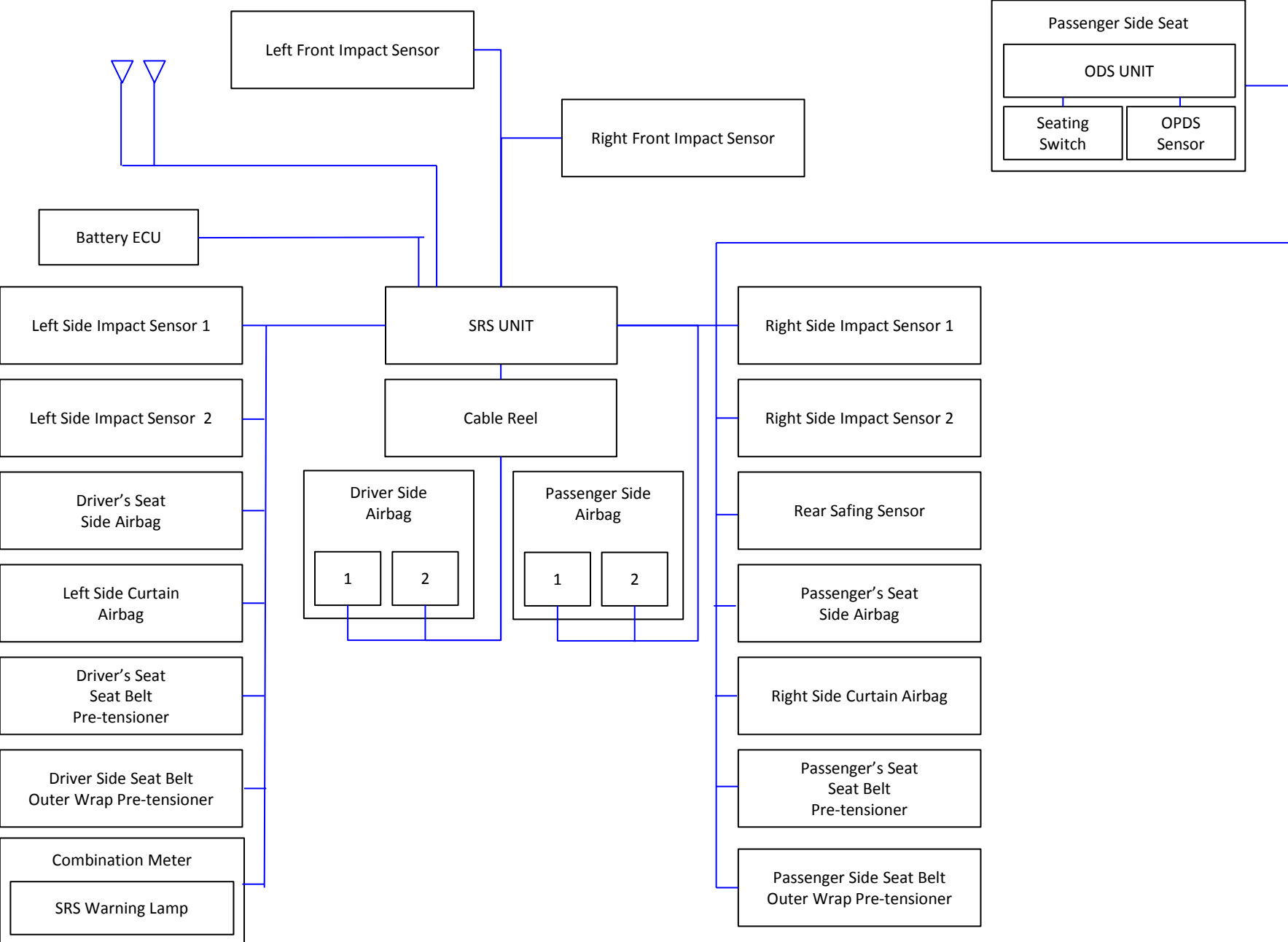
SRS System Overview



SRS System Overview

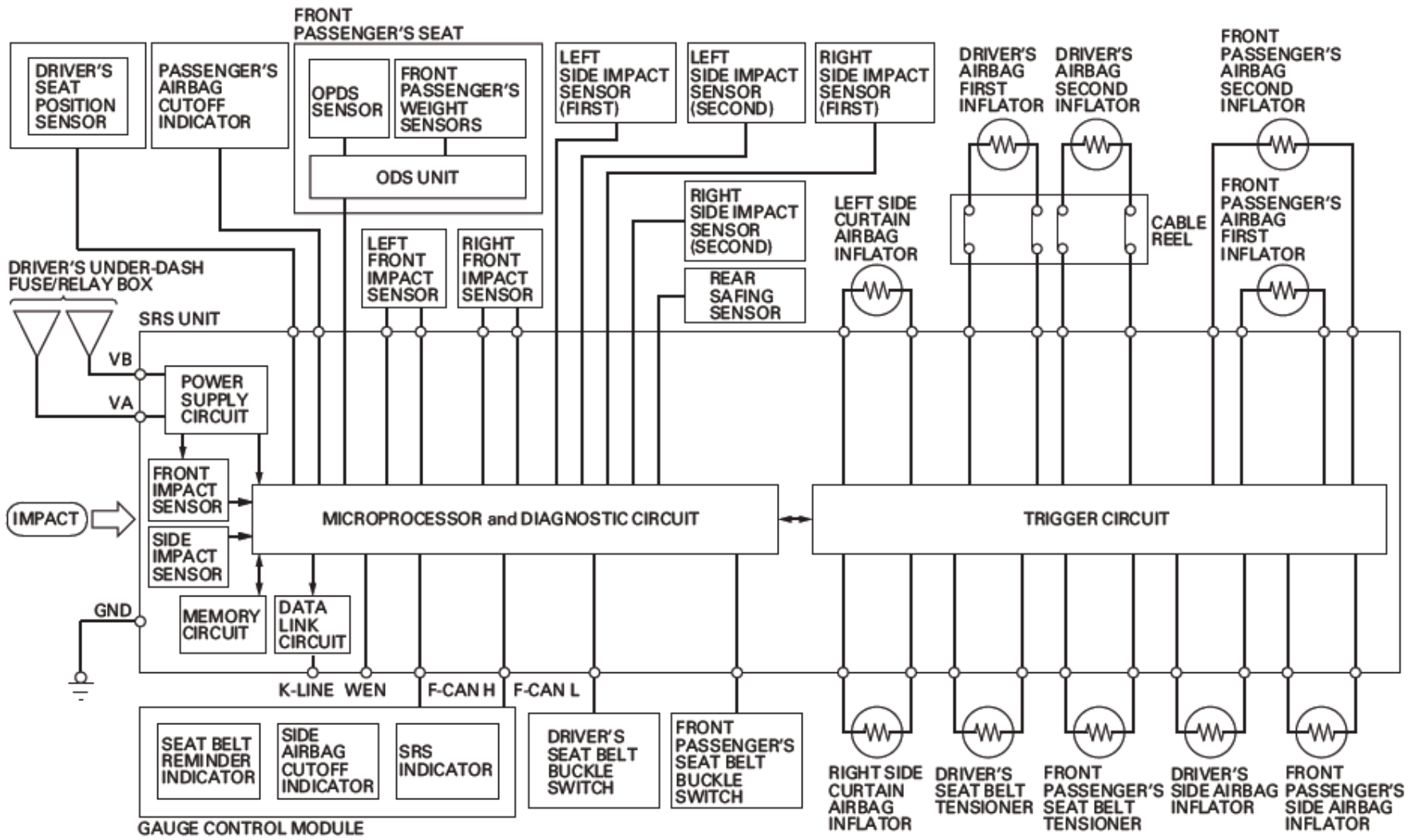


System Block Diagram (Simplified)



System Block Diagram (ACCORD 4-Door)

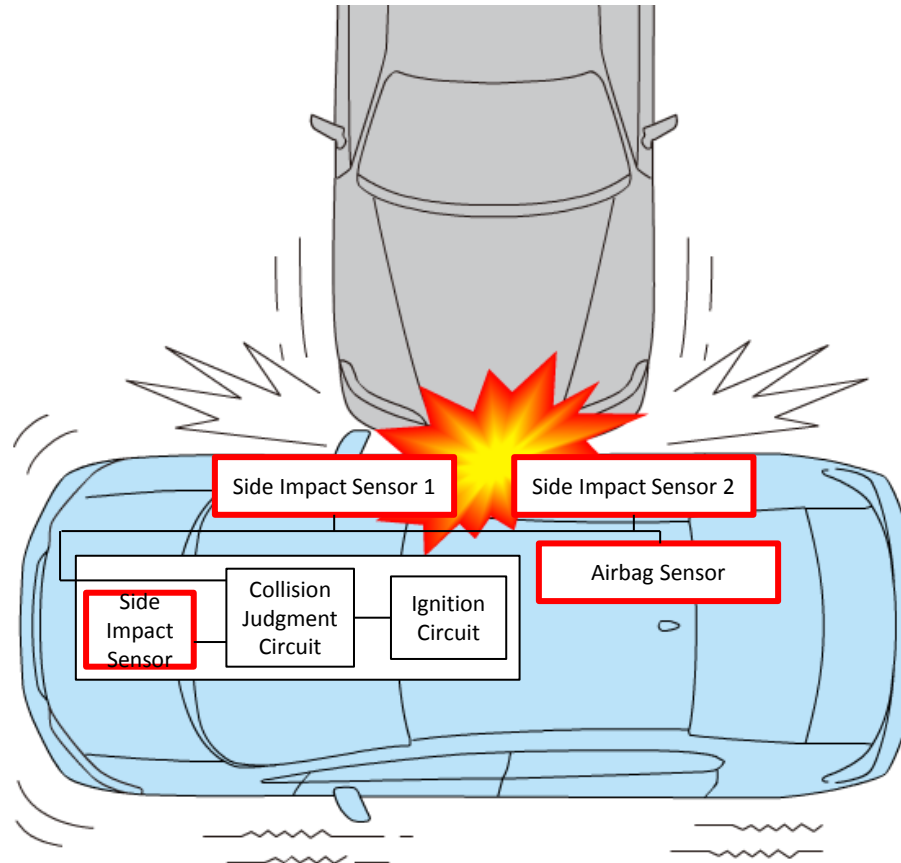
4-Door



Side Airbag and Side Curtain Airbag Operation Process

The impact generated by side collision will be transmitted to side impact sensor, airbag sensor, and SRS unit.

The collision judgment circuit inside of SRS unit determines if the output from side impact sensor and airbag sensor exceed the threshold, and send operation command if the output of side impact sensor inside of SRS unit exceeds the threshold.



Collision judgment circuit sends operation command to ignition circuit, and side airbag and side curtain airbag are activated.

Side airbag is designed to be inflated by 2 different pressure in order to reduce the risk of injury when the airbags are deployed.

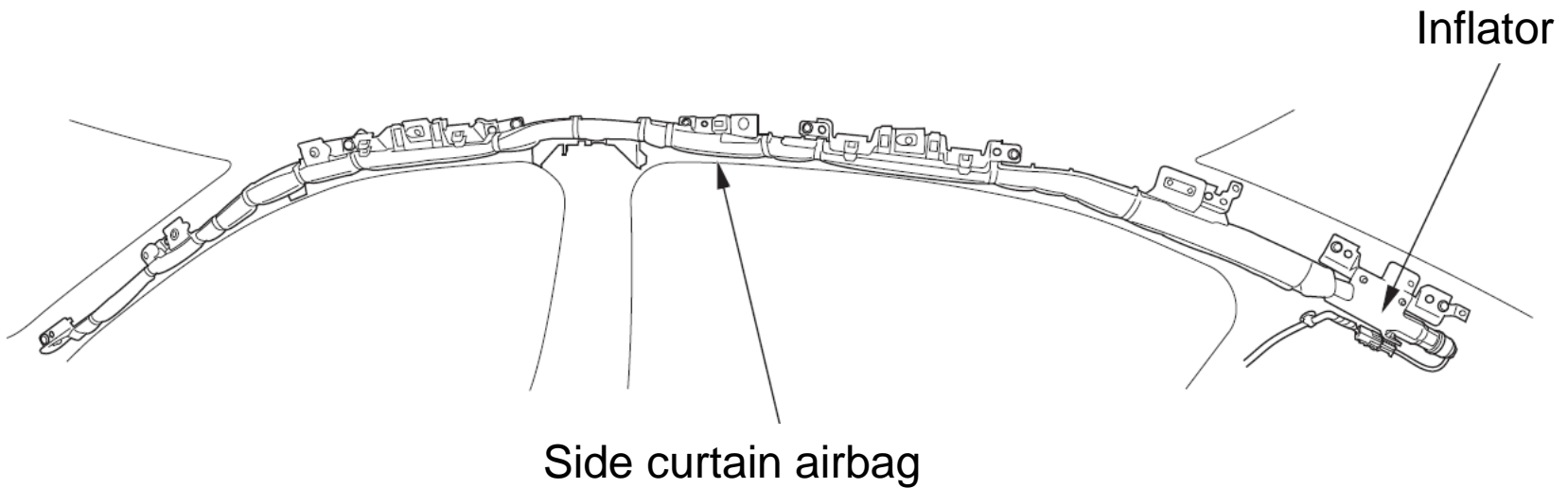
The side airbag and side curtain airbag where impact was input will be activated.

However, to protect the head of passenger, side airbag and side curtain airbag may be deployed even with the front collision when certain lateral force is applied.

Side Curtain Airbag

The side curtain airbag is stored compact in the roof side portion and provided with gas by the inflator installed in the rear pillar via the roof side.

- (1) The side impact sensor or the rear safing sensor must activate and send electrical signals to the microprocessor.
- (2) The microprocessor must compute the signals and trigger the side curtain airbag and the side airbag inflators.
- (3) The triggered inflators must ignite and deploy the side curtain airbag and the side airbag at the same time.



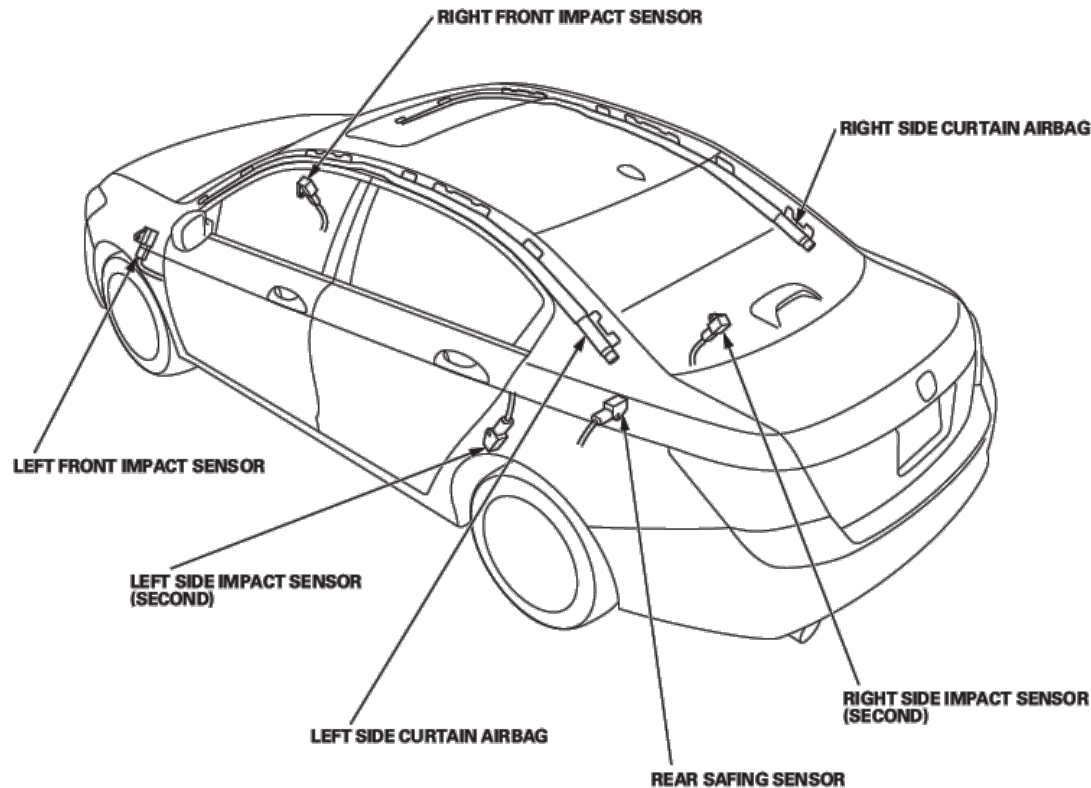
Side Impact Sensor & Rear Safing Sensor

Side Impact Sensor(s)

Side impact sensors are installed on the right and left side of the floor close to the side faces of a vehicle, detecting impacts applied to areas close to the front door and rear door. When a vehicle collides and an impact higher than that assumed is applied, each side impact sensor converts the impact into an electrical signal and send it to the unit.

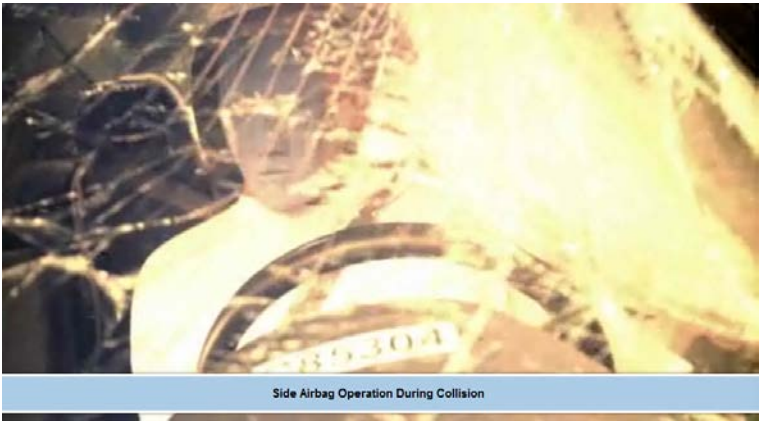
Rear Safing Sensor

The rear safing sensor is located under the rear seat cushion. [The rear safing sensor performs the same basic function as the safing sensor in the SRS unit.](#) It measures sideways G force, such as the force the vehicle would receive in a side collision in the rear, and sends that information to the SRS unit. The SRS unit uses that information, and the information from the side impact sensors to determine the side that is impacted and the force. If the threshold is met, the SRS unit deploys the side airbag, the side curtain airbag, and the front seat belt tensioner on that side.



SRS System Overview

Driver's Seat
Side Airbag



Rear Left Seat
Side Curtain Airbag



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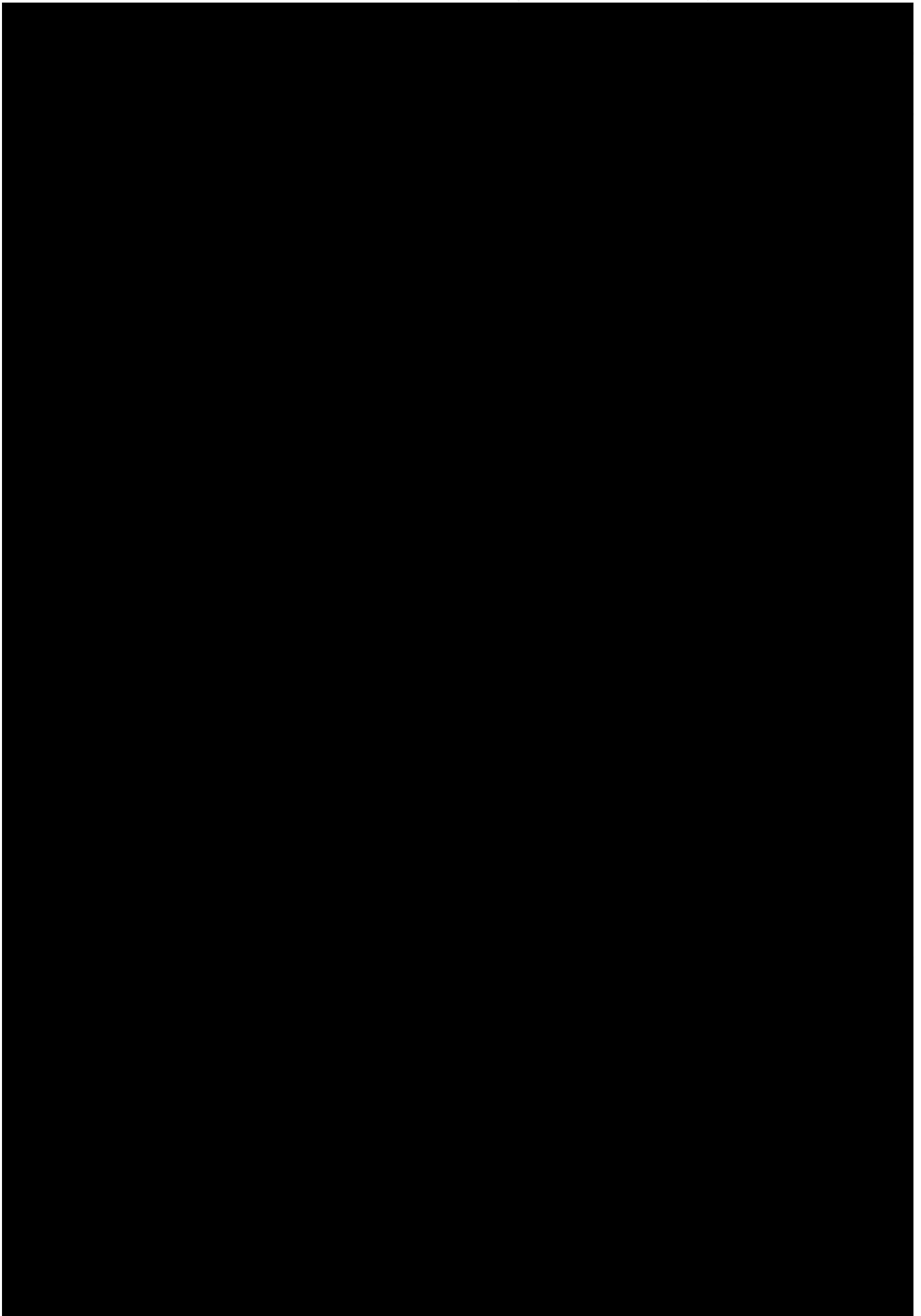
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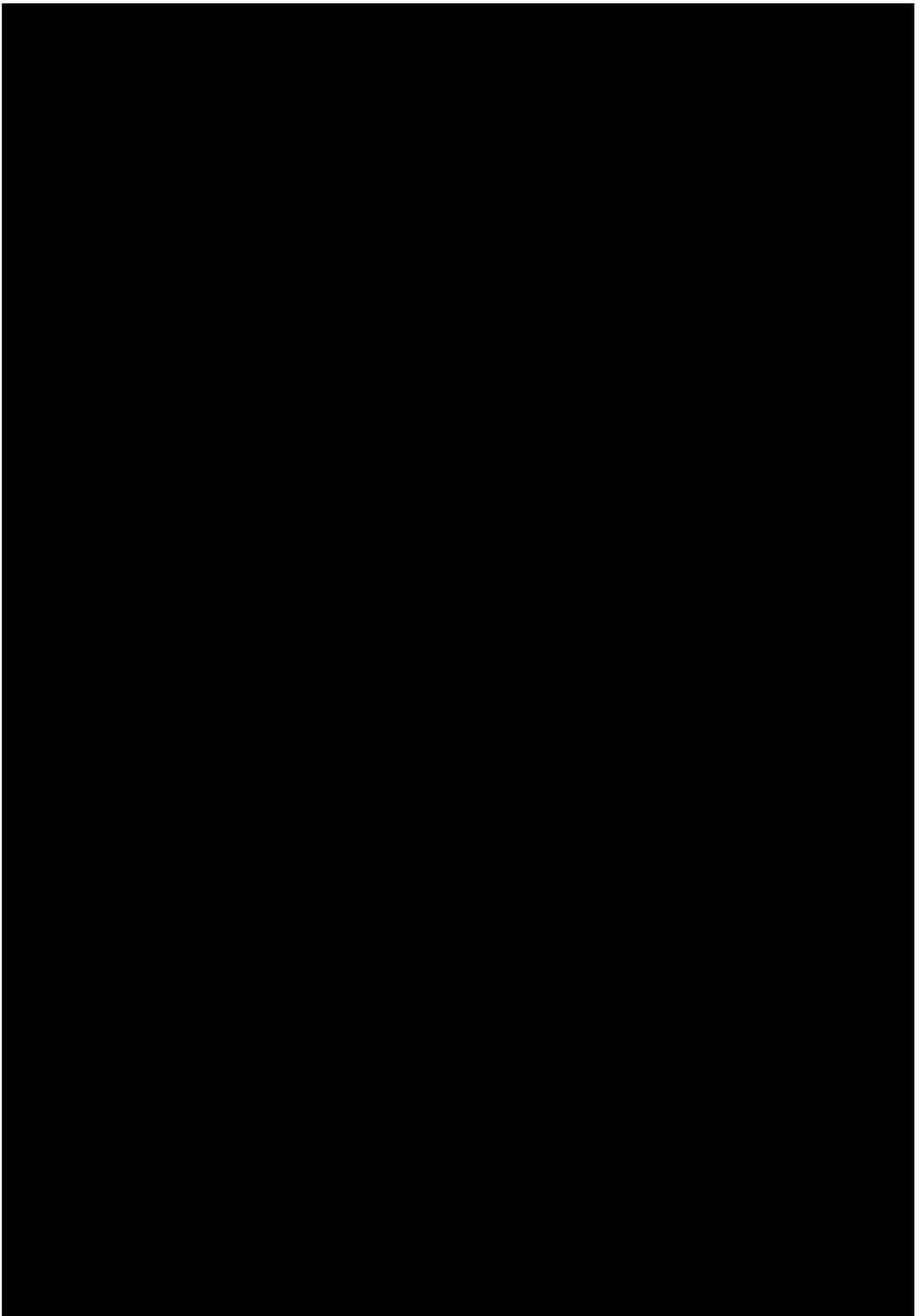
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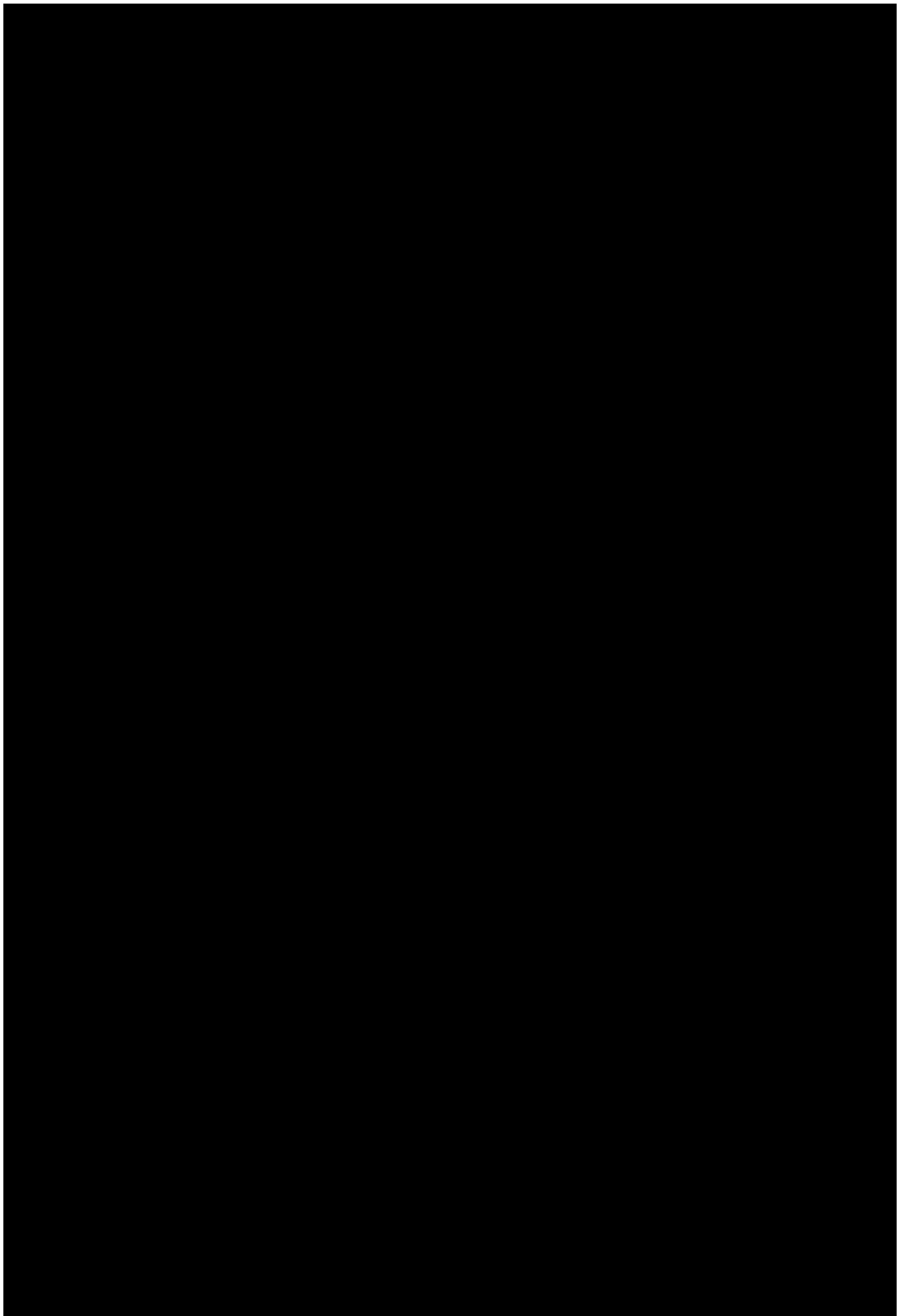
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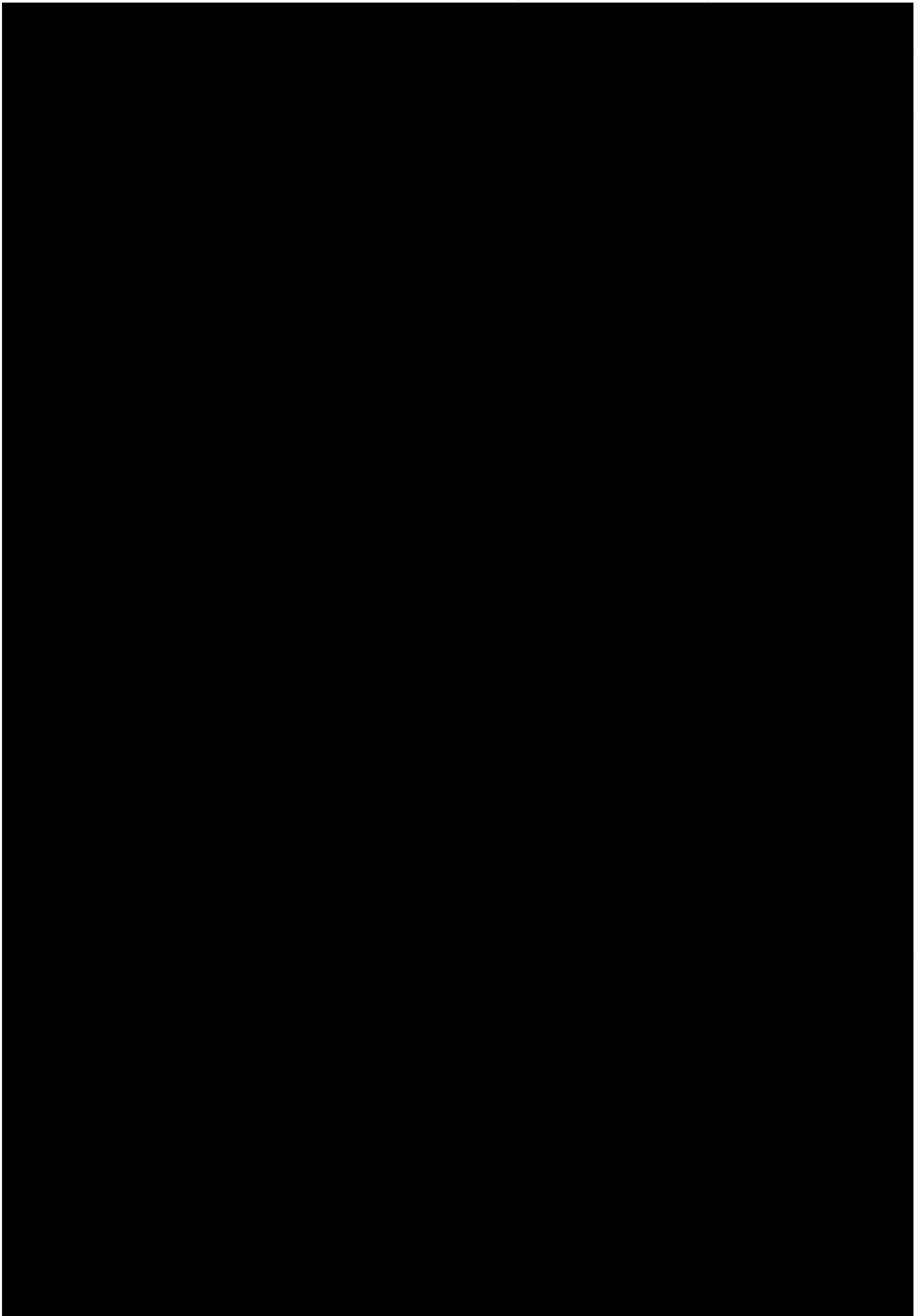
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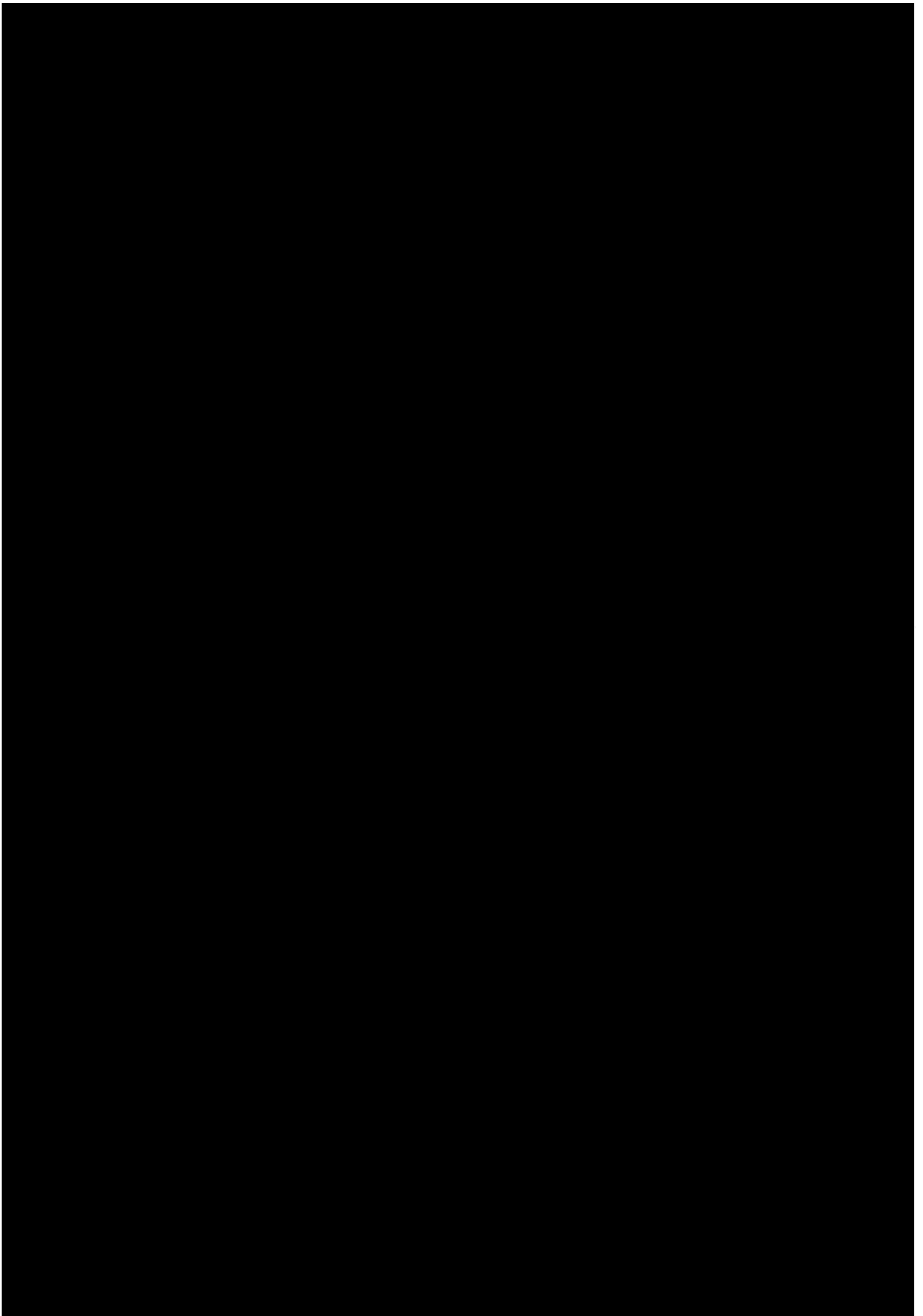
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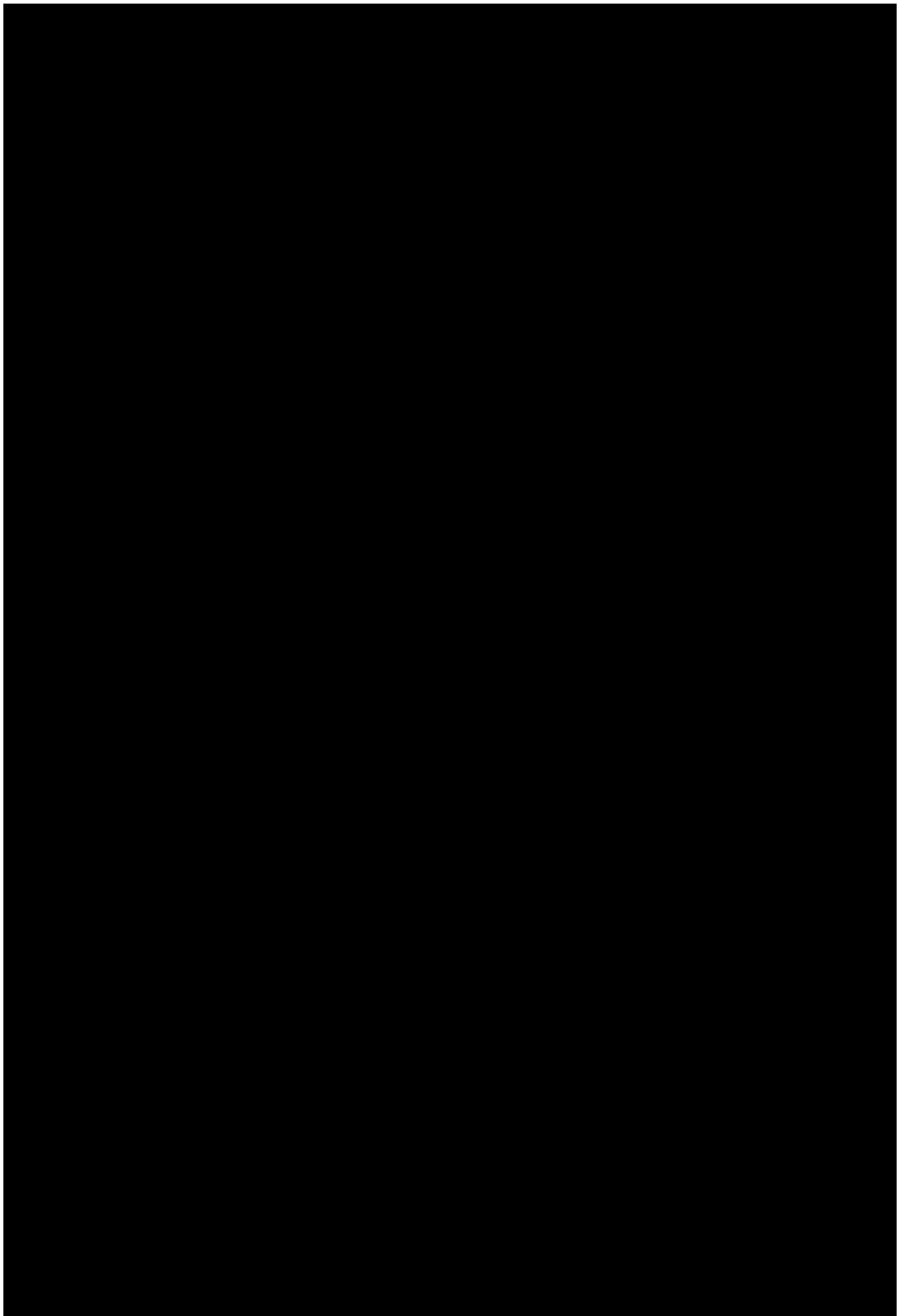
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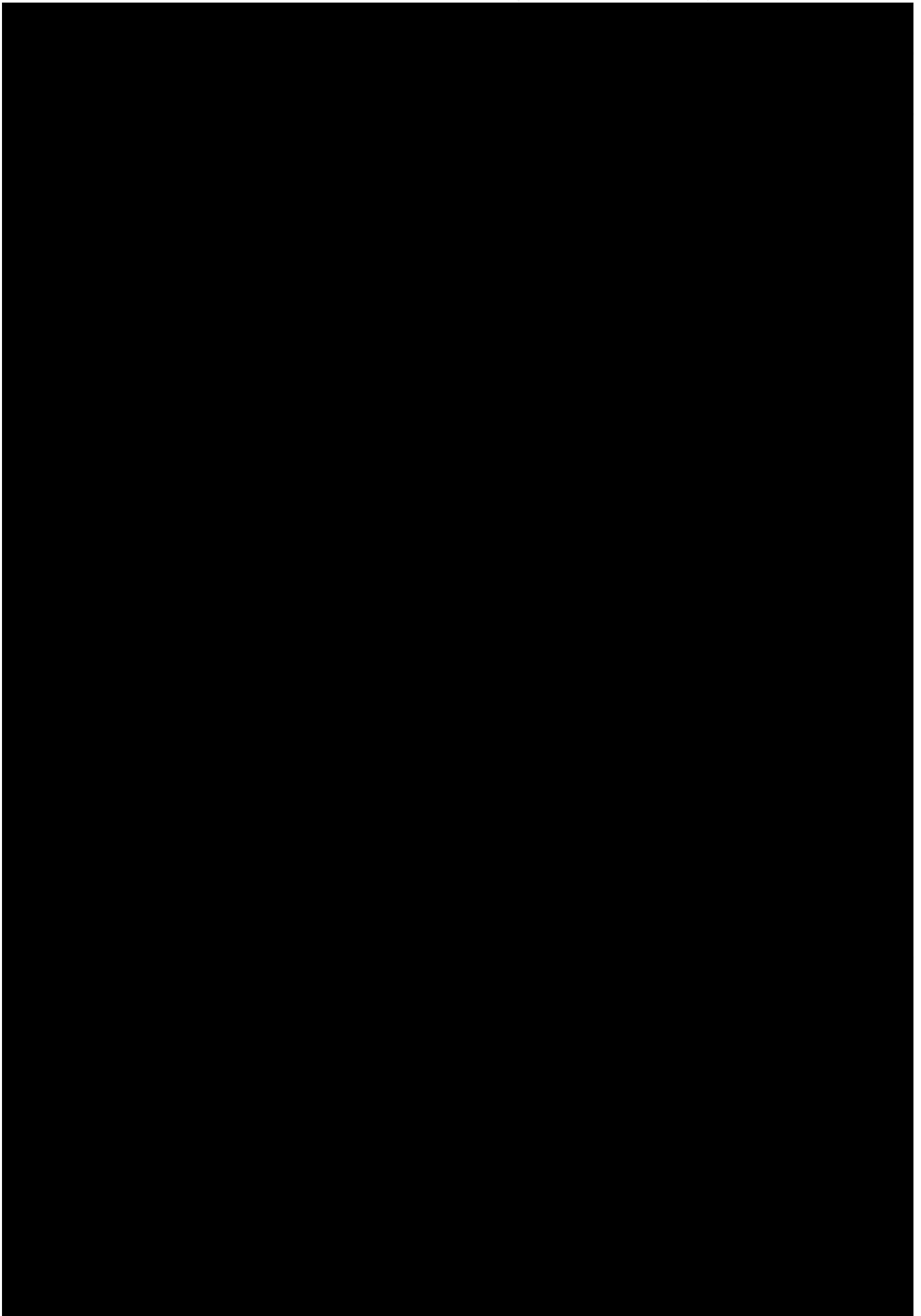
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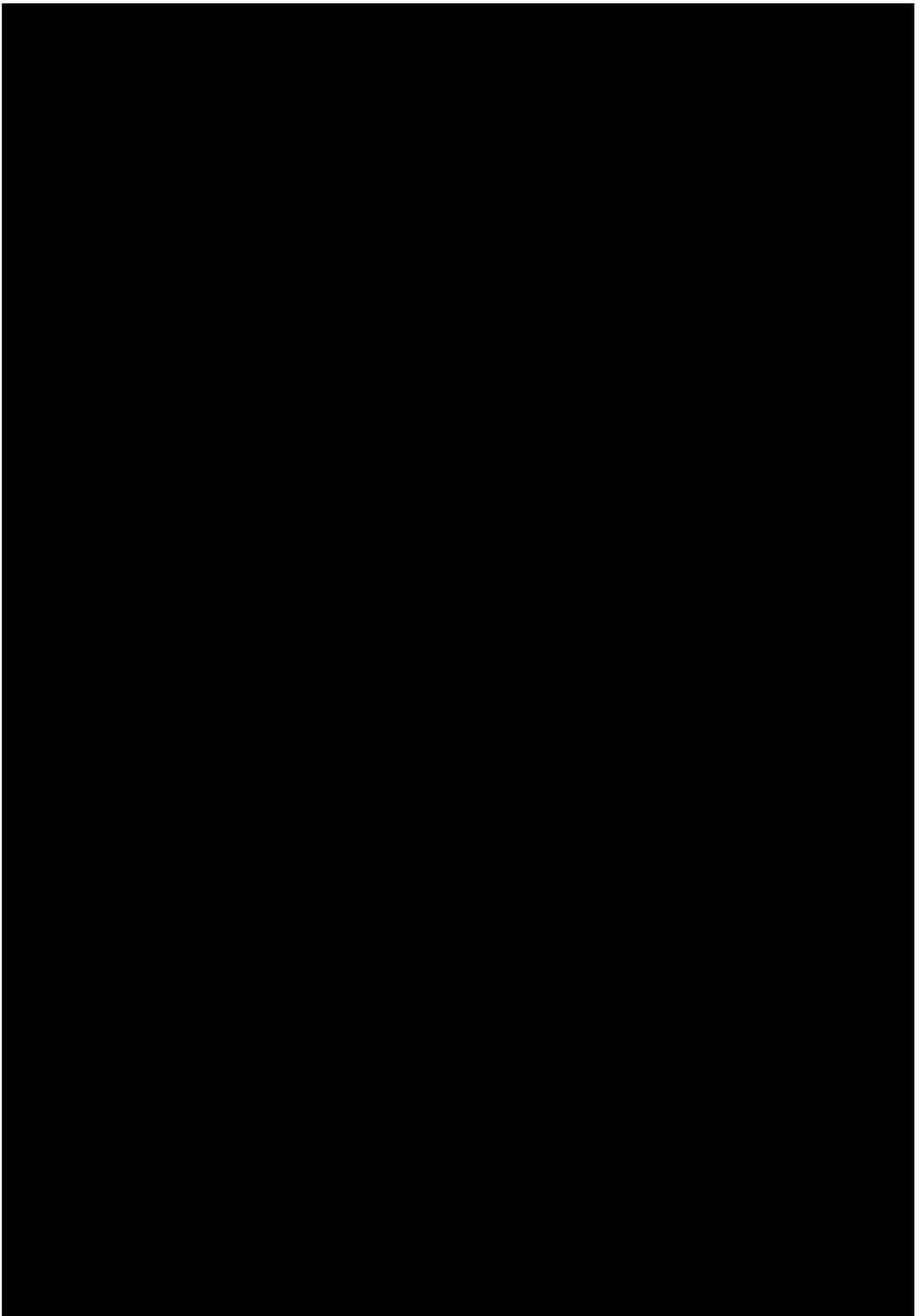
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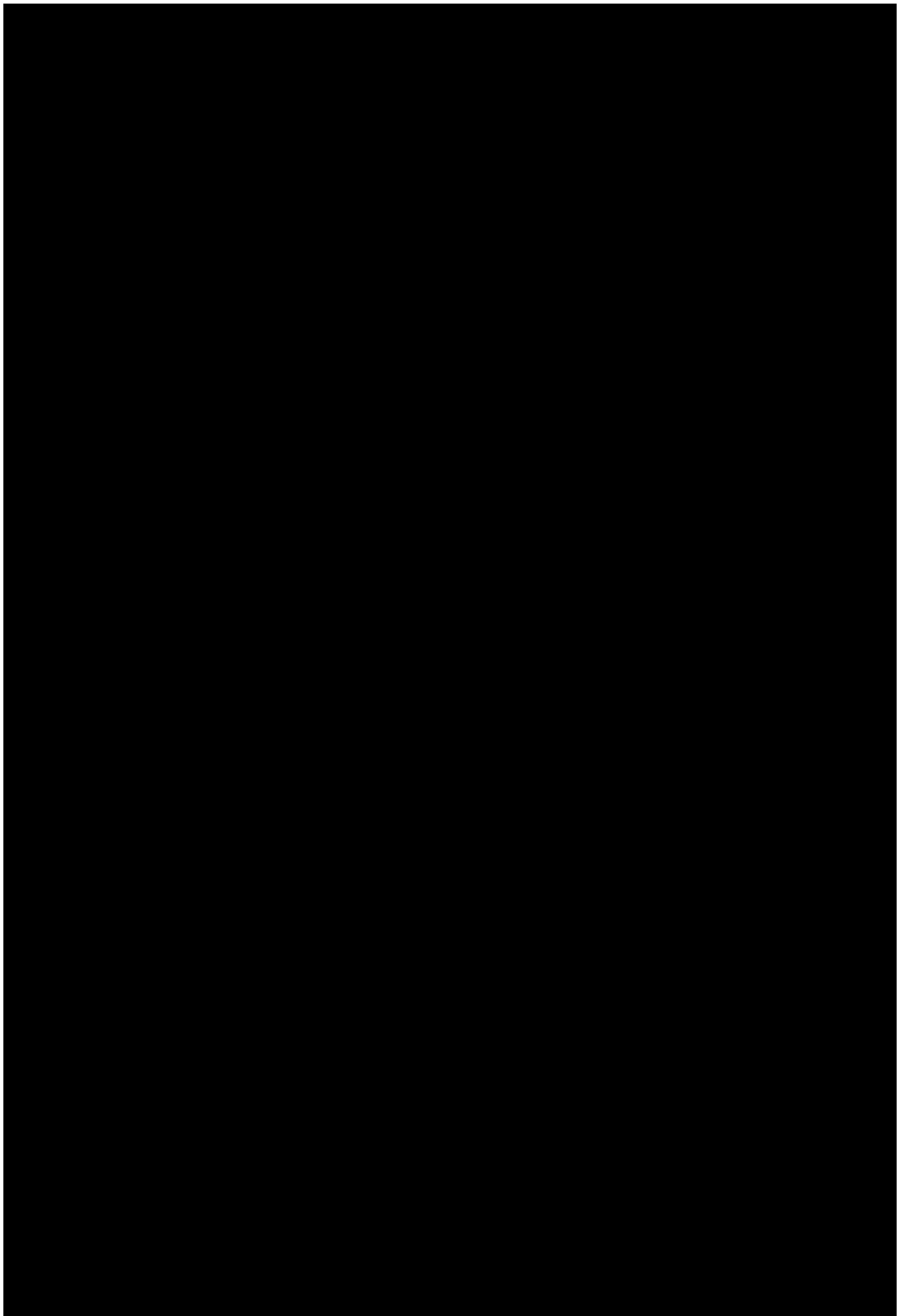
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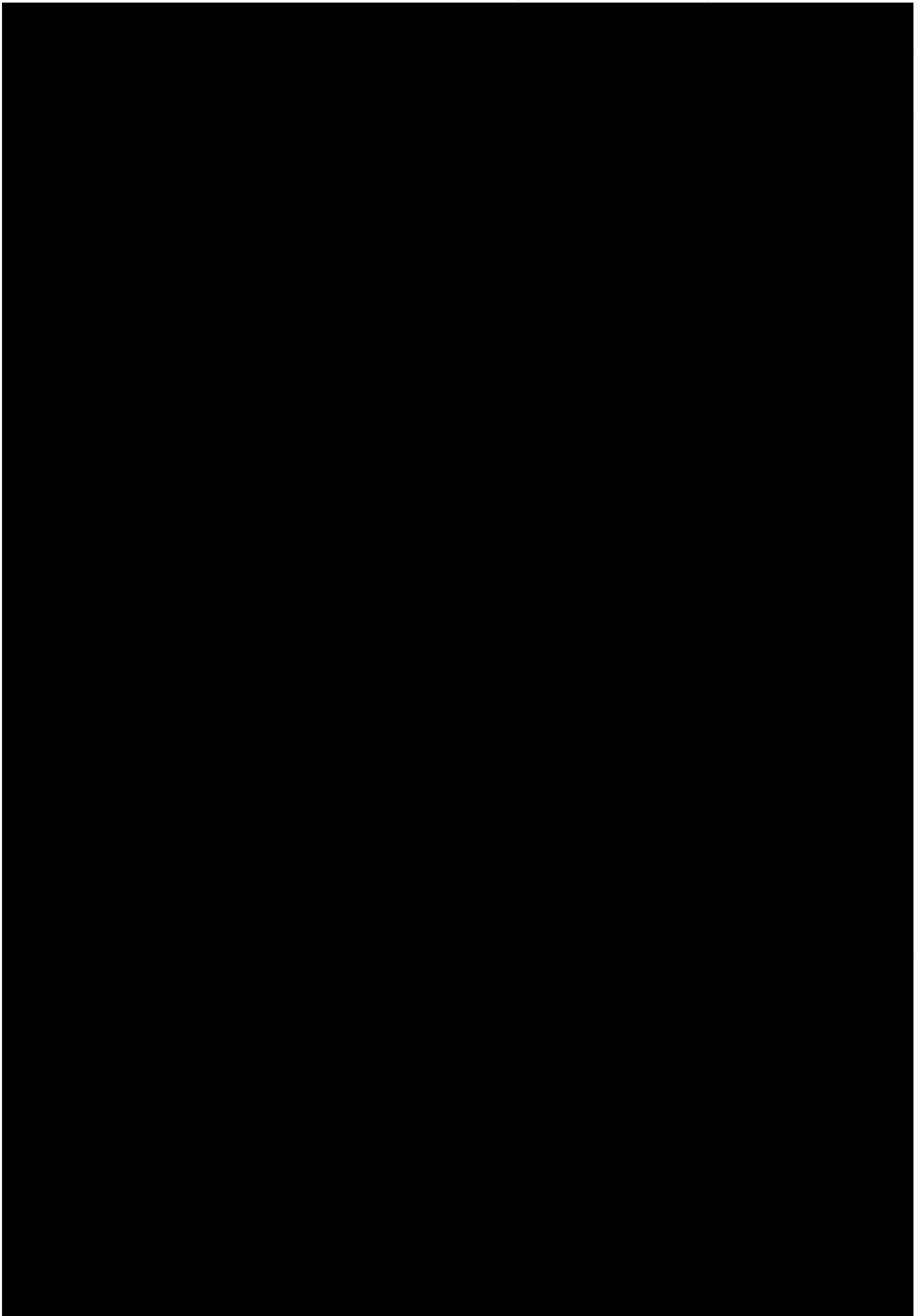
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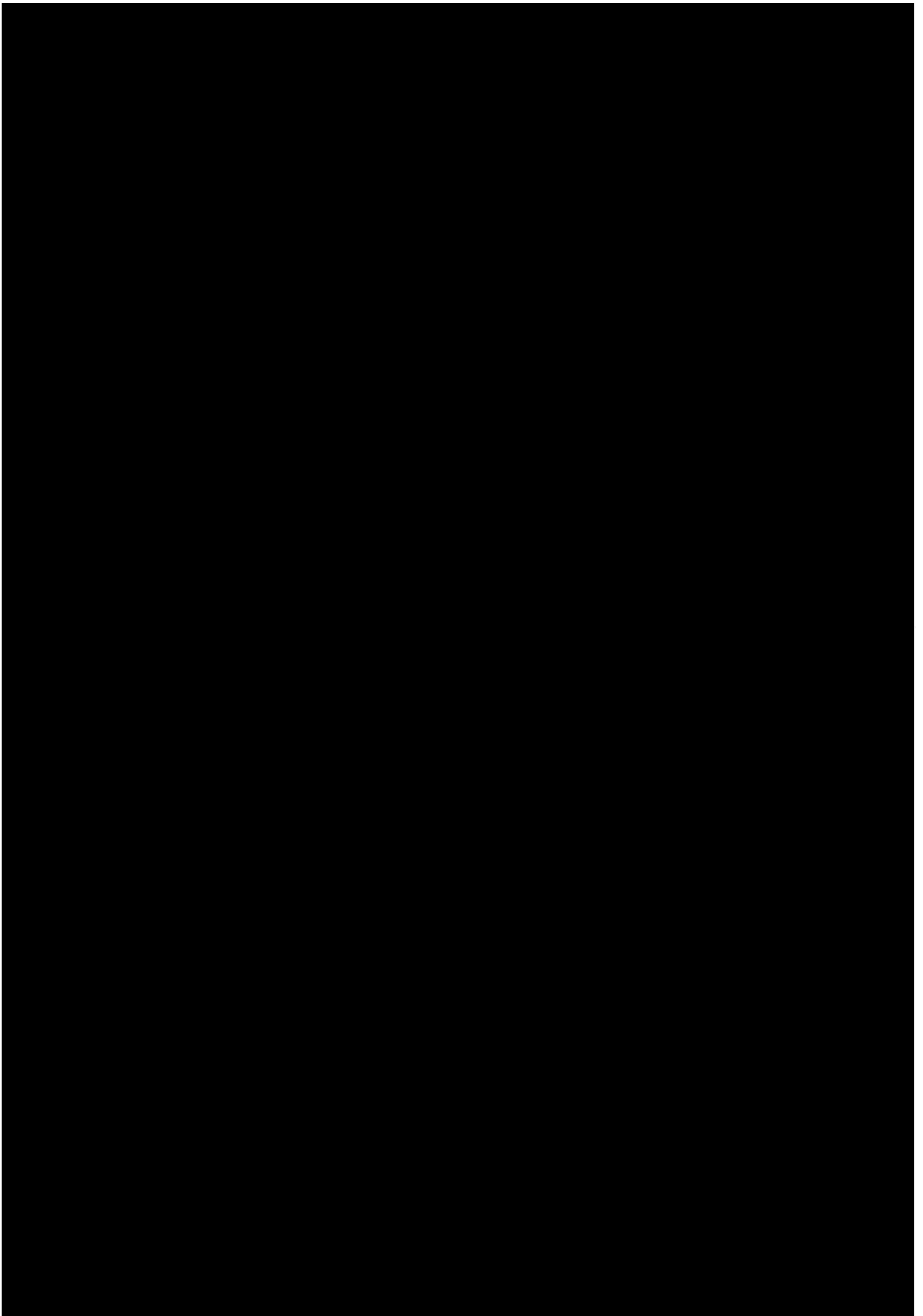
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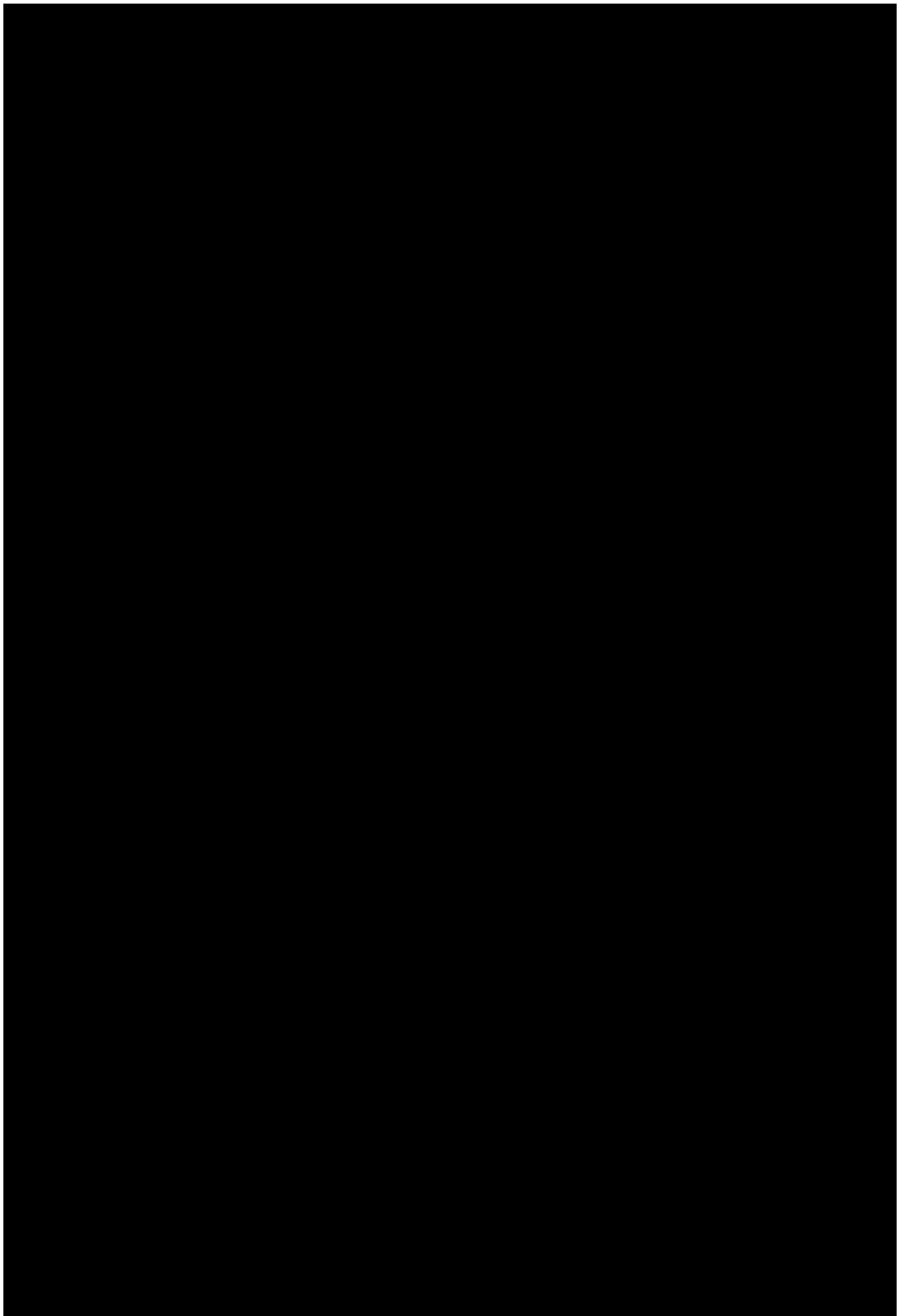
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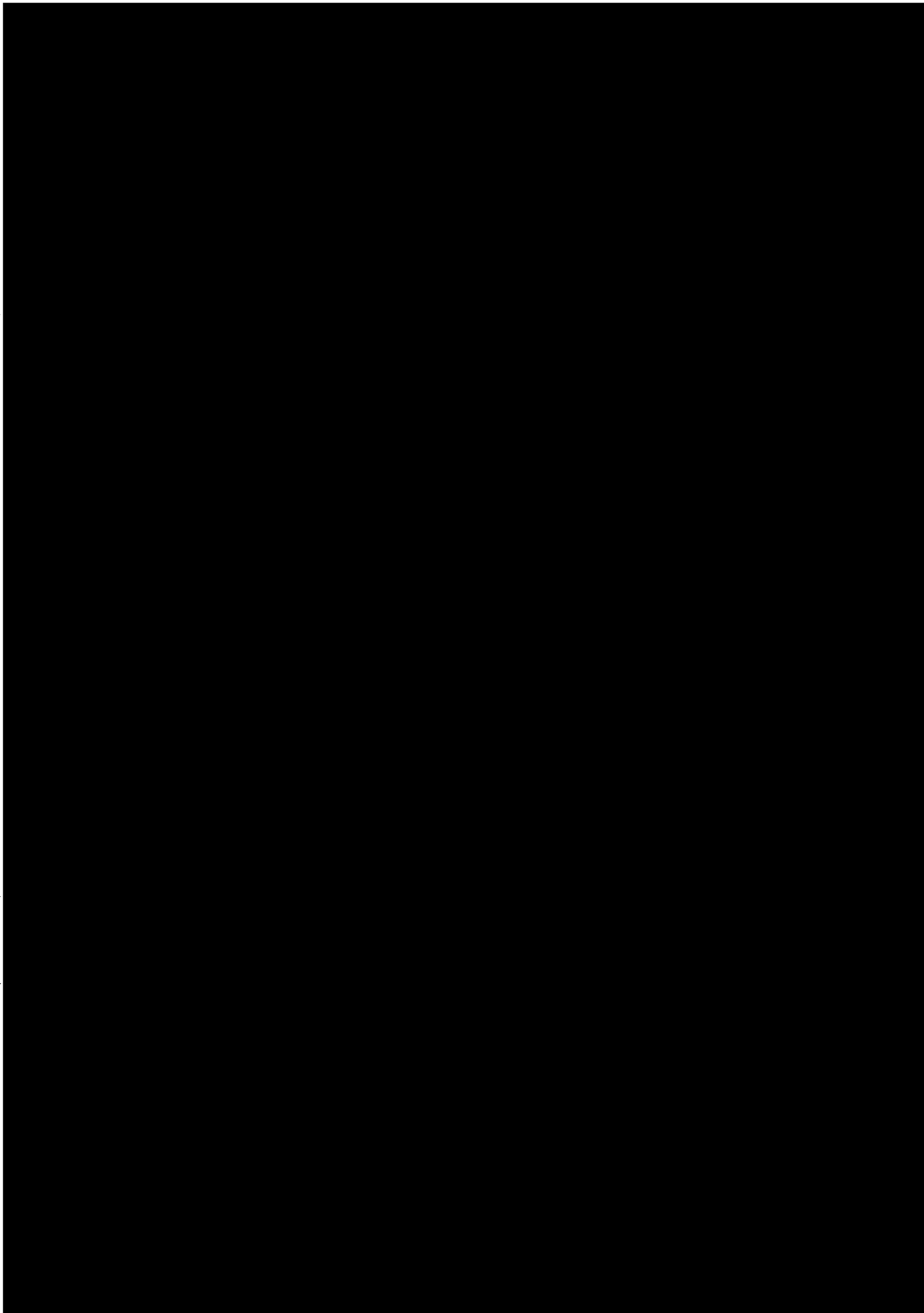
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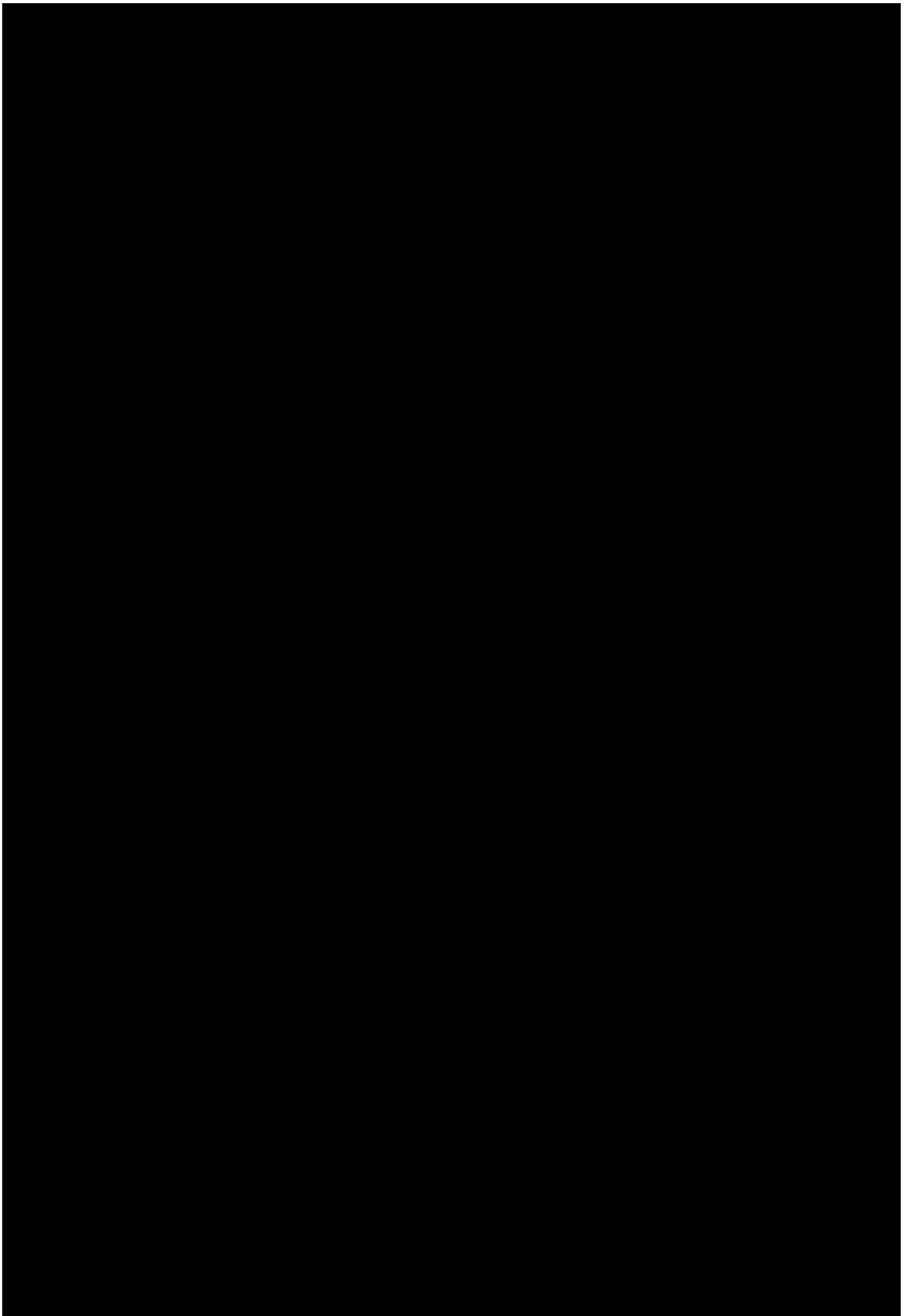
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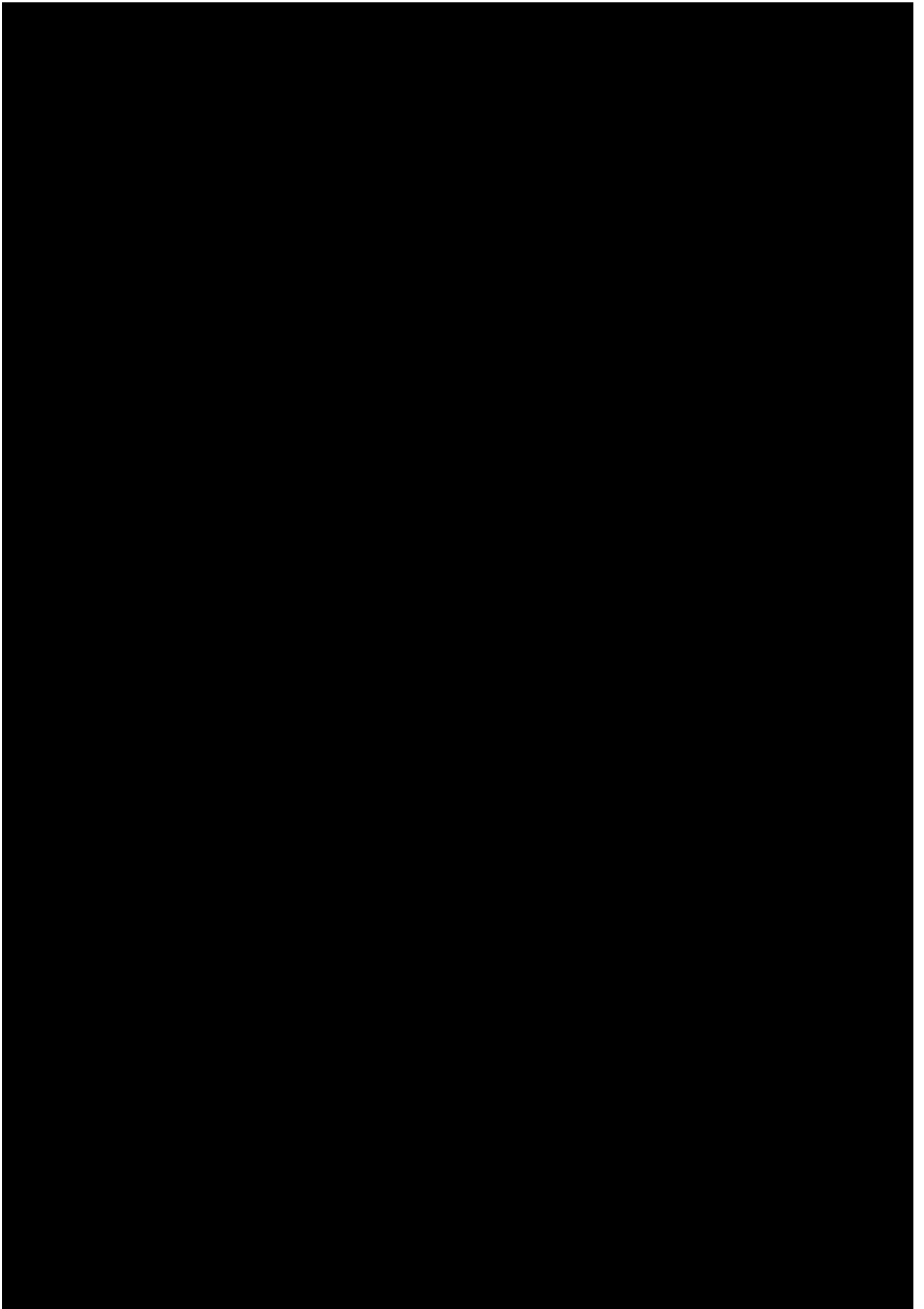
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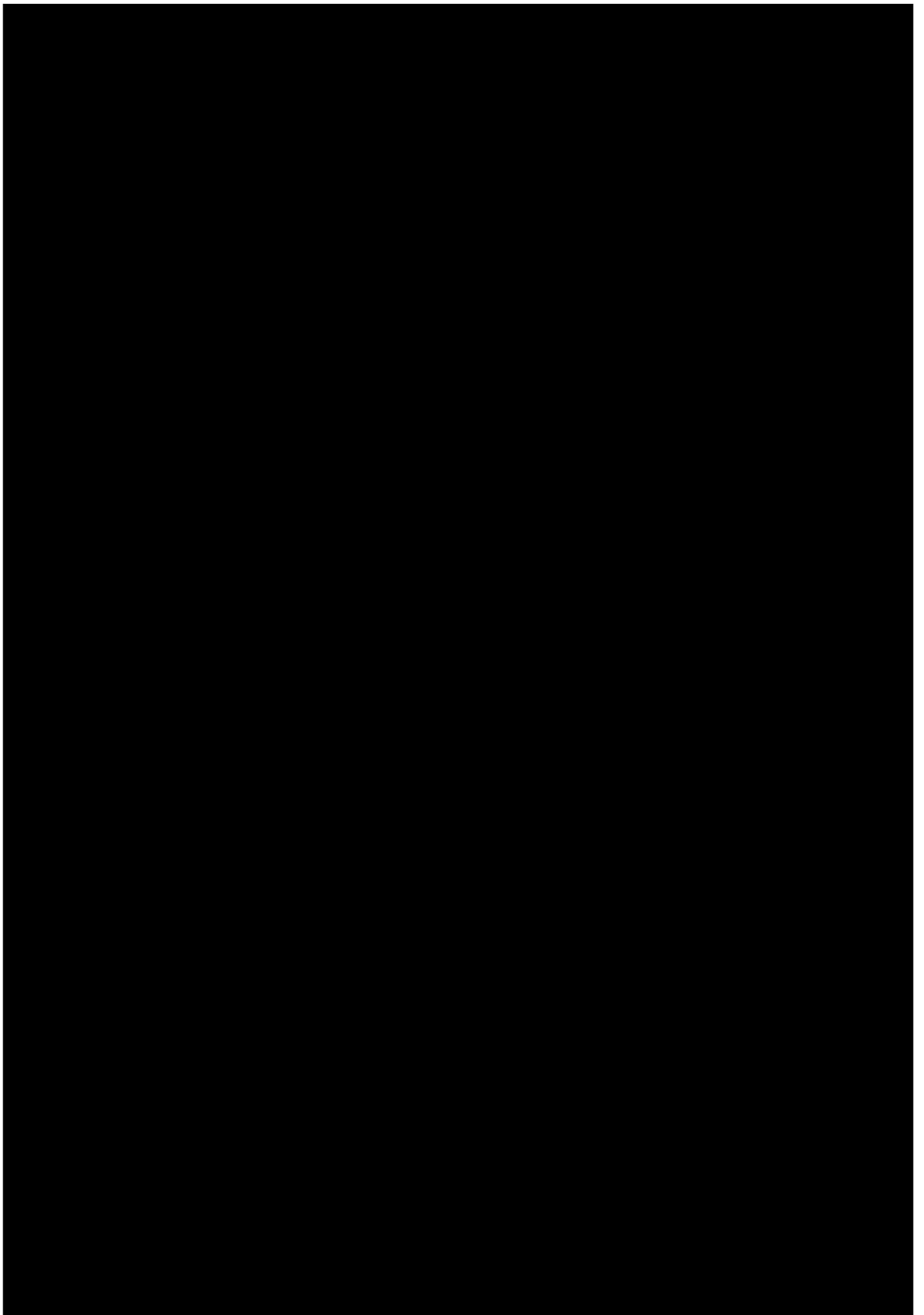
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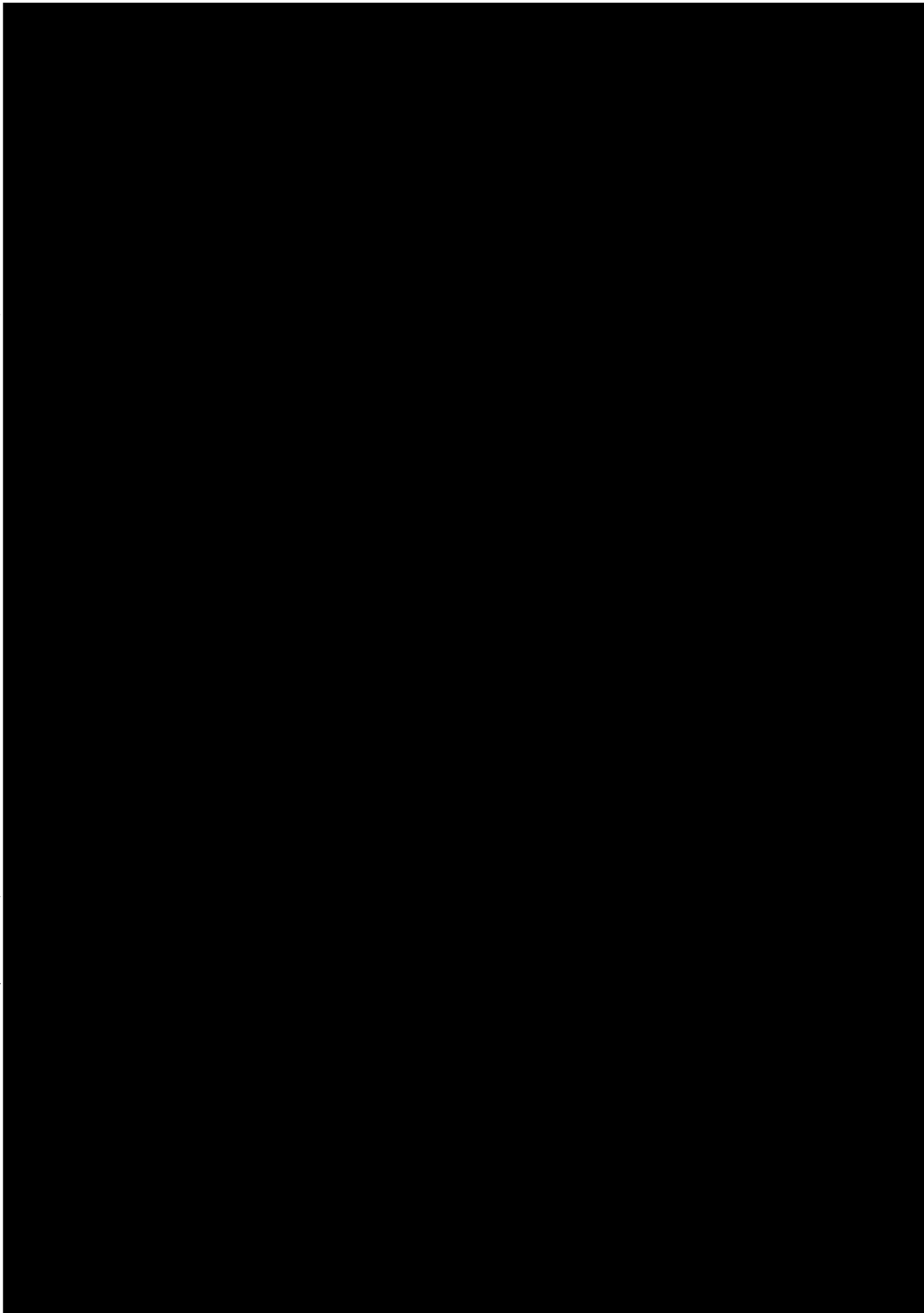
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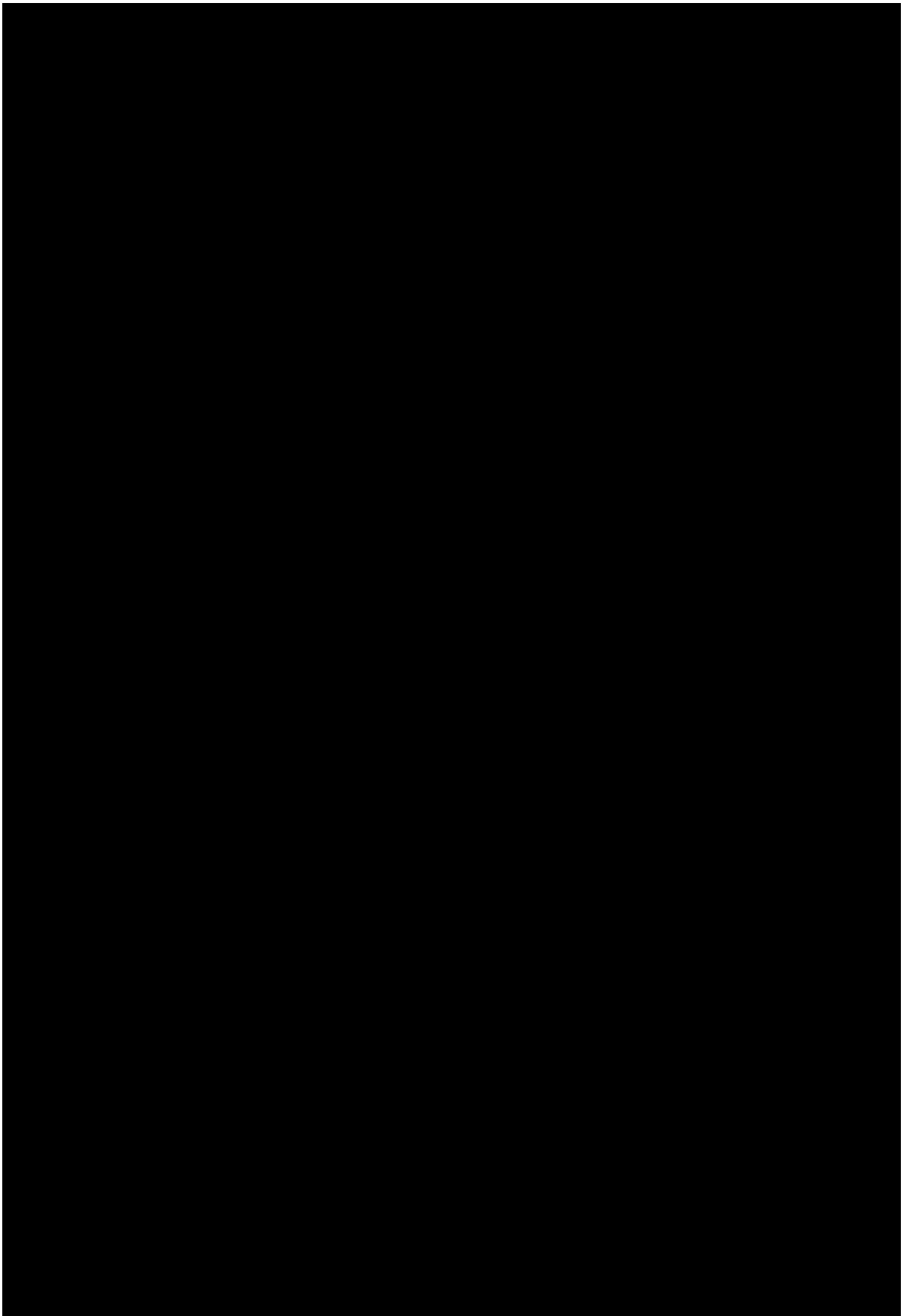
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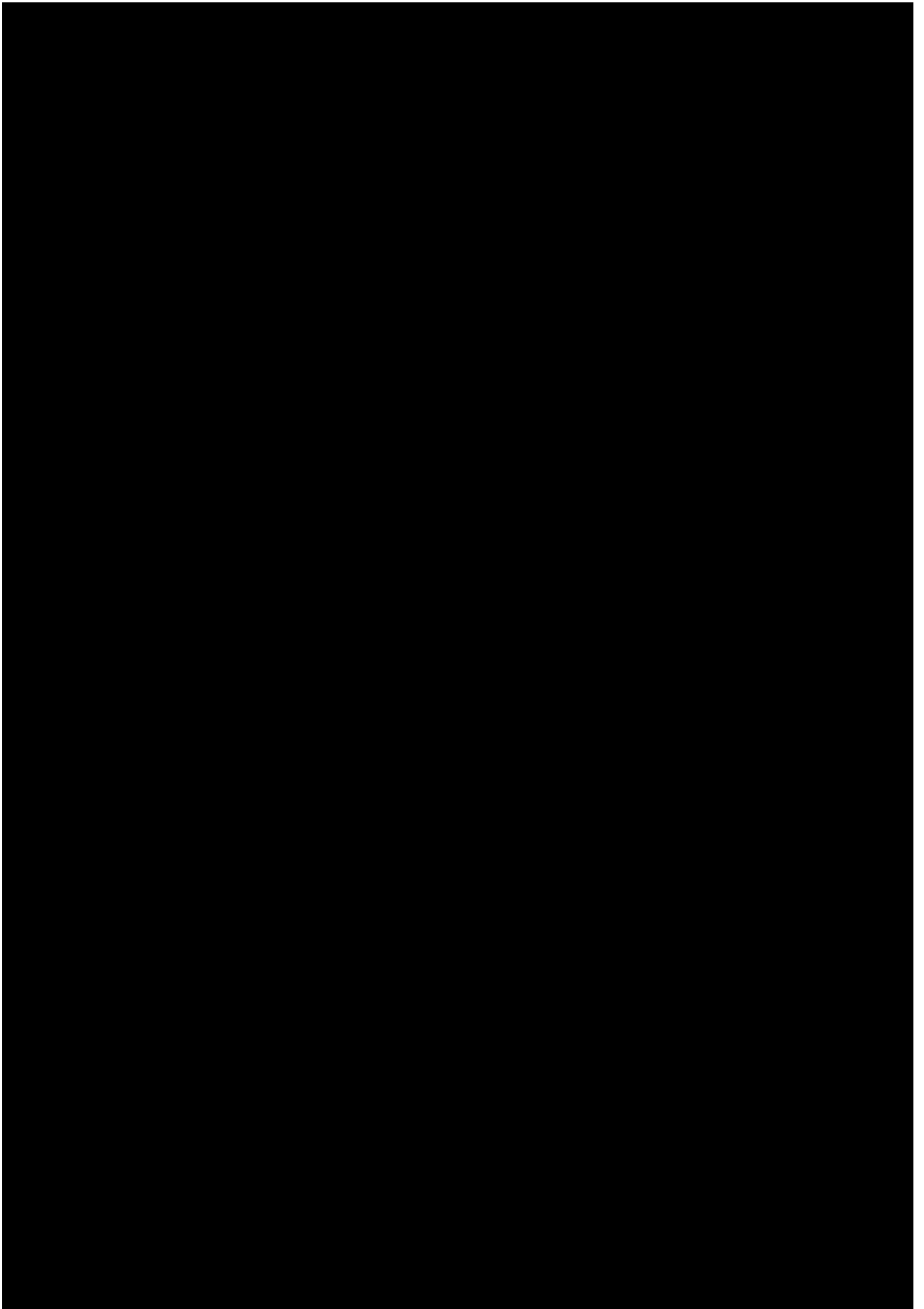
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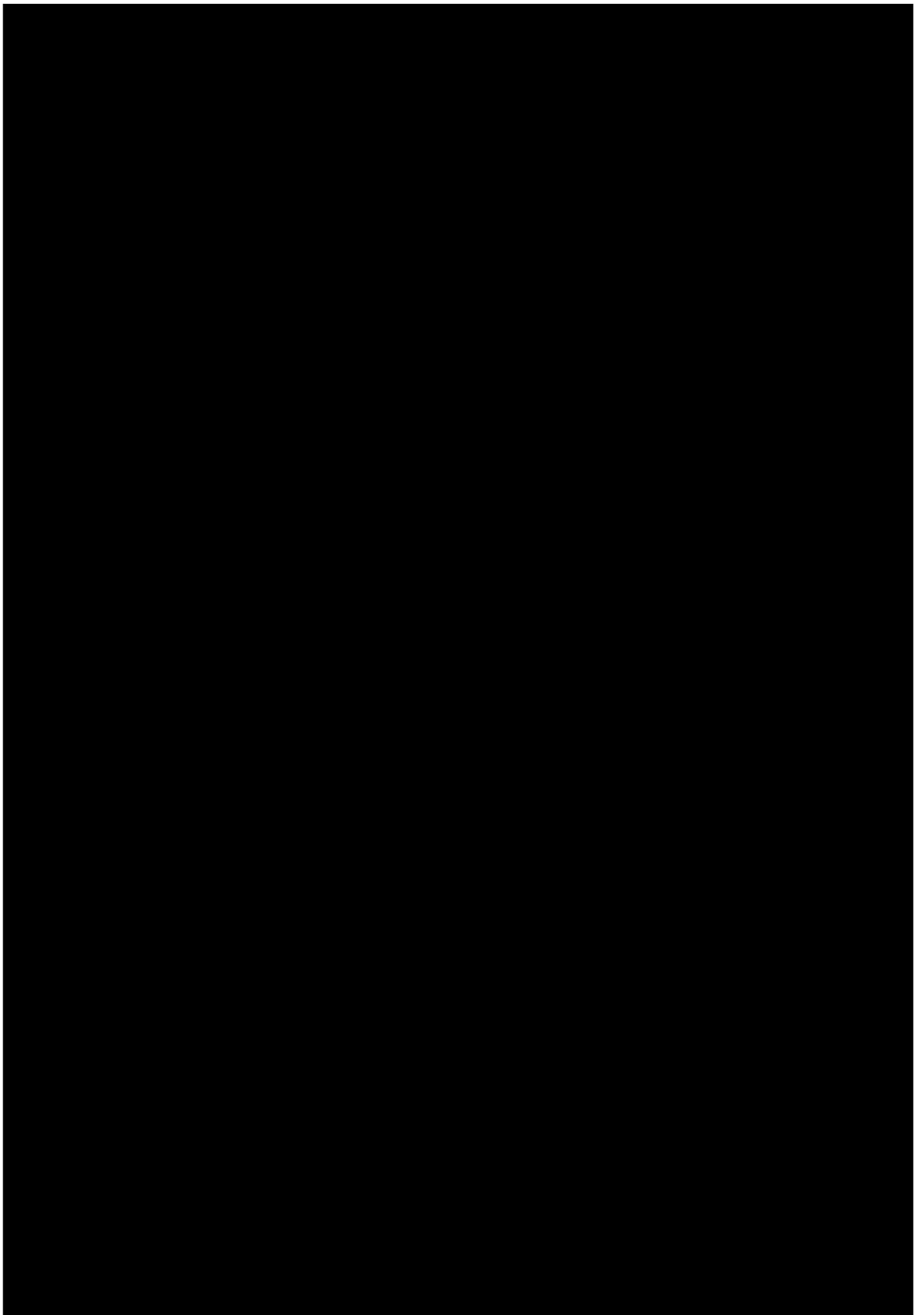
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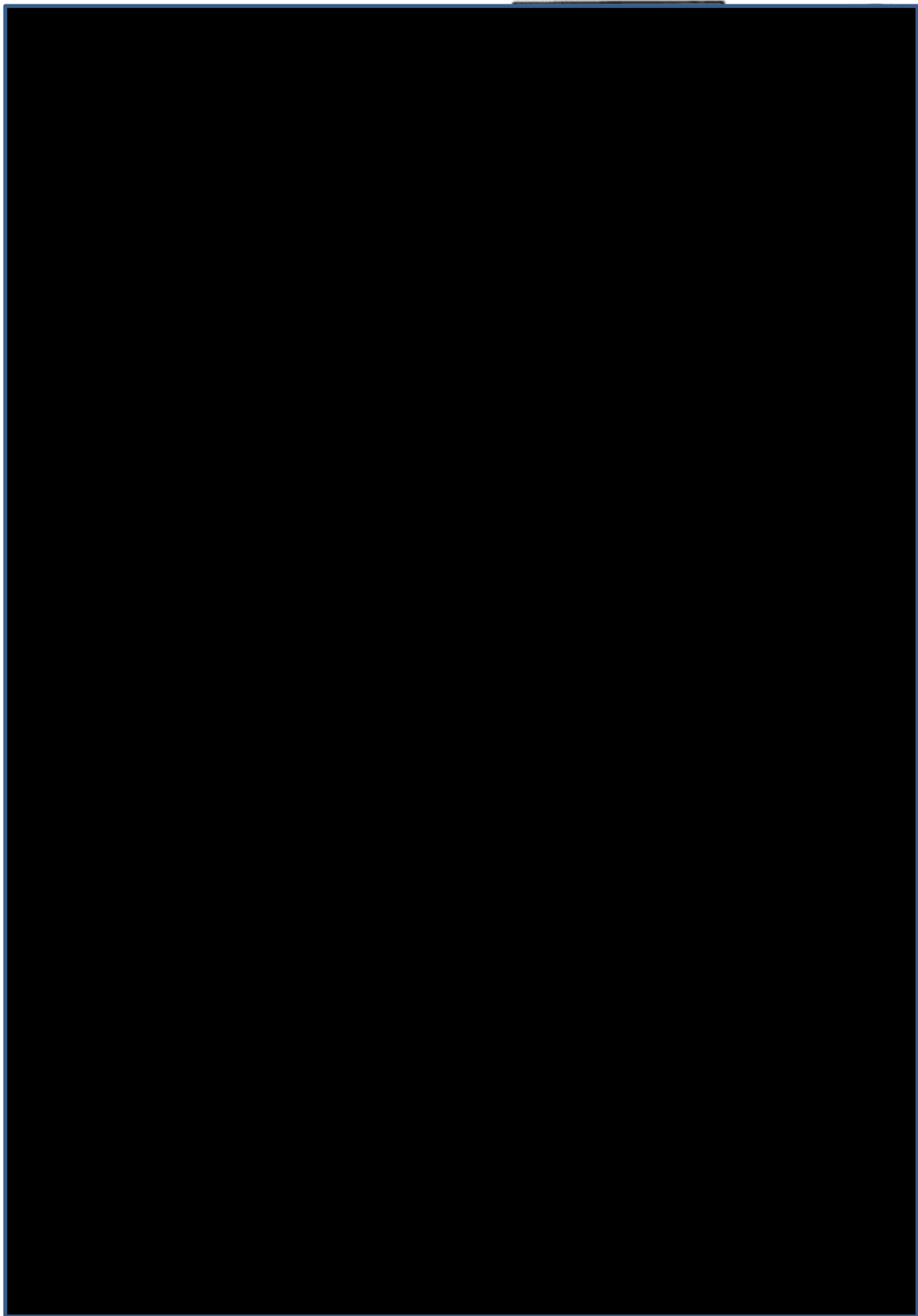
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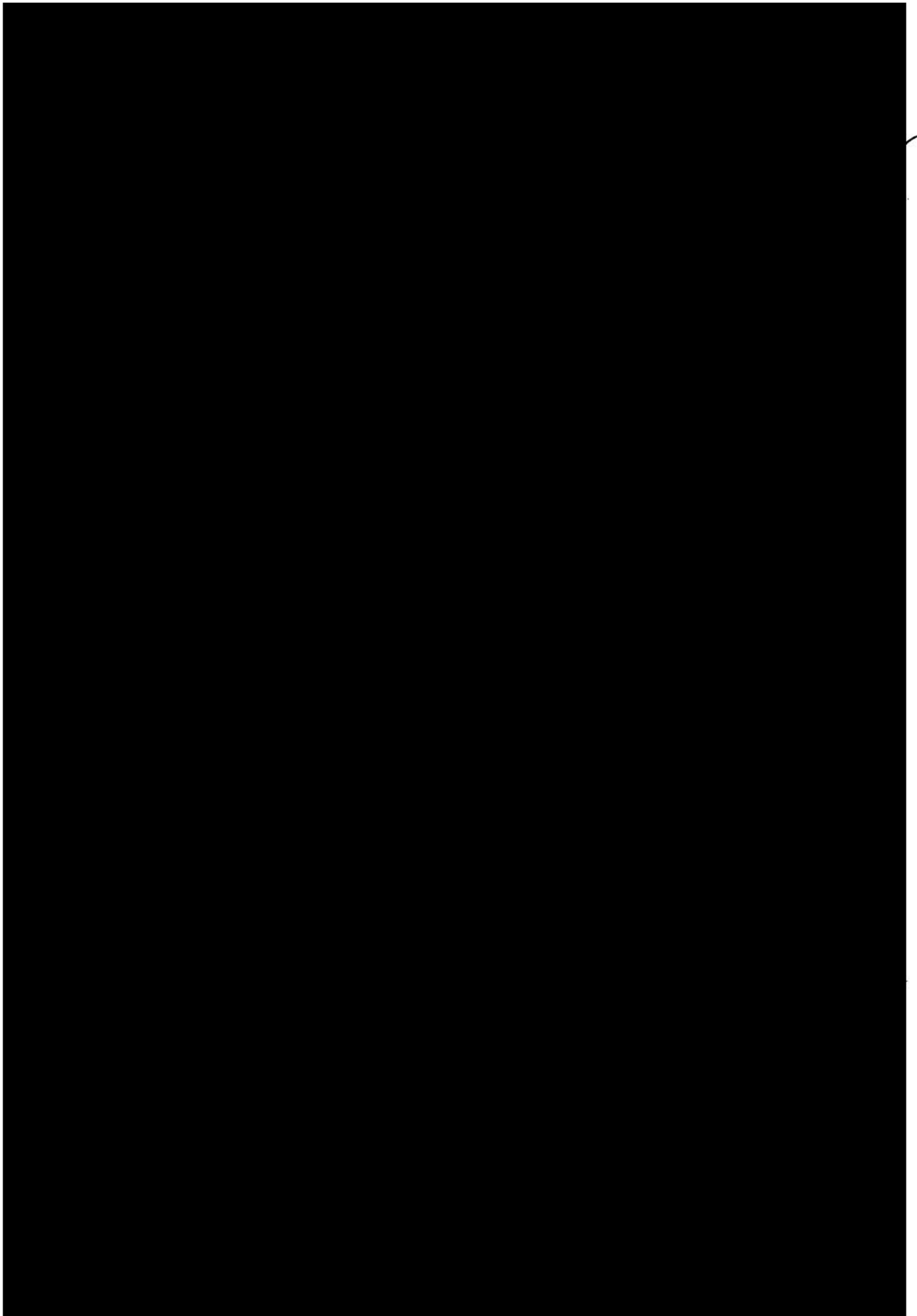
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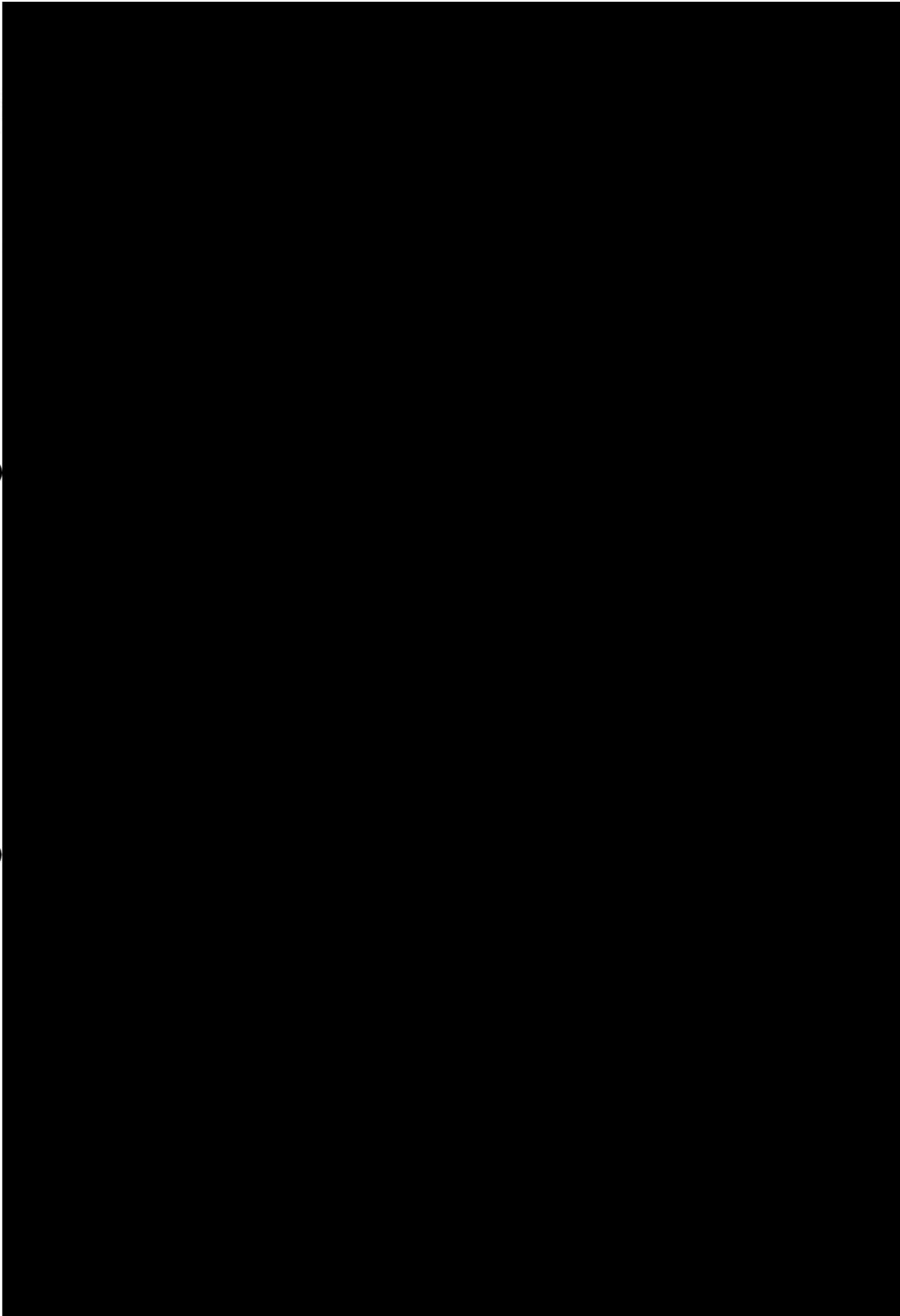
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TWG GUIDE LINE

**RECOMMENDED PROCEDURES FOR
EVALUATING OCCUPANT INJURY RISK
FROM DEPLOYING SIDE AIRBAGS**

Prepared by

The Side Airbag Out-of-Position Injury Technical Working Group
(A joint project of Alliance, AIAM, AORC, and IIHS)

Adrian K. Lund (IIHS), Chairman

(First Revision – July 2003)

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Foreword

This document provides the results of the deliberations of the Side Airbag OOP Injury Technical Working Group. The working group was sponsored by the Alliance of Automobile Manufacturers (Alliance), Association of International Automobile Manufacturers (AIAM), Automotive Occupant Restraints Council (AORC), and Insurance Institute for Highway Safety (IIHS) for the purpose of developing a common understanding of the risks associated with side airbag deployments and ways to minimize those risks. The principal part of this report is a set of recommended procedures for assessing the risks, which begins in Section 3. In the Introduction, we provide background on the formation of the Technical Working Group, its goals, and its limitations. In addition, we review the substance of the Working Group's deliberations, including the data and philosophies that guided the development of the recommendations.

It is the expectation of the Technical Working Group's members that these recommendations will be followed by manufacturers and their suppliers for future airbag designs, and we are confident that following the recommendations will reduce the already small risk of injury from interactions with side airbags even further. However, three limitations of the Working Group's efforts are important to note:

- Some level of inflation injury is inherent with any inflatable restraint system that reduces the risk of injury in side impacts. The group's work reflects the best current information on how to measure the risk of significant injury from the airbag inflation itself and assure that it is very small, but the risk cannot be made zero.
- The level of scientific understanding is not the same for all of the potential OOP injury risks. Scientists are more confident in the evidence supporting the conclusions about some of the injury values described in this report than in others. The group was concerned that misplaced confidence in some of the injury values with limited scientific support might result in delaying or discarding some side airbag systems that hold promise for reducing the risk of significant injuries in severe side impact crashes.
- Research on side airbag inflation injury is an ongoing, worldwide effort. The final recommendations may need revision, as new information becomes available. The sponsoring groups have agreed to periodically reconvene the Technical Working Group to review the adequacy of the recommendations.

1 Introduction

Airbags to protect occupants in side impacts are appearing in the new car market rapidly. Introduction of these devices can reduce the incidence of serious injury in side impact crashes, especially those airbag devices that interpose themselves between the heads of occupants and outside structures (trees, poles, other vehicles) that intrude into the occupant compartment during the crash. In 1998, side impacts of passenger vehicles resulted in 9,482 fatalities, 2,891 in single vehicle crashes and 6,591 in multiple-vehicle crashes. Occupants of passenger cars are particularly vulnerable when their car is struck in the side by large and tall vehicles; side airbags offer one major countermeasure to this risk in the face of the growing popularity of light truck vehicles.

However, airbags also introduce new energy into the crash, a situation that can exacerbate rather than ameliorate injury likelihood under some conditions. Those conditions are typically labeled as occupant out-of-position (OOP) situations. With frontal airbags, 150 fatalities have occurred to OOP occupants in crashes of such low speed that only minor or moderate injuries would have been expected without airbags. National Highway Traffic Safety Administration (NHTSA) data suggest that the incidence of these injuries is declining, as airbag designs evolve and as occupants become more aware of their risk and the simple countermeasures to reduce them (“buckle up – kids in the back”). Although no deaths or serious injuries have occurred from side airbags to date, it is imperative that automakers and the safety community take measures that minimize the potential negative side effects of side airbags as they are introduced into new cars.

1.1 Historical Background

The Side Airbag OOP Injury Technical Working Group was formed in an effort to meet this goal. Its genesis began when concerns were expressed about the aggressiveness of side airbags, which brought the issue of side airbag risks to the public’s attention. The NHTSA, which had been gathering information about side airbags as well, scheduled a public meeting for April 19, 1999 to discuss the rising issue. On April 15, 1999, just prior to the public meeting, NHTSA received a petition from the Center for Auto Safety asking the agency to develop regulatory test requirements that could assure that side airbags would not pose risks to vehicle occupants that happened to be in the path of inflating airbags.

At the April 19 public meeting, more test results were presented which demonstrated the high forces that could be experienced by out-of-position occupants. However, concerns about these test results were balanced by other crash test data showing that side airbags were an important crash injury countermeasure. Furthermore, real-world crash investigation programs sponsored by both NHTSA and Transport Canada included examples of severe crashes in which side airbags apparently prevented serious injuries. Neither organization had yet discovered any cases of serious injuries or deaths caused by side airbags. Nevertheless, most participants at the meeting recognized the need to coordinate information about the new technology of side airbags and promising procedures for assessing their potential risks to out of position occupants.

On May 21, 1999 the NHTSA’s administrator, Ricardo Martinez, M.D., sent a letter to the Alliance of Automobile Manufacturers (Alliance) and the Association of International Automobile Manufacturers (AIAM) asking that the industry develop public standards which their member companies would follow as they developed future side airbag systems that did not pose serious

injury risks to vehicle occupants. Dr. Martinez also indicated it was important that the deliberations of the industry be:

- Comprehensive of the hardware and risks involved,
- Open and inclusive of different interest groups, and
- Timely.

In response, Alliance and AIAM asked the Insurance Institute for Highway Safety (IIHS) and the Automotive Occupant Restraints Council (AORC) to join them in sponsoring a technical working group comprised of crash safety and biomechanics experts to develop recommended procedures and performance requirements. Inclusion of AORC assured that the airbag supplier industry, which has a separate body of expertise, had a significant voice in the deliberations. IIHS was asked to chair the technical working group, in part because of its involvement in the analysis of frontal airbag out-of-position problems and because of independence from the auto industry and suppliers.

The first meeting of the Side Airbag OOP Injury Technical Working Group (TWG) was held in the Detroit area, Michigan, on July 21, 1999. Organizations and companies represented at that meeting and subsequent meetings included Alliance; AIAM; AORC; Autoliv; BMW; Bosch; Breed; DaimlerChrysler; Delphi; Ford; General Motors; Honda; Hyundai; IIHS; Dale Kardos and Associates; Mazda; Mitsubishi; Nissan; Porsche; Simula; Subaru; Takata; Toyota; TRW; and Volkswagen. Thus, automakers and airbag suppliers were represented. In addition, the TWG invited NHTSA and Transport Canada to attend the meetings, so that the knowledge of these two government organizations could inform the deliberations. Finally, Nationwide Insurance and George Washington University were included in the working group because of technical background and ties to other consumer information and testing organizations. Thus, participation in the TWG was as broad as possible, with the provision that participants outside the involved industries should have technical backgrounds that allow them to contribute to the technical discussions. Although not members of the TWG, Erika Jones of Mayer, Brown, and Platt (at the request of the Alliance), and Charles Lockwood of AIAM were present for some meetings to provide advice on antitrust and other legal questions that might arise from the activities of the TWG.

1.2 Information Considered by the Technical Working Group

The deliberations of the TWG benefited greatly from the expertise of its membership.

- Members serving on Working Group 3 of the International Organization for Standardization (ISO) Technical Committee 22, Subcommittee 10, which also has been considering procedures for evaluation of side airbags, kept the TWG apprised of parallel activities there. The preliminary work of the ISO Group provided the TWG with a head start on its consideration of test procedures. However, based on information provided the TWG, primarily test data from Transport Canada, several test positions were replaced with new positions that seemed both more realistic and more likely to reveal potentially aggressive side airbags. It is the understanding of the TWG that the ISO test procedures (TR 14933) have been modified to parallel the procedures recommended here.

As part of the ISO Working Group 3 activities, several auto manufacturers have been conducting tests of different child dummies. Results of that testing were important in the TWG's choice and specification of test dummies in its recommendations.

- Airbag supplier companies updated the TWG on their efforts to develop side airbags that meet the conditions being considered. One important implication of their information concerns the inherent relationship between the expected effectiveness of side airbags in serious crashes and the risk of OOP injury. Suppliers indicated they were developing side airbag prototypes that satisfied the OOP test criteria, but these airbags were clearly lower in power. There were no estimates as to the degree to which side airbag effectiveness was compromised, however, because no comparative tests were being conducted. According to suppliers, they are being asked to demonstrate only that new side airbag designs will produce good scores in the FMVSS 214 compliance test or the Lateral Impact New Car Assessment Program (LINCAP), in addition to satisfying the OOP tests.

Another important issue addressed by the suppliers' data is that of test-to-test repeatability. High repeatability (or low variability) is necessary for airbag system developers to be confident that low scores on one test are predictive of low scores on subsequent tests. The higher the variability, the harder it is to have confidence in the performance of a system regarding a particular injury criterion. Supplier information suggests that some of the neck injury tests included in the current recommendations have relatively low repeatability, meaning that it would be necessary to design well below any selected injury threshold if a manufacturer wanted to assure that most airbags in mass production will meet the criterion. A point frequently emphasized by suppliers is that setting injury risk targets very low for OOP testing could greatly reduce the effectiveness of side airbags in real crashes, because the energy levels will have been set very low.

- The NHTSA reported on its Special Crash Investigations that involved side airbag vehicles. Following the experience with frontal airbags, the agency has maintained a concentrated effort to monitor the real-world experience with side airbags in order to be aware as early as possible of any untoward incidents. As of October, their program had investigated 37 crashes of vehicles with side airbags. Those investigations indicated that the side airbags already on the road at this time are performing well in the real world. Side airbags appeared to have prevented serious or fatal injury in a number of cases, including two where children were present. So far, no fatal injuries have been attributed to occupant interaction with side airbags; the cause of all fatal injuries in these side impacts has been severe intrusion. One serious injury, that to a 76 year old male driver, appears to have been caused by the side airbag, although there is continuing discussion about the case with the CIREN team that initiated the investigation. Side airbags are causing some injuries, but these tend to be minor or moderate. Overall, real-world experience has shown no serious problem with side airbags at this time; however, the number of deployment incidents is still quite small.
- Transport Canada has performed numerous crash tests and static side airbag deployment tests to study both out of position injury risk and the effectiveness of side airbags in severe side impacts. Based on their data, the TWG decided to replace two of the child OOP tests that had been proposed initially by ISO Working Group 3 with two tests that Transport Canada had developed. These tests, which address the OOP injury risk from side airbags that deploy from seat backs, appeared to adopt realistic risk positions and had been carefully specified by Transport Canada.

Transport Canada has also conducted a number of full-scale side impact crash tests of vehicles with side airbags. These tests, in which the side airbag car is struck in the side by a utility vehicle, show impressive performance of the systems. In one test, a child dummy seated in the rear seat of a vehicle equipped with rear seat side airbags appeared to receive good protection from the side airbag, which prevented the child dummy's head from contacting the stiff structure of the rear door.

- Recognized world leaders in the specification and quantification of injury risk from forces experienced during car crashes participated in the TWG. One of the difficulties faced by the TWG was to specify methods of testing for injury risk with dummies that were not designed in anticipation of the test conditions. For example, several of the recommended tests use frontal crash test dummies to assess risk from airbags that are more likely to deploy into the side of a human. The presence of these experts allowed the TWG to consider thoughtfully the problems in using these dummies and to reach reasonable recommendations for their use in assessing the risk of OOP injury from side airbags.

2 Scope of the Recommendations

Side airbags are inflatable devices intended to help reduce the crash injury risk of vehicle occupants adjacent to the struck side of the vehicle. Side airbags work by interposing an inflatable cushion between vehicle occupants and the vehicle's side structure, which is pushed into the occupant by the striking vehicle or stationary roadside object (e.g. tree or pole). During the inflation process, an airbag releases considerable energy and, as a result, substantial forces can be developed between the deploying airbag and the nearby occupant. The interaction forces may be greater than intended by the airbag designer when the seat occupant or part of the seat occupant blocks the path of the inflating airbag. This situation may occur for a normally seated occupant whose outboard arm would be near a side airbag. Normally seated occupants may also be forced out-of-position by pre-crash events such as braking or hard maneuvering. Finally, some vehicle occupants drive or ride in positions different from those considered normal. A passenger sleeping with his/her head against the vehicle side, for example, may experience side airbag forces different from a normally seated passenger. The TWG recognizes these as circumstances to be considered in assessing side airbag systems. Other circumstances could also occur that are beyond the consideration of this TWG. For example, unrestrained occupants in a complex rollover crash may achieve positions unanticipated by these recommended procedures. However, the TWG does not believe the circumstances of this group should unnecessarily restrict the availability of side airbags to protect the remainder of the population.

This report describes the test devices (dummies), instrumentation, test procedures, and performance guidelines that should be used for assessing the injury risk of interactions between a deploying side airbag and a vehicle occupant. They do not address the issue of secondary impacts because the TWG believes the primary risk occurs during interaction with the side airbag. The test procedures are sufficiently broad to cover airbags which deploy from the door or side trim panel, the armrest, the seat back or cushion, the roof support pillars or roof rail area as well as occupants ranging in size from young children through adults. Most of the performance criteria are established to assure that the risks of life-threatening injuries to the head, neck, thorax and abdomen are low, but they also include criteria that minimize the risks of less serious injuries to the arm and pelvis. The test procedures described in this report provide as comprehensive an evaluation as possible for current state-of-the-art airbag designs. However, only sound engineering judgment can guarantee the comprehensive evaluation of

any design. Additional tests, with slight variations of the recommended dummy positions, may be needed to ensure the robustness of the occupant interaction measurements.

2.1 Issues Not Addressed by the Technical Working Group

The TWG agreed with NHTSA that its deliberations should have a timely conclusion. To that end, the focus was on assuring that all those involved in the development of side airbags evaluated the potential risk according to the best knowledge of the industry. To achieve this focus, it was agreed that the TWG would *not* address several important issues:

- **Methods for assessing the effectiveness of side airbags.** This issue was outside the scope of the TWG's mission, described above. However, the TWG notes that methods to evaluate the effectiveness of side airbags have been described elsewhere and include vehicle crash tests and impact simulation.
- **Schedules for implementation of the recommended evaluation procedures by individual manufacturers.** It is expected that all side airbag systems currently under development or those developed in the future will be designed according to the recommended procedures. While the real-world experience with side airbags to date has been very positive, there have not been enough deployments to assess the OOP injury risk of side airbags from accident data. The majority view of the TWG is that new systems should be designed according to these recommendations for further limiting out-of-position occupant injury risk largely because new technology is emerging that is expected to meet the guidelines while still providing effective side impact protection. Thus, new systems should be designed according to these recommendations for the simple reason that they now can be. This does not mean that older systems pose an unreasonable risk.
- **Dissemination of information about out of position injury risk and compliance with the recommendations.** The TWG recognizes that there is considerable public interest in the potential risk of side airbags to out-of-position occupants. However, communicating the actual risk of out-of-position injury in a meaningful way is complex, and this issue falls outside the expertise of the TWG. Moreover, there is likely to be variation in the degree to which these recommendations will be applied to side airbag systems that are already in vehicles, so this issue must be addressed by individual manufacturers.

3 Recommendations

The recommendations of the TWG address three substantive areas:

- The tools or test devices (crash test dummies) best suited for assessing injury risk from the close-range deployment of side airbags.
- Performance criteria against which to assess the injury risk indicated by the forces measured on the test devices.
- A standard set of test procedures (occupant positions) for assessing side airbag inflation-injury risk associated with various side airbag designs.

3.1 Test Devices

The Side Airbag Out-of-Position Injury Technical Working Group focused principally on the risk of injury to small women, adolescents, and children. Even these occupants have low risk of injury from side airbag systems because the small size of side airbags means that occupants must be in the deployment path and near the module when the airbags deploy. Larger adults and infants are expected to be at even lower risk due to size and/or position in the vehicle seat. Given generally lower injury risk as occupant size increases, the small female should experience the maximum risk faced by an adult. For infants and toddlers (1-2 years), it is expected that the majority will increasingly be restrained in appropriate child restraints. The locations of these restraints place them out of the path of deploying side airbags.

These observations led the Technical Working Group (TWG) to conclude that the risk of side airbag inflation injury can be assessed using dummies representing the small female (and adolescents), the 6-year-old child, and the 3-year-old child. However, the TWG encourages vehicle manufacturers and their suppliers to verify whether these conclusions are appropriate for a given vehicle configuration. If a particular system places a larger adult's head nearer the airbag deployment area than achieved by the small female or places a restrained child in a child seat in the deployment path, then this new risk should be assessed.

In assessing OOP injury risk, the TWG is recommending the use of child dummies developed for frontal impact testing and a small adult dummy developed for side impact testing. In reality, OOP injury risk can occur from forces applied in many directions – frontal, lateral, from the rear, from above – directions for which these dummies may not provide direct injury measures. There are relatively few test devices available for assessing some of these injury risks (for example, lateral forces or forces from the rear). Nevertheless, the TWG has concluded that appropriate positioning of the dummies that are available, such that the force transducers are oriented as designed with respect to the direction of force from the deploying airbags, can provide meaningful assessment of OOP injury risk. This conclusion reflects, in part, the fact that some of the risk will occur to occupants whose position in the vehicle exposes them to the types of forces that the dummies were designed to measure (i.e., frontal forces for frontal dummies). It also reflects the fact that each side airbag system will be subject to multiple tests. This should become more apparent as the reader considers the array of tests described in Section 3.3.

The test dummies recommended for use at this time by the TWG are described in the following sections. They are also listed in Table 1, which includes an indication of the required instrumentation to measure the injury risks specified elsewhere in this document.

3.1.1 Hybrid III 3-Year-Old Child Dummy

This dummy represents an average 3-year-old-child and was developed for evaluation of child restraint systems and frontal impact countermeasures. The dummy's specifications are described in SAE Engineering Aid 31 and 49 CFR Part 572 Subpart P. The Q3 dummy, developed by TNO, also was considered by the TWG. The Q3 was supposedly designed to have both front and lateral biofidelity. However, testing of the Q3 by members of the TWG showed that it lacks the necessary durability and repeatability to be used in evaluating side airbag OOP injury risk, and its lateral impact biofidelity is no better than the Hybrid III 3-year-old child dummy. As a result, the TWG recommends using the Hybrid III 3-year-old dummy. This is consistent with the current recommendation of ISO/TC22/SC12/WG5.

3.1.2 Hybrid III 6-Year-Old Child Dummy

This dummy represents an average 6-year-old child and was developed for evaluation of child restraint systems and frontal impact countermeasures. The dummy's specifications are described in SAE Engineering Aid 29 (1998) and 49 CFR Part 572 Subpart N. The Hybrid III 6-year old is the only 6-year old child dummy available at this time. The TWG believes its suitability is similar to that of the Hybrid III 3-year old dummy. However, the 6-year old dummy does require the development of a neck shield because of a non-humanlike junction at the back of the head and the neck in which the inflating airbag could become partially trapped. This junction could produce nonbiofidelic load patterns on the dummy, particularly the neck transducers.

Use of the Hybrid III 6-year old dummy is consistent with the recommendation of ISO/TC22/SC12/WG5.

3.1.3 SID-IIs

This dummy represents a 5th percentile adult female as well as typical 12-13-year-old adolescents. It was designed specifically for the evaluation of side impact countermeasures; hence, it is normally equipped with laterally oriented measuring devices. Daniel et al (1995) describes the dummy's specifications. Use of the SID-IIs is consistent with the recommendation of ISO/TC22/SC12/WG5.

3.1.4 Hybrid III 5th Percentile Adult Female Dummy

This dummy represents a 5th percentile adult female as well as typical 12-13-year-old adolescents. It was designed for the evaluation of front impact countermeasures. The dummy's specifications are described in SAE Engineering Aid 25 (1994) and 49 CFR Part 572 Subpart O. In the context of these recommendations, the Hybrid III small female dummy is a suitable substitute for the SID-IIs in tests of roof-rail-mounted airbags. For roof-rail airbags, the principal injury risks concern the head and neck, which are identical for SID-IIs and the Hybrid III 5th percentile female. Tests of systems that pose a risk of injury to the thorax, abdomen, or pelvis should be tested with the SID-IIs.

**Table 1 Test Devices (Dummies) and Recommended Instrumentation
for Assessing OOP Injury Risk for Side Airbags**

Dummy	Body Region	Instrumentation Measure
Hybrid III 3-Year-Old Child Dummy	Head	3 accelerations (x,y,z)
	Neck	
	Upper	3 forces and 3 moments (x,y,z)
	Lower	3 forces and 3 moments (x,y,z)
	Thorax	
	Upper spine (~T1)	3 accelerations (x,y,z)
	Sternum	
	Upper	1 acceleration (x)
	Center	1 deflection (x)
	Lower	1 acceleration (x)
	Spine (~T4)	3 accelerations (x,y,z)
Spine at level of Rib 3	1 acceleration (x)	
Lower spine (~T12)	3 accelerations (x,y,z)	
Hybrid III 6-Year-Old Child Dummy	Head	3 accelerations (x,y,z)
	Neck	
	Upper	3 forces and 3 moments (x,y,z)
	Lower	3 forces and 3 moments (x,y,z)

	Thorax	
	Upper spine (~T1)	1 acceleration (x)
	Sternum	
	Upper	1 acceleration (x)
	Center	1 deflection (x)
	Lower	1 acceleration (x)
	Spine at level of Rib 1	1 acceleration (x)
	Spine (~T4)	3 accelerations (x,y,z)
	Lower spine at level of Rib 6	1 acceleration (x)
Hybrid III 5th Percentile Adult Female	Head	3 accelerations (x,y,z)
	Neck	
	Upper	3 forces and 3 moments (x,y,z)
	Lower	3 forces and 3 moments (x,y,z)
SID-IIs	Head	3 accelerations (x,y,z)
	Neck	
	Upper	3 forces and 3 moments (x,y,z)
	Lower	3 forces and 3 moments (x,y,z)
	Thorax	
	Upper spine (~T1)	3 accelerations (x,y,z)
	Ribs	3 accelerations (y) and deflections (y)
	Spine box, opposite each rib	3 accelerations (y)
	Abdomen	
	Ribs	2 accelerations (y) and deflections (y)
	Spine box, opposite each rib	2 accelerations (y)
	Lower spine (~T12)	3 accelerations (x,y,z)
	Pelvis	3 accelerations (x,y,z)
	Acetabulum	1 force (y)
	Pubic symphysis	1 force (y)
Iliac	1 force (y)	
5th percentile Arm	Humerus	2 moments (x,y)
	Ulna	2 moments (x,y)

3.1.5 Instrumented Arm for 5th Percentile Adult Female Dummy

The instrumented arm for small female dummies was developed through the cooperation of the SAE Human Biomechanics and Simulation Standards Committee; Mechanical Simulation Subcommittee and Robert A, Denton, Inc. It is designed to fit both the Hybrid III 5th percentile adult female dummy and the SID-IIs.

3.1.6 Dummy Preparation for Side Airbag Tests

3.1.6.1 General

The dummy should be in good condition and able to meet its performance certification requirements. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The skullcap seam shall be taped with 4mm or electrical tape to prevent the airbag from getting caught in the seam. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.

3.1.6.2 Dummy Test Temperature

The test dummy temperature should be within a temperature range of 20.6-22.2 °C at a relative humidity of 10-70 percent after a soak period of at least 4 hours prior to its application in a test, or that specified for the dummy by the dummy manufacturer.

3.1.6.3 Instrumentation

3.1.6.3.1 General

Measurements needed for the assessment of airbag-inflation injury risk using each of the approved anthropomorphic test devices are shown in Table 1. All measurements should be recorded and filtered according to the latest version SAE J211. These measurements should be recorded continuously and synchronously throughout the tests defined in Section 3.3, so that injury measures may be calculated. The TWG recommends that sternum and rib deflection rate be calculated from the integration of the difference between rib/sternum and spine accelerations. Differentiation of displacement measures is an acceptable alternative. It should be noted that either method can produce spurious rates depending on the amount of noise in the original signals and the methods of integration and differentiation. Appendix B contains the recommended procedure for the calculation using the difference between rib/sternum and spine accelerations.

Dummy interactions with the side airbags should also be monitored by high-speed cameras (or equivalent video equipment) operating at a minimum speed of 1000 frames per second (3000 fps is recommended). The cameras should be positioned so that the field-of-view encompasses the test setup and includes the anticipated movement of the dummy during the test.

3.1.6.3.2 Electrical Grounding

The test dummy, vehicle, and all related instrumentation must be grounded. The test dummy shall be grounded with cables attached to the dummy's head, thorax, abdomen, and pelvis, which shall be connected to earth ground during all testing. Between tests, the dummy may be sprayed with an anti-static spray. These are both very important due to the high likelihood for electrostatic discharges as a result of the inflating airbag.

3.2 Dummy Injury Values

In establishing injury values for the various dummy measurements, the TWG wanted to address the risks of life threatening and/or permanent impairment injuries. The TWG also considered the possibility of limiting the risk of non-life-threatening injuries such as fractures to the upper extremities. Many members of the TWG expressed concerns that the level of scientific understanding is not the same for all of the potential OOP injury risks, and that inclusion of injury values with limited scientific support might result in delaying or discarding some side airbag systems that hold promise for reducing the risk of significant injuries in severe side impact crashes. Given the potential of side airbags to reduce the risk of serious injury to occupants, the TWG wanted to avoid this outcome.

As a result, the TWG defined two distinct classes of injury values, Injury Reference Values and Injury Research Values. Those values which the majority of the TWG believed have a strong scientific basis are classified as Injury Reference Values and are listed in Table 2. Those injury values currently with less scientific support or insufficient test experience to allow full confidence in their accuracy are classified as Injury Research Values and are listed in the Appendix in Table A1. The TWG recommends that future side airbag systems be designed according to the Injury Reference Values. The TWG also recommends considering the Injury Research Values when designing future side airbag systems, and accommodating them in those designs where feasible. However, the TWG agreed that a future side airbag designed according to the Injury Reference Values need not be discarded solely to accommodate an Injury Research Value.

It bears noting here that injury risk assessment based on anthropomorphic dummy responses is a reasonable method for assessing injury risks to humans and it is widely used in the automotive engineering community. It is, nevertheless, an imperfect science that occasionally yields invalid results for a variety of reasons. The TWG agreed that whenever a test result is obtained in excess of a reference value, and if there is reason to question the validity of this result, the manufacturer (or other testing entity) should use additional analyses to assess the validity of the result, just as would be done if an apparently invalid result were obtained in any sort of dynamic or static testing. If, however, the result is validated, then appropriate countermeasures should be pursued.

3.2.1 Dummy Injury Reference Values

The principal risks from deploying side airbags are expected to be injuries to the head, neck, and thorax. As discussed in the introduction, the risk of such injuries cannot be made zero with any inflatable restraint systems, but should be kept as small as feasible without sacrificing promising side airbag systems.

On a practical level, this corresponded to choosing injury values for the various dummy measures that would indicate approximately a 5 percent risk of AIS 4 or greater injury for the head and thorax or AIS 3 or greater for the neck. AIS stands for Abbreviated Injury Scale, which scores injuries in terms of their threat to life from 1, minor, to 6, currently unsurvivable; AIS 3 refers to serious injuries and AIS 4 to severe injuries. The lower AIS value chosen for the neck risk reflects the concern that these injuries have been the most common fatal injury in frontal airbag/OOP interactions and the fact the neck tension risk curve is very steep; in other words, neck injury risk can increase dramatically with only a small increase in tension force applied to the neck.

There was extensive discussion in the TWG about the meaning of the injury values. It is important to understand that the 5 percent risk level does not imply a 5 percent risk of injury to all occupants. Rather, it means that even in the rare event that a side airbag deploys **and** the

occupant is as severely out of position as specified in these tests **and** if the dummy responses are below the specified injury values, the risk of serious or severe injury from the airbag is very low. Thus, the actual risks to occupants from the deploying side airbags that produce dummy responses that are at or below the proposed Injury Reference Values are exceedingly small.

The Injury Reference Values recommended by the TWG are summarized in Table 2. Details about their derivation are given in the following sections.

3.2.1.1 Head Injuries

The most widely accepted measure of head injury risk is the Head Injury Criterion (HIC). The recommended Injury Reference Values for HIC are the same as given in the Alliance (1999) recommendation to NHTSA for the OOP assessment of frontal airbags. For the average sized adult male, HIC of 700 corresponds approximately to a 5 percent risk of an AIS 4 or greater injury (Mertz et al., 1997). This value was scaled to give the Injury Reference Values for the other size occupants noted in Table 2. The scaling method used takes into account size and brain tissue strength variation with age as described by Mertz et al. (1997). For all dummy sizes, the time interval of the search for the maximum HIC value should not exceed 15 ms. The TWG agreed that the HIC values in Table 2 should be treated as Injury Reference Values since their basis is an injury risk curve.

Table 2 Dummy Injury Reference Values for Out-of-Position Testing of Side Airbags

Body Region/Injury Measure	Dummy			SID-IIs
	Hybrid III 3-Year-Old Child	Hybrid III 6-Year-Old Child	Hybrid III Small Female	
Head				
15 ms HIC	570	723	779	779
Upper Neck				
N_{ij}	1	1	1	1
Intercepts				
F_T (N)	2120	2800	3880	3880
F_C (N)	2120	2800	3880	3880
M_F (Nm)	68	93	155	155
M_E (Nm)	27	37	61	61
Tension (N)	1130	1490	2070	2070
Compression (N)	1380	1820	2520	2520
Thorax				
Deflection (mm)	36	40	—	34
Deflection rate (m/s)	8.0	8.5	—	8.2

3.2.1.2 Neck Injuries

Based on the frontal airbag OOP injury data, the TWG believes neck injuries will be the most critical OOP injury risk from side airbags. Experience with frontal airbags indicates that rupture of the connective tissues between the head and neck (occipital condyles – atlas region) is a primary cause of the fatalities observed among OOP children and adults. Accordingly, the TWG considered a number of neck injury indicators that can be measured at the upper neck load cells of the dummy necks.

One approach is to impose limits on the peak force and moment values that are measured by the upper neck load transducer located at the dummy's head/neck interface, occipital condyles. Limit values for these measurements were proposed by AAMA (1998) for OOP assessment of frontal airbags.

A second approach is to place limits on an index. The N_{ij} combines the effects of the forces and moments as was proposed by Prasad and Daniel (1984) for tension and extension moment. In its rulemaking activities regarding the assessment of OOP injury risk from frontal airbags, NHTSA proposed using the N_{ij} concept and extended the analysis to include the combinations of tension-flexion, compression-flexion, and compression-extension. In its comments on the NHTSA proposal, the Alliance (1999) developed injury risk curves for the combined effect of tension-extension moment based on its re-analysis of the animal injury/dummy response correlation data of Mertz et al. (1982) and Prasad and Daniel (1984). The Alliance recommended setting the limit for tension-extension moment at 2 percent risk of AIS ≥ 3 neck injury. The 5 percent risk line was not chosen as the limit line because 5 animals with AIS ≥ 3 neck injury were below the 5 percent limit line. There were no animals with AIS ≥ 3 neck injury below the proposed 2 percent limit line.

In addition, the Alliance was concerned that the N_{ij} concept allowed high axial forces when the bending moments were low. Because the most sensitive indicator of animal neck injury was peak neck tension (Mertz et al., 1997), the Alliance proposed to limit peak tension and peak compression. The limits for peak neck tension were set at 3 percent risk of AIS ≥ 3 neck injury. The limits for peak neck compression were set at the currently used Injury Assessment Reference Values (IARV). These peak force limits are the same as those proposed by AAMA (1998). NHTSA agreed with the Alliance proposal and incorporated these limits into FMVSS 208 for regulating the OOP performance of frontal airbags.

The TWG reviewed the two approaches and chose to use the combined index, $N_{ij}=1$ and the peak force limits, that were proposed by the Alliance and are now the upper neck limit requirement of FMVSS 208 for OOP regulation of frontal airbags. The intercept values of the N_{ij} limit lines and the peak tension and peak compression limit values are given in Table 2.

Some manufacturers and suppliers have expressed concern that extension and flexion bending moments measured on a dummy in a given test may not always reflect neck injury risk to the corresponding human. As noted above, injury risk assessment on anthropomorphic dummies is a reasonable surrogate for assessing injury risks to humans and it is widely used in the automotive engineering community. It is, nevertheless, an imperfect science that occasionally yields invalid results for a variety of reasons. For this reason, the TWG agreed in general that whenever a test result is obtained in excess of a reference value, and if there is reason to question the validity of this result, the manufacturer (or other testing entity) should use additional analyses to assess the validity of the result. If, however, the result is validated, then appropriate countermeasures should be pursued. Therefore, if a manufacturer or other testing

entity obtains an extension or flexion bending moment in excess of the reference values and has reason to question the validity of that result, the response should be the same as the general guidance adopted by the TWG; namely, to use additional analyses to assess the validity of the result and, if the result is validated, to take appropriate actions.

3.2.1.3 Thoracic Injuries

The TWG recommends that chest compression and compression rate be treated as thoracic Injury Reference Values for OOP testing of side airbags. The Injury Reference Values for the 3-year-old and 6-year-old dummies are the same as those recommended by the AAMA (1998) for frontal airbag OOP testing and are based on research reported in Mertz et al. (1997). The peak compression Injury Reference Value for the SID-IIs was obtained by scaling the BioSID (50th percentile male side impact dummy) IARV (Mertz, 1993; NATO, 1996). The chest compression rate Injury Reference Value recommended for the SID-IIs is the same as the Hybrid III 5th percentile female sternal deflection rate associated with approximately a 5 percent risk of AIS 4+ thoracic injury in frontal impacts (AAMA, 1998; Mertz et al., 1997). The latter recommendation is based on animal tests that have shown that injury severities corresponding to thoracic compression rates are similar for frontal and side impacts (Mertz et al., 1982).

3.3 Test Procedures

Current systems of side airbags include at least one of three types of side airbags: those that deploy from the seat backs (seat-mounted), those that deploy from the door or rear quarter panel, typically just below the window sill (side-mounted), and those that deploy from the roof rail above the door (roof-mounted). The test positions to assess OOP injury risk for these different side airbag designs and/ or combinations of these designs are shown in Table 3. For each side airbag type, test positions have been suggested for each of the three test devices (3-year-old child, 6-year-old child, and small female/adolescent). The tests specified for the small female are relevant to driver and passenger seating positions fitted with side airbags, while those for the 3-year-old and 6-year-old child dummies are relevant only to passenger positions. If driver and passenger side airbag systems are mirror images of one another (front or rear seats), then specified tests need be conducted on only one side of the vehicle.

These static tests were developed to evaluate the inflation-injury risk of side airbags. The test dummy positions were chosen to block the deployment path of the deploying airbag and also to align the dummy's measurement systems to measure the effects of the resulting dummy-airbag interaction. Evaluations should be conducted with representative seats and door trim panels located in the vehicle design position. Systems that include more than one type of airbag should be tested with all side airbags deployed according to the deployment strategy of the vehicle.

In general, these test positions have been chosen to represent nominal "worst case" occupant positions, relative to the side airbags. They represent potentially dangerous rather than common positions occurring among the traveling public. Each manufacturer should evaluate whether that is the case for their particular system and modify the test positions as appropriate. The TWG recommends that manufacturers assess whether additional OOP tests of their systems are appropriate that vary the test positions somewhat from those specified in these recommendations. Test data discussed during the TWG's meetings show that even minor deviations in dummy positioning can greatly change the results of OOP testing. The positions recommended by the TWG provide a generalized point for evaluating side airbag OOP injury potential and each manufacturer must assess whether to vary from the specified procedures and whether additional

testing is necessary for their system. Variations from the recommended positions should still be in a reasonable range that represents typical “worst case” conditions.

3.3.1 General Seat Preparation Procedure

The TWG emphasizes that these instructions apply to initial positioning efforts. Test engineers must determine if these instructions are consistent with their particular system and modify them as appropriate to meet the objectives of the individual test.

1. To aid dummy positioning, identify and mark the centerline of the seat back and seat cushion. For seat mounted airbag systems, draw a horizontal line on the seat corresponding to the top edge of the side airbag module.
2. Tests are to be conducted with the seat in the rearmost and lowest adjustment. The seat back should be adjusted to the manufacturer’s design angle or to achieve a torso angle of 25 degrees as measured on the SAE J826 H-Point machine. If any of these adjustments is found to interfere with the inflation of the airbag or with the stated test objective, then the seat track position and or seat back angle may be adjusted the minimum amount necessary to avoid obstruction and fulfill the required test objective with the seat still in a nominally normal position for travel.
3. The head restraint is adjusted to its full-down position.
4. The upper safety belt anchor is adjusted to its highest position. The seat belt may be taped to the B-pillar to avoid entanglement with the side airbag.
5. All windows on the tested (inflation) side of the vehicle should be in the closed position, unless otherwise specified.

3.3.2 Suppression Systems

Some manufacturers may choose to limit the risk of OOP injury risk through suppression systems. Suppression systems may deactivate the side airbags when occupants are too near the deployment area or when the occupants are particularly vulnerable to injury (i.e., small children). If a suppression system would deactivate the airbag in one or more of the test scenarios described in Sections 3.3.3 and following, those test scenarios need not be performed. However, the TWG notes that the manufacturer should review whether that particular scenario should be replaced with another. For example, a side airbag might be suppressed for a 3-year-old child but still be potentially injurious to a 6-year-old child in a position similar to that which had been intended to be tested with the dummy representing the 3-year-old child. In this case a similar test set-up using the 6-year-old dummy should be evaluated.

Table 3 Recommended Test Procedures

	Section	Test Position	Body Region	Airbag Designs				
				Seat back	Door/ quarter-panel (QP)	Roof-rail	Roof-rail & seat back	Roof-rail & door/ quarter-panel (QP)
			Monitored and of interest					
Hybrid III 3-Year-Old	3.3.3.1	Forward facing on booster seat	Head, neck					
	3.3.3.2	Rearward facing	Head, neck, thorax					
	3.3.3.3	Lying on seat, Head on armrest – for seat mounted bag	Head, neck				*	
	3.3.3.4	Lying on seat – for seat mounted bag	Head, neck				*	
	3.3.4.1	Outboard facing	Head, neck, thorax					
	3.3.4.2	Inboard facing	Head, neck					
	3.3.4.3	Lying on seat, Head on armrest – for door/QP mounted bag	Head, neck					*
	3.3.4.4	Lying on seat – for door/QP mounted bag	Head, neck					*
Hybrid III 6-Year-Old	3.3.3.5	Forward facing on booster seat	Head, neck					
	3.3.5.1	Inboard facing on booster seat	Head, neck					
SID-IIs	3.3.3.6	Inboard facing – for seat mounted bag	Head, neck, thorax, abdomen, pelvis					
	3.3.3.7	Arm on armrest with instrumented arm	Arm, forearm				**	**
	3.3.4.5	Forward facing	Head, neck, thorax, abdomen, pelvis					
SID-IIs or Hybrid III	3.3.5.2	Forward facing with raised seat	Head, neck					

	3.3.5. 3	Inboard facing with raised seat	Head, neck					
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The chart shows for typical side airbag systems (in columns) the recommended tests (shaded cells in each column). Vehicles with more than one type of side airbag at a seating position should be evaluated using tests with all airbags deploying according to the deployment strategy of the vehicle. In tests identified by an asterisk (), the evaluation can be based on thorax bag deployment alone, if the roof rail airbag would clearly not interact with the dummies. In tests of the arm injury potential (identified by **), the injury potential may be based on thorax bag deployment alone.

3.3.3 Tests for Seat-Mounted Airbags

3.3.3.1 Forward Facing Hybrid III 3-Year-Old Child Dummy on Booster Block (Passenger Positions with Seat-Mounted Airbags)

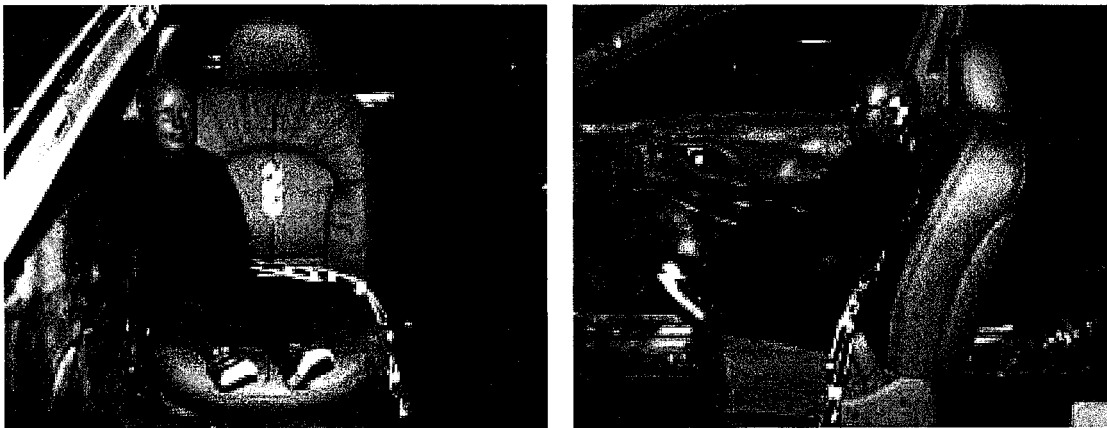


Figure 3.3.3.1.1 Forward Facing Hybrid III 3-year-old Child Dummy on Booster Block
Leaning Against Door Trim Panel

Test Objective: To maximize the head/neck interaction by aligning the neck with the top of the side airbag module.

Test Procedure: The booster foam block dimensions are 300 mm deep by 450 mm wide by 75 mm thick. The foam has a density of 40-80 g/l. A typical foam material is expanded polypropylene (EPP).

Verify that the seat has been positioned to 3.3.1. Locate and mark on the seat cushion two points for heel placement at 20-50 mm from the leading edge of seat cushion and 75 mm from the centerline on each side. Center the foam block on seat cushion so that it contacts the seat back bolsters. Do not tape or otherwise attach the booster to the seat. The dummy positioned in the vehicle is shown in Figure 3.3.3.1.1. Specific positioning instructions are as follows:

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The skullcap seam shall be taped with 4 mm wide electrical tape to prevent the airbag from getting caught in the seam. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Seat the dummy on the outboard edge of foam block, aligning the upper spine with the deployment trajectory of the airbag, for example: the leading edge of the seat bolster or the airbag module. If the dummy upper spine can not be aligned due to interference with the pillar/ side trim adjust the seat track position accordingly.
3. Place the dummy's head in between the seat bolster and pillar/side trim to minimize the fore-aft clearance between the neck and the seatback. The head should remain in its neutral orientation and should not be forced into flexion or extension.
4. Place heels at heel placement points (previously marked on seat cushion).
5. With feet held in position, slide pelvis forward and parallel to the centerline of the vehicle, until the head/neck junction (i.e., lower edge of the skin at the base of the head) is aligned vertically with the top edge of the airbag module.
6. Reposition heels over placement points, if necessary.

7. With the vehicle door closed and the dummy's outboard arm raised (to clear armrest), slide the pelvis and upper torso outboard until pelvis or torso contact the door. The neck/torso junction may shift down no more than 20 mm during the process.
8. Place the outboard arm on the armrest.
9. Flex the inboard arm such that the upper arm contacts with the seatback and the fingertips contact the booster seat.
10. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z) and upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z).

3.3.3.2 Rearward Facing Hybrid III 3-Year-Old Child Dummy (Passenger Positions with Seat-Mounted Airbags)

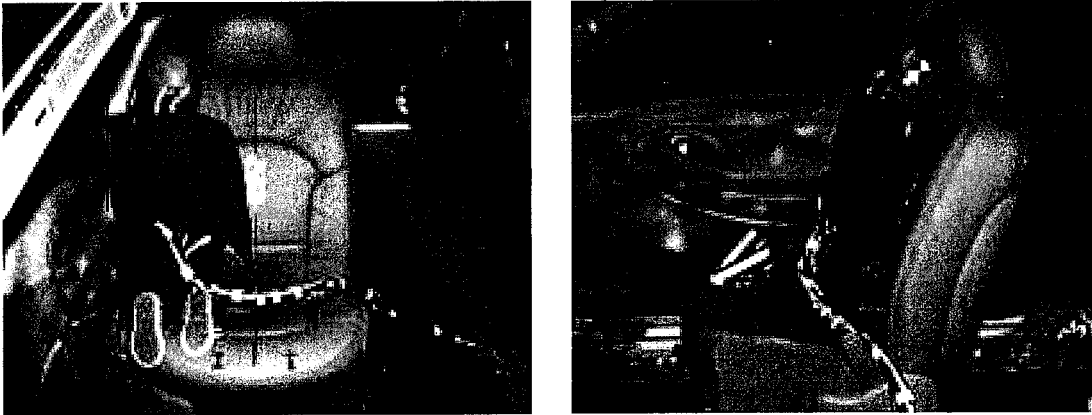


Figure 3.3.3.2.1 Rearward Facing Hybrid III 3-Year-Old Child Dummy Leaning Against Door

Test Objective: To maximize chest interaction by aligning the sternum with the top of the seat-mounted side airbag module.

Test Procedure: Verify that the seat has been positioned to 3.3.1. The dummy positioned in the vehicle is shown in Figure 3.3.3.2.1. Specific positioning instructions are as follows:

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The skullcap seam shall be taped with 4 mm wide electrical tape to prevent the airbag from getting caught in the seam. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Place the dummy along the outboard edge of the seat cushion, kneeling and facing rearward. Its feet may overhang the front edge of the seat cushion.
3. Align the vertical centerline of the dummy's sternum as close as possible with the leading edge of the seat back bolster or forward most contour line. The sternum should contact the seat. If the dummy sternum cannot be aligned due to interference with the pillar adjust the seat track position to ensure that the test objective is met.
4. Place the dummy's head in between the seat bolster and pillar/side trim to maximize contact between the sternum and the seatback. The head should remain in its neutral orientation and should not be forced into flexion or extension.
5. Position the outboard leg at the outboard edge of the seat cushion and parallel to the seat centerline. For seat cushions with bolsters, the outboard leg should be placed as close to the outboard edge of the seat cushion bolster as possible, while remaining on the cushion.
6. Slide the outboard knee and lower leg toward the seat bight (i.e., seat back/seat cushion junction) until the top edge of the upper rib is aligned horizontally with the top edge of the airbag module. The sternum should be in contact with the leading edge of the seat back bolster. In vehicles where the dummy fails to reach the top edge of the airbag module, place the outboard knee at the seat bight, at the outboard edge of the seat cushion.
7. Align the inboard leg such that it is parallel to the centerline of the seat cushion. Slide the inboard knee and lower leg towards the seat bight until a line drawn through both shoulder bolts is perpendicular to the vehicle centerline.
8. Rotate the inboard arm towards the seat back until the thumb contacts the seat back.
9. Rotate the outboard arm and hand to hang down as close to vertical as possible.

10. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z), upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z), chest acceleration (A_x , A_y , A_z), mid-sternum deflection (D_x), upper and lower sternum accelerations (A_x) and upper and lower spine accelerations (A_x , A_y , A_z). Sternum accelerations are measured so that, in combination with spine acceleration, they can be used to calculate the compression rate indicated by the sternum deflection.

3.3.3.3 Hybrid III 3-Year-Old Child Dummy Lying on Seat with Head on Armrest (Passenger Positions with Seat-Mounted Airbags)

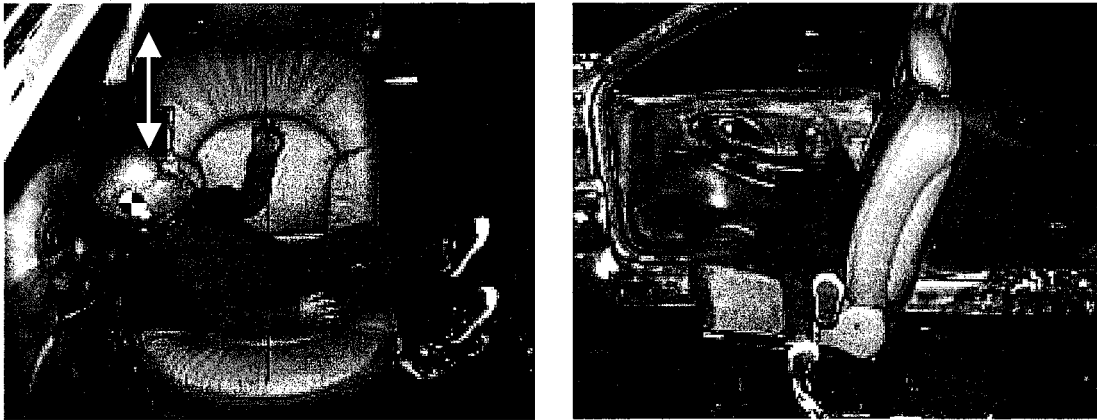


Figure 3.3.3.3.1 Hybrid III 3-Year-Old Child Dummy Lying Across Seat with Head on Door Trim Panel

Test Objective: To maximize the head interaction by aligning the head with the vertical centerline of the airbag module.

Test Procedure: A foam wedge, which is wide enough to support the dummy across the full width of its back (approximately 300 mm), is used to support the dummy's weight. The remaining dimensions of the wedge should be chosen to allow the dummy's head to touch the armrest without applying a significant downward force. The foam's density should be 40-80 g/l. A typical foam material is expanded polypropylene (EPP).

Verify that the seat has been positioned to 3.3.1. The dummy's position in the vehicle is shown in Figure 3.3.3.3.1. Specific positioning instructions are as follows:

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The skullcap seam shall be taped with 4 mm wide electrical tape to prevent the airbag from getting caught in the seam. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Place the dummy on the seat lying on its back with its arms at its sides so that its rearmost arm contacts the seatback.
3. Bending the dummy at the waist, with the back of the head touching the armrest slide it inboard/outboard until the CG of the head aligns with the vertical centerline of the module (armrest contact must be maintained). Support the dummy's back with a wedge-shaped foam block so that the head remains in a neutral position (i.e., head should not be forced into flexion or extension) and does not exert a significant downward force ($< 5\text{N}$) on the armrest.
4. Adjust the dummy's arm closest to the front edge of the seat so that it is parallel to the torso and rests on the foam block with the fingertips just touching the seat cushion.
5. Adjust the rearmost upper arm to an orientation 45 degrees forward of the torso centerline and the forearm on the same side to an orientation 90 degrees to the upper arm.
6. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z) and upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z).

3.3.3.4 Hybrid III 3-Year-Old Child Dummy Lying on Seat (Passenger Positions with Seat-Mounted Airbags)

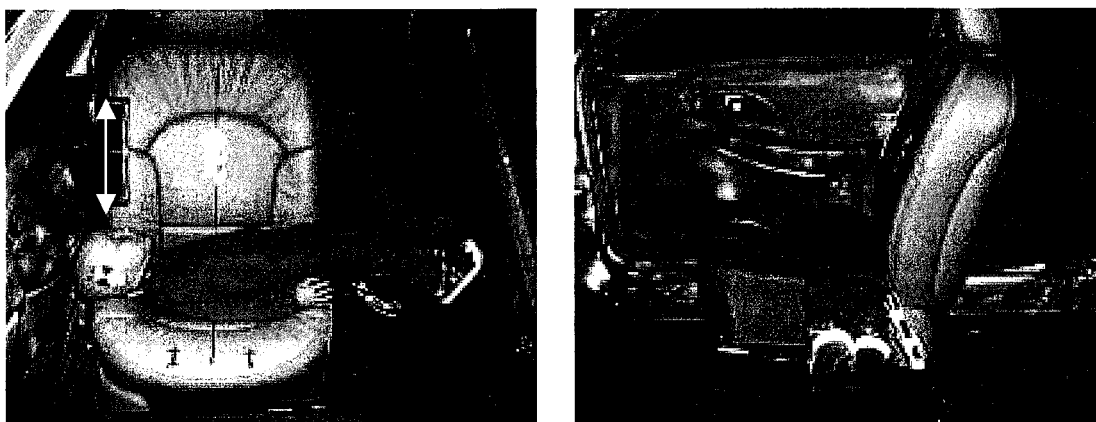


Figure 3.3.3.4.1 Hybrid III 3-Year-Old Child Dummy Lying Across Seat

Test Objective: To maximize the head and neck interaction with the seat-mounted airbag by aligning the head with the vertical centerline of the seat-mounted airbag module.

Test Procedure: Verify that the seat has been positioned to 3.3.1. The dummy positioned in the vehicle is shown in Figure 3.3.3.4.1. Specific positioning instructions are as follows:

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The skullcap seam shall be taped with 4 mm wide electrical tape to prevent the airbag from getting caught in the seam. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Place the dummy on the seat lying on its back with its arms at its sides so that its rearmost arm contacts the seatback.
3. Slide the dummy outboard until the CG of the head is aligned with the vertical centerline of the airbag module. Should the door/side trim interfere with the placement of the head then adjust the seat to ensure that the test objective is met.
4. If necessary, stabilize the dummy by placing a block of lightweight foam under the dummy's legs.
5. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z) and upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z).

3.3.3.5 Forward Facing Hybrid III 6-Year-Old Child Dummy on Booster Block (Passenger Positions with Seat-Mounted Airbags)

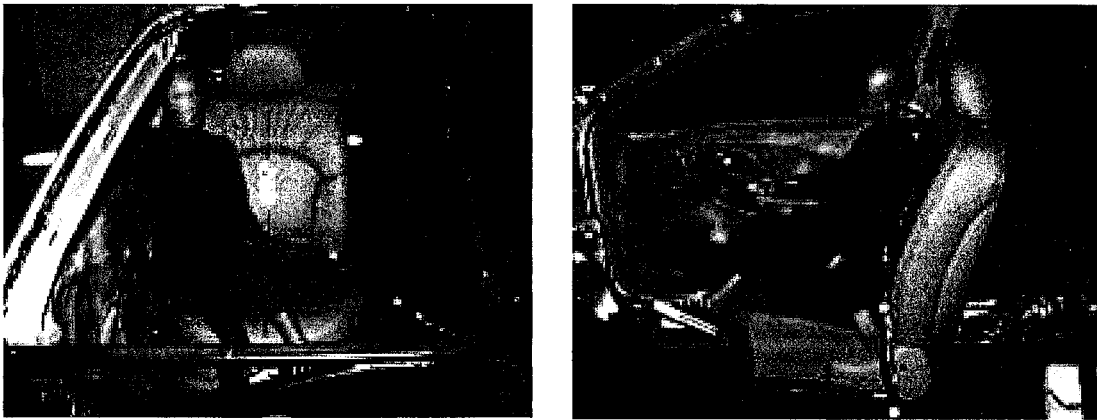


Figure 3.3.3.5.1 Forward Facing Hybrid III 6-Year-Old Child Dummy on Booster Block Leaning Against Door Trim Panel

Test Objective: To maximize the head/neck interaction by aligning the neck with the top of the side airbag module.

Test Procedure: The booster foam block dimensions are 300 mm deep by 450 mm wide by 75 mm thick. The foam has a density of 40-80 g/l. A typical foam material is expanded polypropylene (EPP). Verify that the seat has been positioned to 3.3.1. Locate and mark on the seat cushion two points for heel placement at 20-50 mm from the leading edge of seat cushion and 75 mm from the centerline on each side. Center the foam block on seat cushion so that it contacts the seat back bolsters. Do not tape or otherwise attach the booster to the seat.

Verify that the seat has been positioned to 3.3.1. The dummy positioned in the vehicle is shown in Figure 3.3.3.5.1. Specific positioning instructions are as follows:

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Seat the dummy on the outboard edge of foam block, aligning the upper spine with the deployment trajectory of the airbag, for example: the leading edge of the seat bolster or the airbag module. If the dummy upper spine cannot be aligned due to interference with the pillar or side trim, adjust the seat track position to ensure that the test objective can be met.
3. Place the dummy's head in between the seat bolster and pillar/side trim to minimize the fore-aft clearance between the neck and the seatback. The head should remain in its neutral orientation and should not be forced into flexion or extension.
4. Align the legs such that they cross the heel placement points (previously marked on seat cushion). Note: The heels will probably be off the seat cushion.
5. Holding the feet in position, slide pelvis forward and parallel to the centerline of the vehicle, until the dummy's neck/torso junction (top of the spine box) is aligned vertically with the top edge of the airbag module.
6. Reposition the legs, so they cross the heel placement points, if necessary.
7. With the vehicle door closed and the dummy's outboard arm raised (to clear armrest), slide the pelvis and upper torso outboard until pelvis or torso contact the door. The neck/torso junction may shift down no more than 20 mm during the process.

8. Place the outboard arm on the armrest.
9. Flex the inboard arm such that the upper arm contacts the seat back and the fingertips contact the booster seat.
10. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z) and upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z).

3.3.3.6 Inboard Facing SID-IIs (Driver and Passenger Positions with Seat-Mounted Airbags)

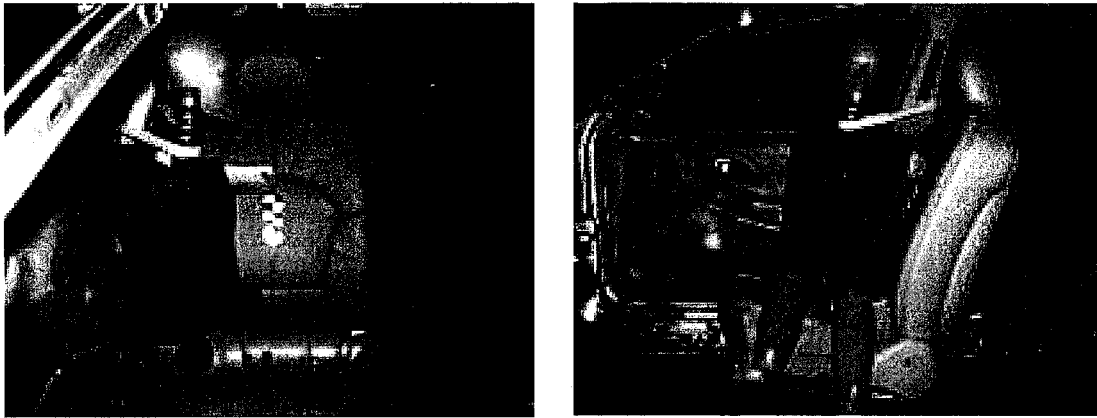


Figure 3.3.3.6.1 Inboard Facing SID-IIs Against Door

Test Objective: To maximize chest interactions by aligning the center of the top thoracic rib with the top edge of the airbag module.

Test Procedure: This test should be conducted for both driver and passenger airbags unless the same airbag design is used at both locations. The instrumentation of the dummy is aligned for driver-side-crash configuration when testing passenger side airbags and for passenger-side-crash configuration when testing driver side airbags. The dummy positioned in the vehicle is shown in Figure 3.3.3.6.1.

1. The dummy shall be dressed in tight fitting cotton knit shirt (optional) and pants. The skullcap seam shall be taped with 4 mm wide electrical tape to prevent the airbag from getting caught in the seam. The dummy's exposed skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Seat the dummy facing toward the center of the vehicle with its arm against the seatback.
3. Slide the dummy's pelvis outboard until the dummy contacts the door trim panel. A vertical plane through the centerline of the dummy's shoulder rib-stiffener and shoulder bolt should be parallel to the longitudinal plane of the vehicle.
4. Rotate the arm to a horizontal orientation.
5. Slide the dummy's pelvis forward/rearward with respect to the vehicle to lean the dummy rearward to align the center of the first thoracic rib with the top edge of the airbag module. The dummy's spine should align such that a vertical plane through the centerline of the dummy's shoulder rib stiffener and shoulder bolt should be parallel to the longitudinal plane of the vehicle. Masking tape (25 mm) wrapped around the dummy's neck bracket may be used to hold the dummy in place, if necessary.
6. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z), upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z), upper and lower spine accelerations (A_x , A_y , A_z), thoracic rib and abdominal rib lateral deflections (D_y), thoracic rib and abdominal lateral accelerations (A_y), opposite rib lateral accelerations (A_y), and pelvic acceleration (A_x , A_y , A_z). Opposite rib lateral accelerations are used, in contribution with rib accelerations, to calculate thoracic or abdominal compression rates.

3.3.3.7 SID-IIs with Instrumented Arm on Armrest (Driver and Passenger Positions with Seat-Mounted or Door/Quarter Panel-Mounted Airbags)

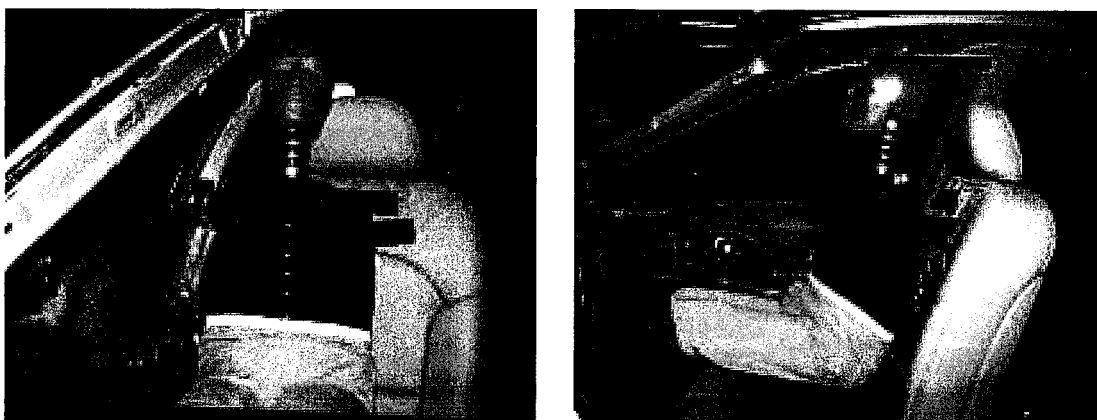


Figure 3.3.3.7.1 SID-IIs with instrumented arm on armrest

Test Objective: To maximize upper arm interaction.

Test Procedure: The dummy position is shown in Figure 3.3.3.7.1 with a foam cushion, which may be needed to meet the requirements of step 5 of the positioning sequence.

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The dummy's exposed skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Adjust the seat to the mid-seat track position.
3. Seat the dummy near the outboard edge of the seat with its elbow on the armrest. Push the dummy outboard so there is no gap between the upper arm and the door trim panel above the armrest. The test dummy's pelvis may be propped up on a foam cushion and/or leaned to achieve this positioning requirement.
4. The upper arm is vertical and in line with the dummy's torso.
5. The lower arm of the test dummy should rest on the armrest without exerting significant downward force (< 5 N) on the armrest.
6. The hand should be extended to have a 45-degree orientation relative to the armrest surface.
7. Deploy the side airbag(s) and record the following dummy channels: ulna bending moments (M_x , M_y) and humerus bending moments (M_x , M_y).

3.3.4 Tests for Door/Quarter Panel-Mounted Airbags

3.3.4.1 Outboard Facing Hybrid III 3-Year-Old Child Dummy (Passenger Positions with Door/Quarter Panel-Mounted Airbags)

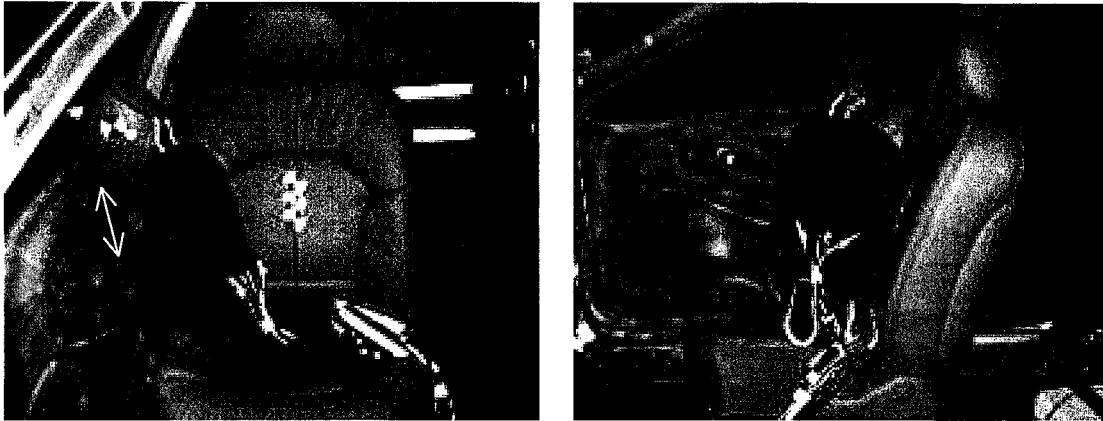


Figure 3.3.4.1.1 Outboard Facing Hybrid III 3-Year-Old Child Dummy Leaning Against Seat and Door Trim Panel

Test Objective: To maximize chest interaction by aligning the dummy's sternum with the vertical centerline of the side airbag module.

Test Procedure: The dummy positioned in the vehicle is shown in Figure 3.3.4.1.1.

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The skullcap seam shall be taped with 4 mm wide electrical tape to prevent the airbag from getting caught in the seam. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Place the dummy on the seat in a kneeling position facing out the side window with the rearmost knee in the seat bight. The dummy's arms and hands should be hanging against the sides of the torso
3. Holding the dummy in a vertically upright position, adjust the seat track position to align the vertical centerline of the sternum with the vertical centerline of the airbag module. **Geometric limits of the module may be defined through a blank deployment or obtained from the manufacturer.** The seat back, in conjunction with the arm position, may be used to stabilize the dummy.
4. Keeping the head in its neutral orientation (i.e., head should not be forced into flexion or extension), lean the dummy outboard until the chest contacts the airbag module in the door trim panel.
5. Move the dummy's knees inboard/outboard to align the top of the upper rib with the top edge of the airbag module as defined by the manufacturer. . It may be necessary to roll down the window to minimize the clearance between the chest and airbag module.
6. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z), upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z), chest acceleration (A_x , A_y , A_z), mid-sternum deflection (D_x), upper and lower sternum accelerations (A_x) and upper and lower spine accelerations (A_x , A_y , A_z).

3.3.4.2 Inboard Facing Hybrid III 3-Year-Old Child Dummy (Passenger Positions with Door/Quarter Panel-Mounted Airbags)

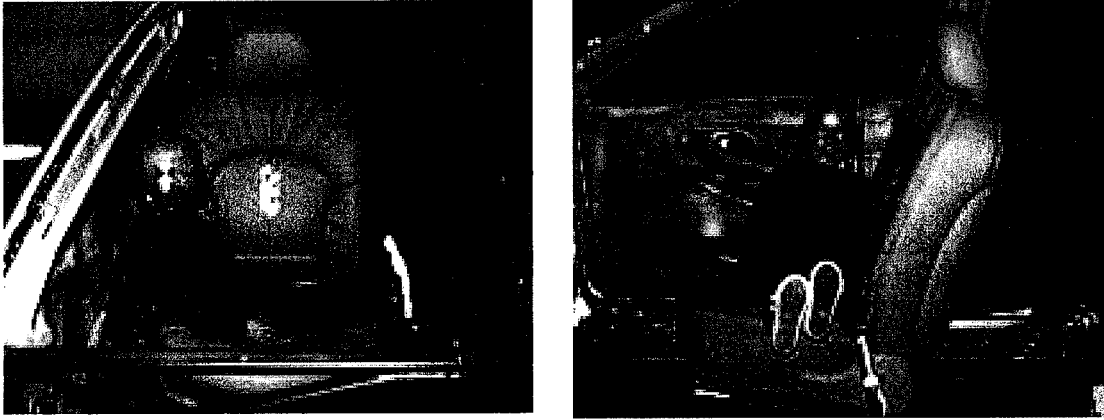


Figure 3.3.4.2.1 Inboard Facing Hybrid III 3-Year-Old Child Dummy Leaning Against Door or Window Glazing

Test Objective: To maximize head and neck interactions.

Test Procedure: The dummy positioned in the vehicle is shown in Figure 3.3.4.2.1.

1. This test should be conducted with the Hybrid III 3 year old. However, in vehicles where location of the airbag module precludes alignment of the head neck junction with the top edge of the airbag module, the use of Hybrid III 6 year old is recommended
2. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The skullcap seam shall be taped with 4 mm wide electrical tape to prevent the airbag from getting caught in the seam. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
3. With the dummy's arms hanging along its sides, seat the dummy on the seat facing inboard with its legs extended.
4. Lean the dummy to the rear of the vehicle until its arm contacts the seat back.
5. Adjust the seat track position to align the dummy's vertical centerline of the spine box with the vertical centerline of the airbag module. **Geometric limits of the module may be defined through a blank deployment or obtained from the manufacturer.**
6. Keeping the head in its neutral orientation (i.e., head should not be forced into flexion or extension), lean the dummy back until its shoulders or head contact the door trim panel.
7. While maintaining the alignment of the dummy, slide the pelvis inboard/outboard until the head/neck junction (i.e., lower edge of the skin at the base of the head) is as aligned with the top edge of the airbag module. Seat height adjustments, if available, may be used to assist in final placement of the dummy. If this is not sufficient see step 1.
8. The dummy's upper arms are parallel with its torso and lower arms are bent forward so the fingertips just touch the seat cushion.
9. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z) and upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z).

3.3.4.3 Hybrid III 3-Year-Old Child Dummy Lying on Seat with Head on Armrest (Passenger Positions with Door/Quarter Panel-Mounted Airbags)

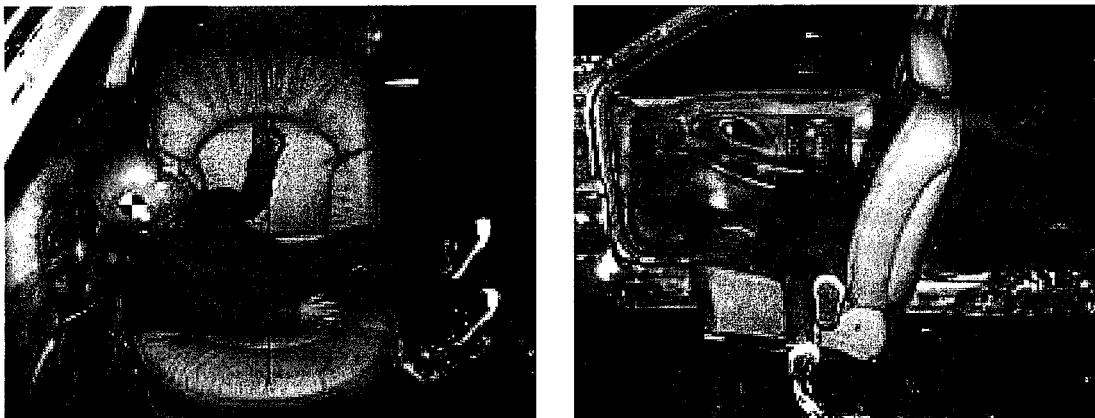


Figure 3.3.4.3.1 Hybrid III 3-Year-Old Child Dummy Lying Across Seat with Head on Door Trim Panel

Test Objective: To maximize the head and neck interaction by aligning the head with the center of the airbag module.

Test Procedure: A foam wedge, which is wide enough to support the dummy across the full width of its back (approximately 300 mm), is used to support the dummy's weight. The remaining dimensions of the wedge should be chosen to allow the dummy's head to touch the armrest without applying a significant downward force. The foam's density should be 40-80 g/l. A typical foam material is expanded polypropylene (EPP). The dummy's position in the vehicle is shown in Figure 3.3.4.3.1. Specific positioning instructions are as follows:

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The skullcap seam shall be taped with 4 mm wide electrical tape to prevent the airbag from getting caught in the seam. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Place the dummy on the seat lying on its back with its arms at its sides so that its rearmost arm contacts the seatback.
3. Adjust the seat track position to align the horizontal centerline of the dummy's head as close as possible to the vertical centerline of the airbag module. **Geometric limits of the module may be defined through a blank deployment or obtained from the manufacturer.**
3. Slide the dummy outboard until the head just contacts the module (armrest contact must be maintained). Support the dummy's back with a wedge-shaped foam block so that the head remains in a neutral position (i.e., head should not be forced into flexion or extension) and does not exert a significant downward force ($< 5\text{N}$) on the armrest.
4. Adjust the dummy's arm closest to the front edge of the seat so that it is parallel to the torso and rests on the foam block with the fingertips just touching the seat cushion.
5. Adjust the rearmost upper arm to an orientation 45 degrees forward of the torso centerline and the forearm on the same side to an orientation 90 degrees to the upper arm.
6. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z) and upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z).

3.3.4.4 Hybrid III 3-Year-Old Child Dummy Lying on Seat (Passenger Positions with Door/Quarter Panel-Mounted Airbags)

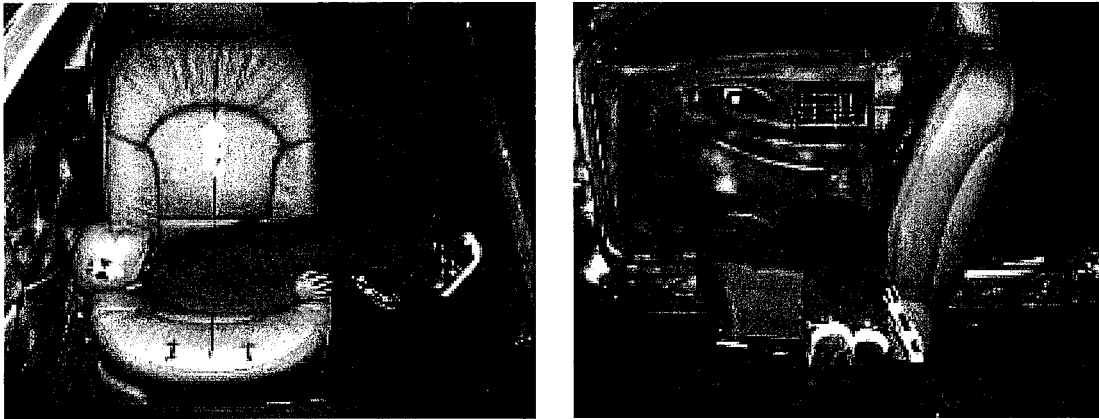


Figure 3.3.4.4.1 Hybrid III 3-Year-Old Child Dummy Lying Across Seat

Test Objective: To maximize the head and neck interaction by aligning the head with the vertical centerline of the door/quarter panel-mounted airbag module.

Test Procedure: The dummy positioned in the vehicle is shown in Figure 3.3.4.4.1. Specific positioning instructions are as follows:

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The skullcap seam shall be taped with 4 mm wide electrical tape to prevent the airbag from getting caught in the seam. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Place the dummy on the seat lying on its back with its arms at its sides so that its rearmost arm contacts the seatback.
3. Adjust the seat track position to align the center of the dummy's head as close as possible to the vertical centerline of the airbag module. **Geometric limits of the module may be defined through a blank deployment or obtained from the manufacturer.**
4. Adjust seat height, if adjustable, to align the instrumentation plane of the dummy's head as near as possible to the horizontal center of the airbag module.
4. Slide the dummy outboard until the head just contacts the airbag module.
5. If necessary, stabilize the dummy by placing a block of lightweight foam under the dummy's legs.
6. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z) and upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z).

3.3.4.5 Forward Facing SID-IIs (Driver and Passenger Positions with Door/Quarter Panel-Mounted Airbags)

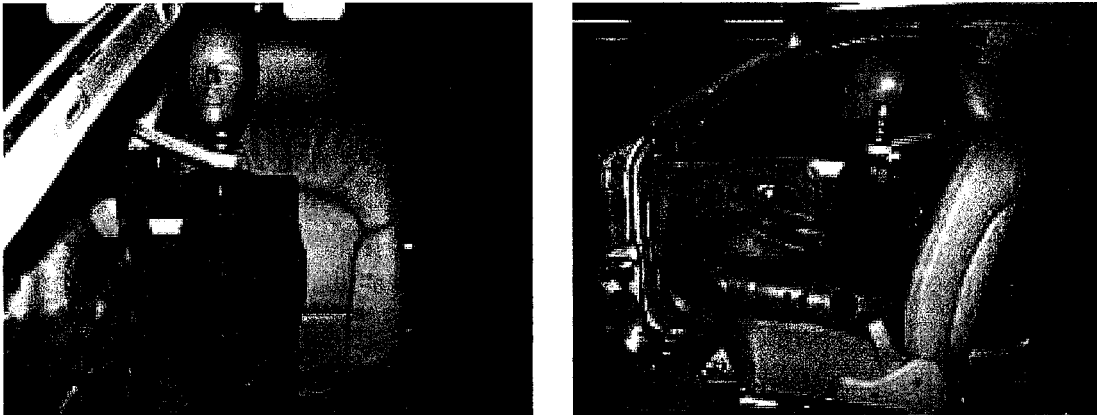


Figure 3.3.4.5.1 Forward Facing SID-IIs Against Door

Test Objective: To maximize the head, neck and chest interactions by aligning the chest with the top edge of the airbag module.

Test Procedure: The dummy positioned in the vehicle is shown in Figure 3.3.4.5.1.

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Place the dummy seated upright in the center of the seat.
3. The outboard arm should be rotated horizontal in the forward direction with respect to the dummy (i.e. to clear armrest).
4. Adjust the seat track position to align the centerline of the lateral thorax with the vertical centerline of the module.
5. Slide the dummy outboard, without leaning it sideways or twisting the torso, until the dummy contacts the door trim panel. A vertical plane through the centerline of the dummy's rib-stiffener and shoulder bolt should be perpendicular to the centerline of the vehicle.
6. Adjust the seat height, if possible, to align the center of the first thoracic rib with the top edge of the airbag module. Masking tape (25 mm) wrapped around the dummy's neck bracket may be used to hold the dummy in the vertical orientation, if necessary.
7. Repeat step 6, if necessary.
8. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z), upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z), upper and lower spine accelerations (A_x , A_y , A_z), thoracic rib and abdominal rib lateral deflections (D_y), thoracic and abdominal rib lateral accelerations (A_y), opposite rib lateral accelerations (A_y), pelvic acceleration (A_x , A_y , A_z), and pelvic forces (pubic and iliac, F_y). Opposite rib lateral accelerations are used in conjunction with rib accelerations to calculate thoracic and abdominal compression rates.

3.3.5 Tests for Roof-Rail-Mounted Airbags

3.3.5.1 Inboard Facing Hybrid III 6-Year-Old Child Dummy on Booster Block (Passenger Positions with Roof-Rail-Mounted Airbags)



Figure 3.3.5.1.1 Inboard Facing Hybrid III 6-Year-Old Child Dummy on Booster Block

Test Objective: To maximize the head/neck interaction by positioning the head in the path of the deploying airbag.

Test Procedure: For this test the seat is adjusted to its highest position. The booster foam block dimensions are 300 mm deep by 450 mm wide by 75 mm thick. The foam has a density of 40-80 g/l. A typical foam material is expanded polypropylene (EPP). Center the foam block on seat cushion so that it contacts the seat back bolsters. Do not tape or otherwise attach the booster to the seat. The dummy positioned in the vehicle is shown in Figure 3.3.5.1.1.

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The skullcap seam shall be taped with 4mm electrical tape to prevent the airbag from getting caught in the seam. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Place the dummy with its arms hanging at its sides on the foam block facing inboard with its legs extended.
3. Adjust the seat track position forward to minimize the vertical distance between the dummy's head and the roof-rail module and to maximize the cushion to head interaction.
4. Keeping the head in its neutral orientation (i.e., head should not be forced into flexion or extension), slide the dummy's pelvis outboard until the dummy's back contacts the door trim panel or armrest and the center of gravity of the head is centered in the deployment trajectory of the airbag. It may be necessary to tilt the dummy outboard in order to achieve proper alignment of the head. A vertical plane through the centerline of the dummy's shoulder bolts should be parallel to the vehicle centerline.
5. Bend the dummy's arms at the elbow until the fingers just touch the booster seat.
6. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z) and upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z).

3.3.5.2 Forward Facing SID-IIs on Raised Seat (Driver and Passenger Positions with Roof-Rail-Mounted Airbags)

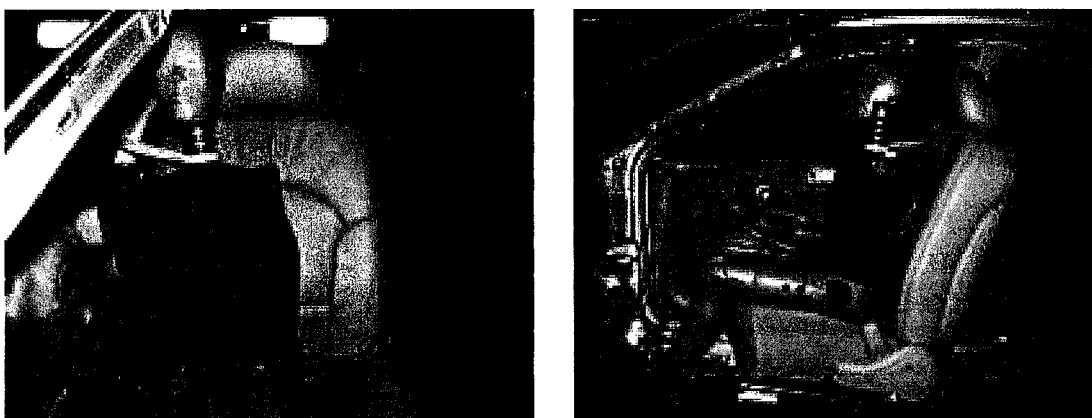


Figure 3.3.5.2.1 Forward Facing SID-IIs Aligned for Test of Roof-Rail-Mounted Airbag

Test Objective: To maximize the head/neck interaction by positioning the head in the path of the deploying airbag.

Test Procedure: For this test the seat is adjusted to its highest position. The dummy positioned in the vehicle is shown in Figure 3.3.5.2.1

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Place the dummy seated upright in the center of the seat.
3. The outboard arm should be rotated horizontal in the forward direction with respect to the dummy (i.e. to clear armrest).
4. Adjust the seat track position forward to minimize the vertical distance between the dummy's head and the roof-rail module and to maximize the cushion to head interaction.
5. Move the dummy outboard until the dummy contacts the door trim panel. The dummy may be leaned outboard to ensure that the deployment trajectory of the airbag will intersect with the centerline of the top of the head (pelvis may need to be adjusted inboard to achieve this position). Masking tape (25mm) wrapped around the dummy's neck bracket may be used to hold the dummy in the test orientation if necessary.
6. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z) and upper and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z).
7. If driver and right-front passenger side airbag systems are identical, then only one position need be tested.

3.3.5.3 Inboard Facing SID-IIs on Raised Seat (Driver and Passenger Positions with Roof-Rail-Mounted Airbags)

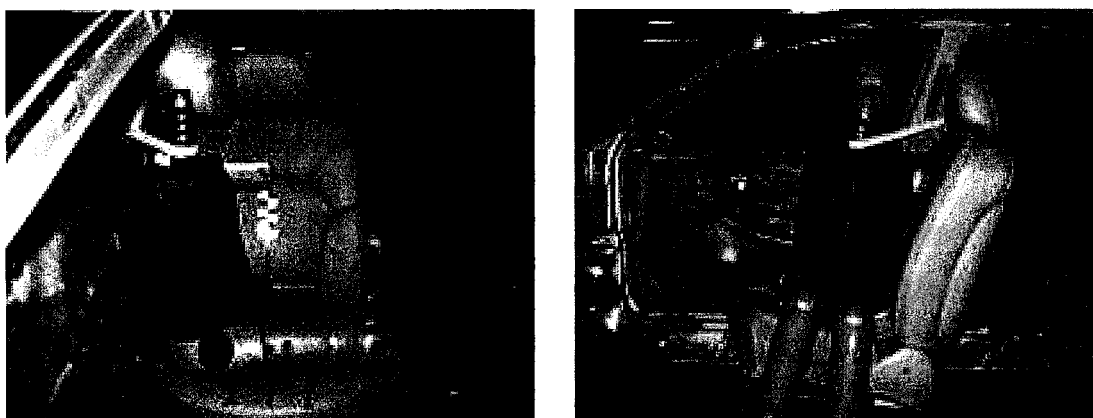


Figure 3.3.5.3.1 Inboard Facing SID-IIs Aligned for Test of Roof-Rail-Mounted Airbag

Test Objective: To maximize the head/neck interaction by positioning the head in the path of the deploying airbag.

Test Procedure: For this test the seat is adjusted to its highest position. The dummy positioned in the vehicle is shown in Figure 3.3.5.3.1.

1. The dummy shall be dressed in tight fitting cotton knit shirt and pants. The skullcap seam shall be taped with 4 mm wide electrical tape to prevent the airbag from getting caught in the seam. The dummy's head skin shall be cleaned with alcohol and dusted with baby powder to achieve acceptable frictional characteristics.
2. Seat the dummy facing toward the center of the vehicle with its arm against the seatback.
3. The arm should be rotated horizontal in the forward direction with respect to the dummy.
4. Adjust the seat track position forward to minimize the vertical distance between the dummy's head and the roof-rail module and to maximize the cushion to head interaction.
5. Keeping the head in its neutral orientation (i.e. head should not be forced into flexion or extension), slide the dummy's pelvis outboard until the dummy's back contacts the door trim panel or armrest and the CG of the head is centered in the deployment trajectory of the airbag. It may be necessary to tilt the dummy outboard in order to achieve proper alignment of the head. A vertical plane through the centerline of the dummy's rib-stiffener and shoulder bolt should be parallel to the centerline of the vehicle. Masking tape (25mm) wrapped around the dummy's neck bracket may be used to hold the dummy in place if necessary.
6. Deploy the side airbag(s) and record the following dummy channels: head acceleration (A_x , A_y , A_z), upper neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z) and lower neck forces and moments (F_x , F_y , F_z , M_x , M_y , M_z).
7. If driver and right-front passenger side airbag systems are identical, then only one position need be tested.

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Appendix A – Dummy Injury Research Values

As stated in the body of the report, the Injury Research Values represent important indicators of potential injury, but the engineering and scientific community does not yet have a sufficient biomechanical and other scientific basis to know that the published values correctly predict injury risks from deploying side airbags. In some cases, additional biomechanical research is needed to understand adequately the mechanisms that cause injury to particular body regions (e.g., the lower neck, abdominal and pelvic injuries) and the mechanisms of injury associated with side airbags (e.g., whether spinal acceleration is a predictor of side airbag injury risk). In other cases, additional work is needed to correlate measurable dummy responses to injury mechanisms that have established risk curves. Still more work is needed to provide adequate test experience with some of these measures to gain confidence in their accuracy.

As this research progresses, the engineering and scientific community will have a basis on which to establish Injury Reference Values for some or all of these indicators. The TWG recommends that it be reconvened periodically to review the continuing scientific status of its recommended procedures, including these Injury Research Values. It should be emphasized that a larger body of scientific data is needed to confirm what the correct Injury Reference Value should be, not simply to verify or validate the value published here as an Injury Research Value. When a given injury measure is sufficiently well understood to become an Injury Reference Value, it may be the same value published here as a research value, or it may be a higher or lower value.

At this time, the TWG recommends that manufacturers and suppliers consider the Injury Research Values when designing future side airbag systems and accommodate them in those designs where feasible. However, the TWG agreed that a future side airbag designed according to the Injury Reference Values need not be discarded solely to accommodate an Injury Research Value.

Table A1, below, is a list of the dummy responses that are recommended as Injury Research Values. The following sections explain how the Injury Research Values were derived and the level of scientific understanding associated with the published values.

A.1 Neck Injuries

A.1.1 Upper Neck Load Cell

Reported test experience with the recommended procedures led the TWG to recommend that lateral bending and twisting of the neck should be monitored. There was relatively little experience measuring these neck moments on the dummy, and the Injury Research Values were only recently proposed based on the judgment of biomechanics experts in the TWG. The twist moment values were set at the same level as the extension values, the neck's weakest bending mode, because the cervical vertebrae can easily be separated by twisting of the head. The lateral bending moment values were set midway between the extension and flexion values because the amount of muscle and connective tissue that resists lateral bending is greater than the amount that resists extension bending, but not greater than the amount that resists flexion, the neck's strongest bending mode.

Table A1 Dummy Injury Research Values for Out-of-Position Testing of Side Airbags

Body Region/Injury Measure	Dummy			SID-IIs
	Hybrid III 3-Year-Old Child	Hybrid III 6-Year-Old Child	Hybrid III Small Female	
Upper Neck				
Lateral moment (Nm)	30	42	67	67
Twist moment (Nm)	17	24	39	39
Lower Neck				
Flexion moment (Nm)	83	119	190	190
Extension moment (Nm)	34	48	77	77
Lateral moment (Nm)	60	84	134	134
Twist moment (Nm)	17	24	39	39
Tension (N)	1130	1490	2070	2070
Compression (N)	1380	1820	2520	2520
Thorax				
Spine acceleration (max g, 3 ms)	55	60	—	73
Abdomen				
Deflection (mm)	—	—	—	32
Deflection rate (m/s)	—	—	—	8.2
Pelvis				
Pubic symphysis load (N)	—	—	—	4000
Iliac load (N)	—	—	—	4000
Arm				
Resultant bending moment, ulna (Nm)	—	—	—	44
Resultant bending moment, humerus (Nm)	—	—	—	130

A.1.2 Lower Neck Load Cell

Recent research suggests that the upper neck load cell measurements may not reveal neck injury risk when the airbag deploys into the back of a person. This could be a problem for assessing side airbag OOP neck injury risk because, unlike frontal airbags, occupant positions may be expected to expose occupants' backs to deploying side airbags. For that reason, the TWG is recommending that injury indicators measured at the lower neck load cell be monitored as Injury Research Values. The TWG's Injury Research Values for the lower neck measurements are based on research reported by Prasad, Kim, and Weerappuli (1997), who recommended an IARV of 154 Nm for the Hybrid III 50th percentile male dummy's lower neck extension bending moment. This recommended IARV corresponds to the lowest force at which injury was observed in cadaver spines. This should provide a very low risk of AIS 3+ injury. To provide neck extension bending moment research values for the dummies listed in Table A1, this IARV was scaled using procedures as given in Mertz et al. (1997). The recommended Injury Research Values for lower neck flexion and lateral bending moment limits were calculated from the corresponding values for the upper neck, assuming that the ratios of upper to lower bending moments would have the same value as the ratio of the upper to lower extension moments.

The recommended Injury Research Values for lower neck tension and compression forces are the same as for the upper neck, as is the Injury Research Value for lower neck twist moment. There is no anatomical reason known to the TWG at this time to believe that these forces pose different risks when measured at the upper or lower neck.

A.2 Thoracic Injuries

The TWG recommends that spine acceleration be included as an Injury Research Value in OOP testing of side airbags. The TWG expressed doubt that spine acceleration could indicate thoracic injury likelihood in the absence of excessive compression or compression rate (which are included as Injury Reference Values, Table 2). However, it was noted that this measure is the standard measure included in NHTSA evaluations of thoracic injury. The Injury Research Values for spine acceleration included in Table A1 are scaled from the value specified by Federal Motor Vehicle Safety Standard 208 for the 50th percentile adult male (a maximum of 60 g maintained for 3 ms).

A.3 Abdominal and Pelvic Injuries

Among the dummies recommended for OOP testing of side airbags, only the SID-IIs is instrumented to measure abdominal and pelvic responses to input. The TWG recommends monitoring dummy response for both abdominal compression and compression rate for the SID-IIs. The abdominal compression Injury Research Value is scaled from an IARV of 39 mm for the 50th percentile male dummy, BioSID (NATO, 1996). In the absence of any IARV for abdominal compression rate, the TWG's biomechanics experts recommended that the Injury Reference Value for thoracic compression rate be used as an Injury Research Value for abdominal compression rate. Injury Research Values are also recommended for forces on the pubic symphysis and the iliac crest by scaling from IARVs which have been suggested for the BioSID. These IARVs reflect the force levels at which fractures of these structures are expected. It should be noted that no side airbags are expected to approach these force levels for the SID-IIs, but the TWG nevertheless concluded that these variables should be monitored.

A.4 Arm Injuries

The TWG recommends Injury Research Values for fracture of both the ulna and humerus of the SID-IIs. The Injury Research Value recommended for bending moment of the ulna was derived from the work of Begeman et al. (1999) and Pintar et al. (1998). Begeman et al. reported that the ulnae (forearms) in a sample of adult cadavers failed at an average moment of 89 Nm, while Pintar et al. found an average failure moment of 94 Nm. The TWG agreed that these data supported an IARV of 90 Nm for the 50th percentile male. This limit was scaled down to 44 Nm for members of the population sized similarly to the SID-IIs.

The 130 Nm Injury Research Value for the humerus (upper arm) was recommended by Kirkish et al (1996) for the SID-IIs with instrumented arm.

Appendix B – Chest Deflection (Compression) Rate: Calculation by Integration of Acceleration Differences

Chest deflection or compression rate can be determined in either of two ways:

- By differentiating the deflection data from the sternum (frontal dummies, fore-aft compression) or ribs (SID-IIs, lateral compression)
- By integrating the difference in accelerations between the sternum (frontal dummies) or ribs (SID-IIs) and the spine

Theoretically, these methods should give the same solution, but it has been observed that the potentiometer used to measure deflection can lag behind actual deflections under some conditions or contain “noise.” Both of these problems can result in error in the differentiated compression rate. The TWG has agreed that either method may be used to evaluate chest compression rate, but recommends that if the differentiation method is used, the result be checked by also conducting the integration method. Following is the recommended procedure for calculating chest deflection (compression) rates by the integration method.

1. Calculate chest deflection (compression) rate as a function of time:

This method uses the acceleration data from the spine plus the ribs or sternum and the potentiometer deflection data from the ribs or sternum.

- a. Assure that all data are compiled according to SAE sign conventions.
- b. Filter acceleration data at SAE CFC 1000.
- c. Filter chest or rib potentiometer data at SAE CFC 600.
- d. Find Time Zero (T_0) – the time of first contact of the airbag with dummy.
 - i. Locate the time ($T_{5\%}$) when the sternal or rib acceleration attains a magnitude that is approximately 5 percent of its peak acceleration due to impact by the airbag.
 - ii. Examine the sternal or rib acceleration time trace backward from $T_{5\%}$ to the time where the slope of the acceleration curve changes sign – this time is T_0 for all measures.
- e. Find the time of maximum compression, $T_{\max D}$:

From the sternum or rib potentiometer data, identify the time of maximum deflection. Call this time $T_{\max D}$. Note that the deflection data could contain more than one peak – choose the peak with the maximum deflection.
- f. For each time step, subtract the x-component of the spine acceleration from the coaxial x-component of the sternum acceleration (frontal dummies) or the y-component of the spine acceleration from the coaxial y-component of the rib acceleration (SID-IIs). Call the resulting distribution of acceleration differences over time, $AD(t)$. **If your accelerations are measured in Gs, then change the units to m/s^2 by multiplying by 9.8.**
- g. Set $AD(t) = 0$ when $t \leq T_0$. Call the new function, $AD_0(t)$.
- h. Define N as the number of time increments between $T_{\max D}$ and T_0 . Then $\Delta t = (T_{\max D} - T_0)/N$ is the time increment in seconds. Integrate the differences in

accelerations, $AD_0(t)$, to obtain the compression rate, $CR(t)$, in m/s as a function of time in seconds. That is,

$$CR(t_m) = \sum ((AD_0(t_i) + AD_0(t_{i-1}))/2)\Delta t, \text{ where } i = 1, 2, \dots, m; m \text{ is any integer between } 1 \text{ and } N; \text{ and } CR(t_0) = 0$$

Note that when $m = N$, $CR(t_N)$ is the value of the compression rate at $T_{\max D}$.

2. Check for accuracy of compression rate data:

Note that if the compression rate data are accurate, then $CR(t)$ should be close to zero at $t = t_{\max D}$.

- a. From the integration data in item 1h above, find the compression rate that corresponds to $T_{\max D}$. Call this compression rate, "Value B."
- b. If the absolute value of Value B is ≤ 0.1 m/s, then the compression rate data of Item 1h are acceptable, and maximum compression rate, $CR(t)_{\max}$, is the maximum value of $CR(t)$. If the absolute value of Value B is > 0.1 m/s, then the error in the integration process is too large. Proceed with Items 3-4 to improve the accuracy of the calculation of compression rate.

3. Compute a correction factor (Value C):

- a. Calculate the time interval between airbag first contact and peak deflection. Call this interval, "Value A." That is, $\text{Value A} = T_{\max D} - T_0$.
- b. Divide Value B by Value A to determine Value C. Note that Value C has units of m/s^2 and has the same sign as Value B.

4. Apply the correction factor to the sternum or rib accelerations:

- a. Subtract Value C from the filtered sternum or rib acceleration data at each time step, starting with T_0 and ending with $T_{\max D}$. **Note that if the acceleration data are in Gs, then divide Value C by 9.8 to convert it to Gs before applying the correction.** Remember that the correction procedure assumes that SAE sign conventions have been followed in compiling the acceleration data.
- b. Return to item 1f and repeat the calculation of deflection (compression) rate as a function of time and the accuracy check.

5. The accuracy criterion in item 2b will be met after one iteration if the correction procedure to the data has been done correctly.

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QUESTION 11

Specifications (need to make
confidential)

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QUESTION 11

Specifications (need to make
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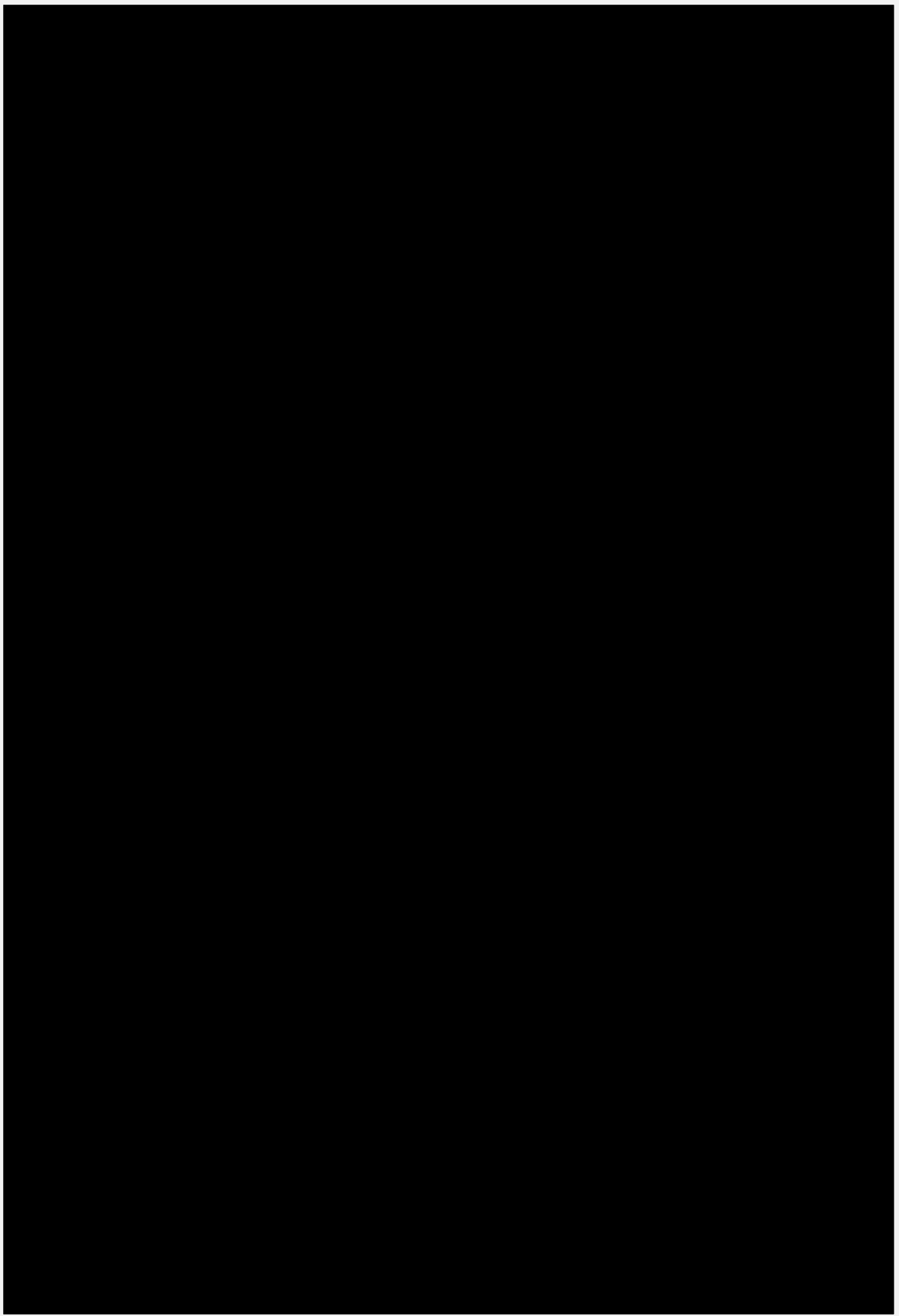
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QUESTION 11

Specifications (need to make
confidential)

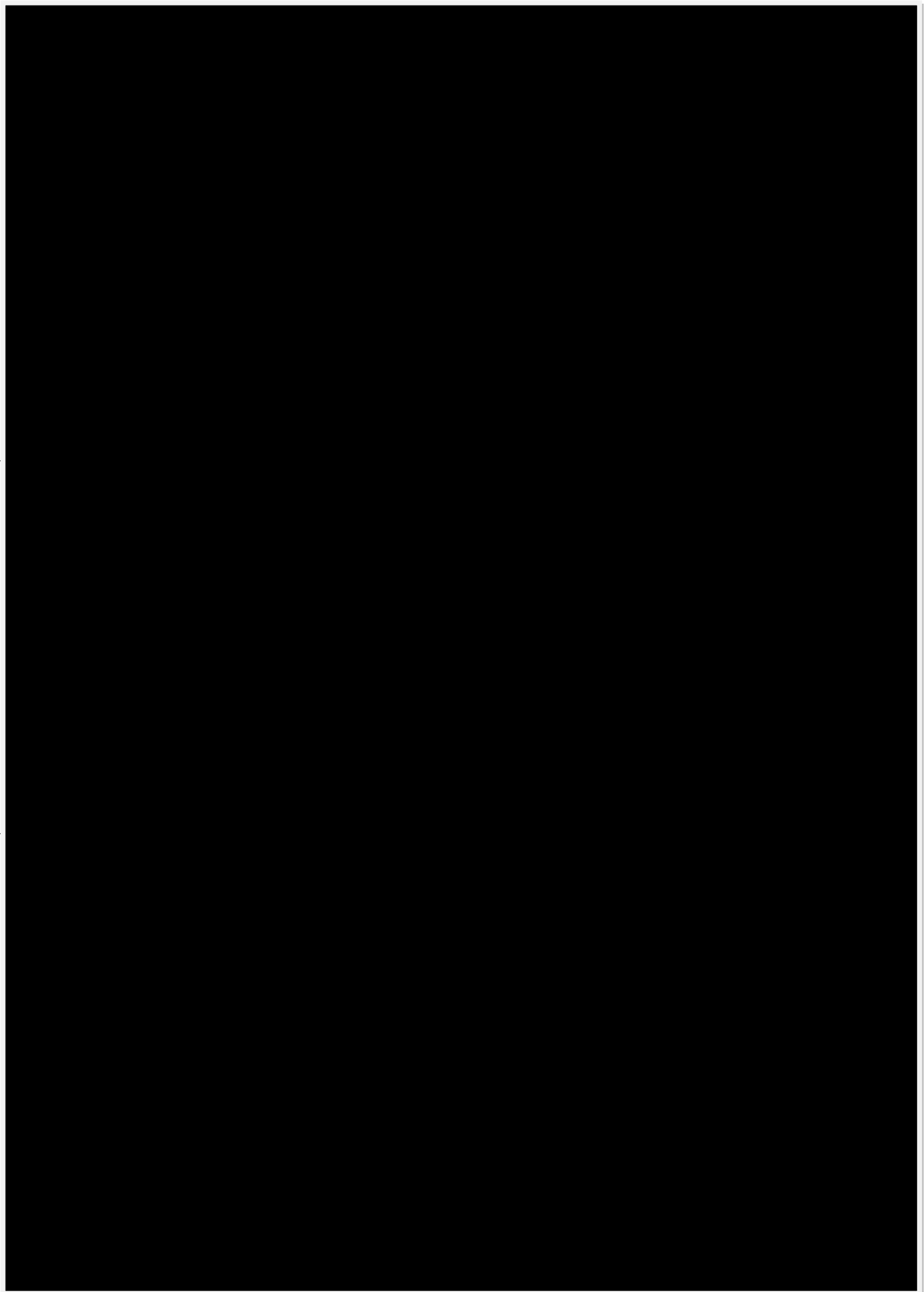
SCAB

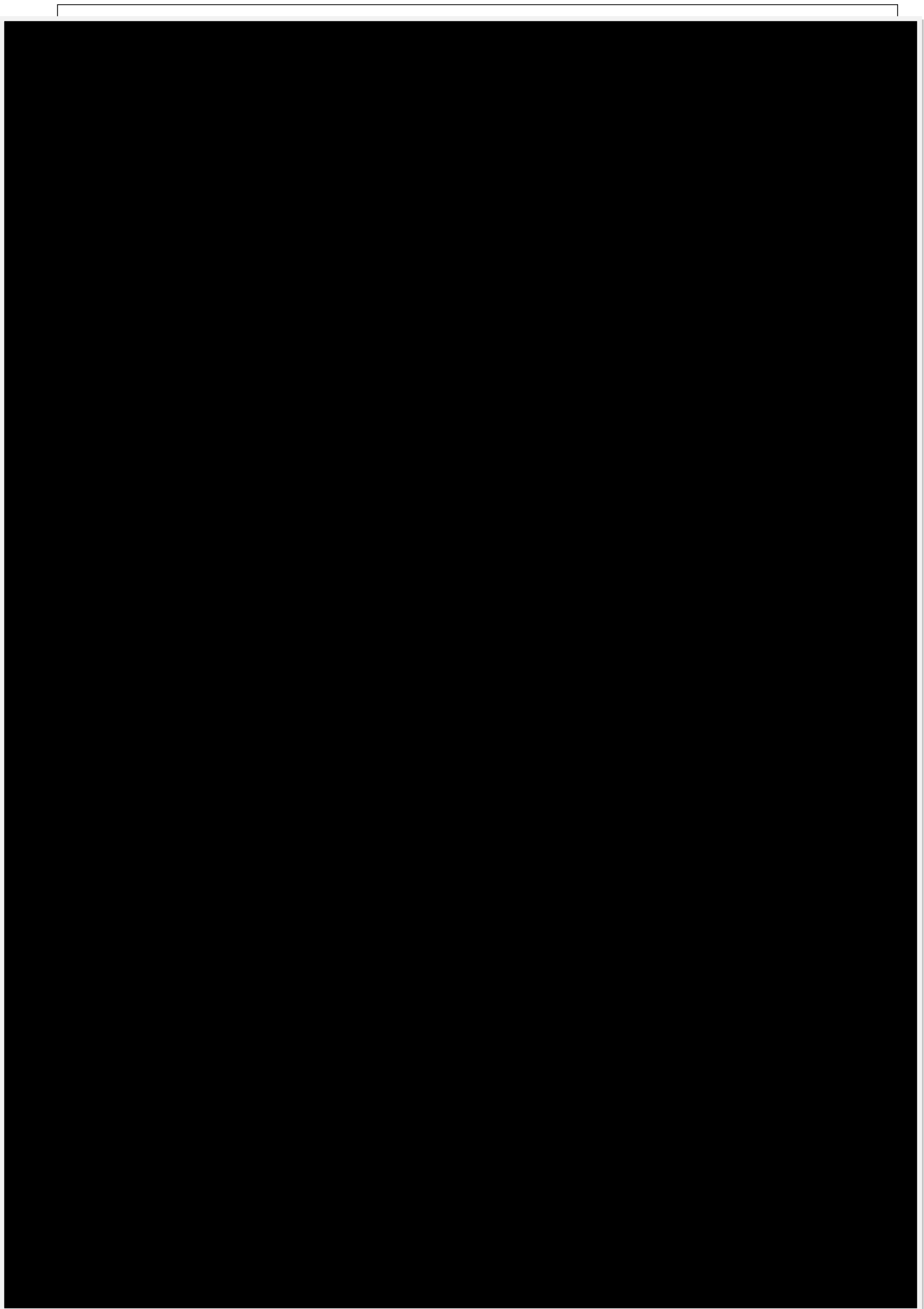
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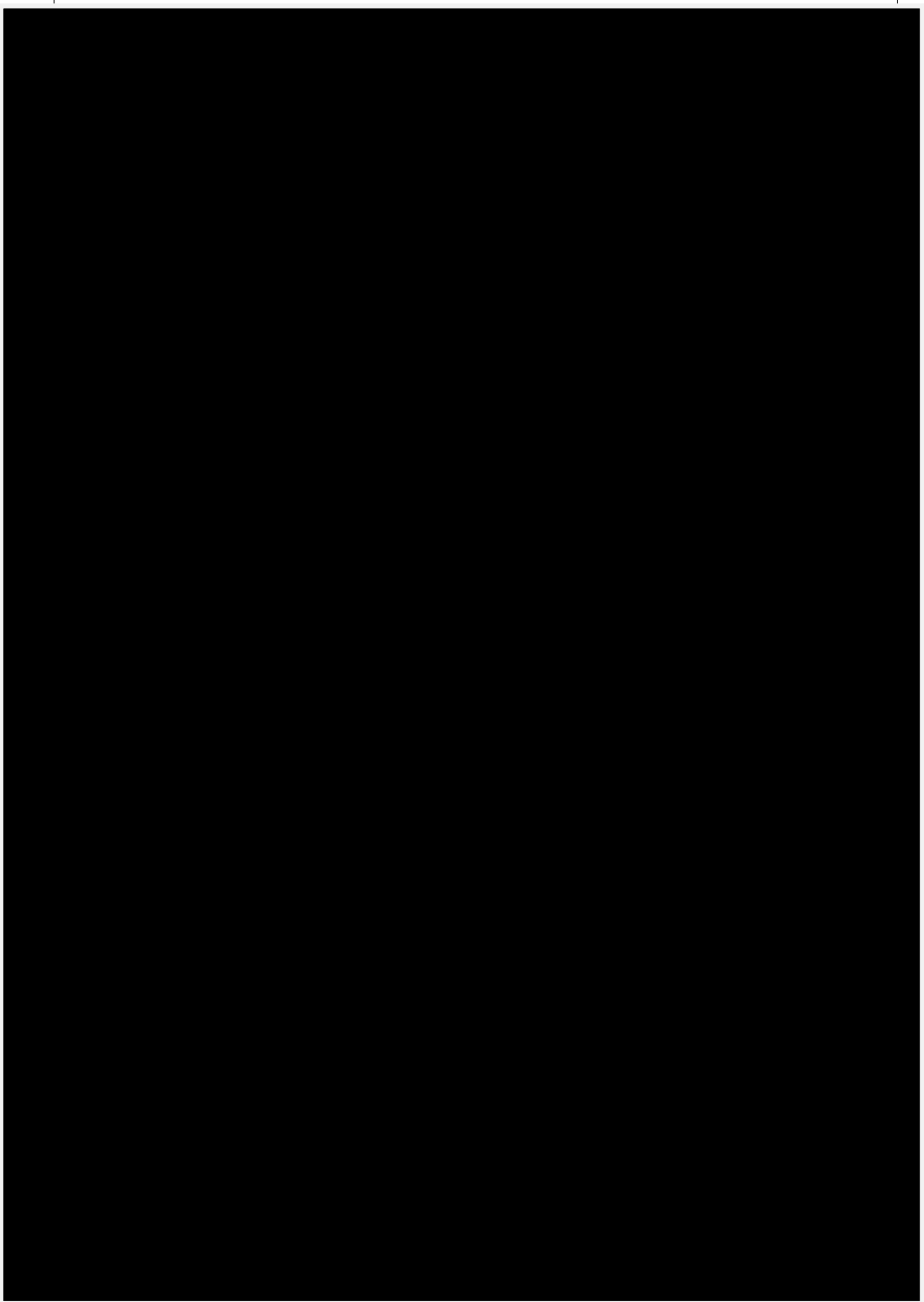
Q11-5

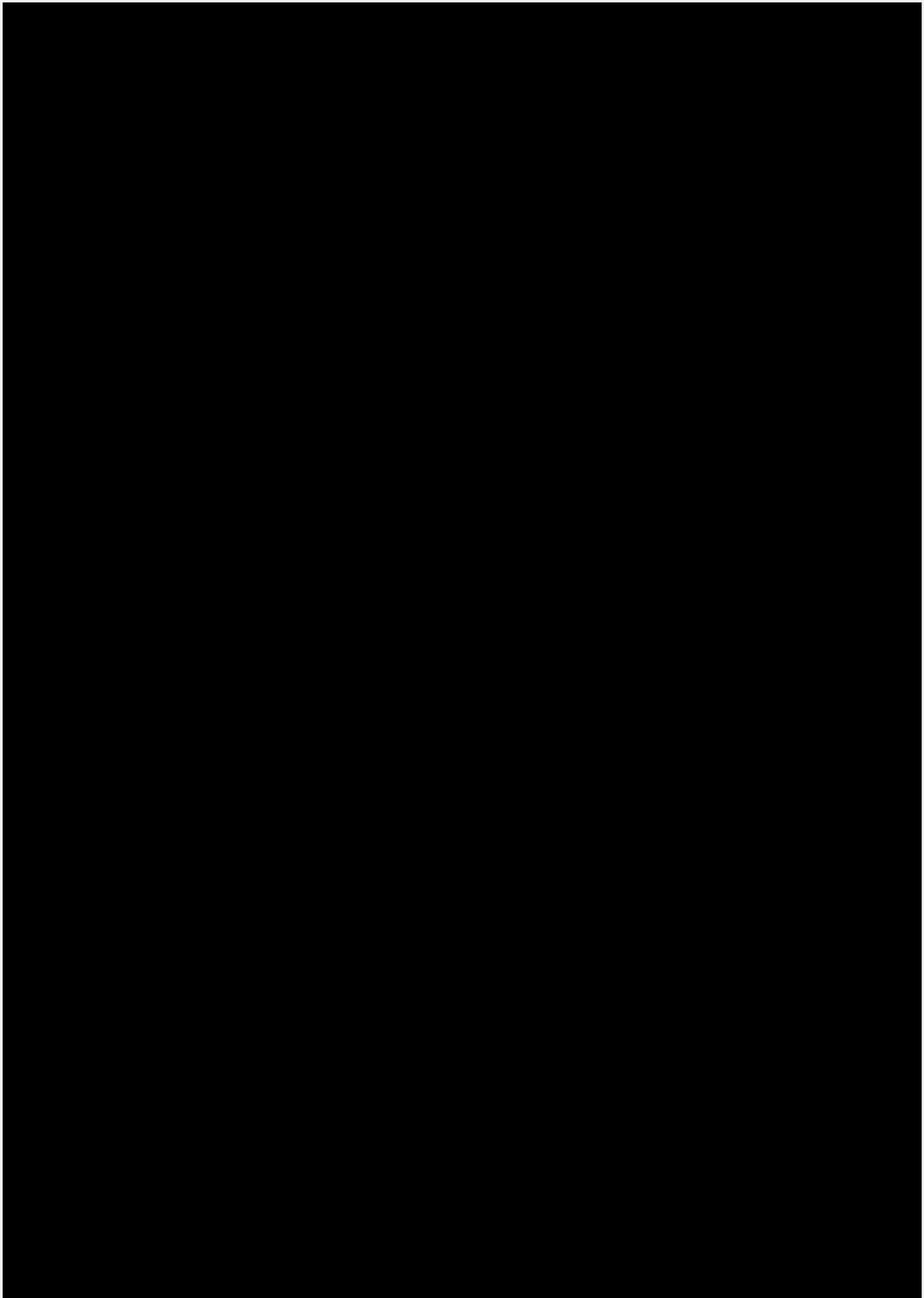
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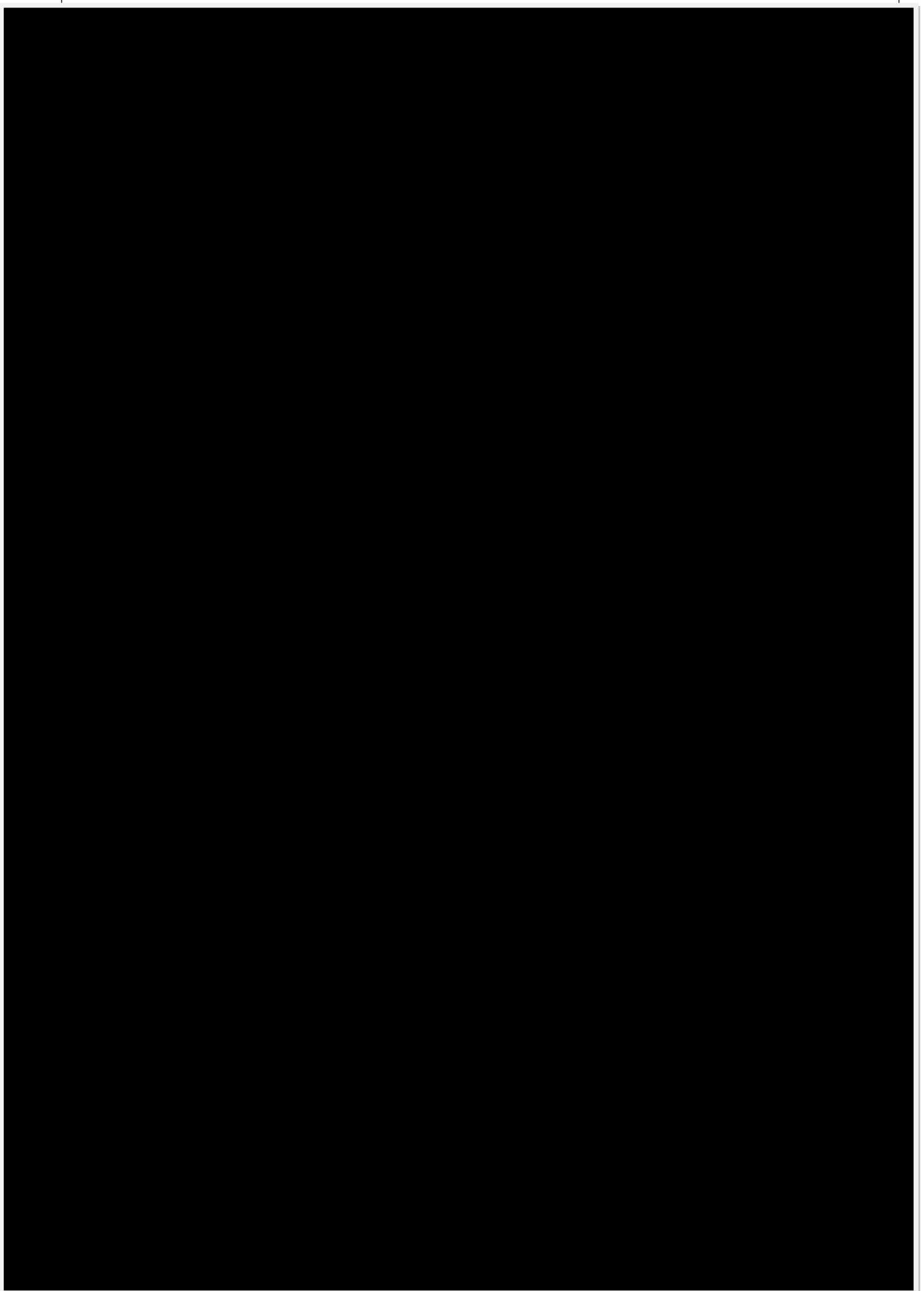
83_JE_REDACTED

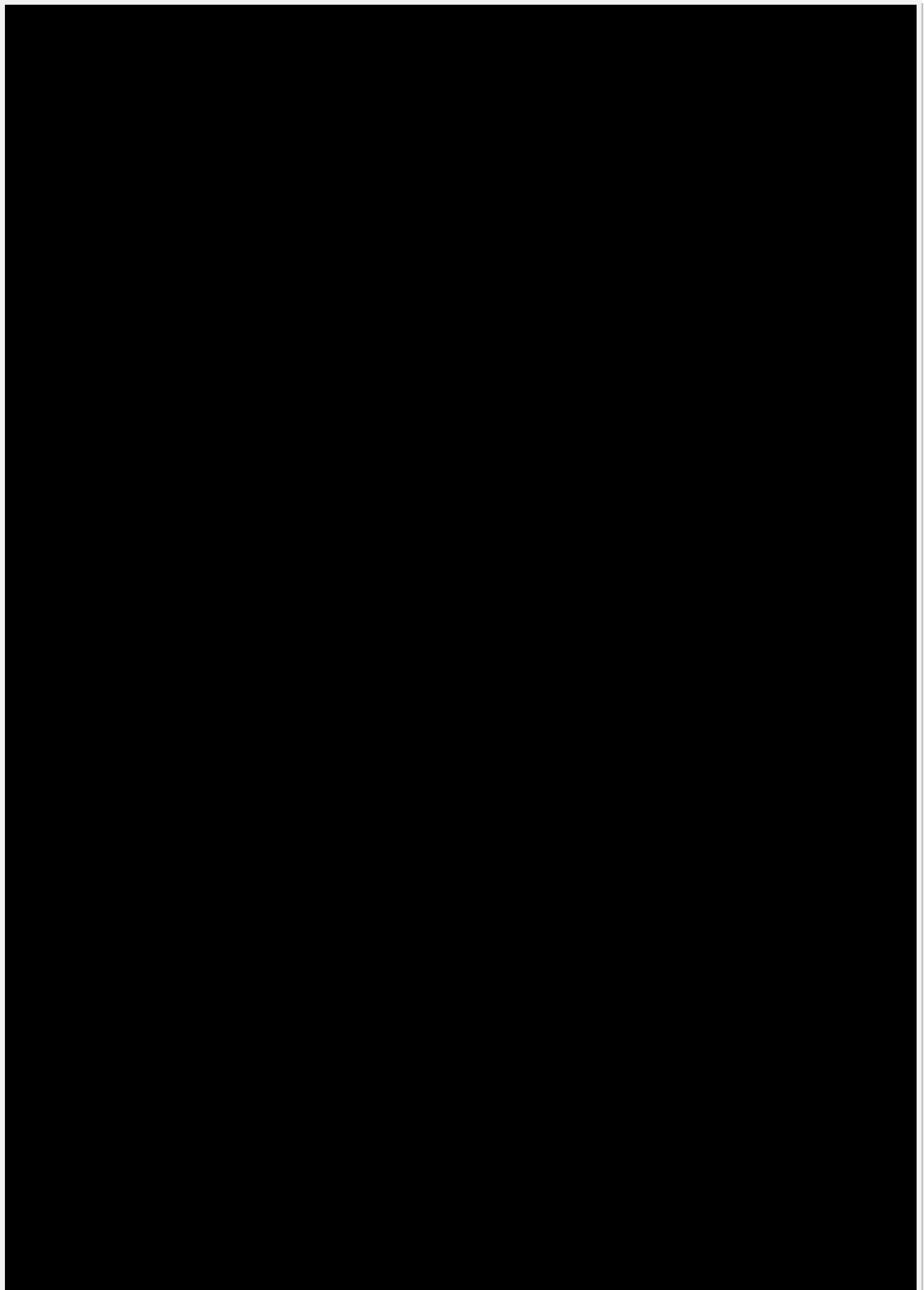


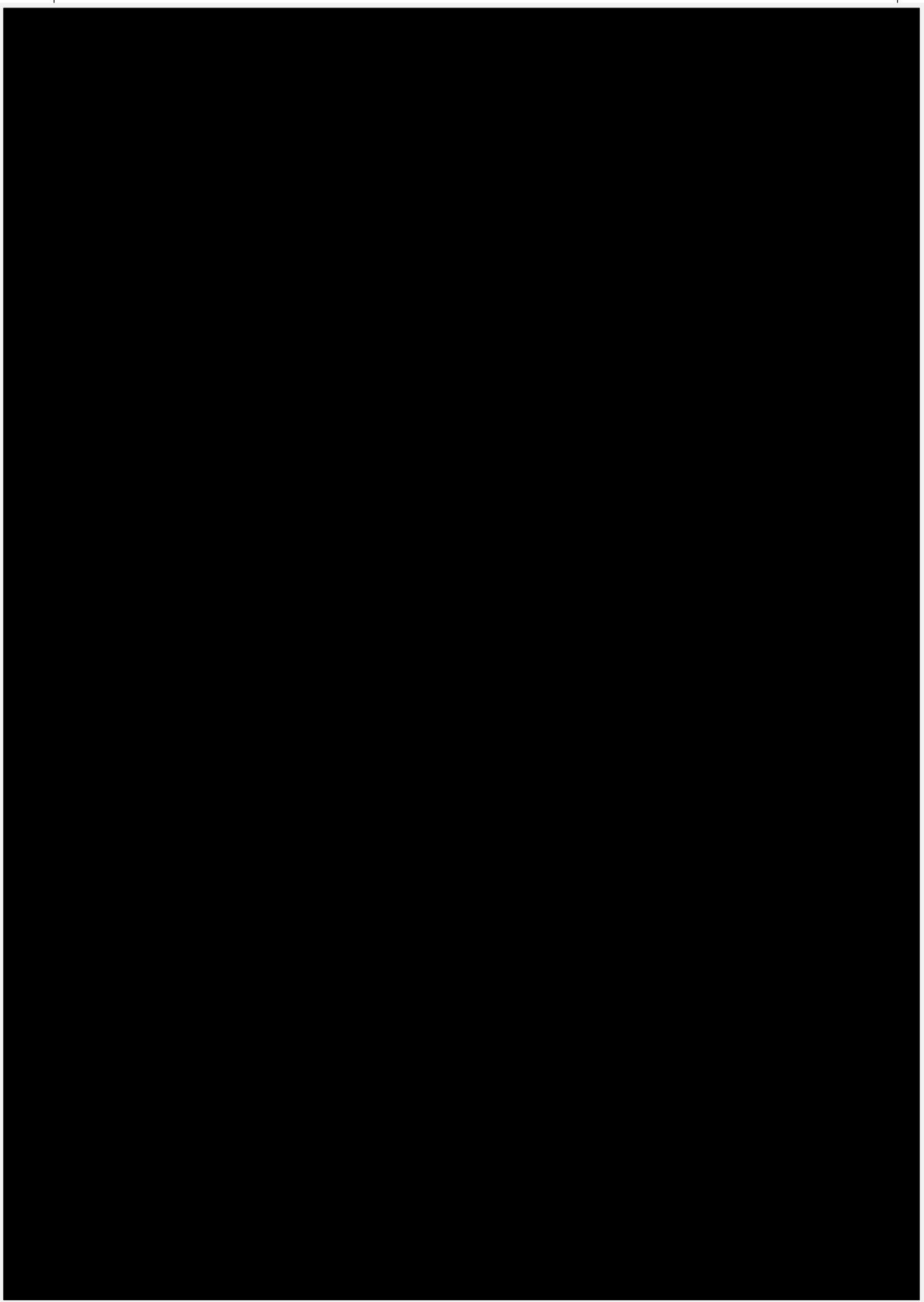


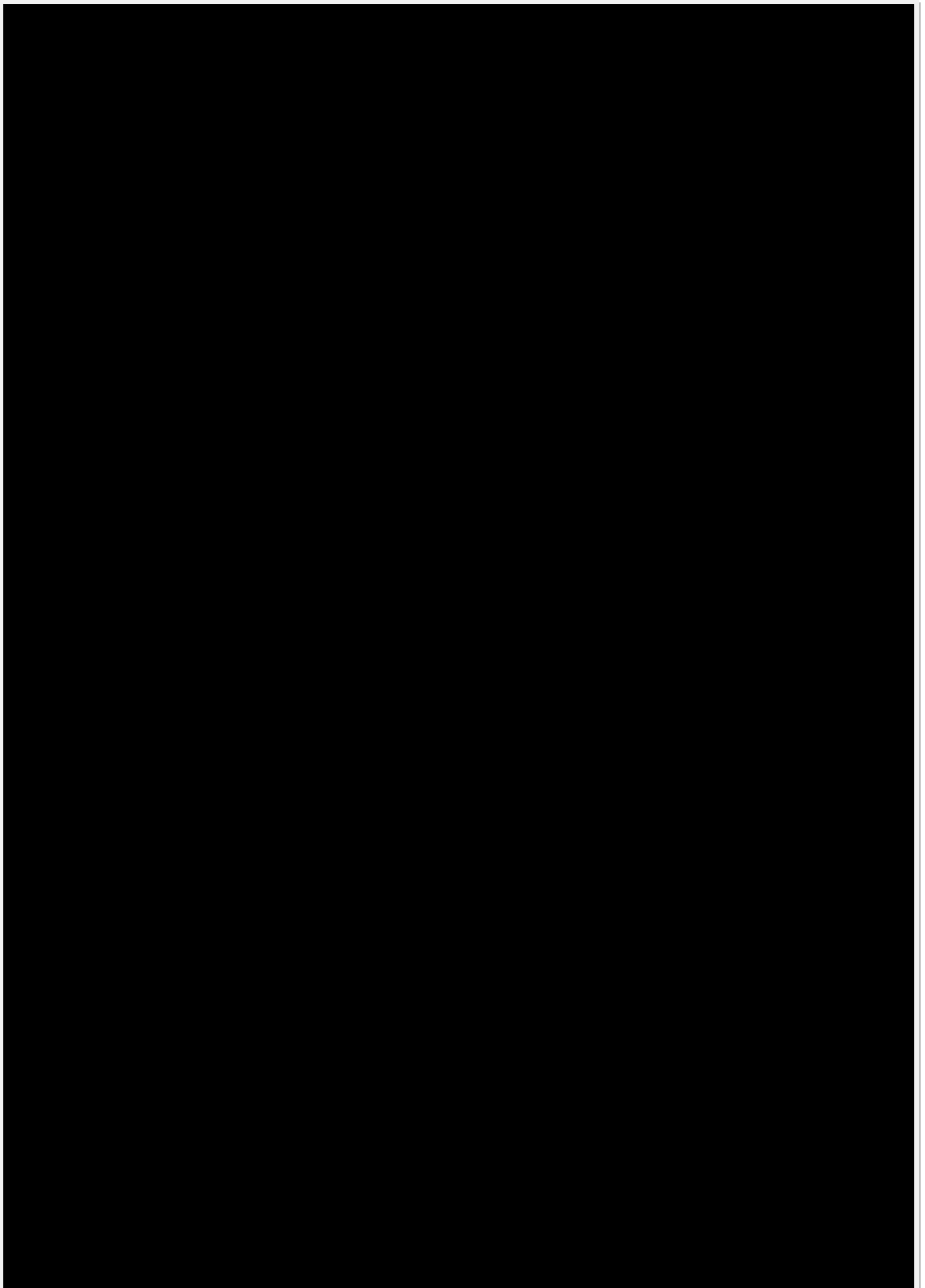


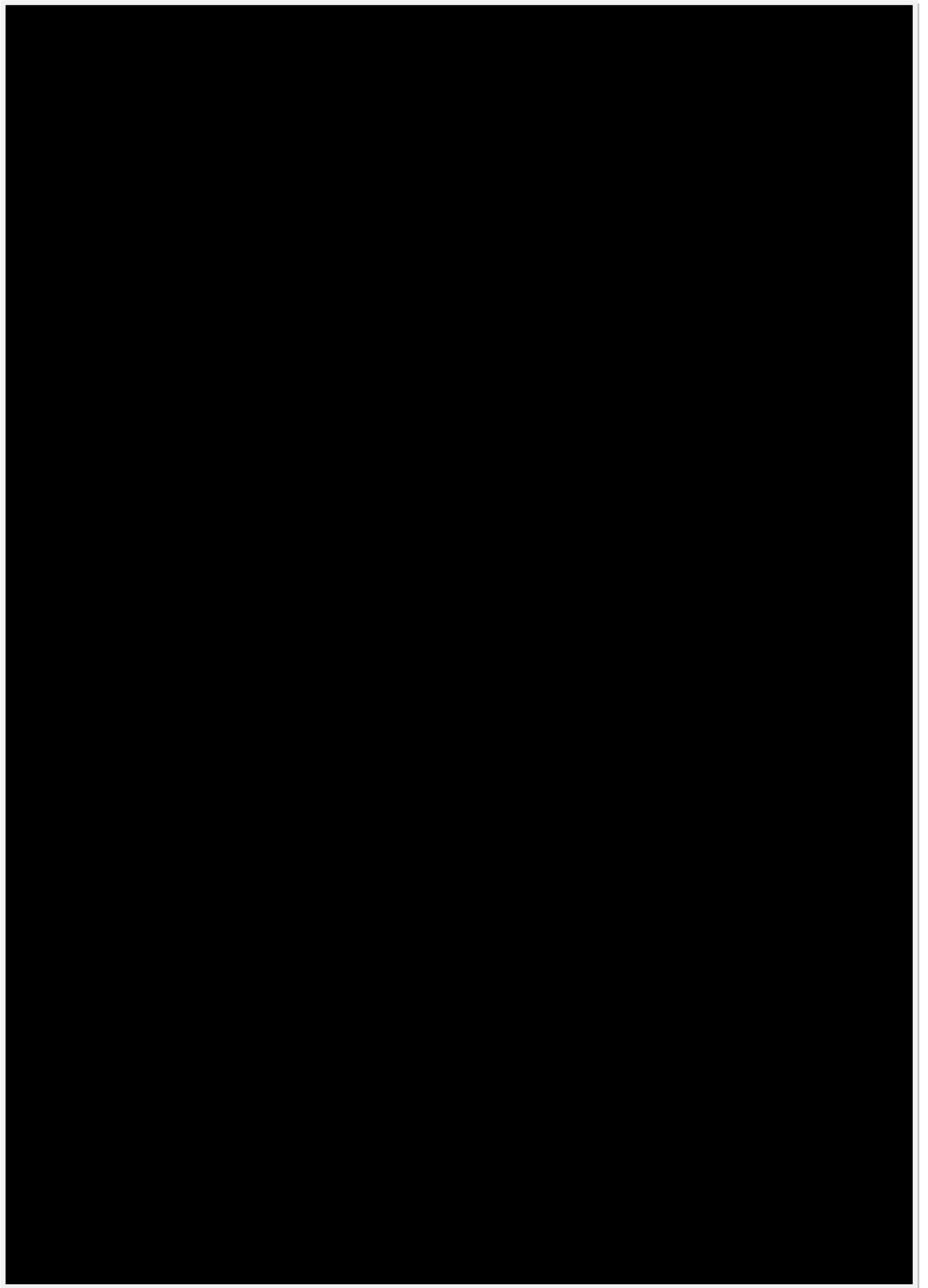












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QUESTION 11

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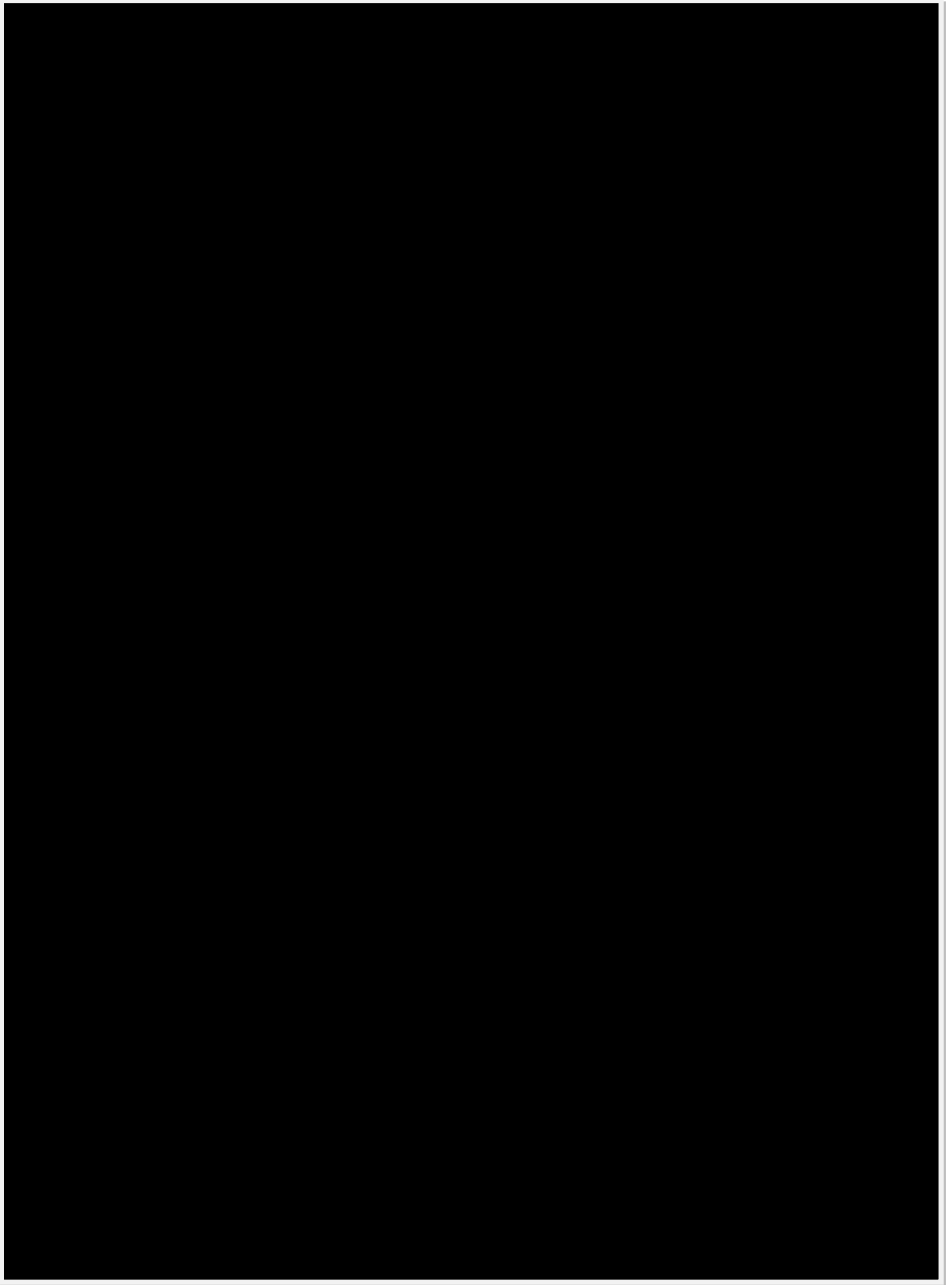
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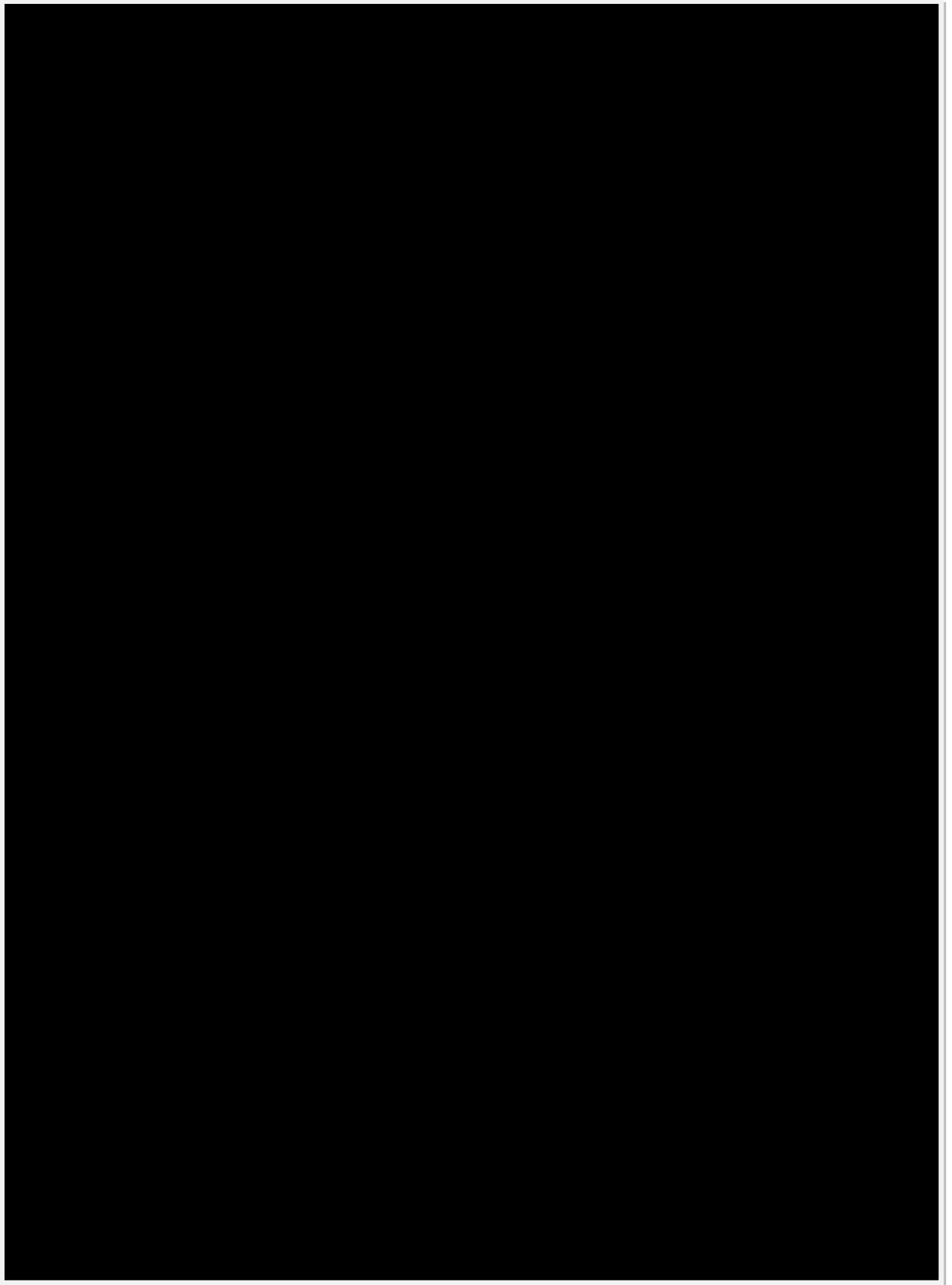
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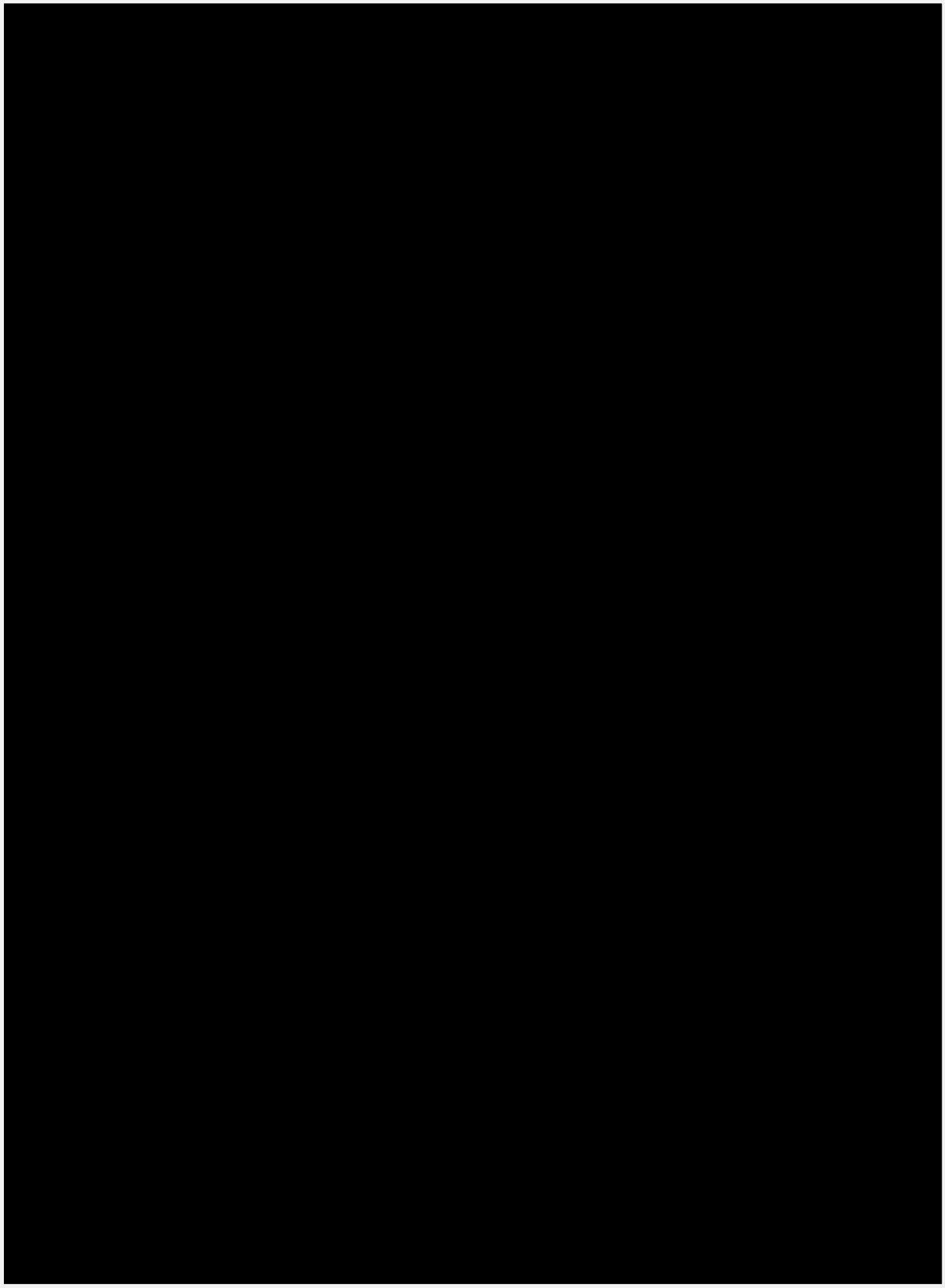
Q11-6

7881ZTA0_A800____C462562

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QUESTION 11

Specifications (need to make
confidential)

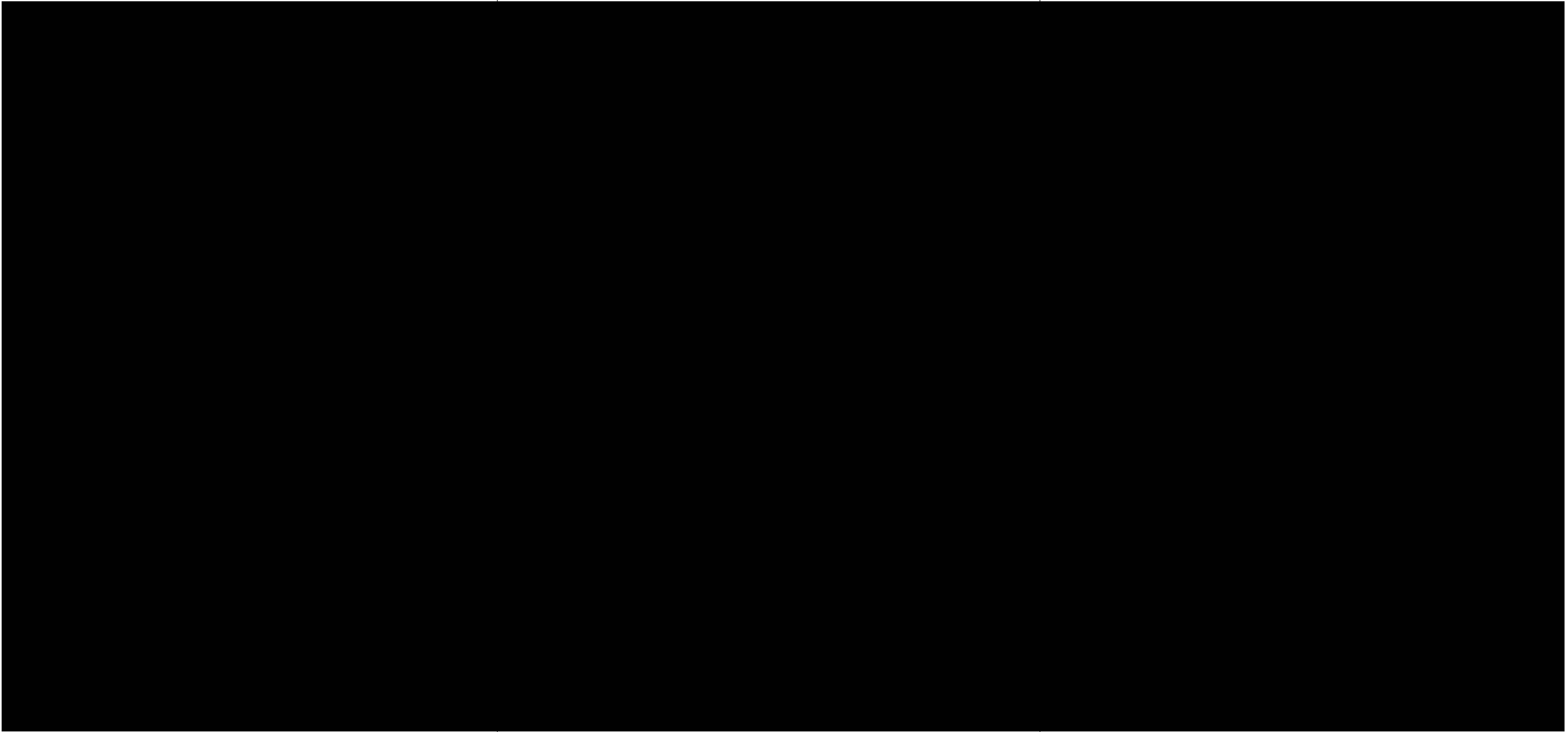
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MP start-

Q11-6 Q11-6

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QUESTION 11

Specifications (need to make
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Q11-6 Q11-6 Q11-7

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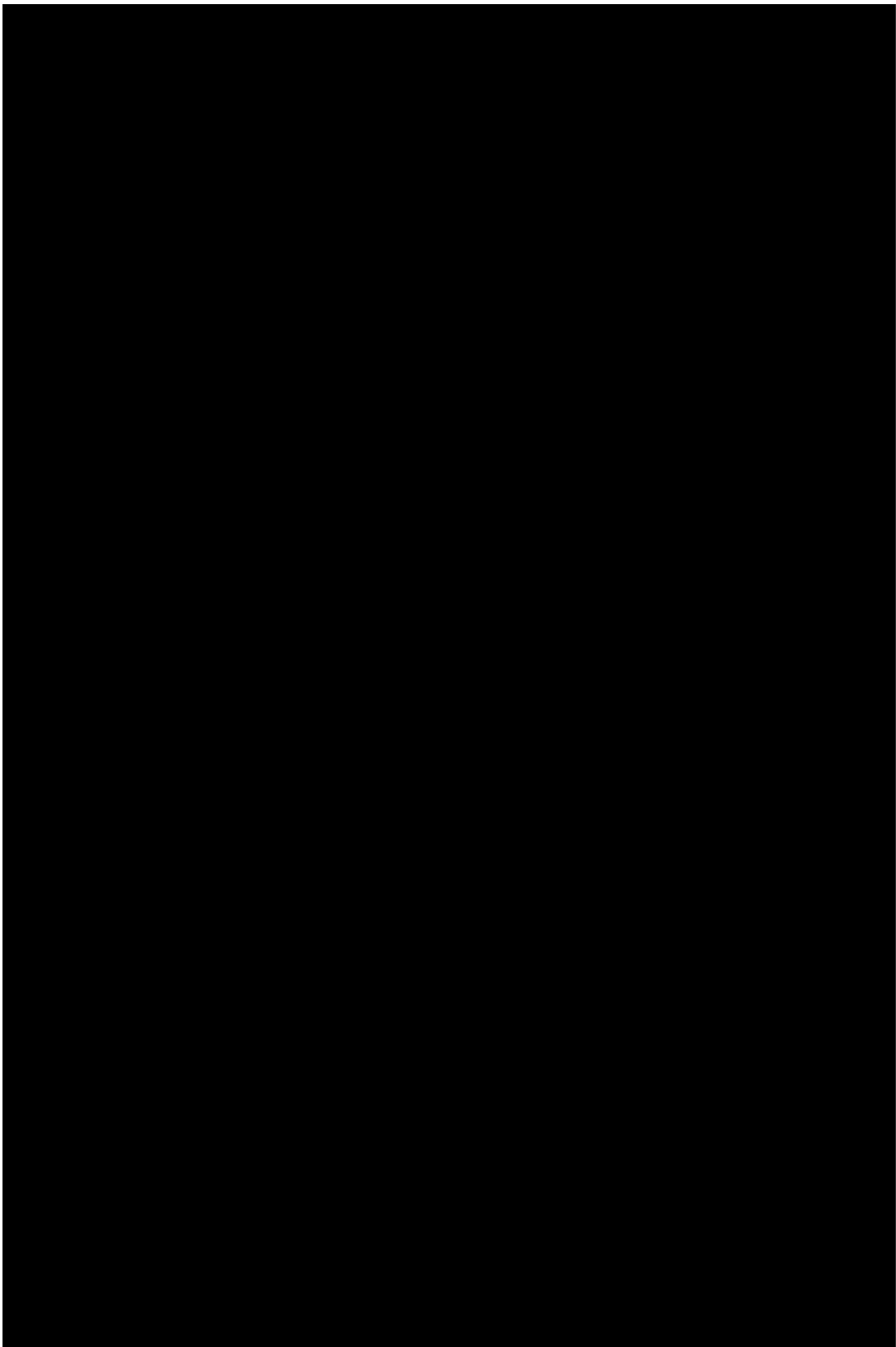
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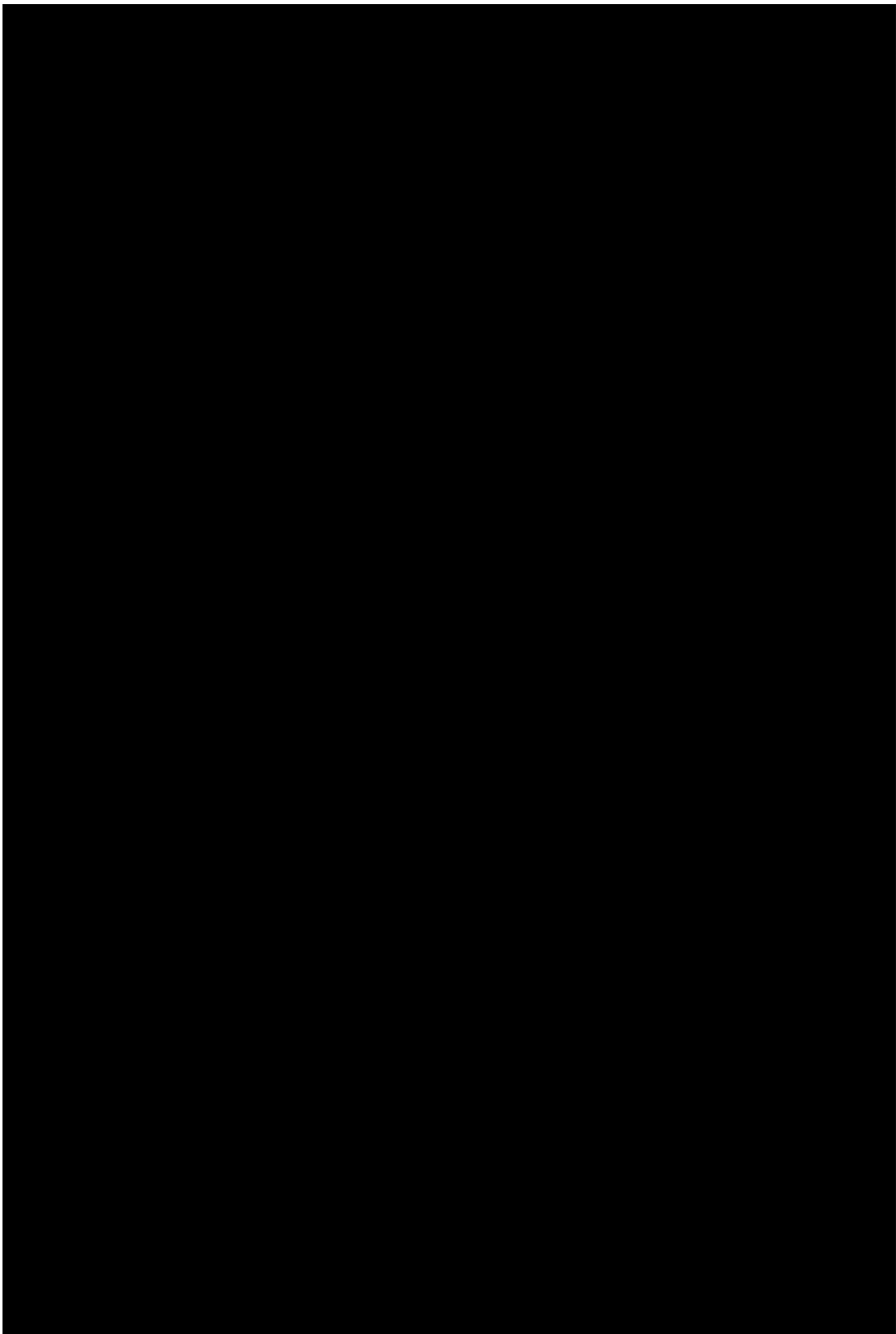


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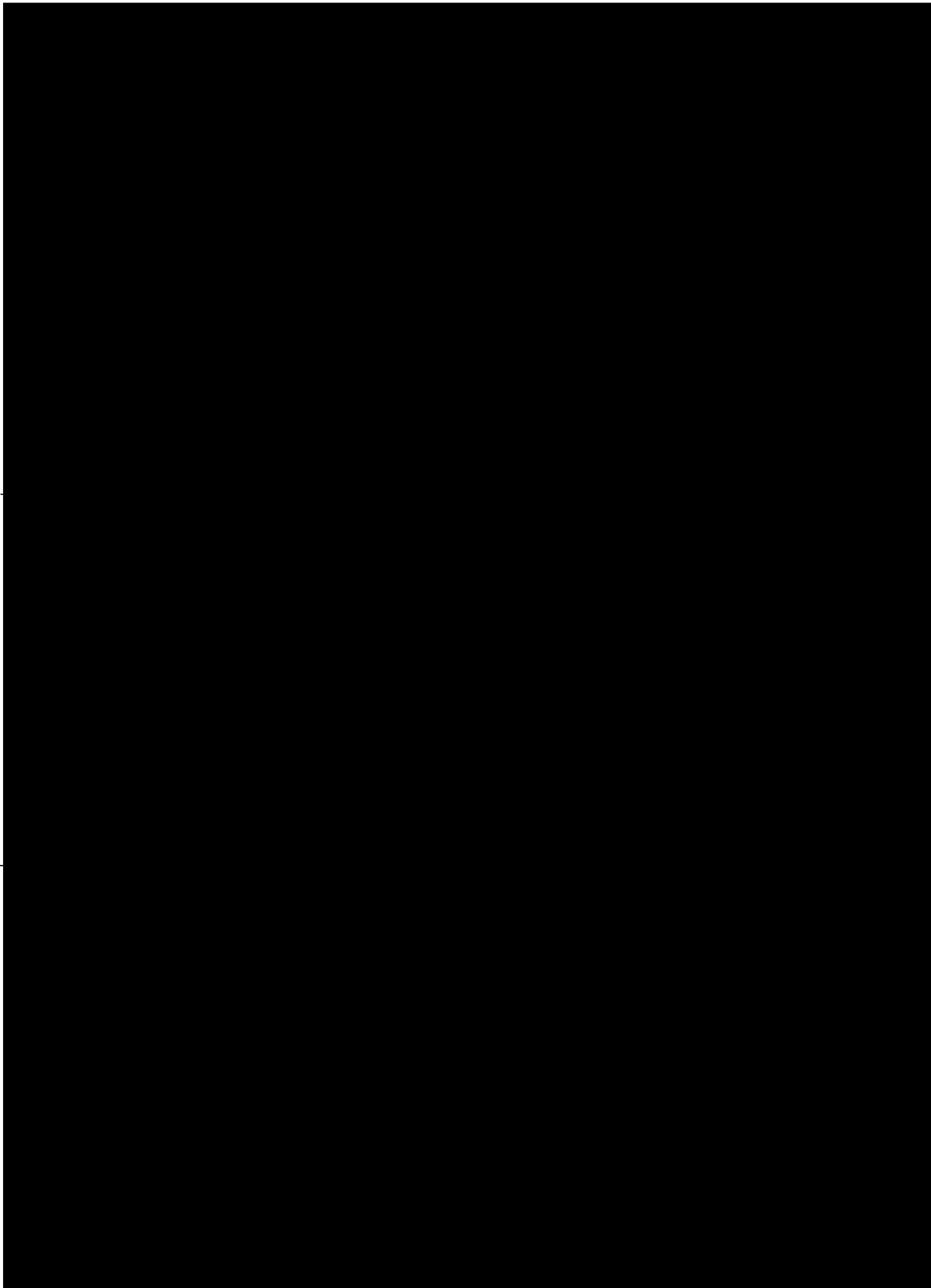


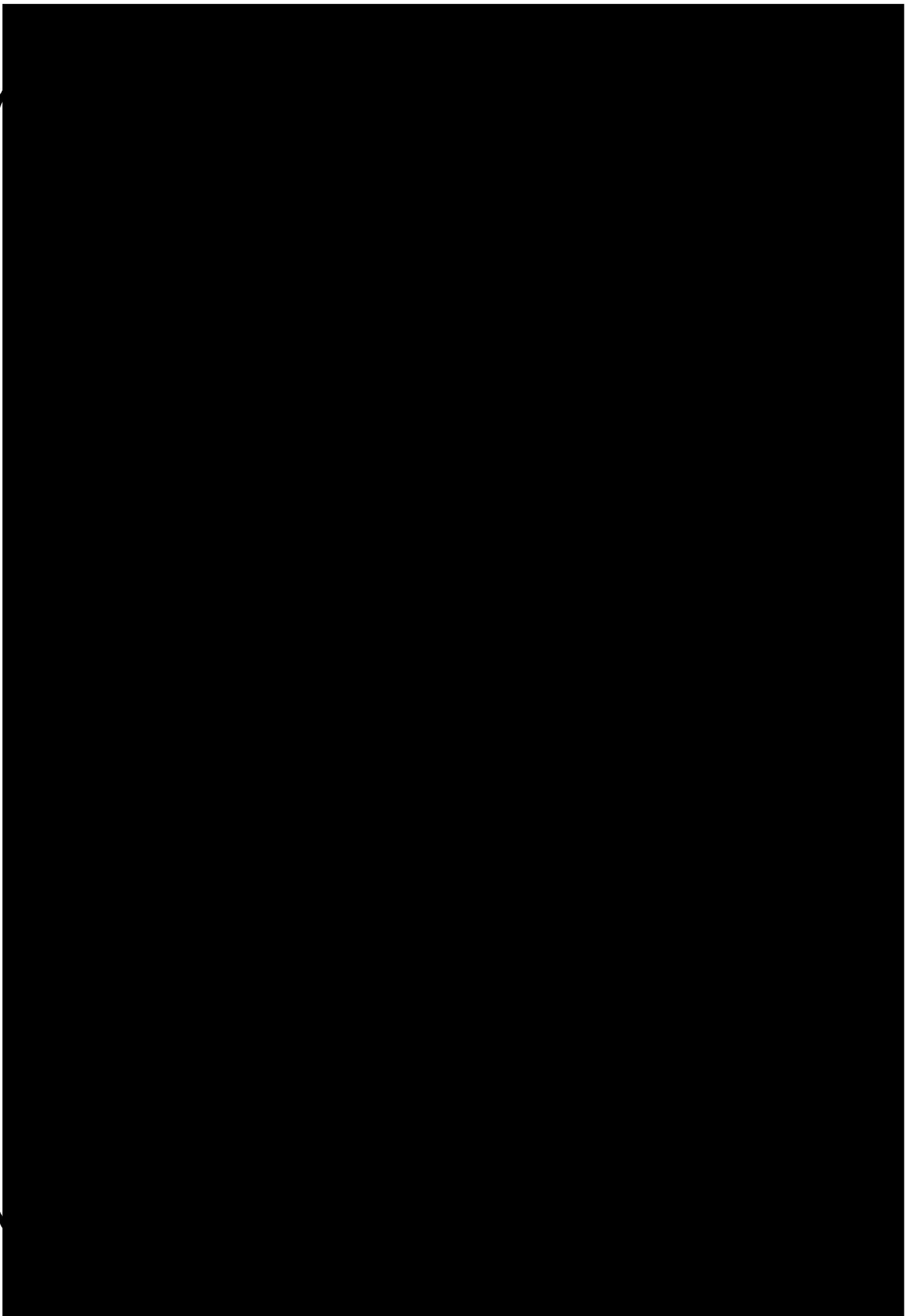
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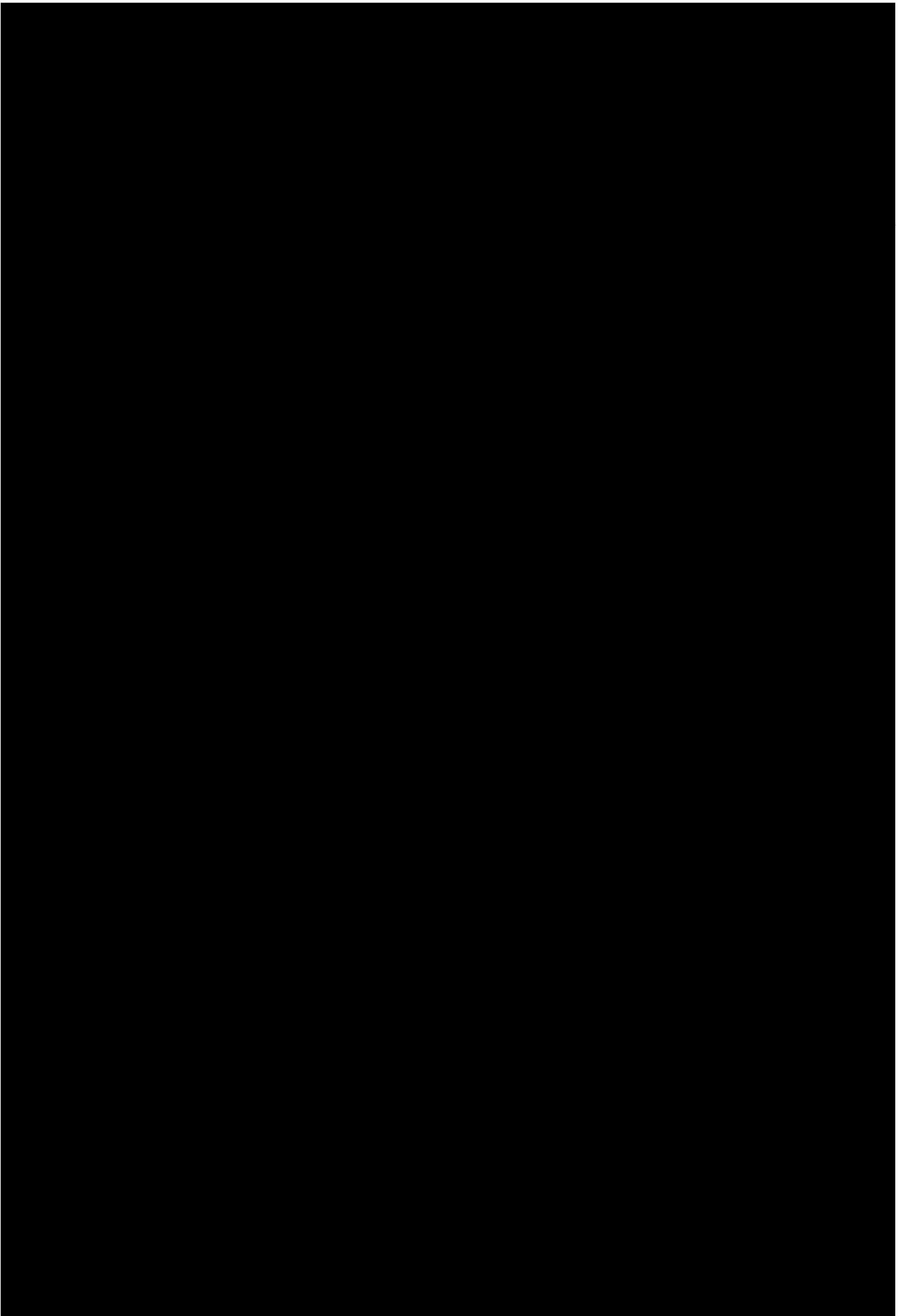
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QUESTION 11

Specifications (need to make
confidential)

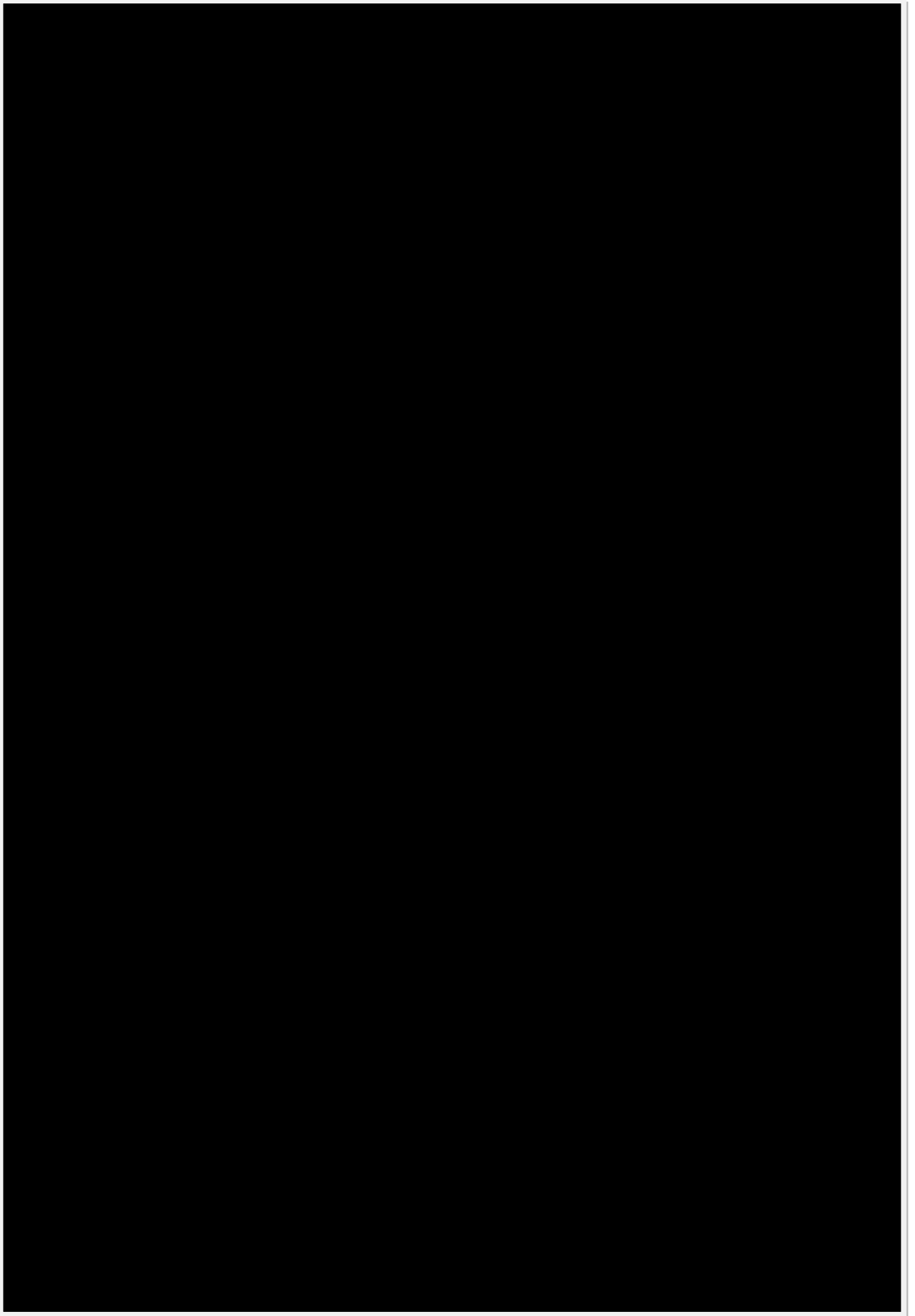
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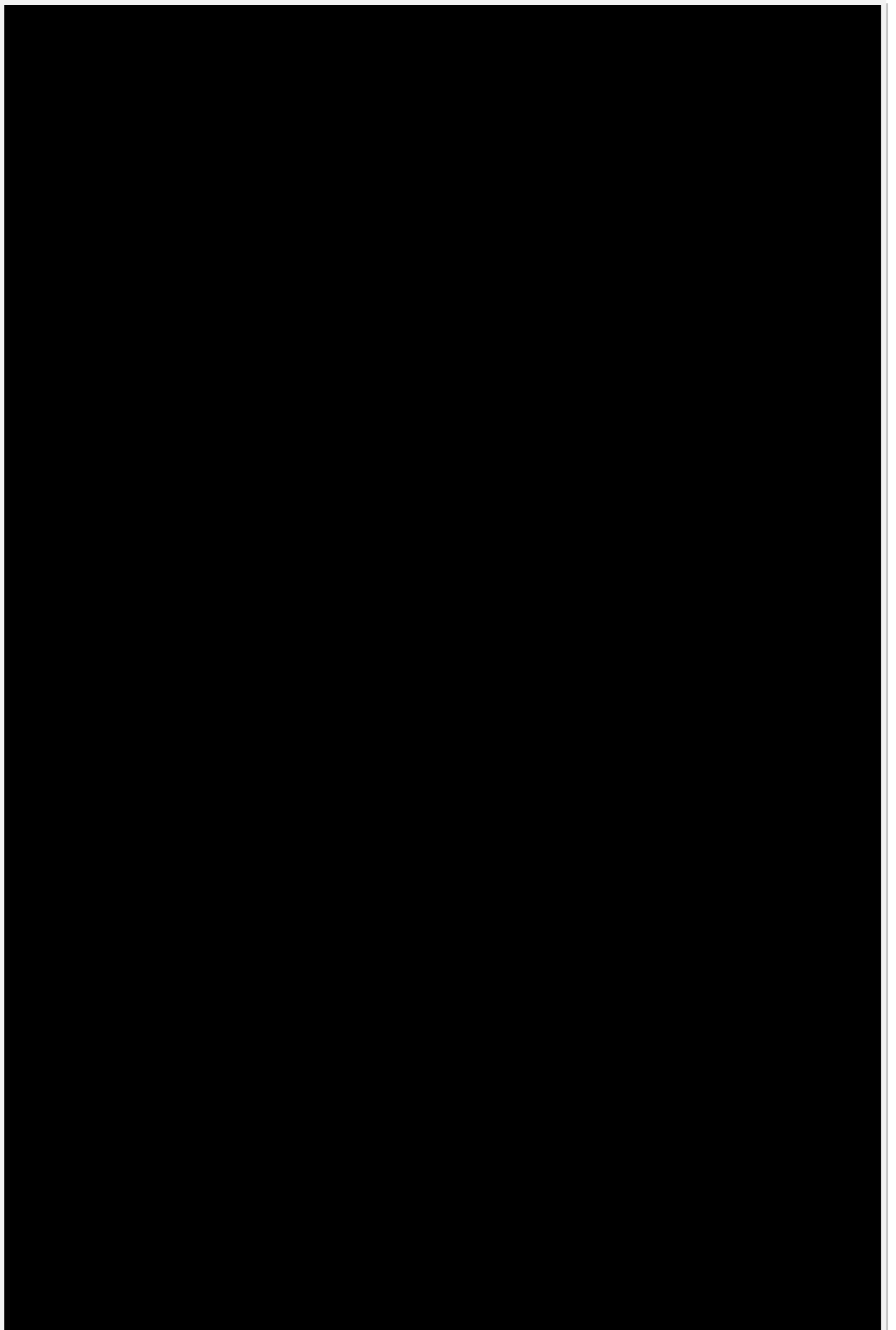
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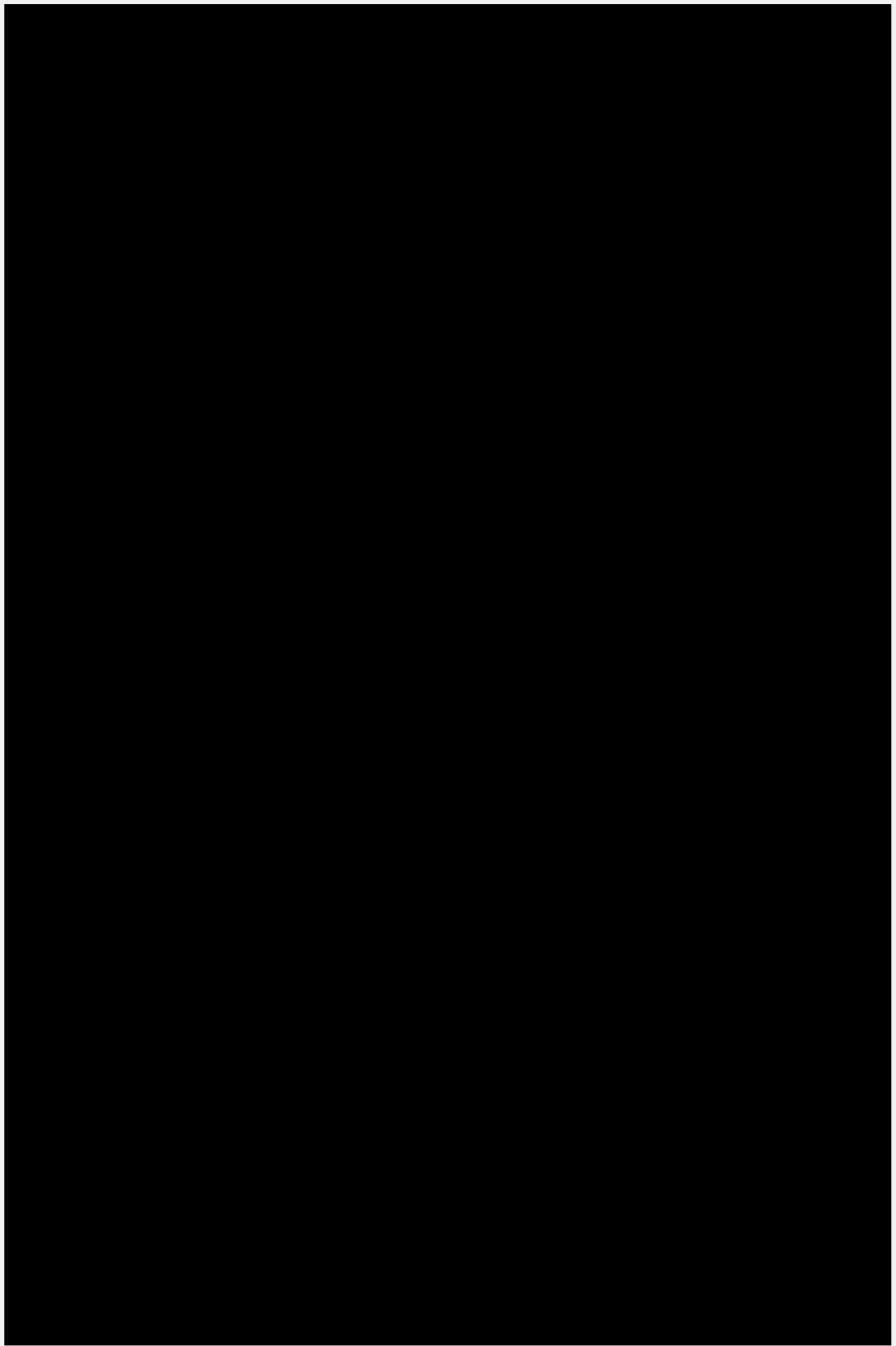
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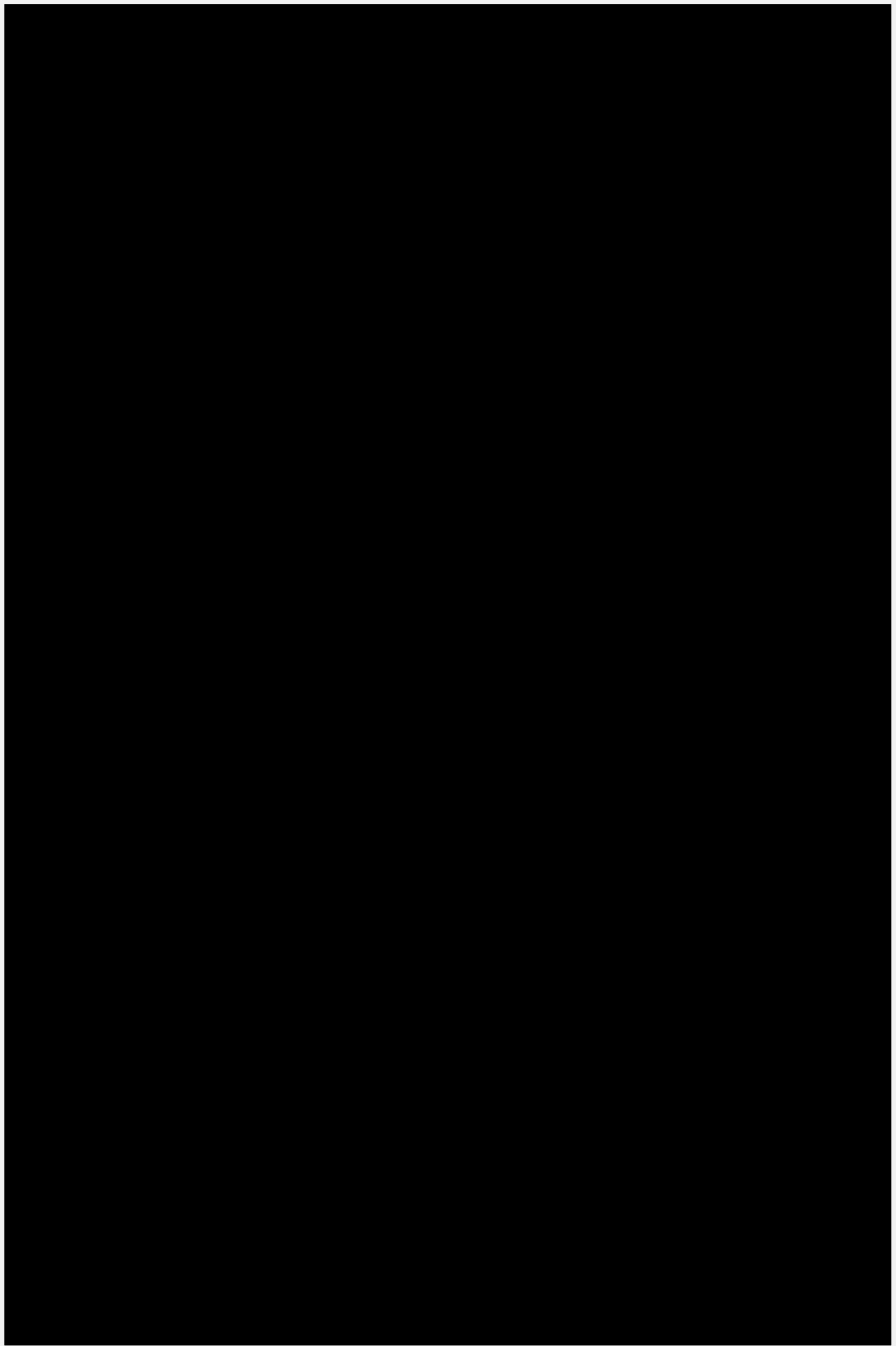
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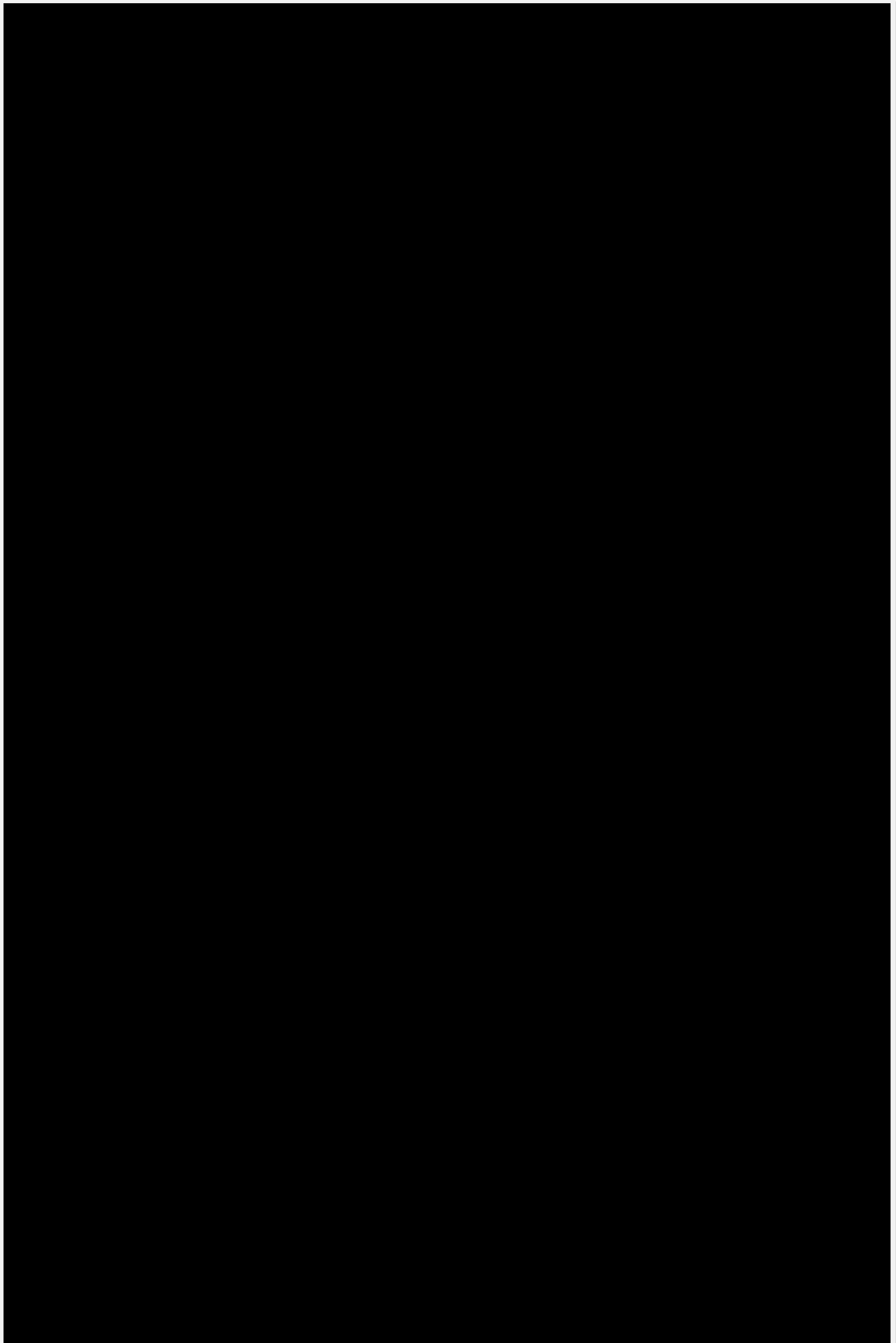
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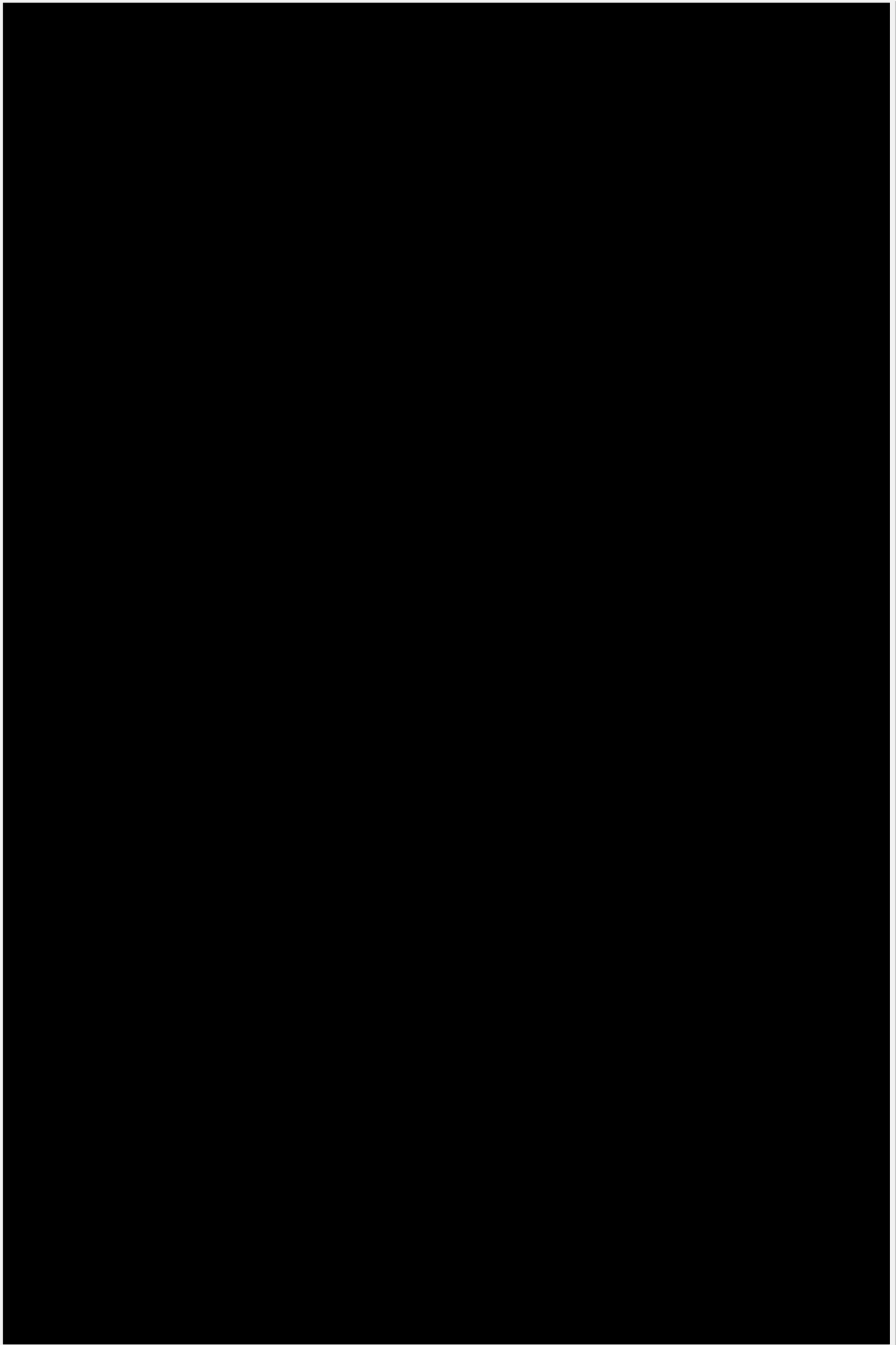


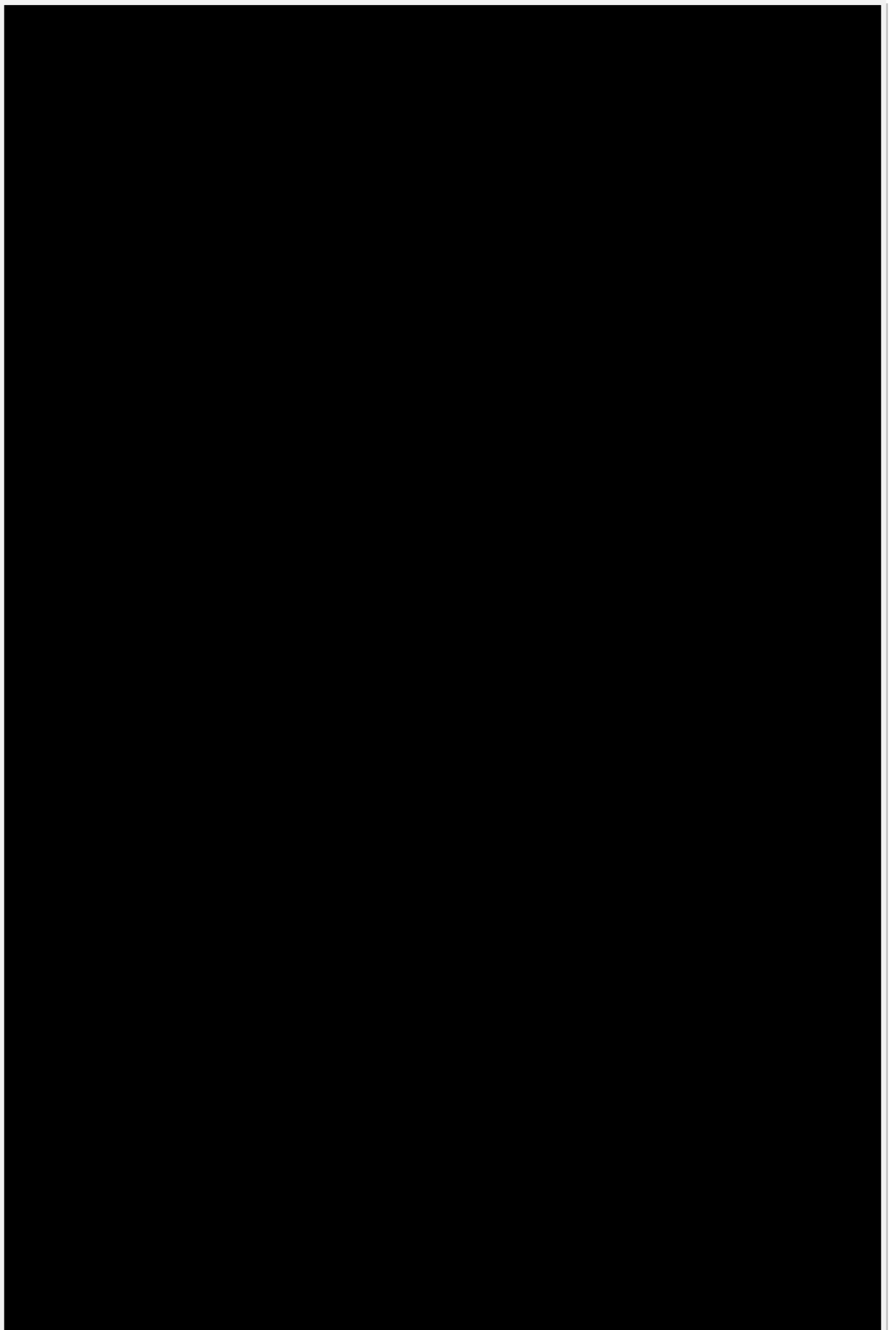


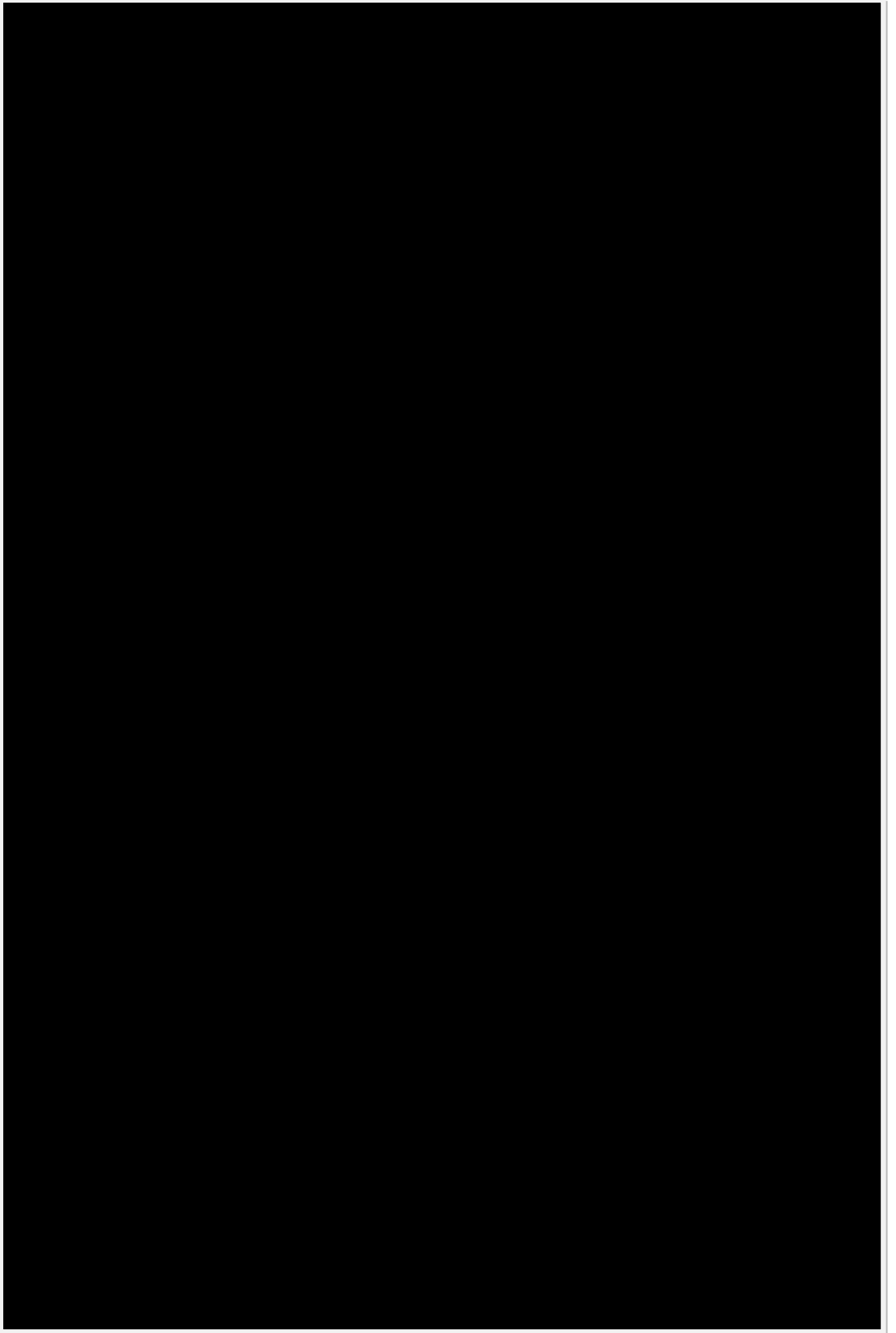


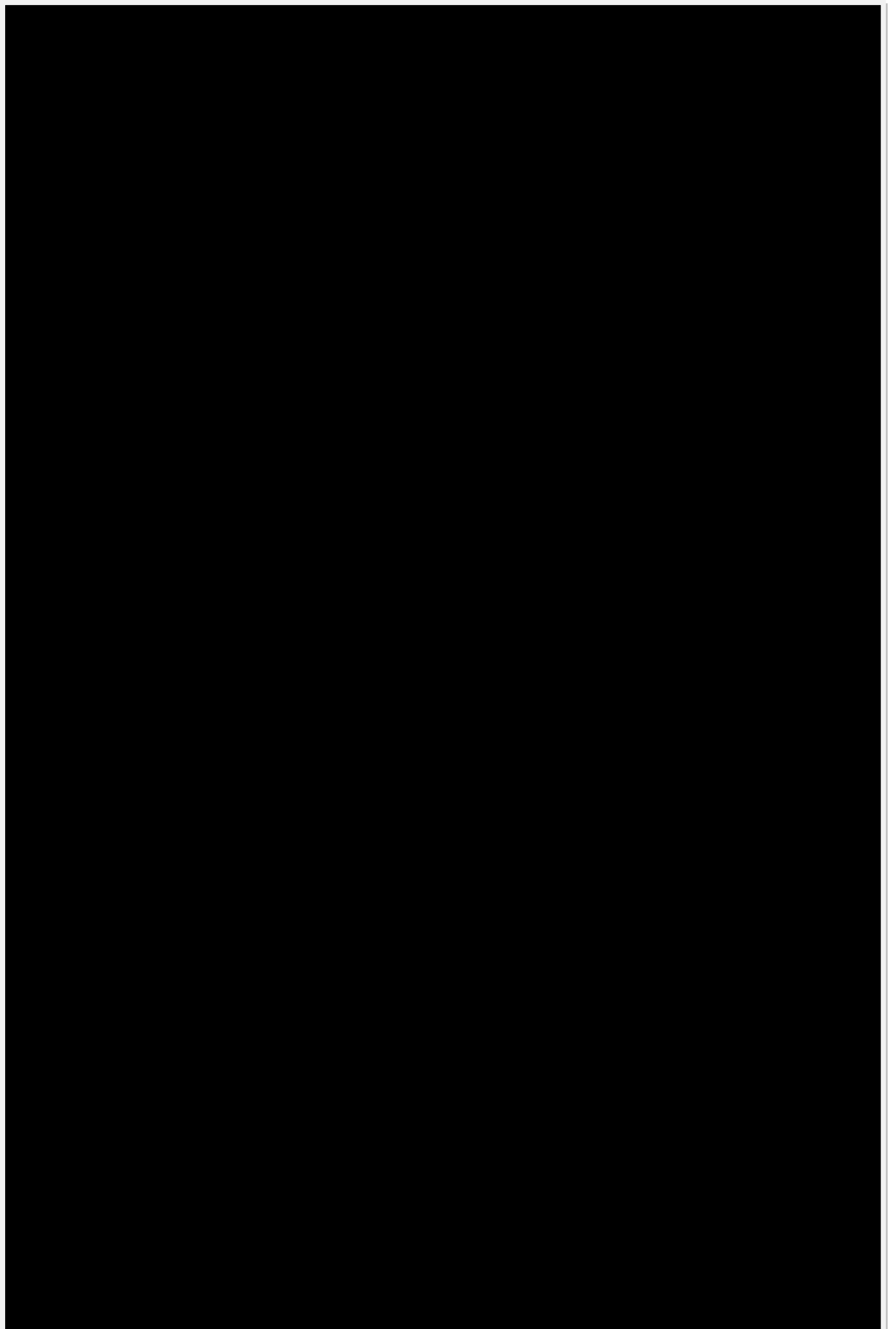


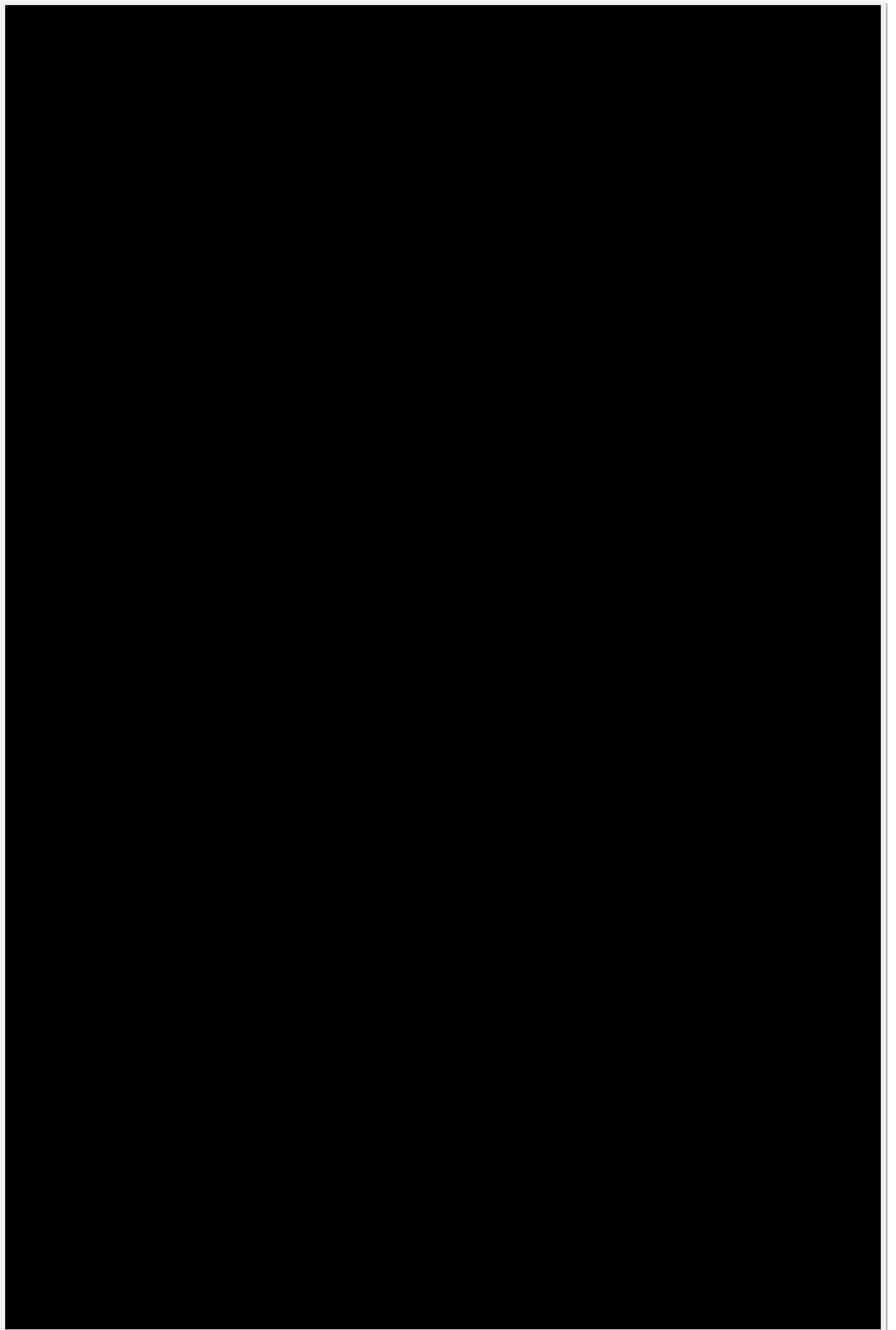


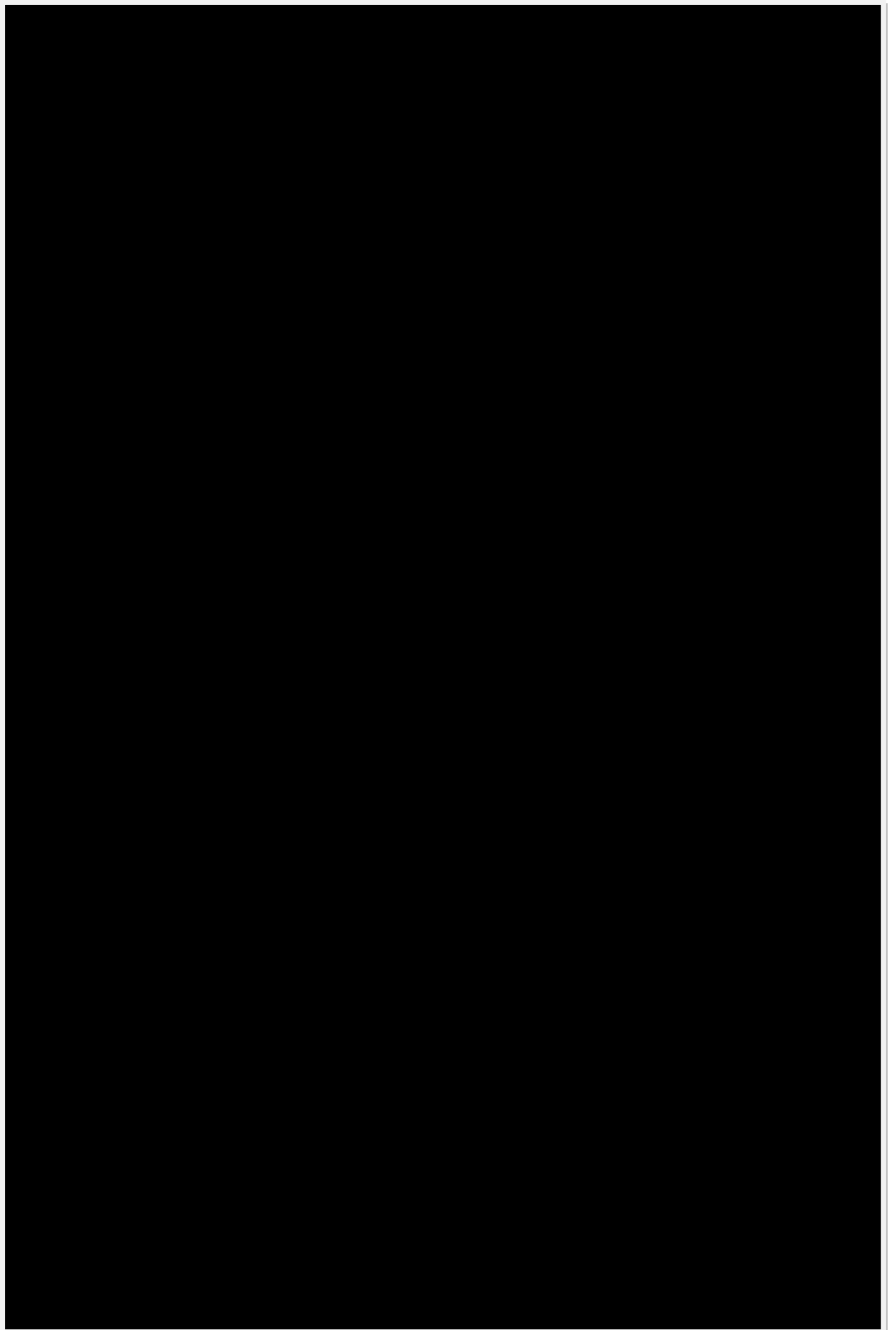


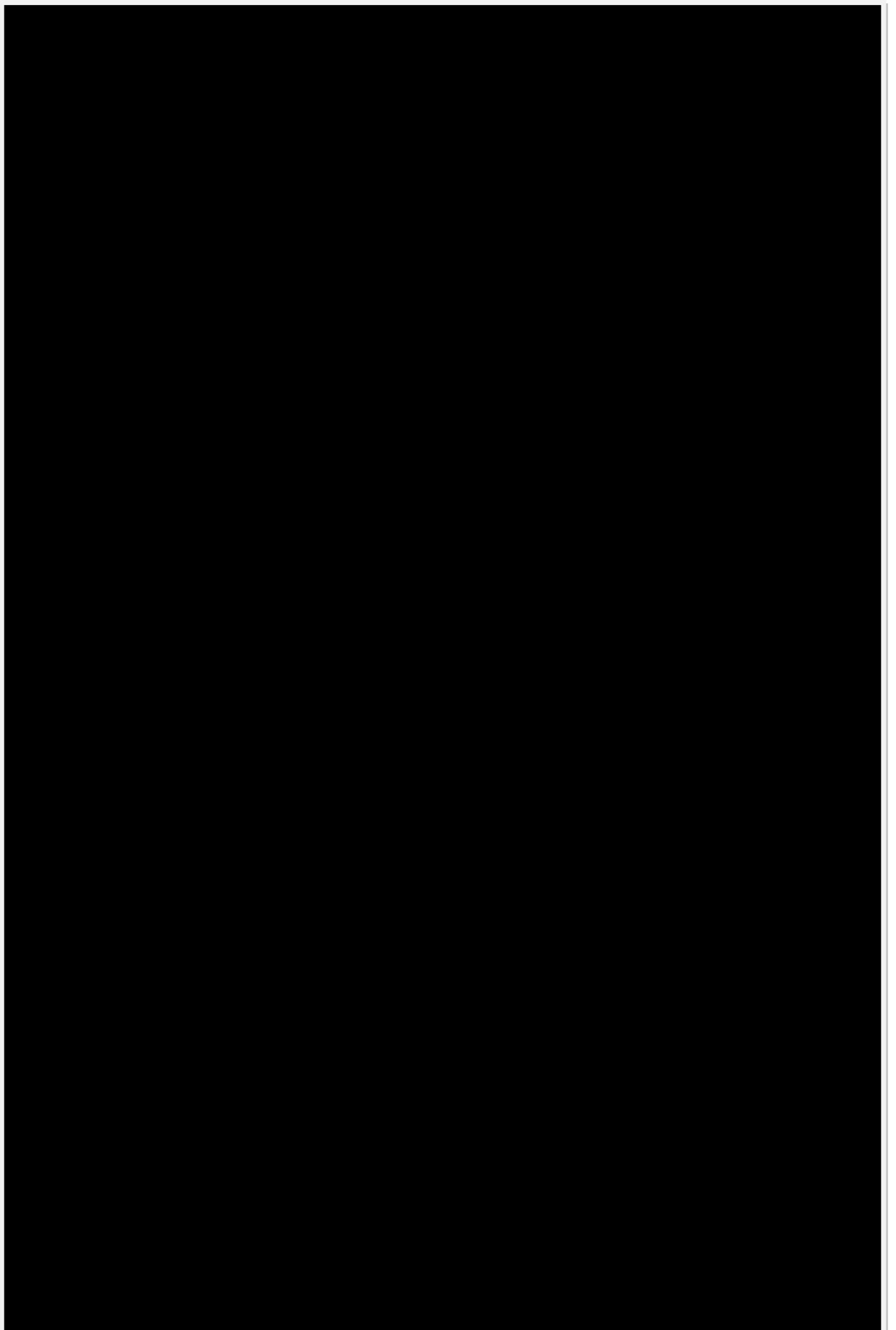


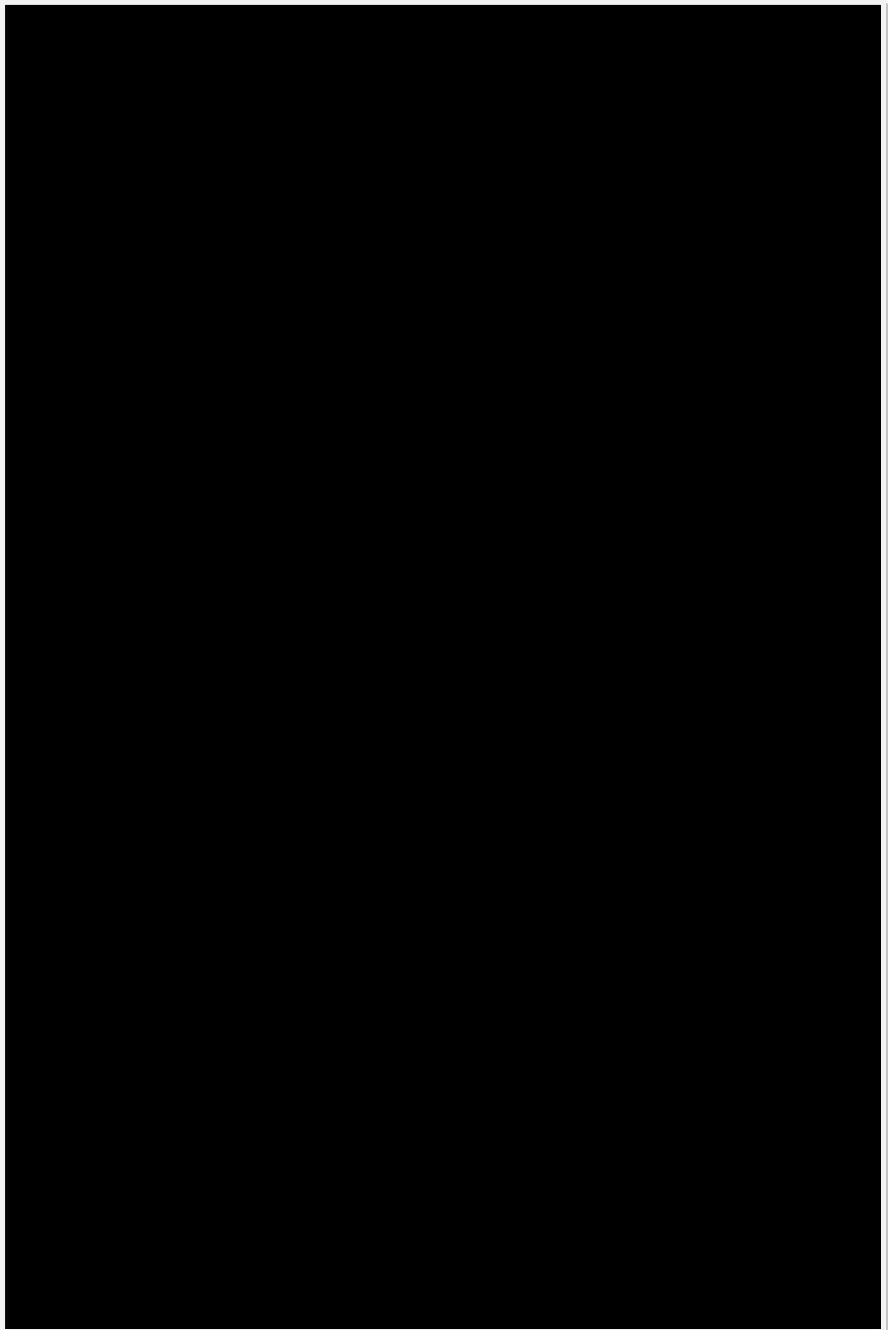


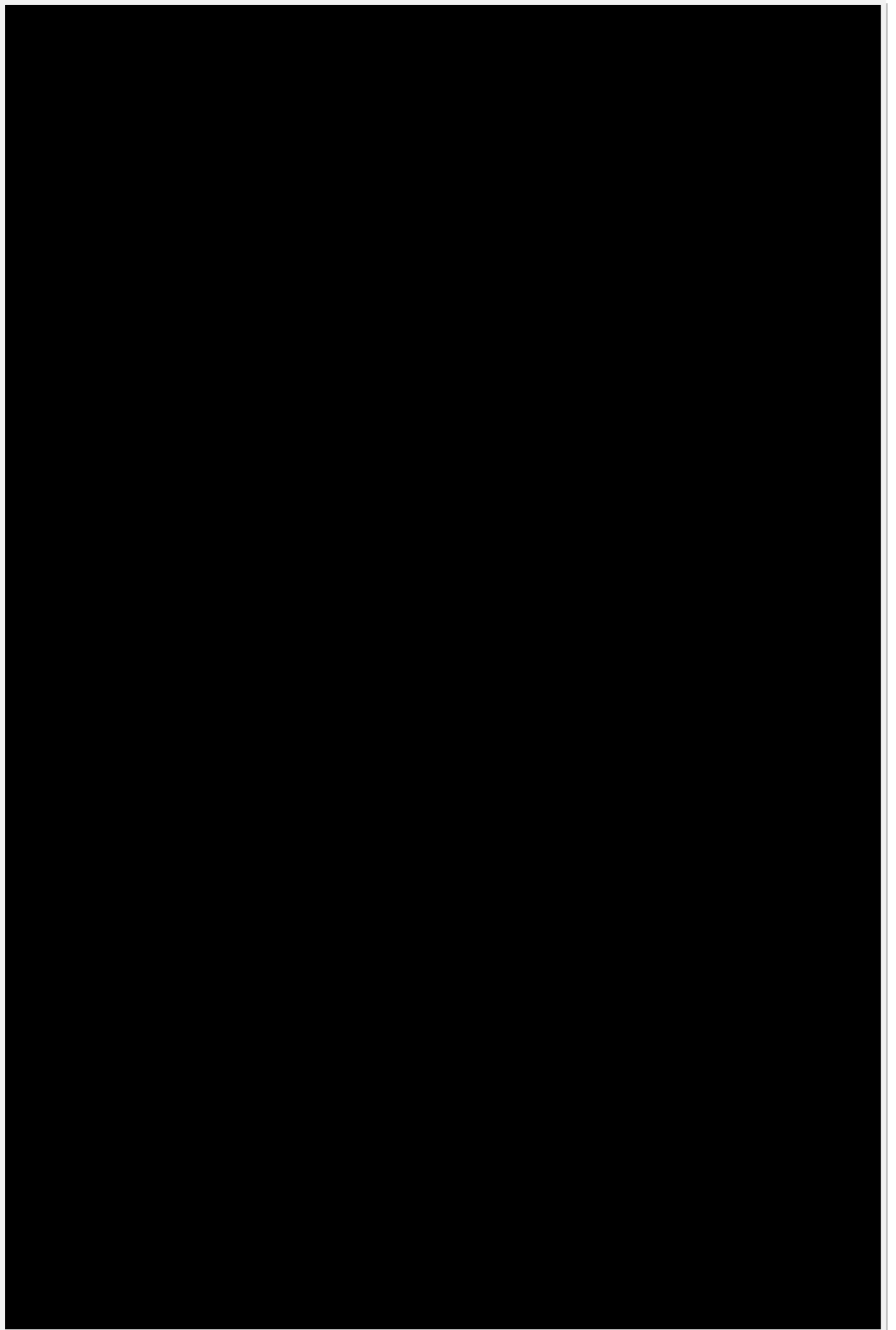


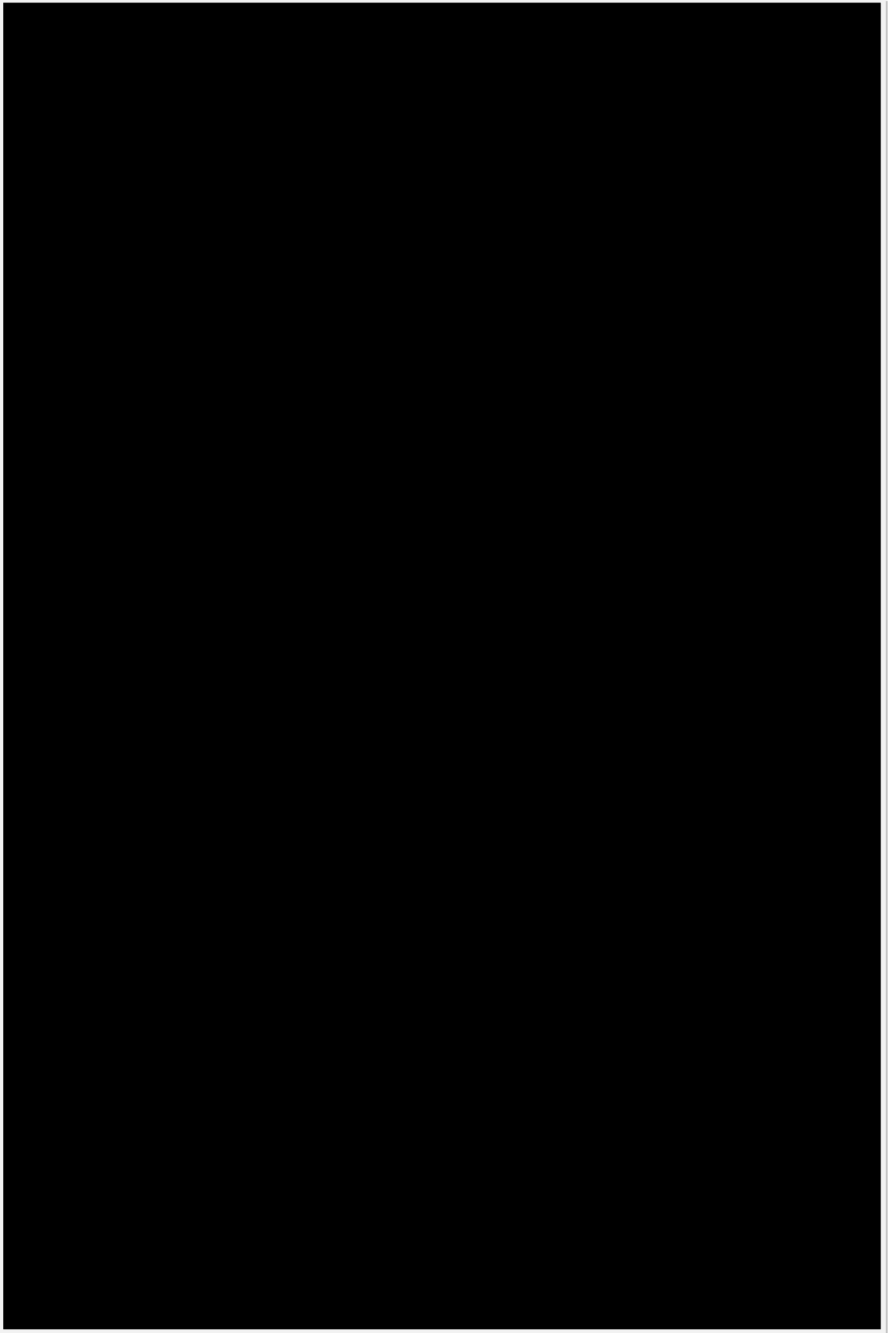


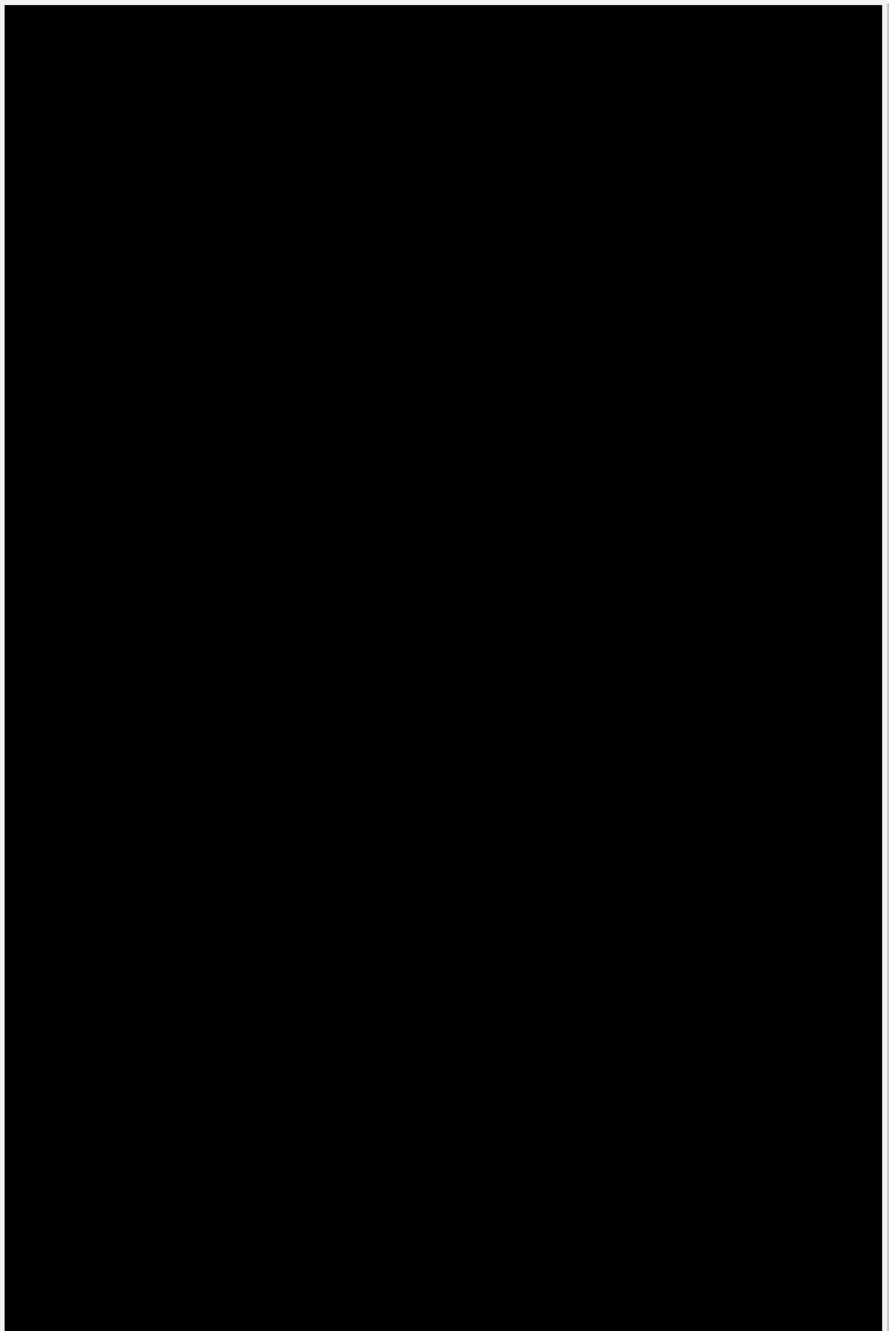


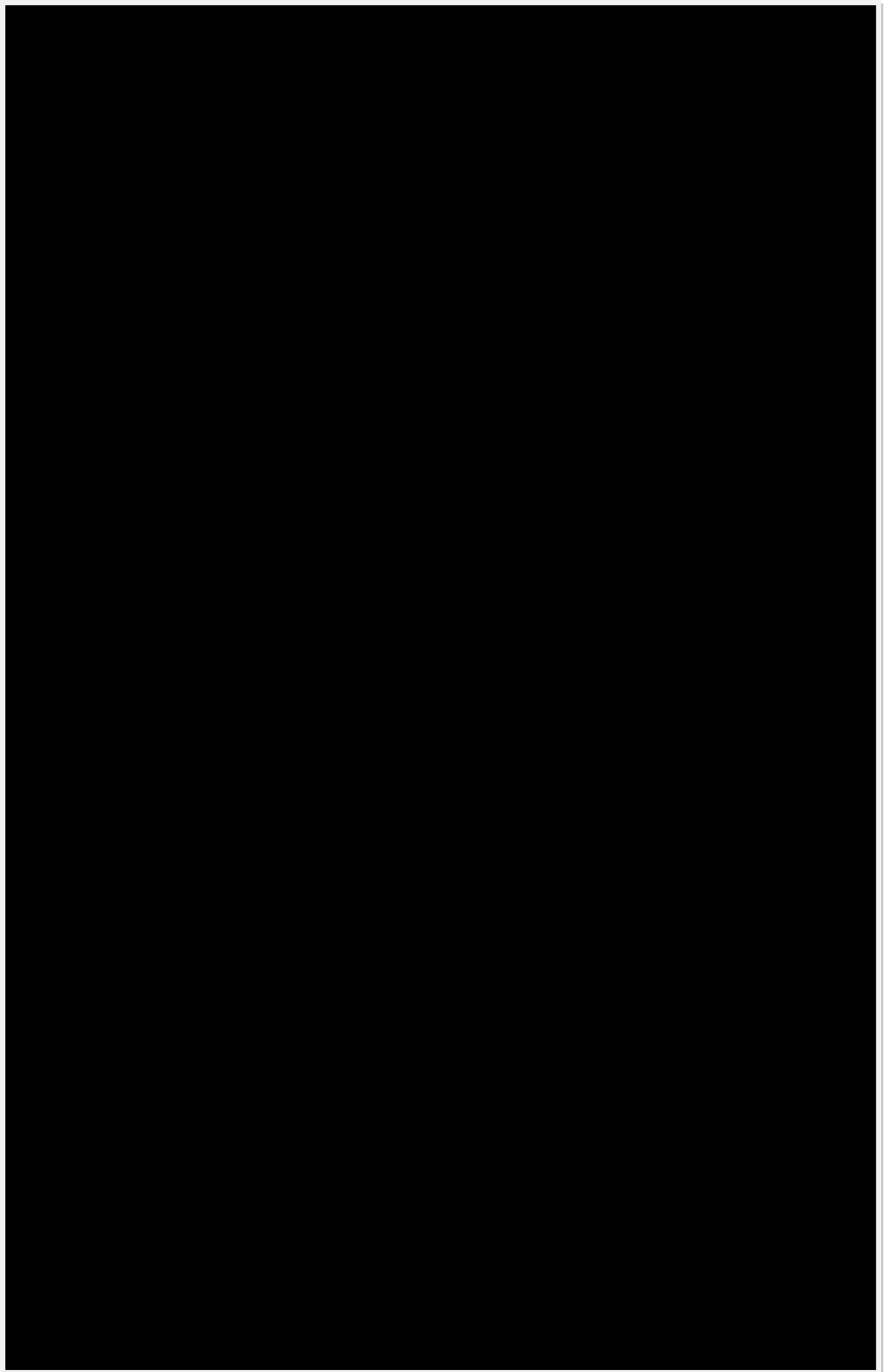


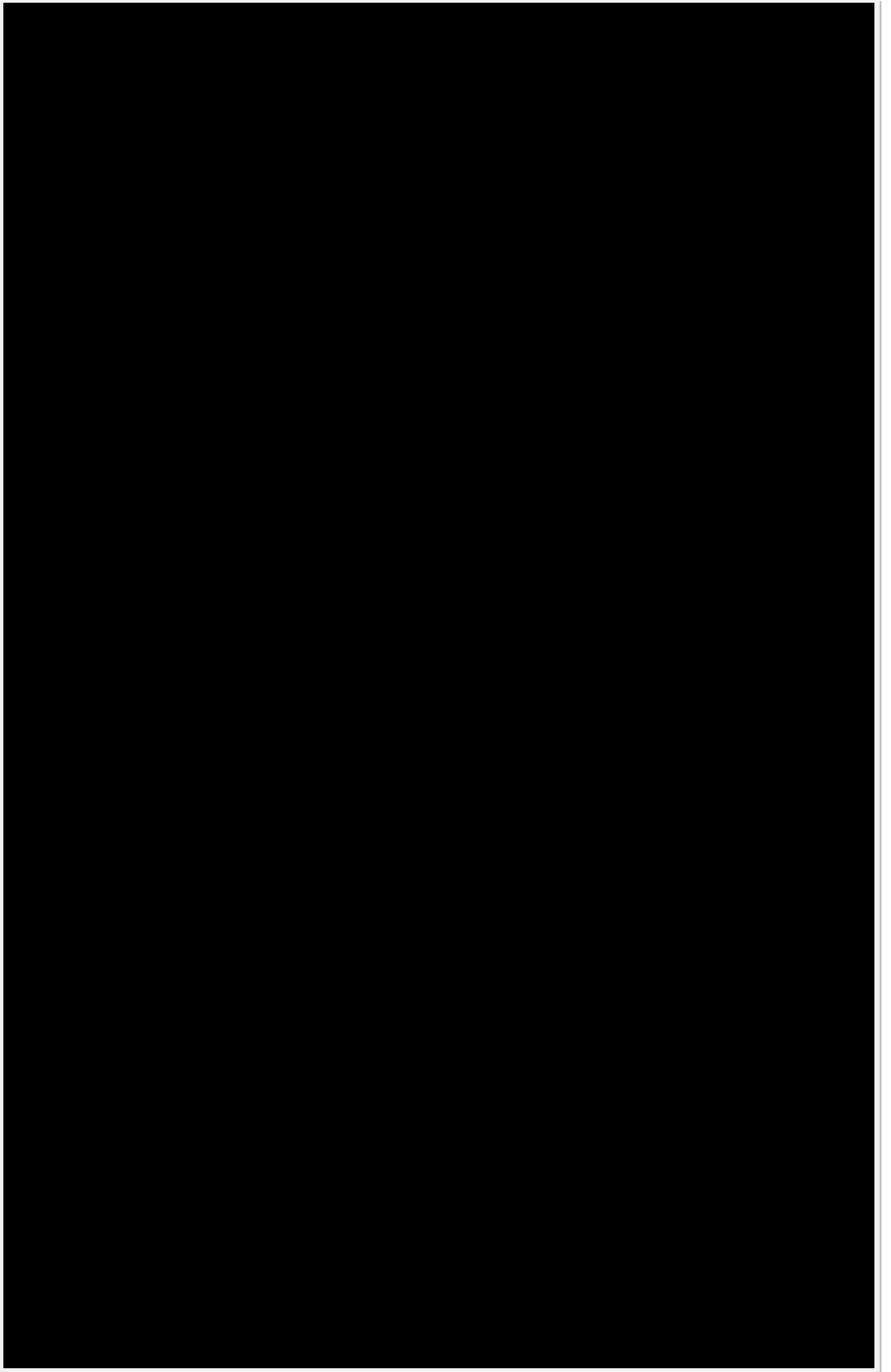


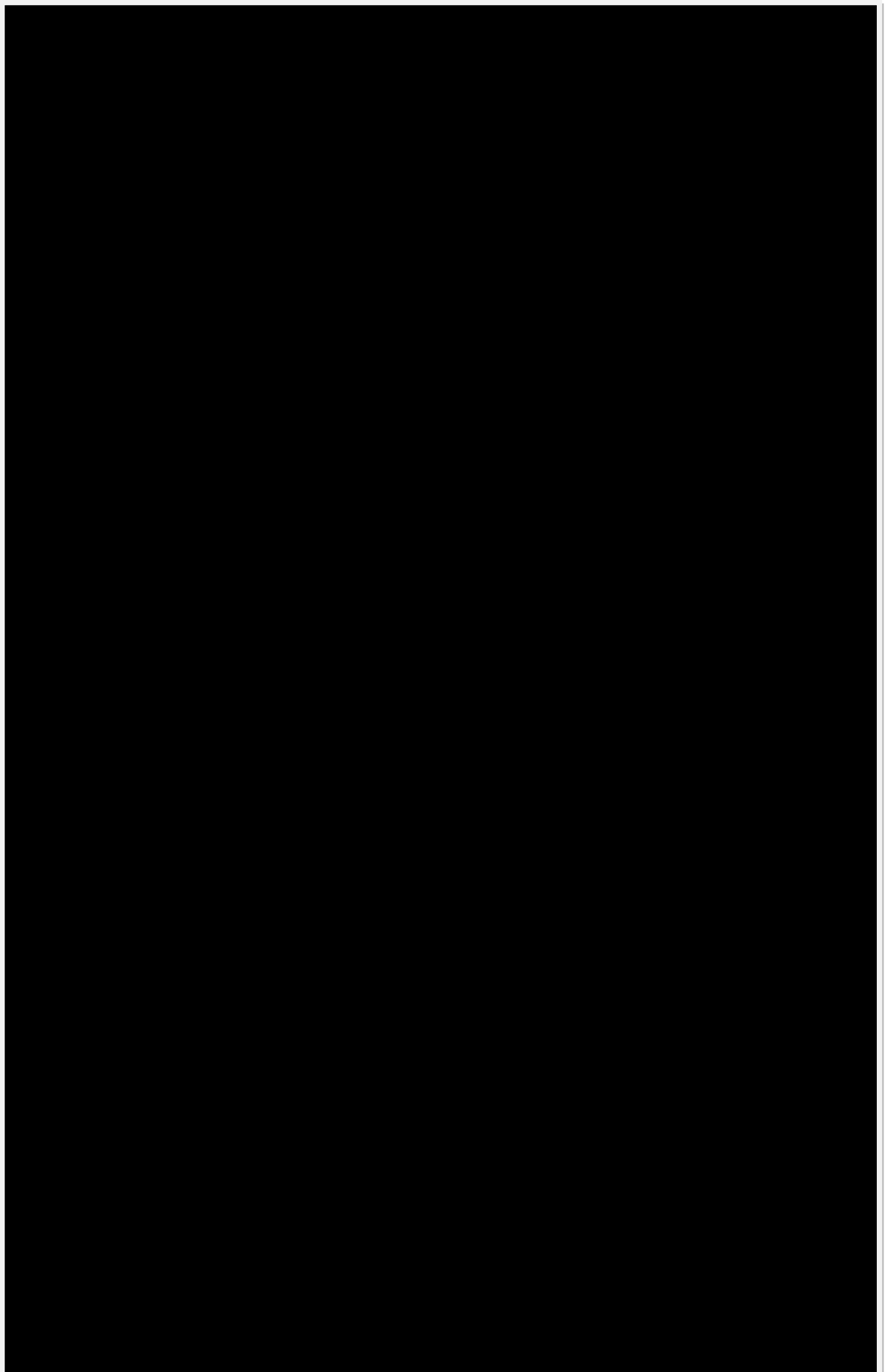


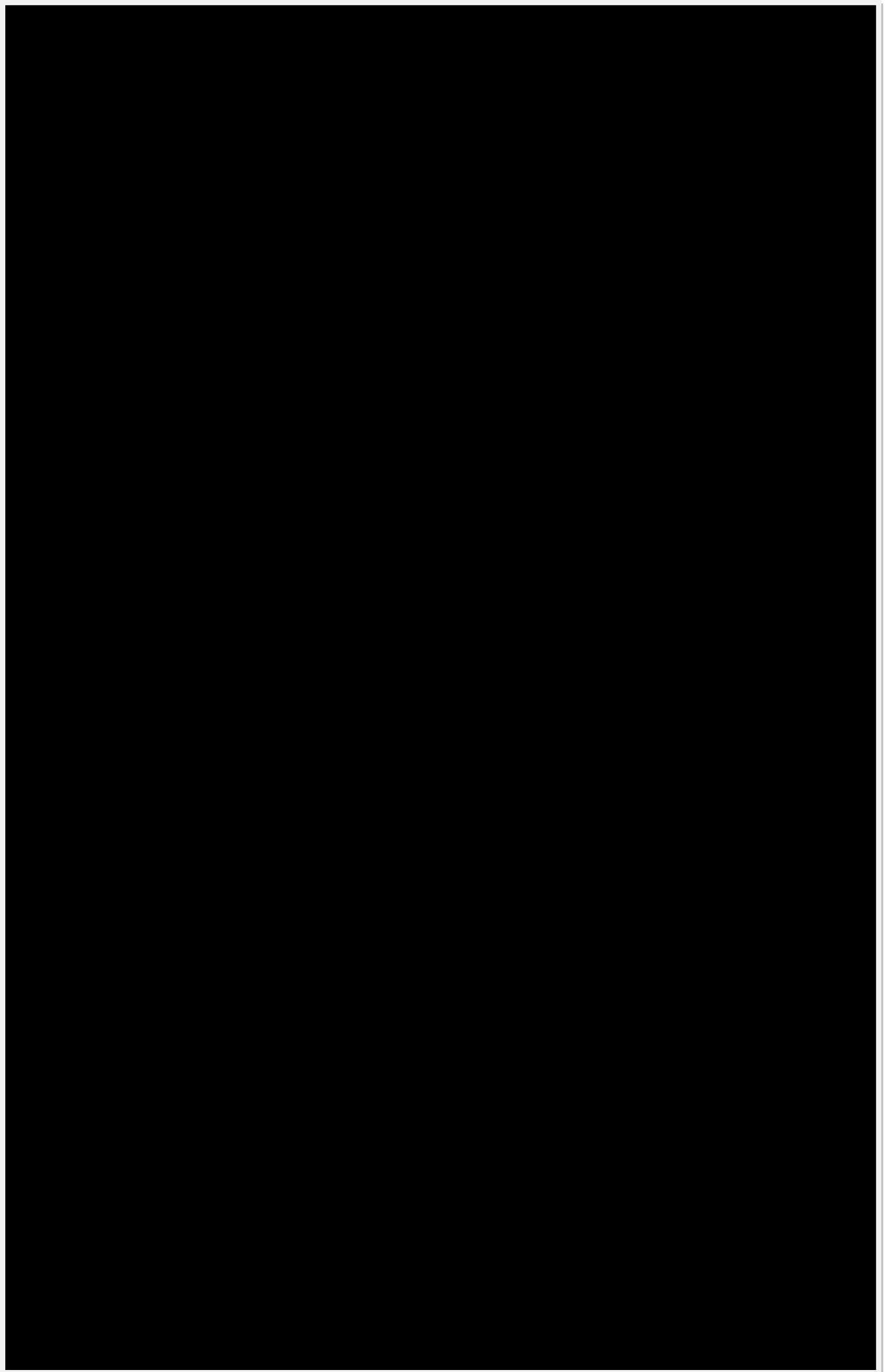


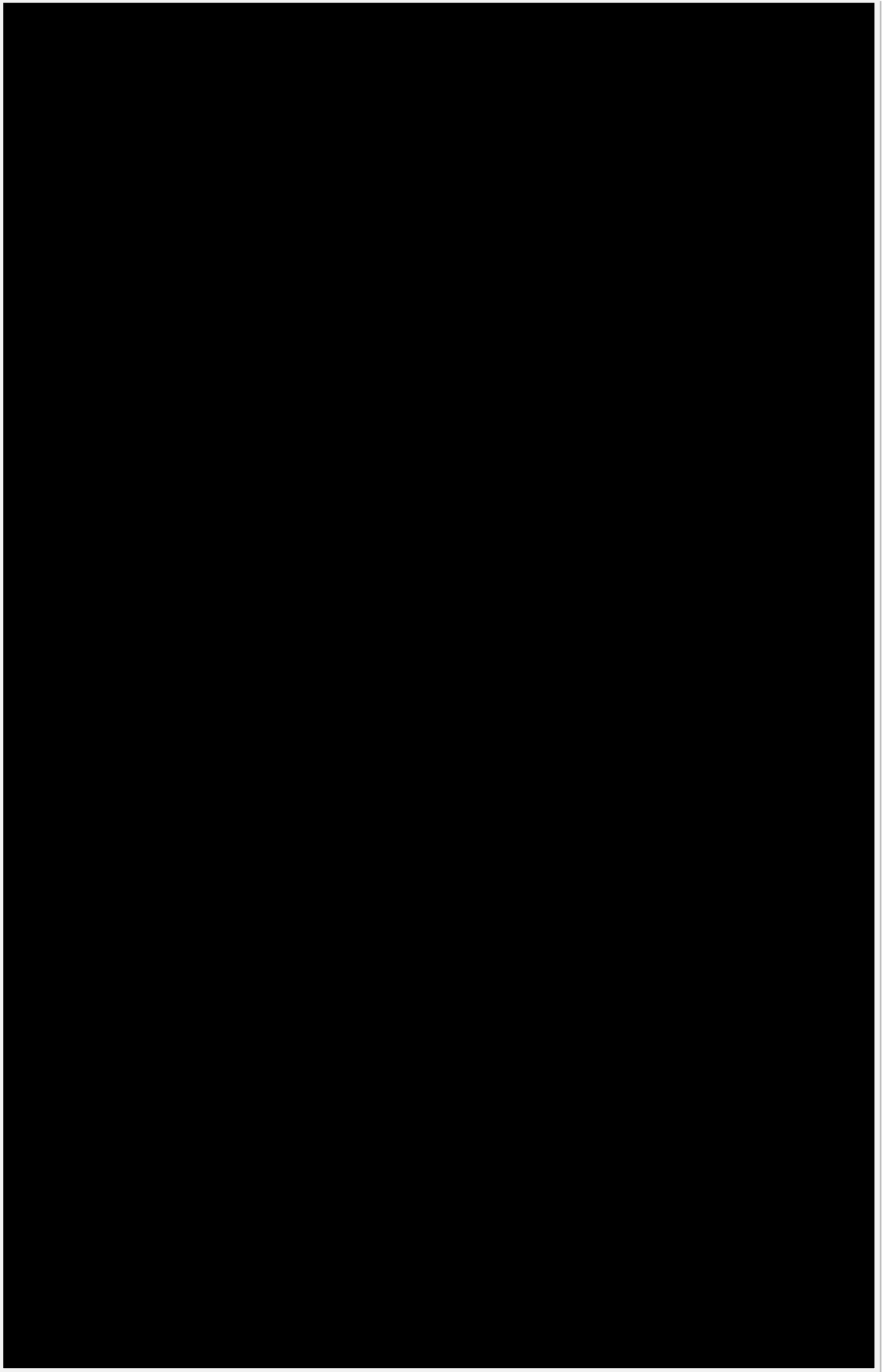


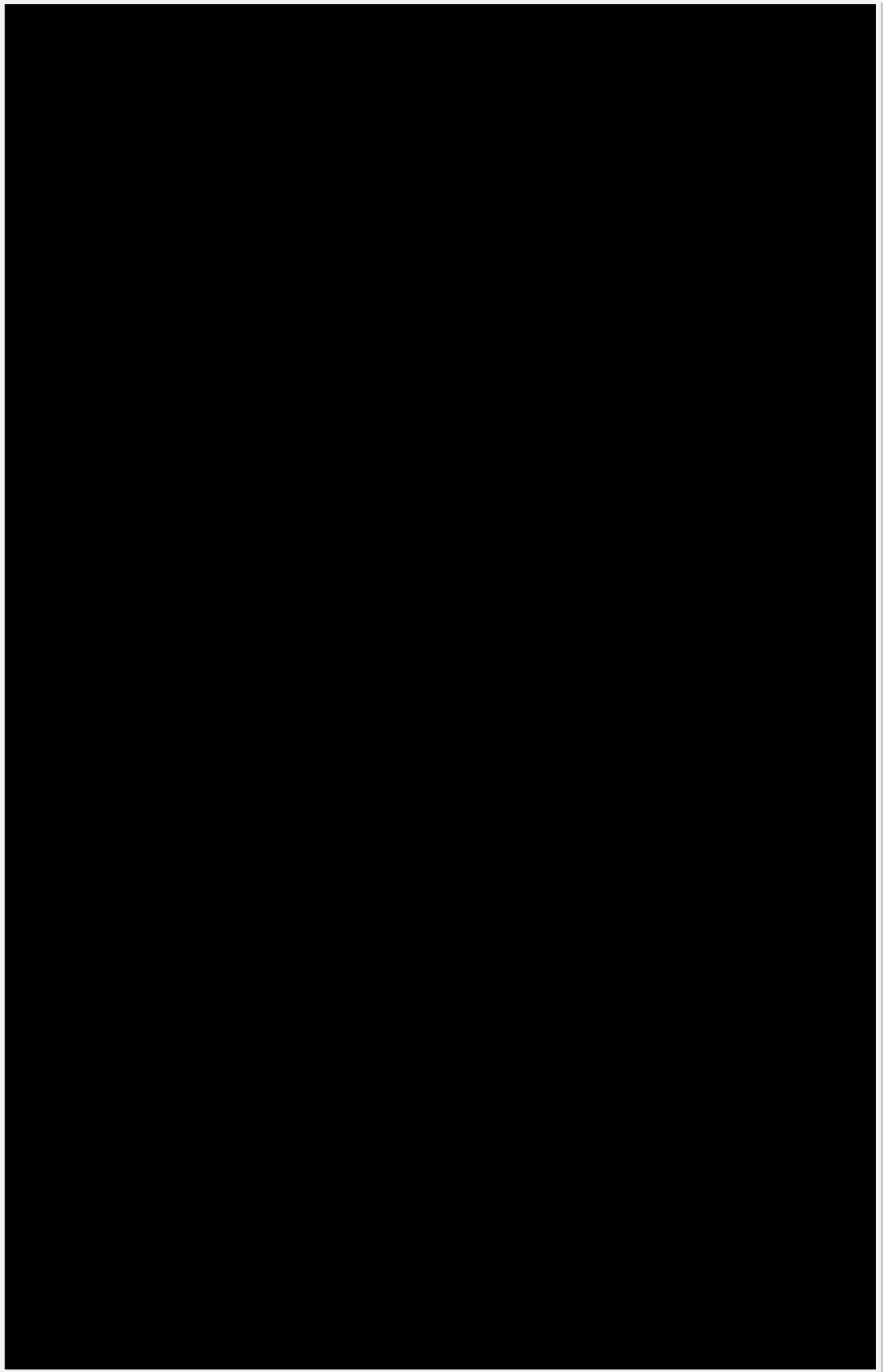


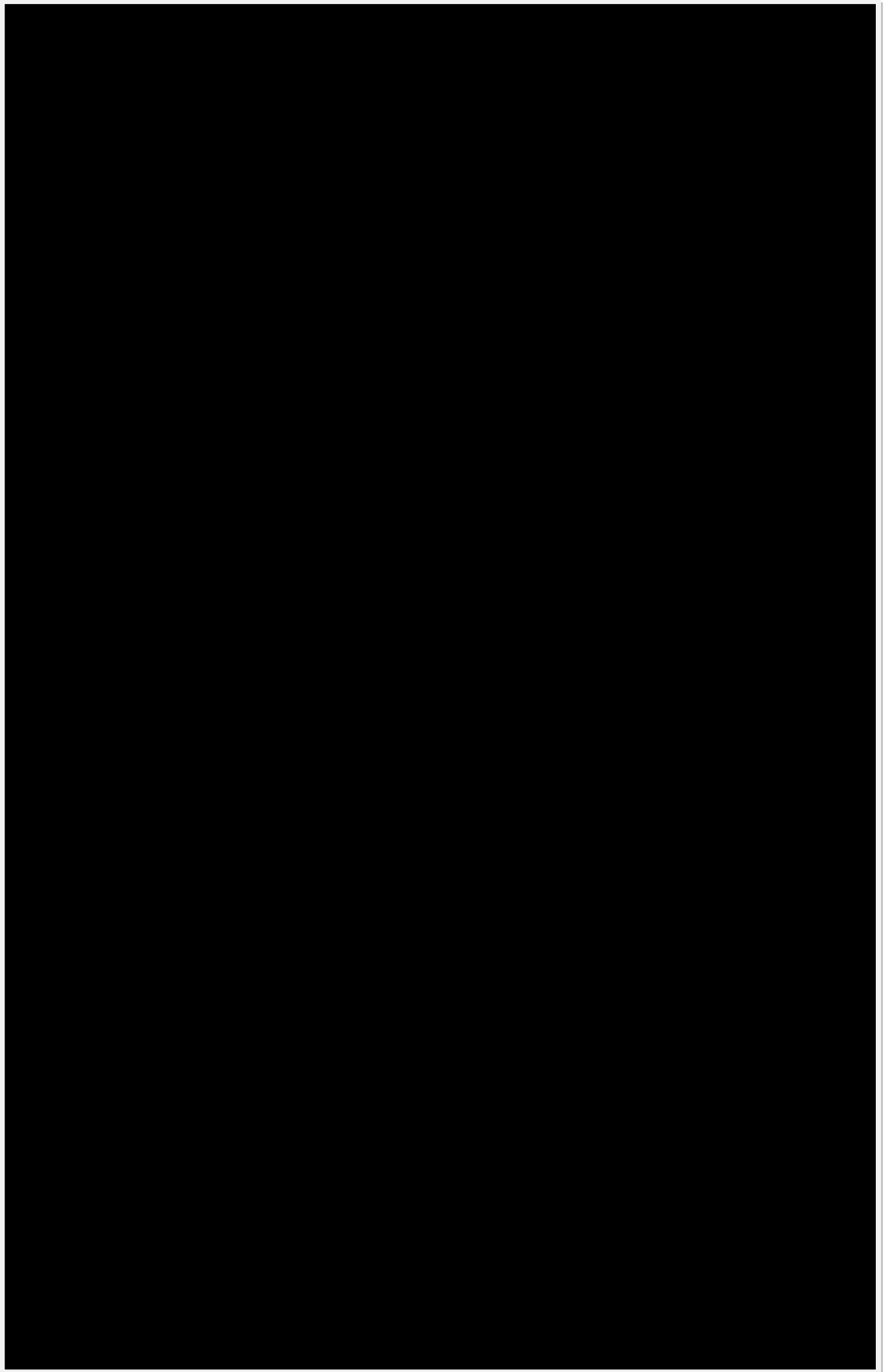


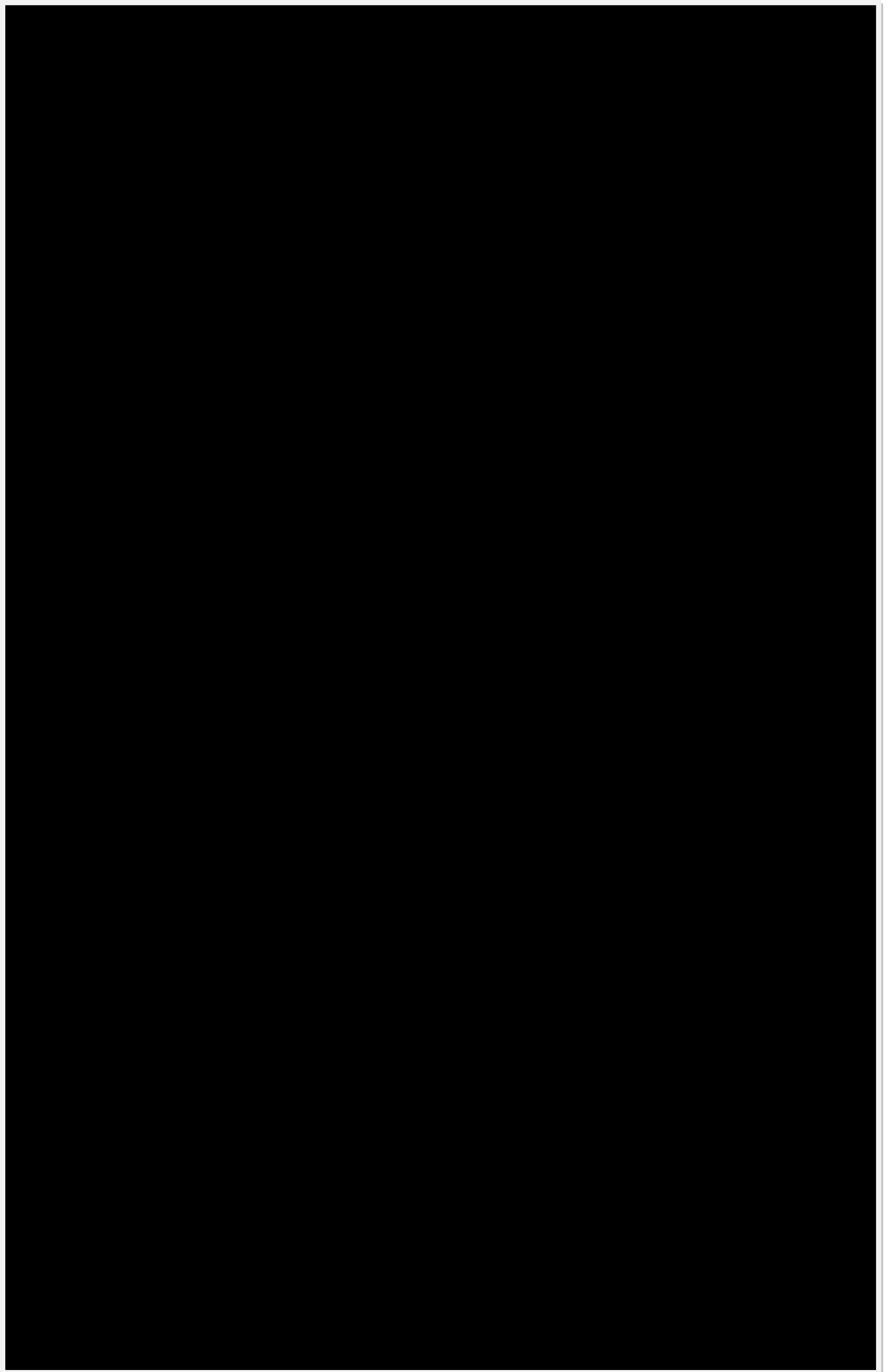


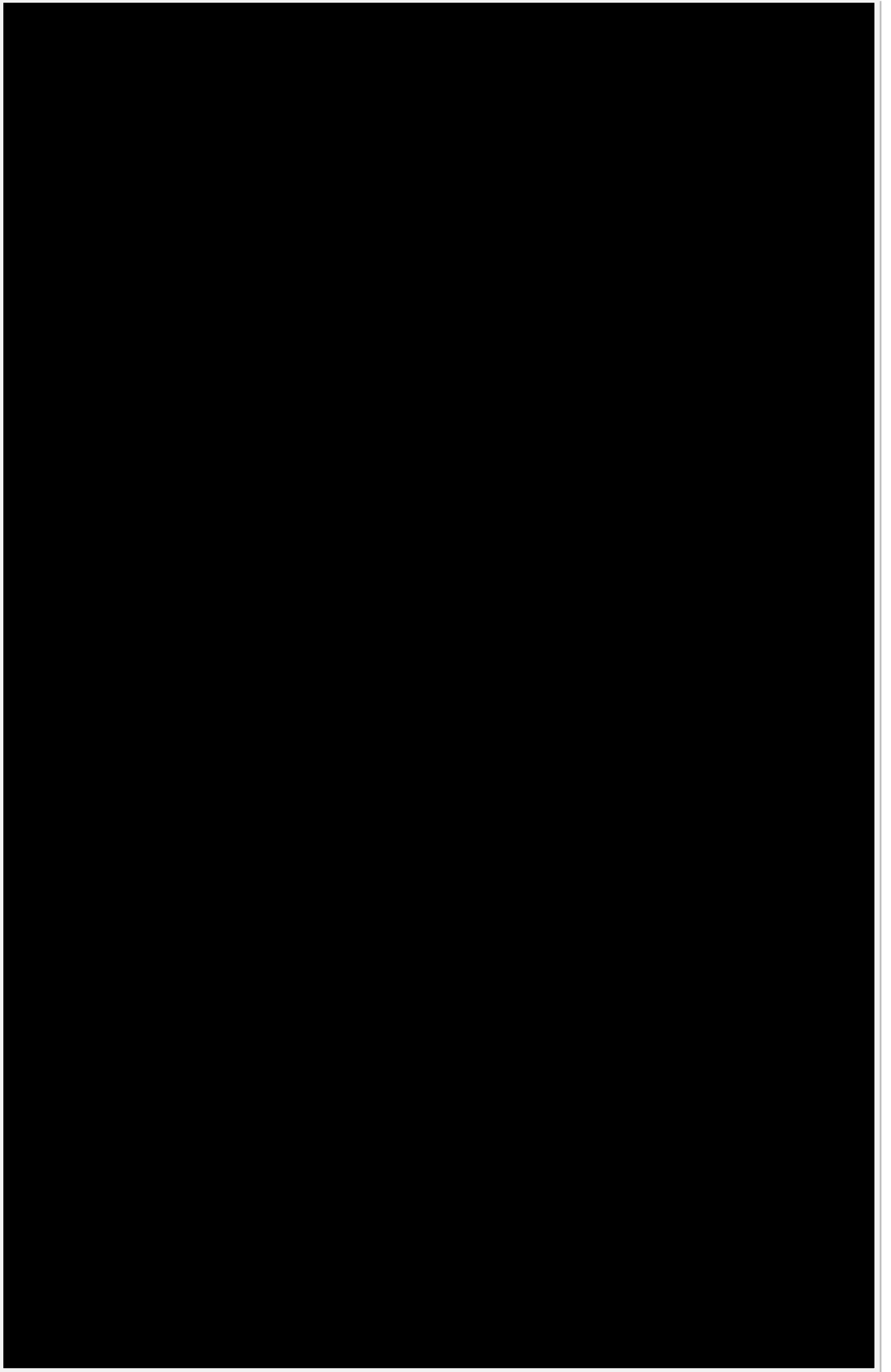


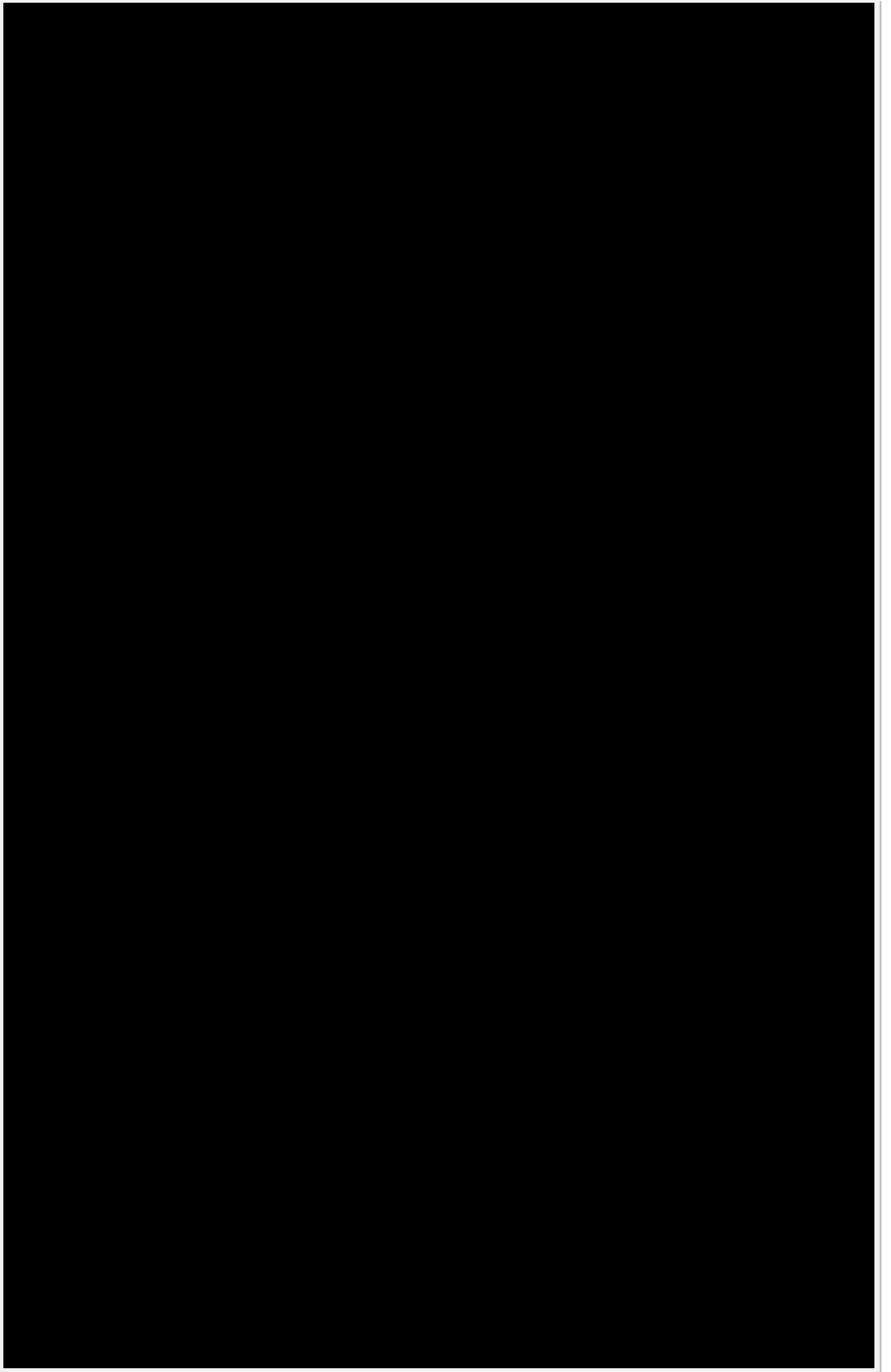


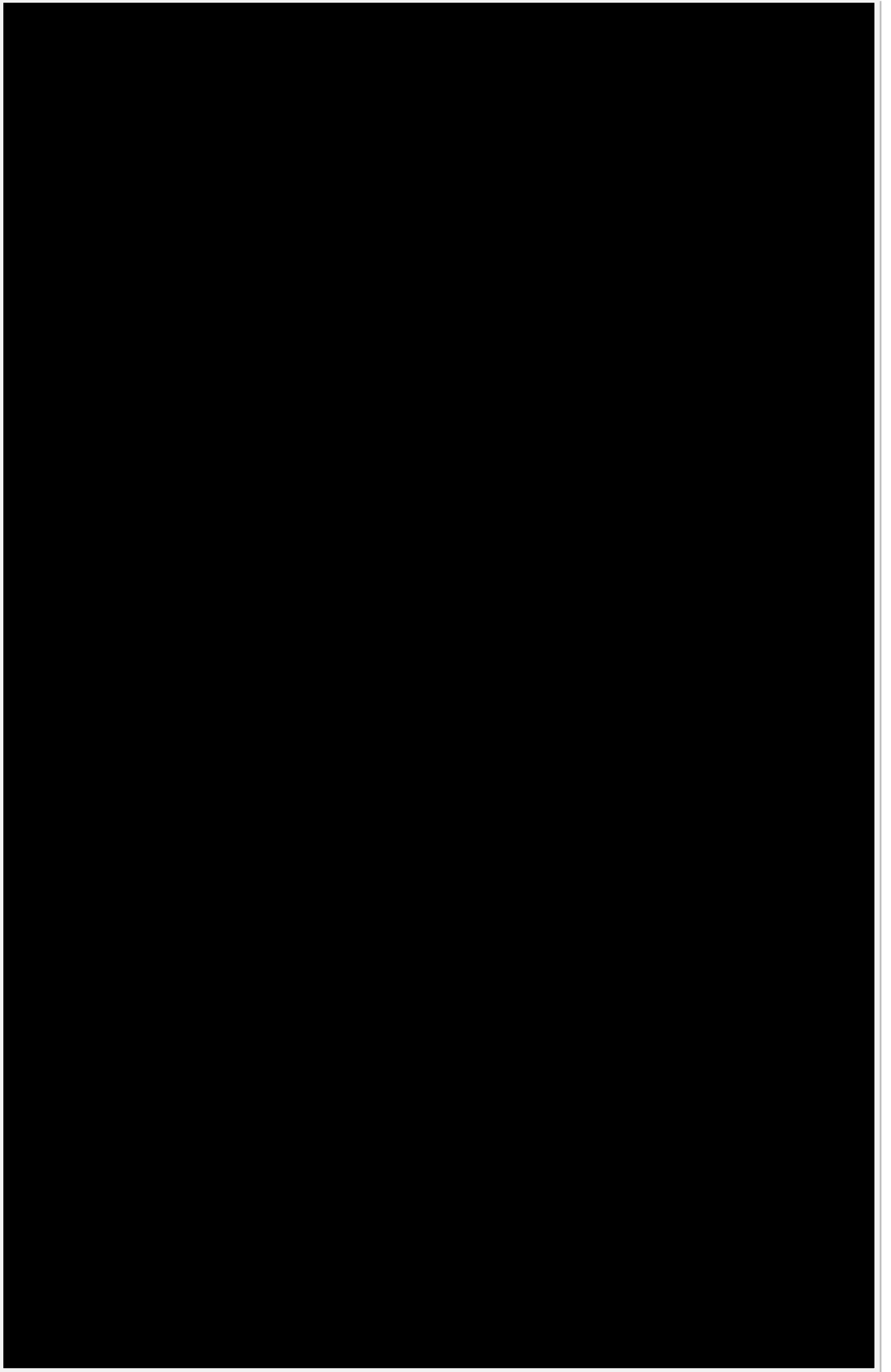












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QUESTION 11

Specifications (need to make
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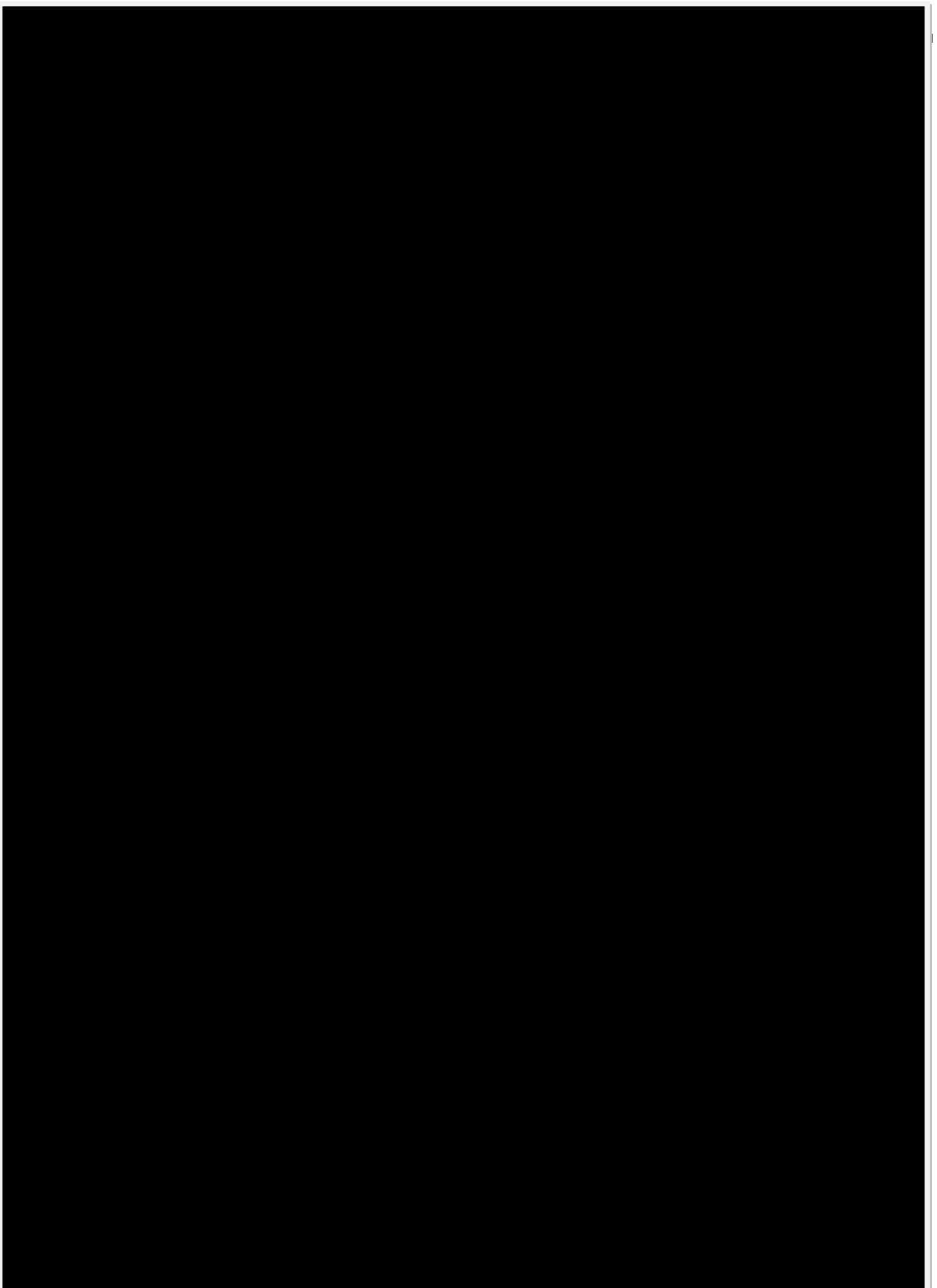
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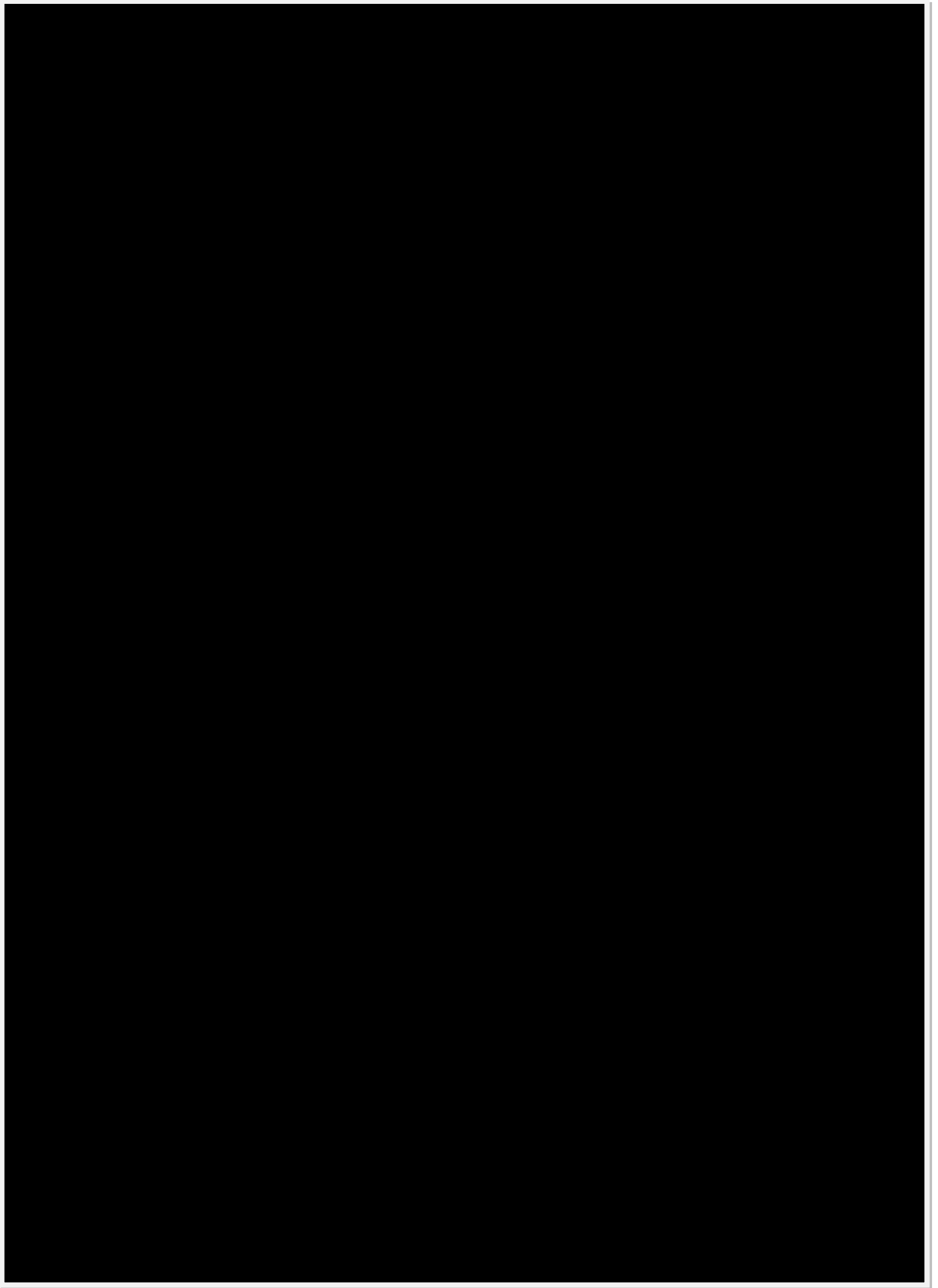
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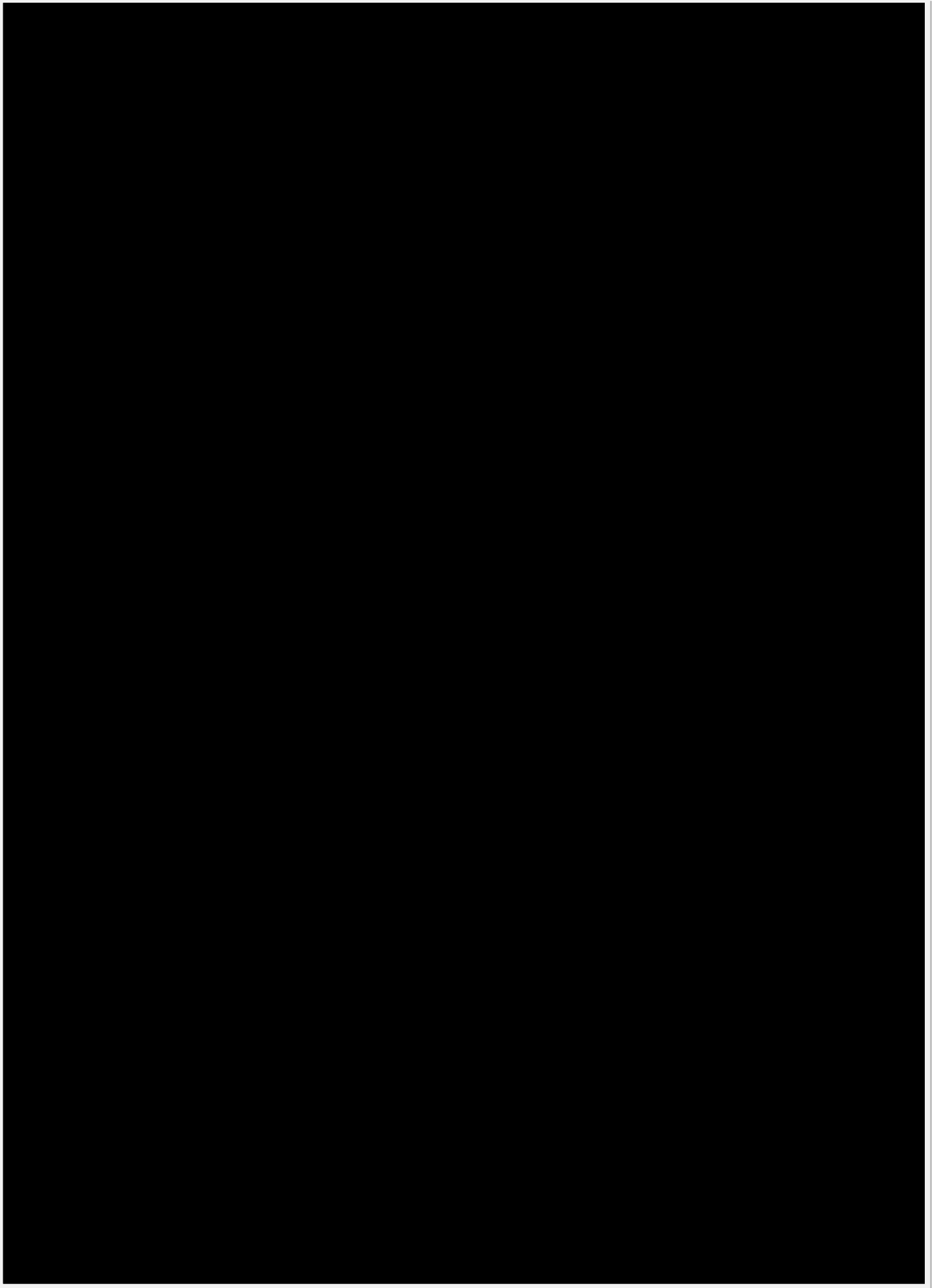
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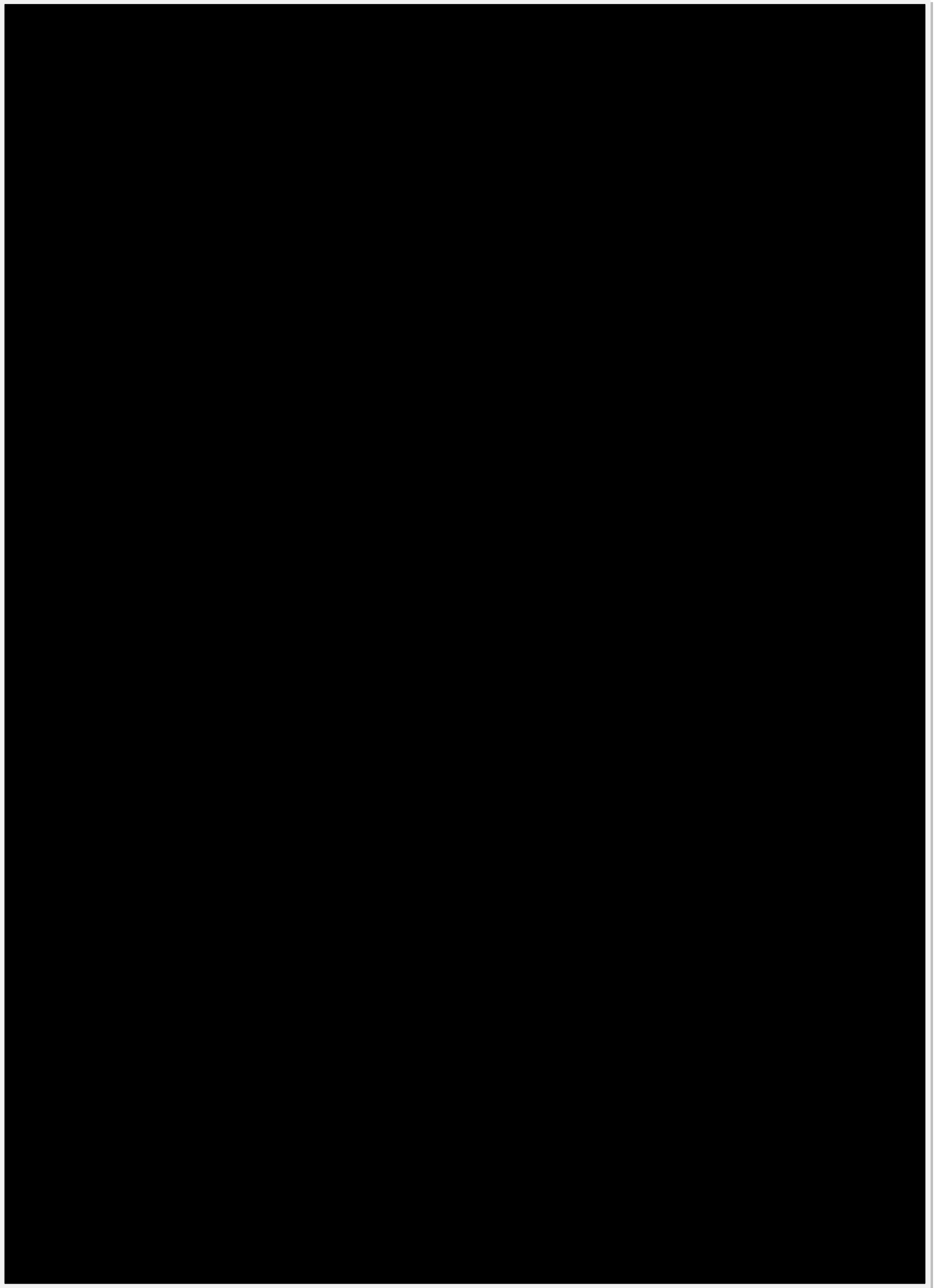
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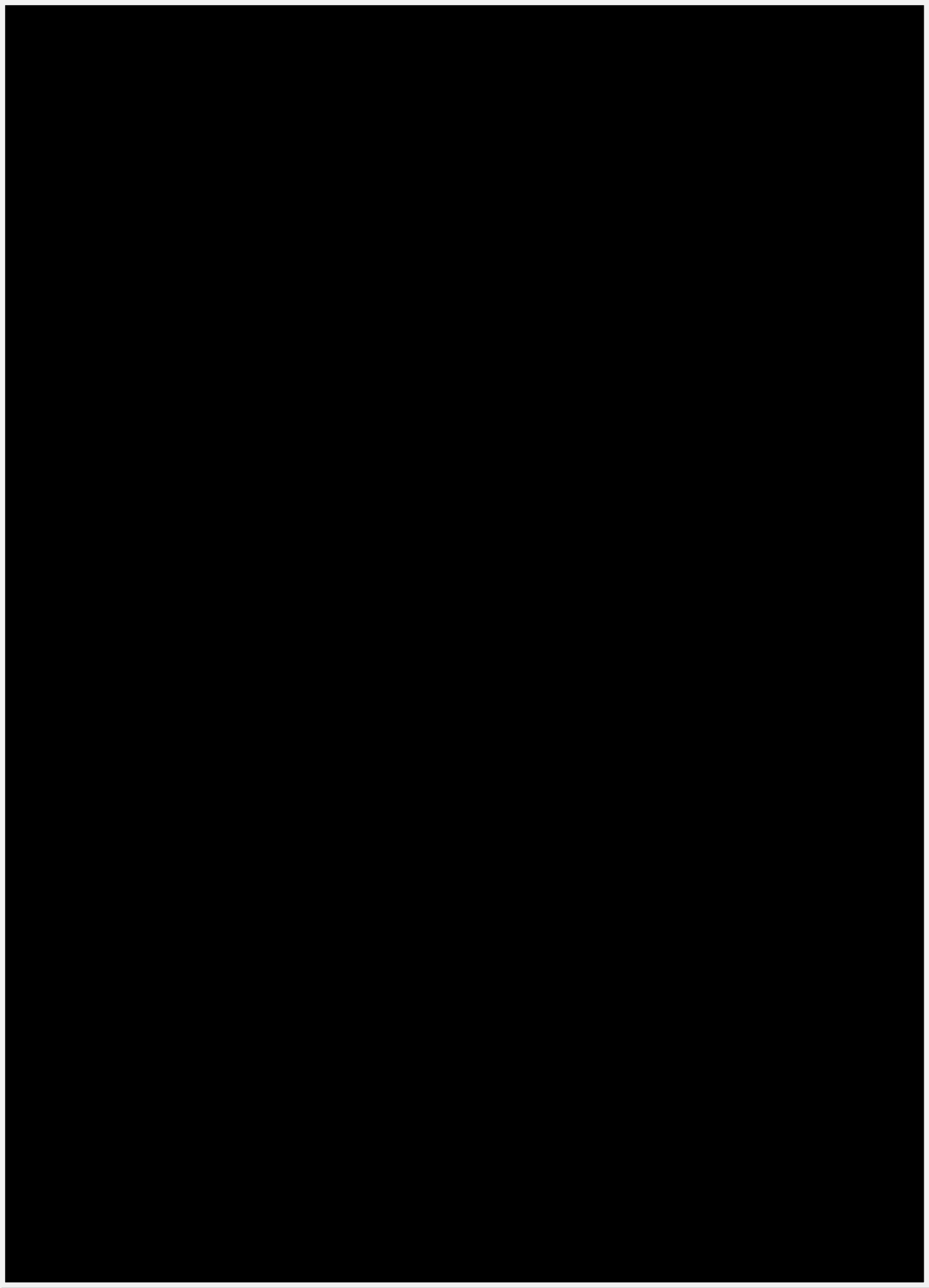
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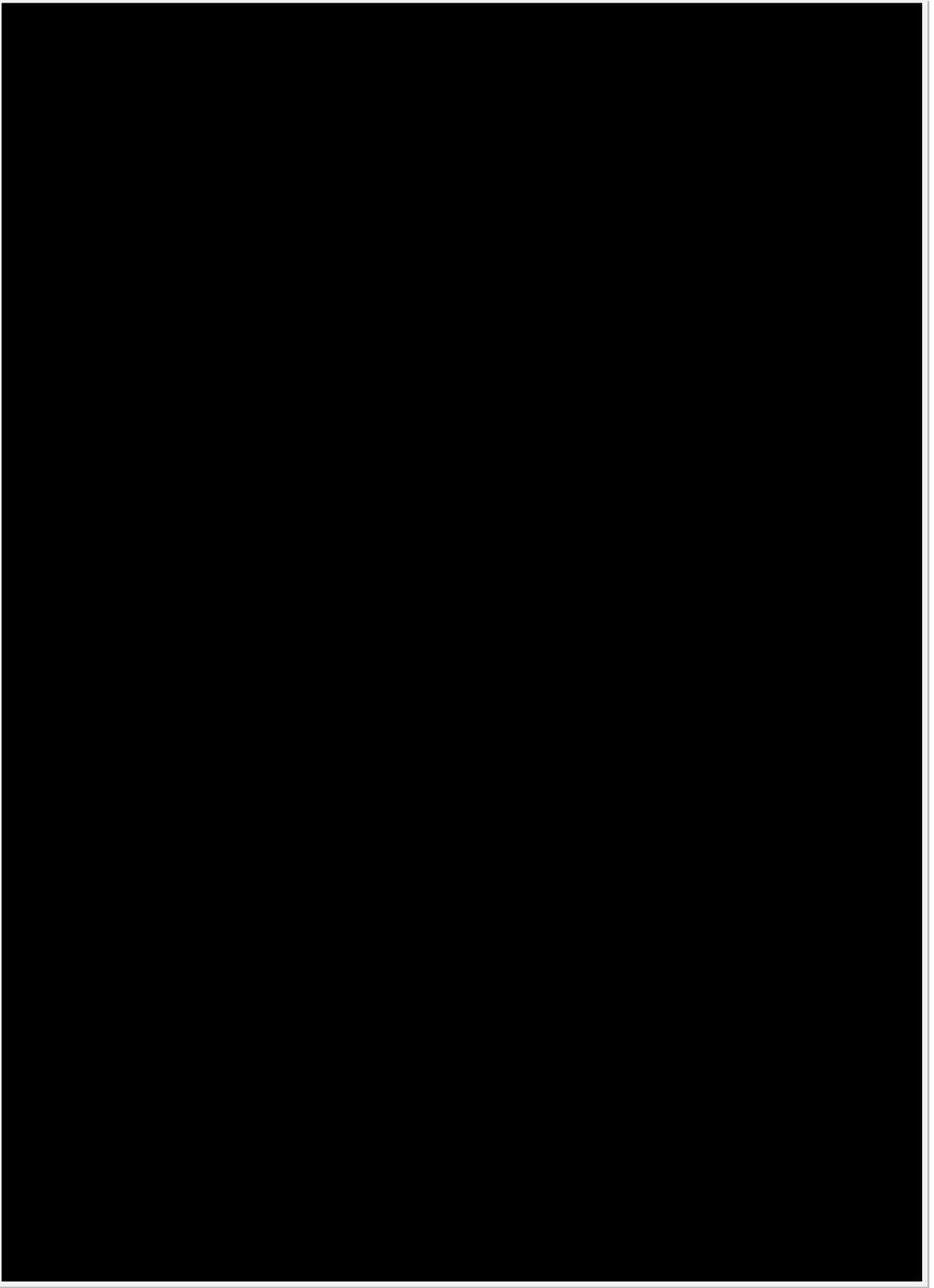


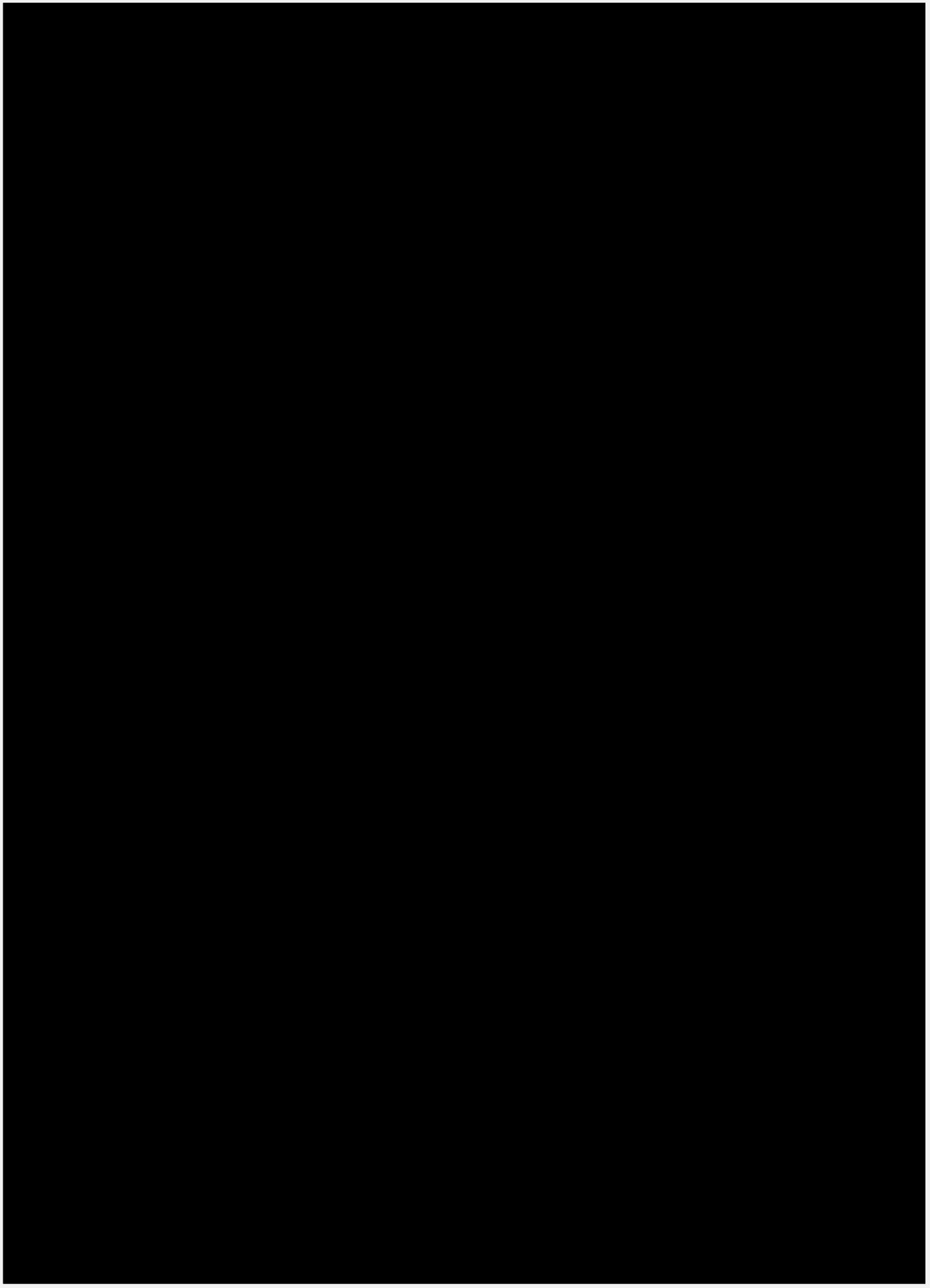


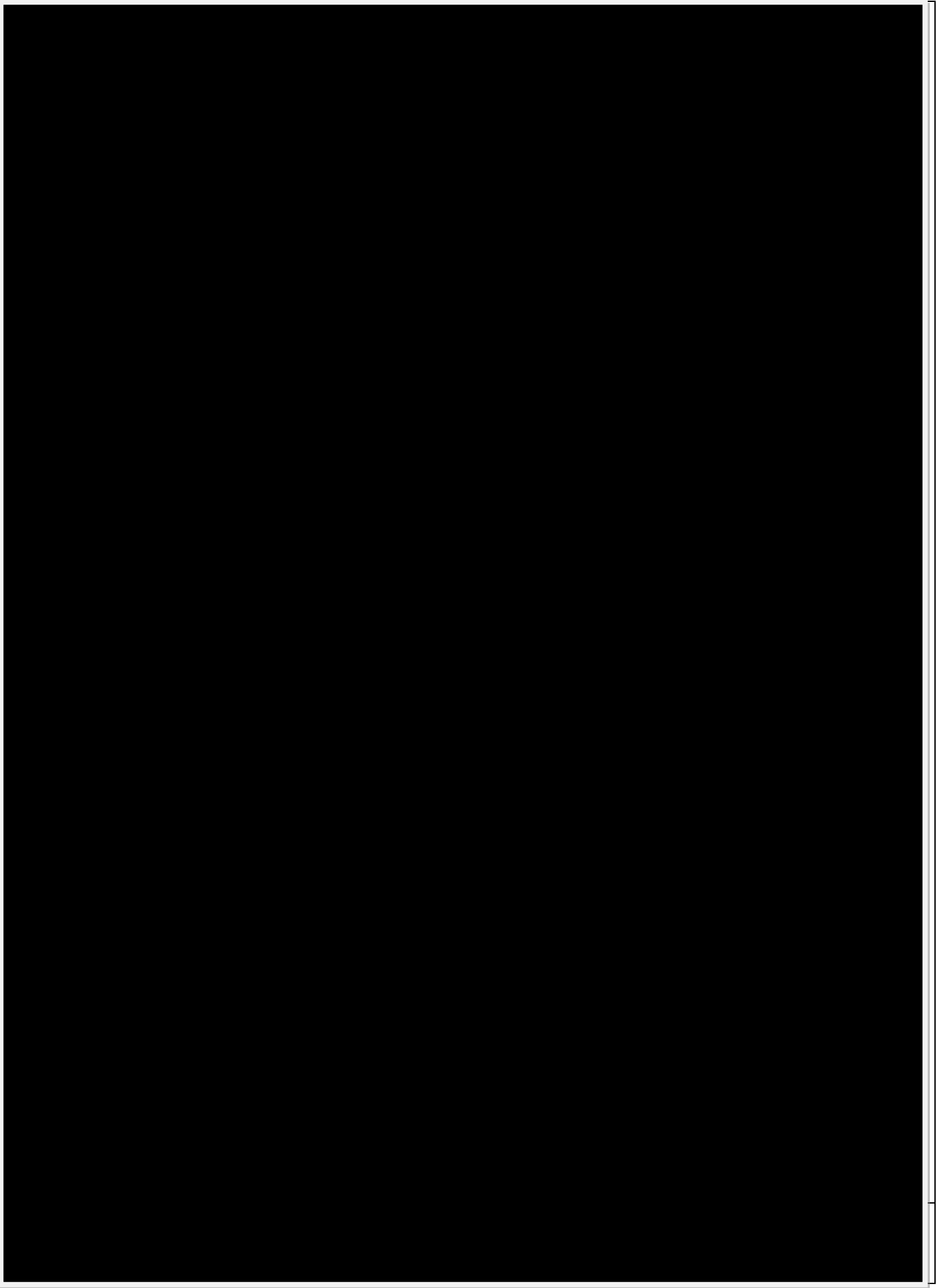


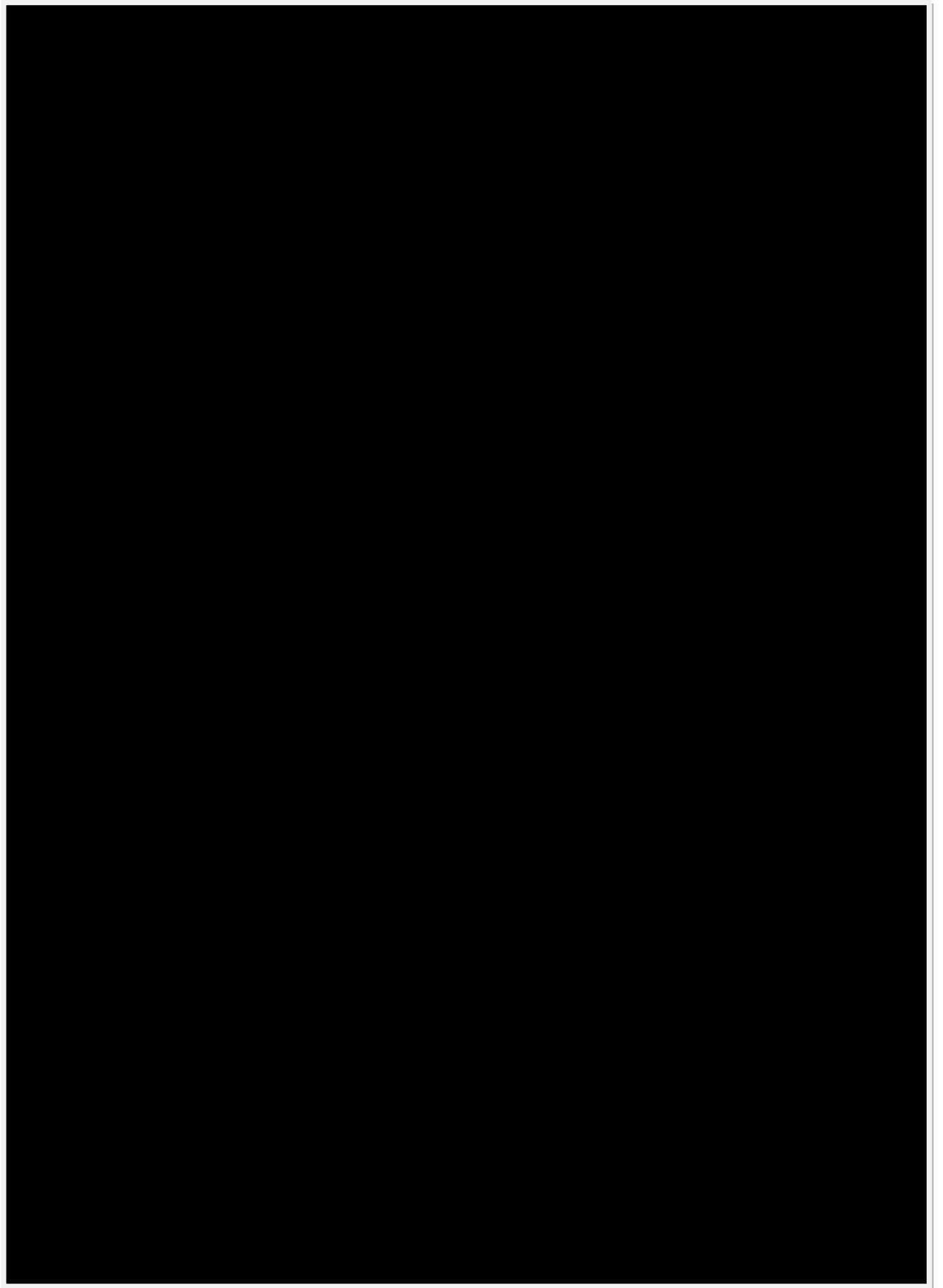


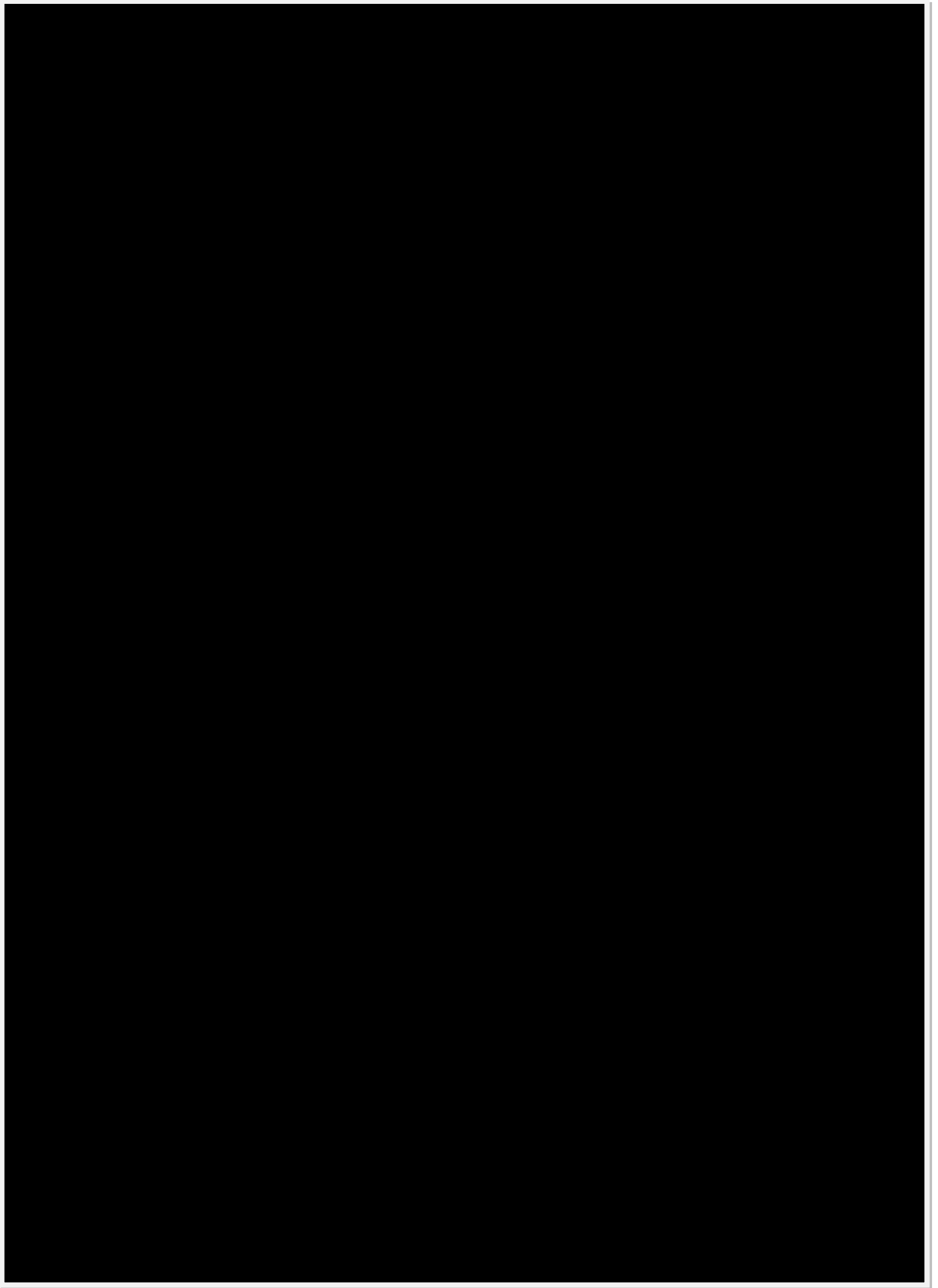


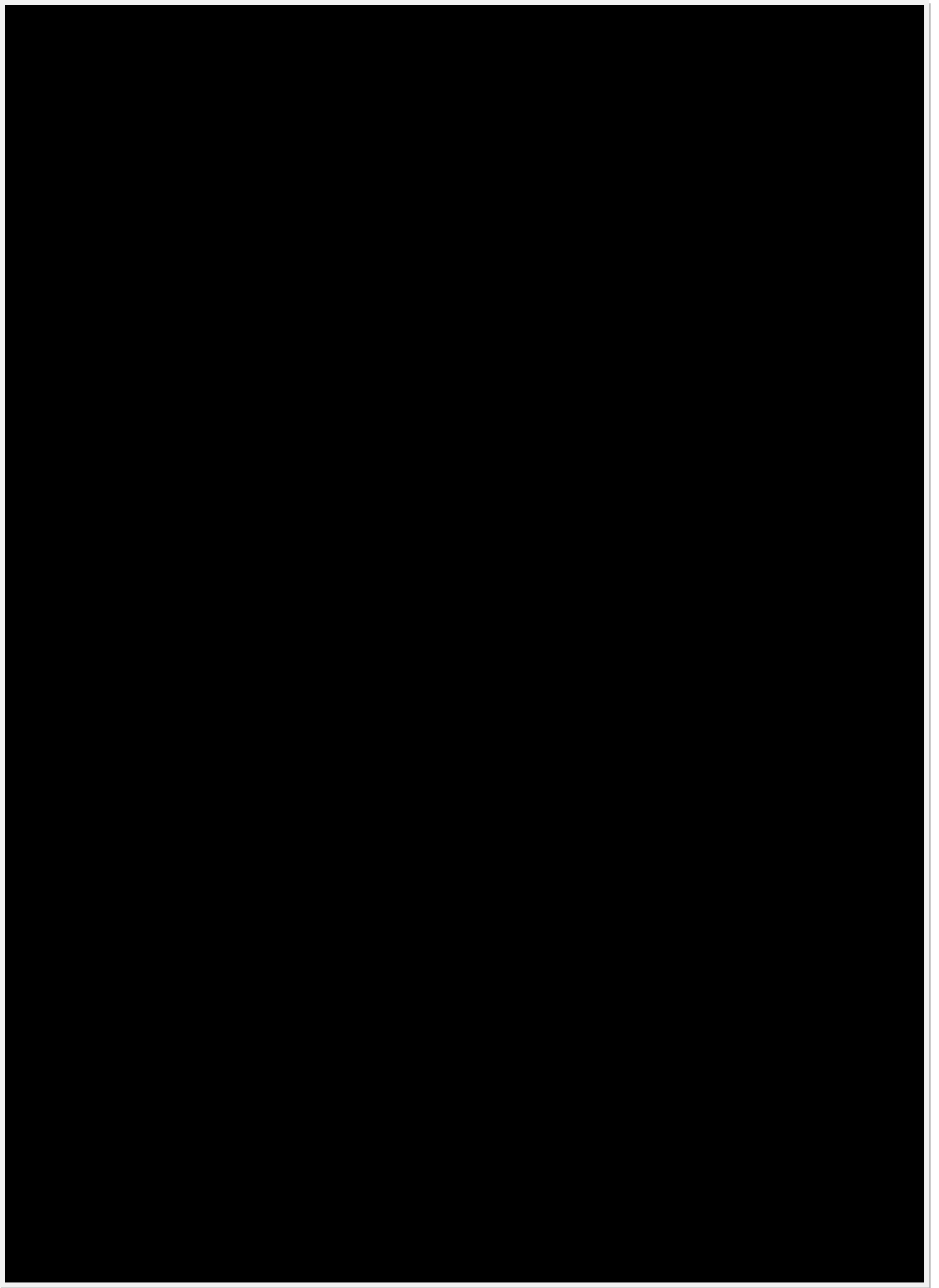


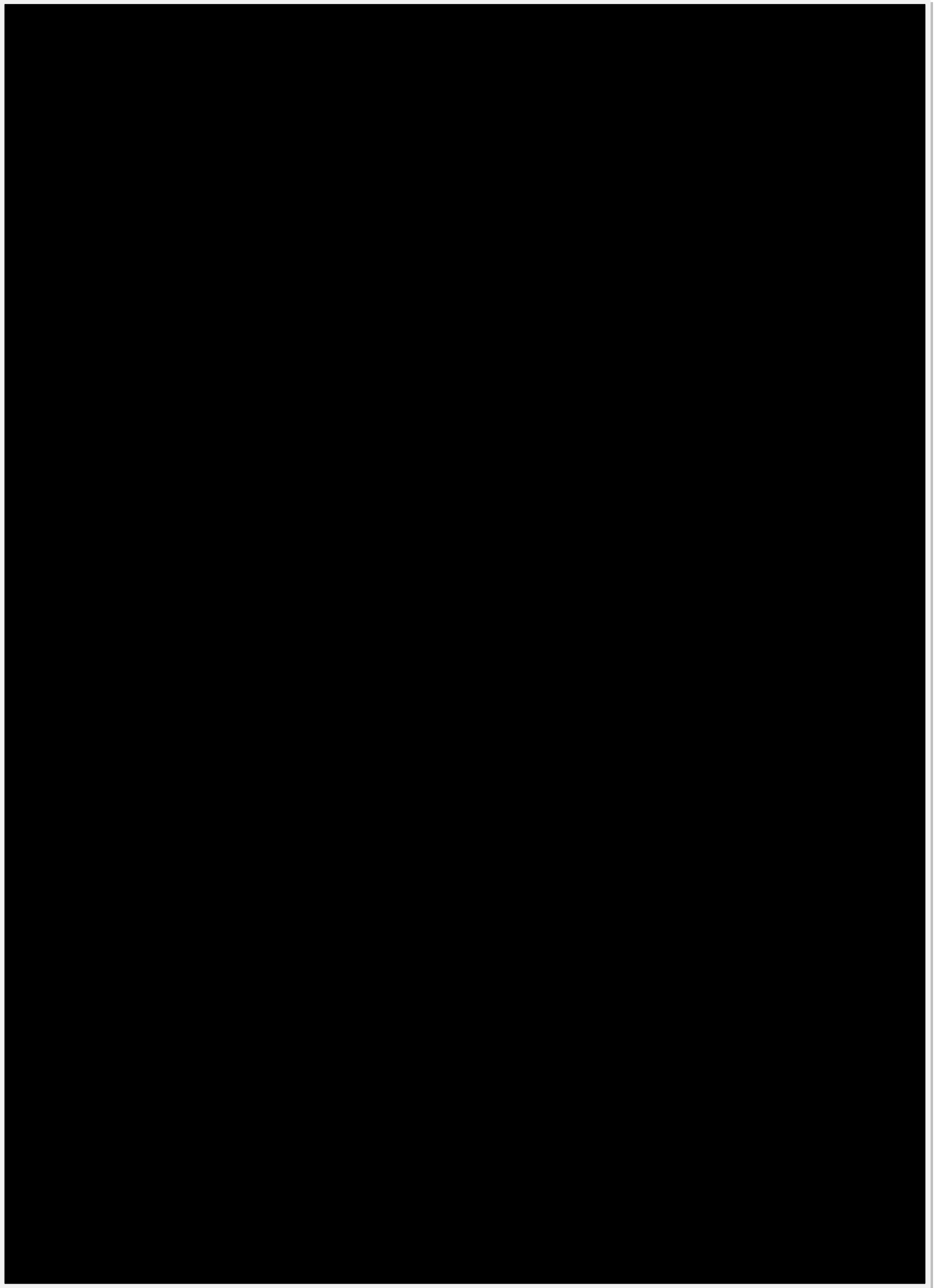


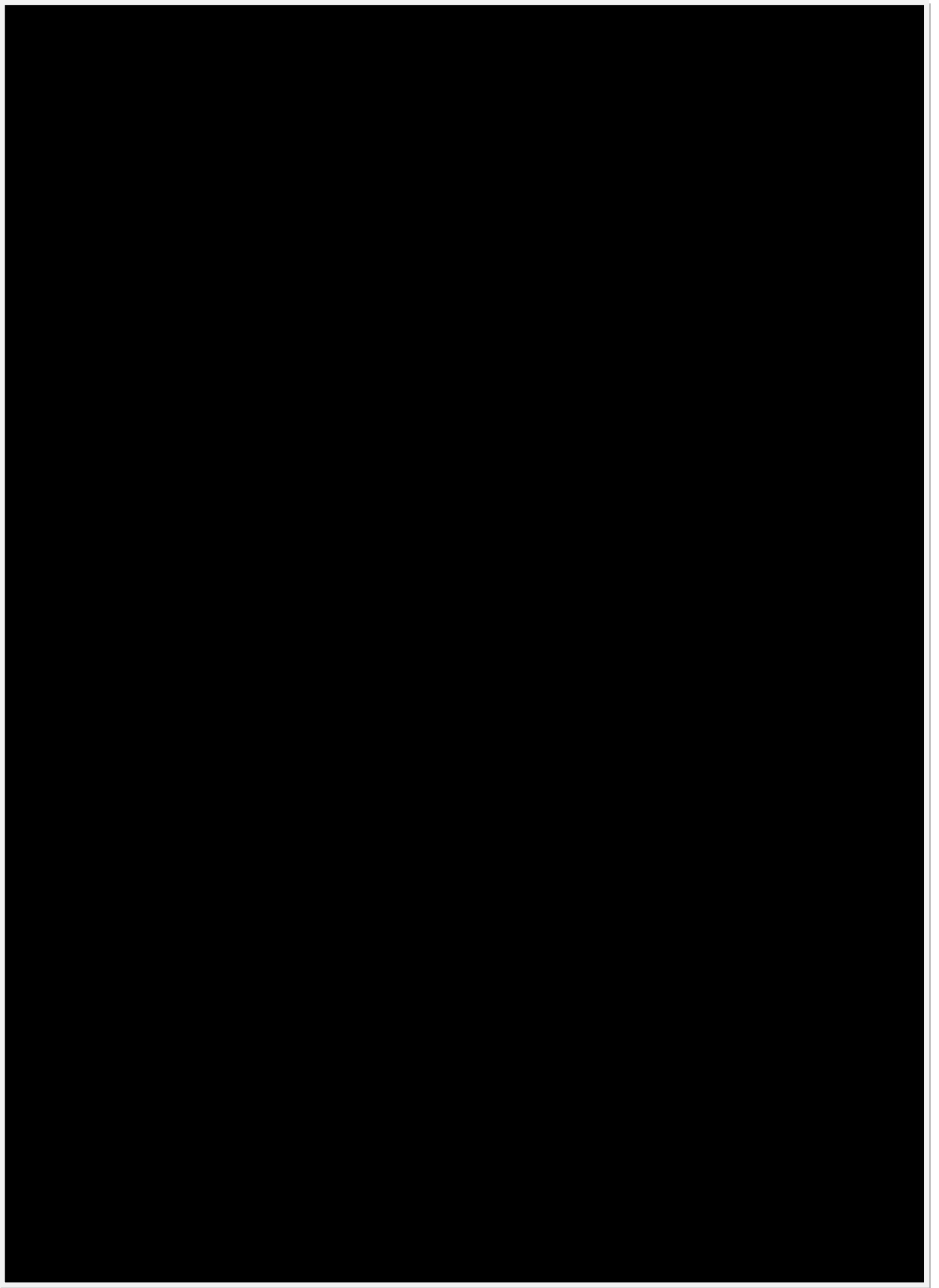


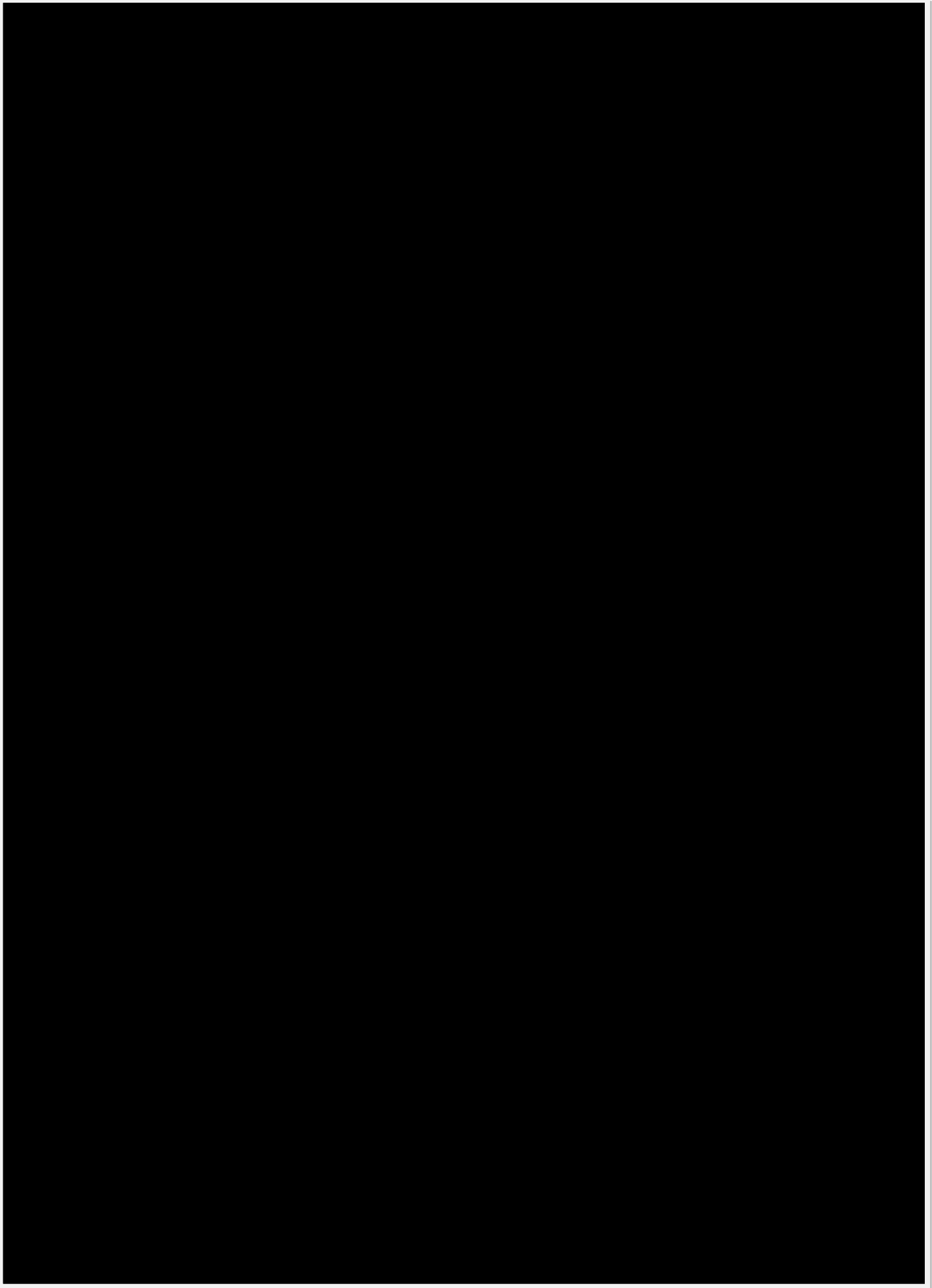


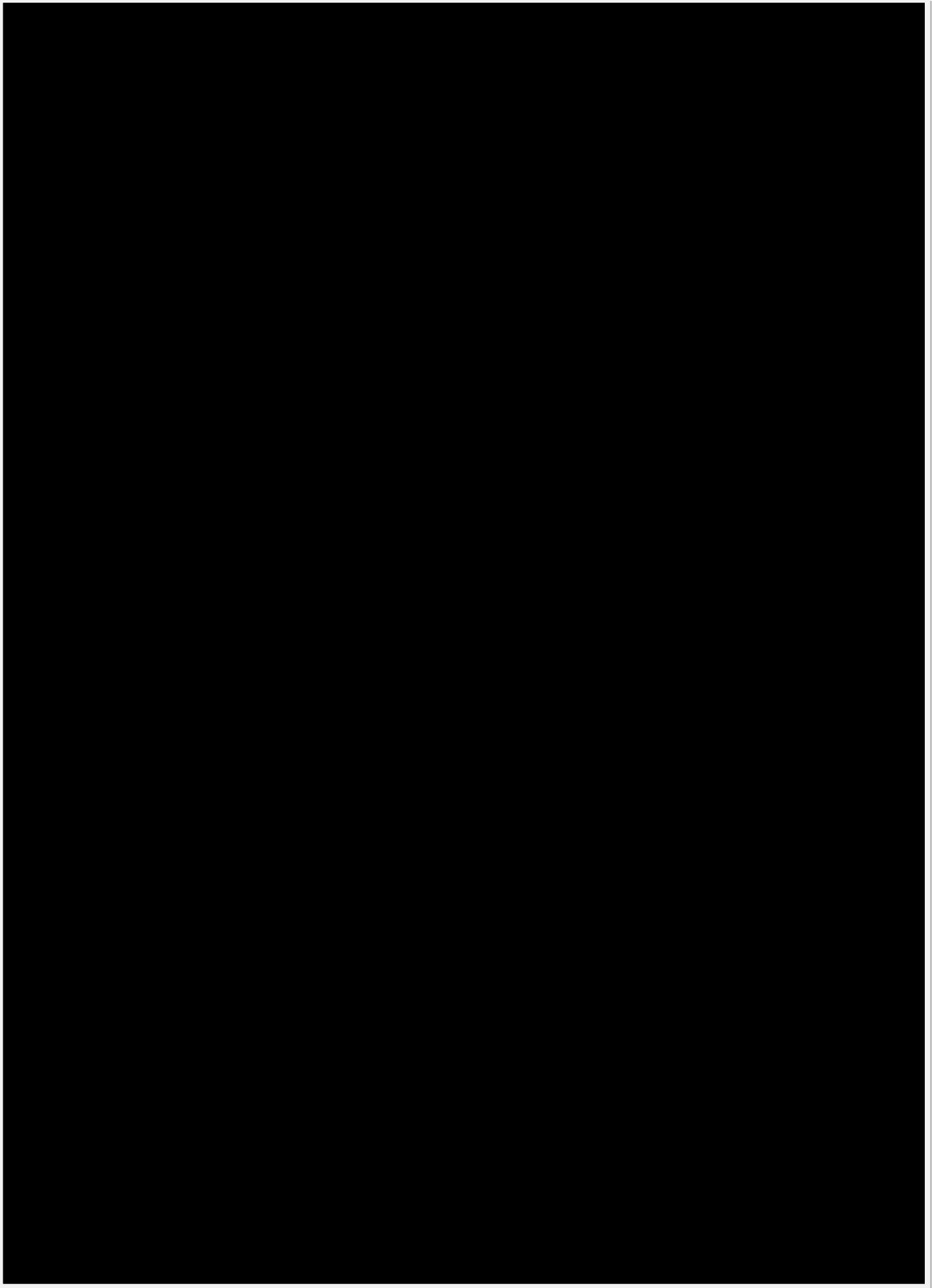


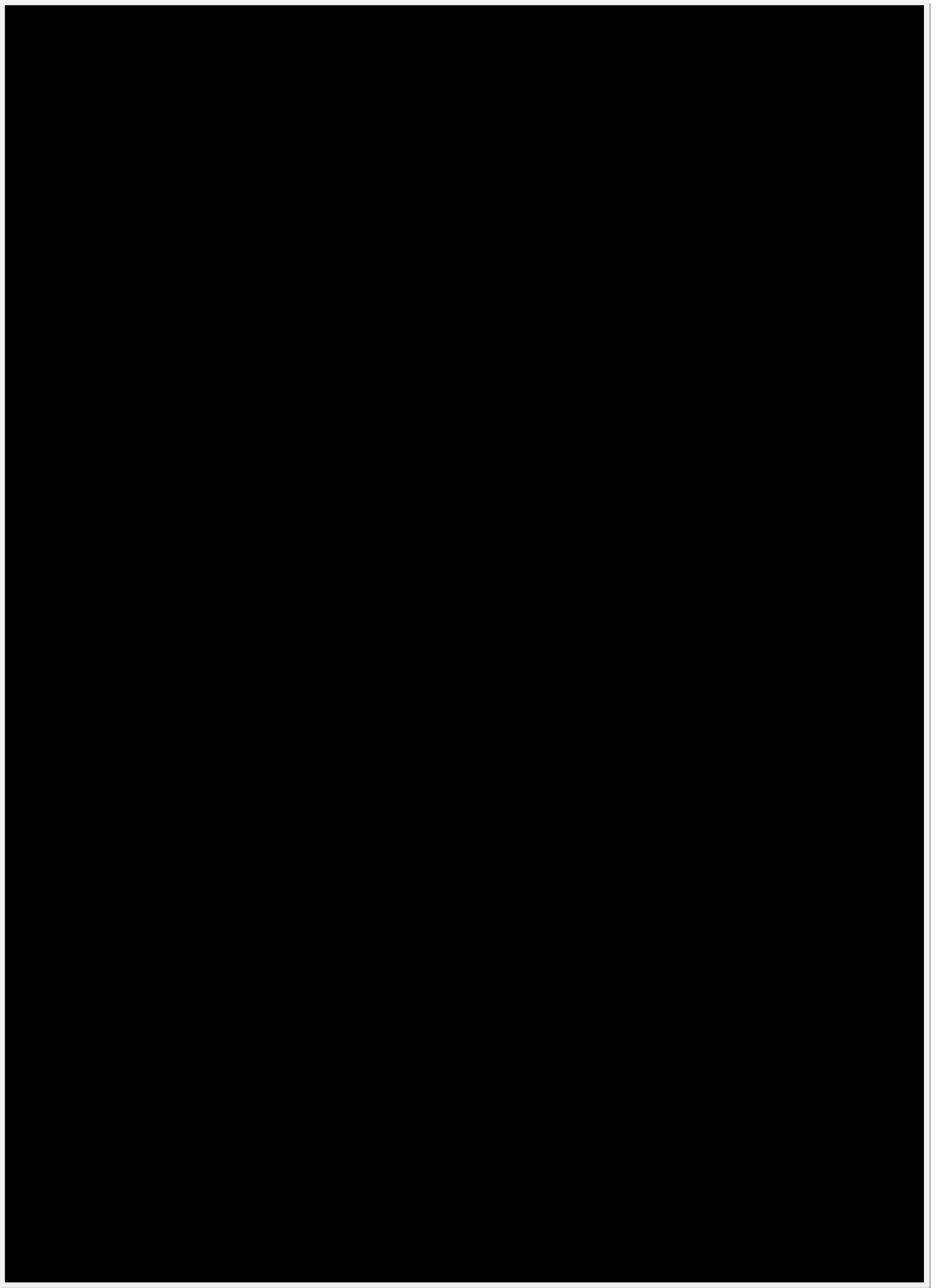


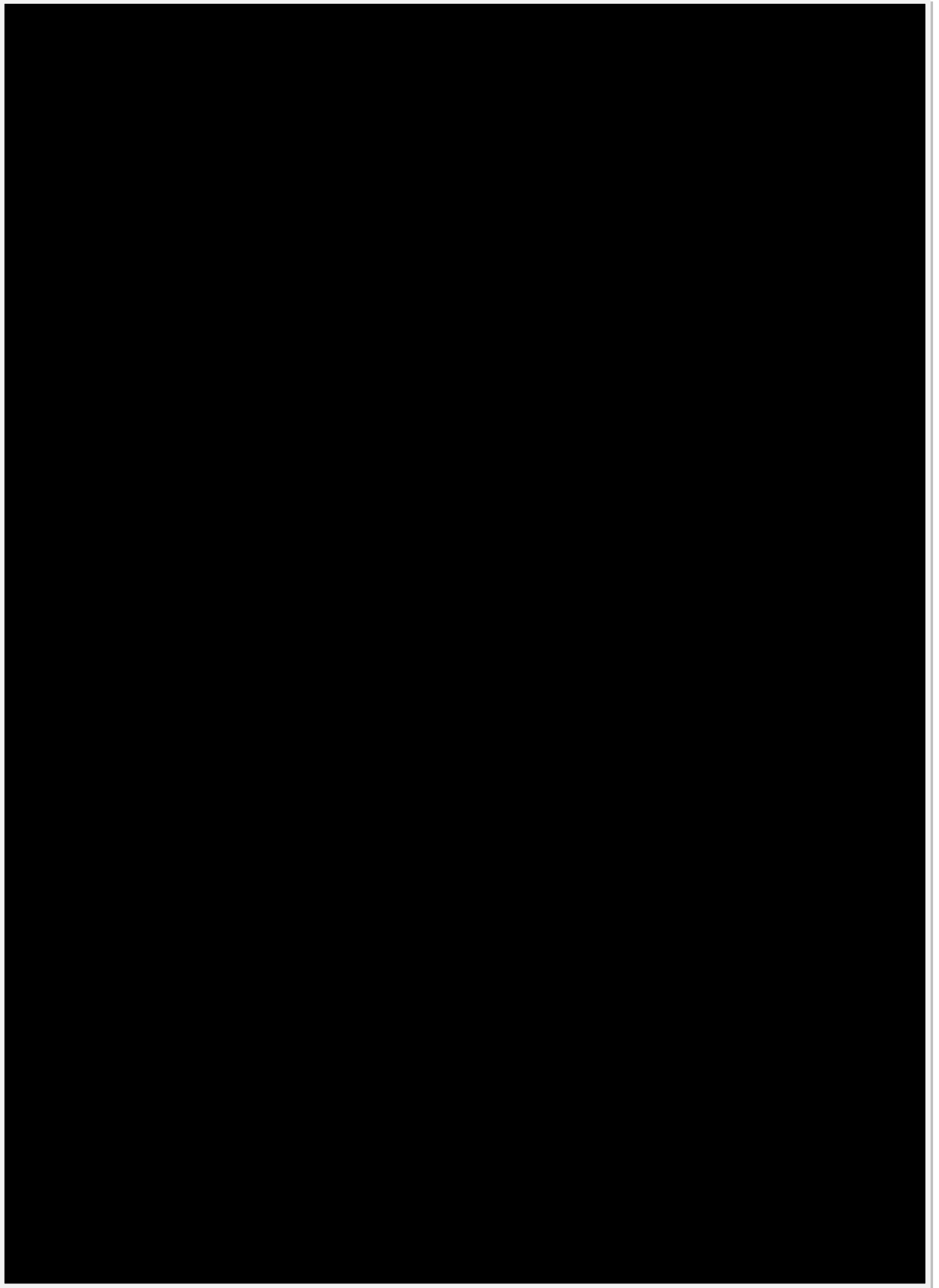












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QUESTION 12

Supplier Contact and Parts
Demand

SUPPLIER CONTACT INFORMATION

Name: Kathleen Kane
Head of Quality Management

Company: Passive Safety & Sensorics - NAFTA
Continental Automotive Systems, Inc.

Address: One Continental Drive
Auburn Hills, MI 48326

Contact: Tel: 248-393-5812
Mobile: 574-596-6326

E-mail: kathleen.kane@continental-corporation.com

PE14-004

Q1
PARTS DEMAND HISTORY
AS OF 03/20/2014

PART DESCRIPTION	SERVICE PART NO.	MODEL APPLICATION	PART RELEASE DATE	CALENDAR YEAR					
				2009	2010	2011	2012	2013	2014
SRS UNIT	77960-TA0-A01	2008 ACCORD	9/5/2007	N/A	N/A	N/A	N/A	N/A	N/A
SRS UNIT	77960-TA0-A02 (SUPERSEDES 77960-TA0-A01)	2008-2010 ACCORD	6/9/2008	2262	3399	3792	3410	3326	2524
SRS UNIT	77960-TA0-L01	2008 ACCORD	9/5/2007	N/A	N/A	N/A	N/A	N/A	N/A
SRS UNIT	77960-TA0-L02 (SUPERSEDES 77960-TA0-L01)	2008-2010 ACCORD	6/24/2008	639	581	575	663	533	514
SIDE IMPACT SENSOR	77970-TA0-A11	2008-2012 ACCORD	9/5/2007	1943	2341	2704	2655	2500	1656
SATELLITE SAFING SENSOR	77975-TA0-A11	2008-2012 ACCORD	9/5/2007	320	433	520	553	541	312

Q11
PARTS DEMAND HISTORY
AS OF 03/20/2014

	24-MONTH HISTORY			
	SRS UNIT 77960-TA0-A02	SRS UNIT 77960-TA0-L02	SIDE IMPACT SENSOR 77970-TA0-A11	SATELLITE SAFING SENSOR 77975-TA0-A11
NOVEMBER 2012	296	67	200	43
DECEMBER 2012	231	35	223	41
JANUARY 2013	317	46	273	57
FEBRUARY 2013	274	40	232	65
MARCH 2013	262	47	227	54
APRIL 2013	243	39	237	54
MAY 2013	279	48	220	41
JUNE 2013	284	46	187	34
JULY 2013	307	56	175	36
AUGUST 2013	319	62	185	41
SEPTEMBER 2013	257	36	194	37
OCTOBER 2013	285	48	219	44
NOVEMBER 2013	221	37	143	30
DECEMBER 2013	278	28	208	48
JANUARY 2014	295	53	212	39
FEBRUARY 2014	204	29	164	32

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QUESTION 13

Q13a c e_Redacted

Q13 a, c and e Response

Q13a) The causal or contributory factor(s);

The threshold setting for side impacts did not have enough margin for typical market use, therefore if the door is slammed shut the airbags may deploy.

Q13c) The failure mode(s);

When driver or passenger side door are slammed shut (with over [REDACTED] force), the side airbag and side curtain airbag can deploy.

Q13e) In the event of the claimed defect or the subject component became inoperative, how the operator and the other passengers are warned inside or outside of the cabin?

1) In the event of claimed defect:

Neither the driver or passengers are warned in advance.

Once the event occurs, the SRS unit detects the airbag deployment and the SRS warning lamp will illuminate on the vehicle instrument panel.

2) In the event the subject component became inoperative:

The self-diagnostic function of the SRS system will detect the failure and the SRS warning lamp will illuminate on the vehicle's instrument panel.

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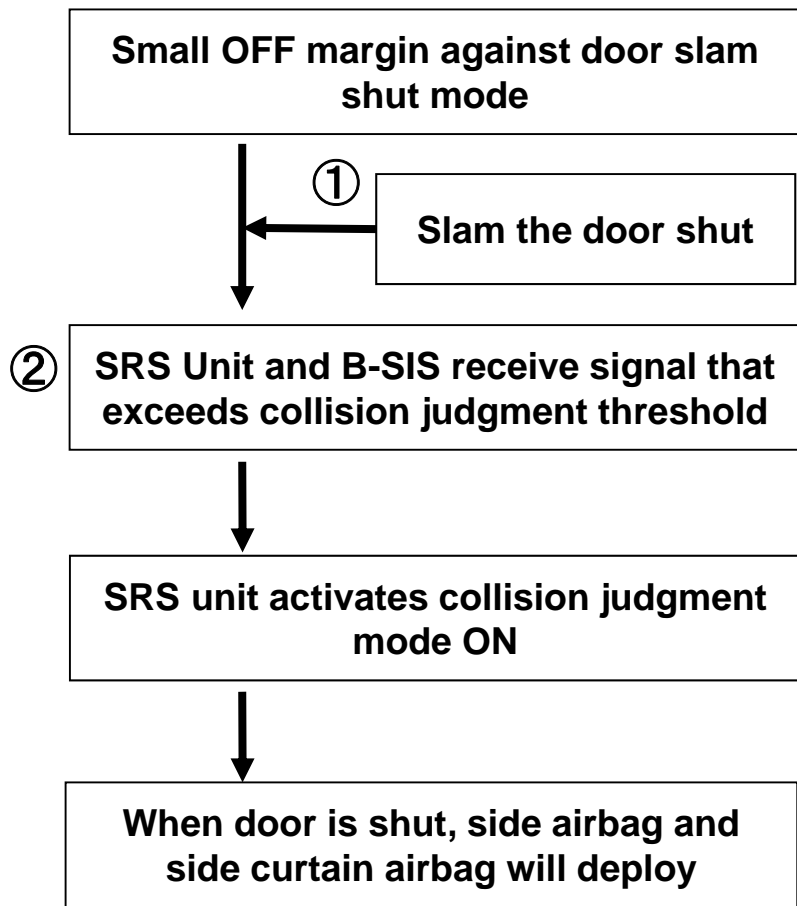
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QUESTION 13

Q13b_Redacted

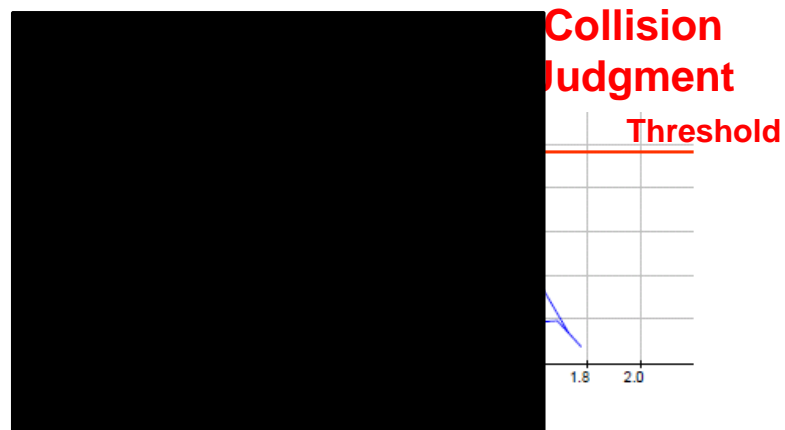
Failure Mechanism



① Slam the door shut



② Collision exceeds collision judgment threshold



SRS Unit Record G Data