

Report of Damage to Telephone Plant Due to Power Faults or Lightning Activity

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1. General

1.1 Purpose

This practice provides the procedures for reporting occurrences of damages to telephone facilities resulting from:

- Contact with power conductors.
- Surges induced by power faults.
- Lightning activity.

1.2 Filing Instructions and Supersedures

Discard all previous issues and associated addenda of this practice and file this issue numerically in your GTE Telephone Operations practices set.

This practice supersedes and cancels:

- All policies, procedures, general instructions, letters, and memoranda which address this subject.
- Any document which provides information contrary to the information contained in this practice.

1.3 Reason for Reissuing

This practice has been reissued to incorporate multiple changes in the content. Read this entire practice to ensure your familiarity with the new information.

1.4 Responsibility

This practice was published by the GTE Telephone Operations Administrative Services Department. For more information about this practice, contact the GTE Telephone Operations Headquarters Telops Protection Engineering Support Department.

1.5 Disclaimer

This practice was prepared solely for the use of GTE Telephone Operations. It must be used only by its employees, customers, and end users when installing, operating, maintaining, and repairing GTE Telephone Operations' equipment, facilities, and services. Any other use of this practice is forbidden. The information contained in this practice may not be applicable in all circumstances and is subject to change without notice. By using this practice the user agrees that GTE Telephone Operations will have no liability (to the extent permitted by applicable law) for any consequential, incidental, special, or punitive damages that may result.

2. Overview

2.1 Scope

This practice is provided for the assessment of damages caused by lightning activity, power surges, or power contacts, to determine the adequacy of GTE's protection programs. Normal operation of protective devices is not included in the requirements of this practice.

Refer to GTE Telephone Operations Practice 117-500-005, Damage to Company Property, for information on how to file claims and/or recover costs.

2.2 Definitions

The following chart provides definitions for the acronyms used in this practice.

Acronym or Term	Definition
CZT	Customer Zone Technician
I&M	Installation and Maintenance
NID	Network Interface Device
NOC	Network Operations Center
OLS	On-Line Support
OSP	Outside Plant
T&P	Transmission and Protection

The following chart provides sources of supplementary information relating to this practice. The documents could be required for performing certain tasks.

2.3 References

See...	For Information About...
007-642-002	Plant Maintenance Order
117-500-005	Damage to Company Property
	Station Protection
795-805-xxx	Grounding Methods
830-000-000	Engineering Directive
887-000-008	Electrical Accident Investigation Report
887-000-050	Electrical Protection Engineering Fundamentals
903-020-070	Outside Plant Protection - Engineering Considerations
903-101-070	Protection - Bonding and Grounding Cable

2. Overview, continued

2.4 Forms

The form Report of Contact with Power/Lightning, Form 90002209 is referenced in this practice.

Order this form through normal supply channels.

3. Obtaining Information

3.1 Sources of Information

Certain required information might not be readily available to the originator. Obtain the information from the following sources.

Contact...	For...
GTE OSP Engineering	<ul style="list-style-type: none">• Line Number(s).• Pole/Pedestal Number(s).• Print of affected area.• Cost of repairs.• Type of plant damaged:<ul style="list-style-type: none">- Cable size(s).- Cable gauge.- Type of cable and strand.• Separation/clearances.• Name of Power Company.
GTE I&M/CZT	<ul style="list-style-type: none">• Type of protector(s) found.• Type of fuses or arresters• Corrective action taken.• Cost of repairs.
Power Company	<ul style="list-style-type: none">• Line-to-Ground Voltage• Number of Phases.• Type of Configuration.<ul style="list-style-type: none">- Delta.- Wye.- Grounded Wye.• Maximum expected fault clearing time.• Actual duration of Contact or Fault• Classification of Power Line:<ul style="list-style-type: none">- Transmission Line- Primary Distribution Line- Secondary Distribution

3. Documenting Contact with Lightning and Power

3.2
Form 90002209

Use Report of Contact with Power/Lightning, Form 90002209 to document each occurrence of contact with lightning or power (see Exhibit 1).

3.3
Distribution

Distribute Report of Contact with Power/Lightning, Form 90002209 as follows:

- White: Send to the T&P Engineer/Administrator (in the respective Division/District).
- Yellow: Send to NOC - OLS Power.
- Pink: Retained by Originator.
- Copy: Send to OSP Engineering to be included with work order (only if a work order is required).

Send additional copies to work groups, such as Claims and Legal that might need to know details of either the event or corrective action.

3.4
Instructions

The following chart describes how to fill out Form 90002209.

Number	Item...	Enter...
1	Date and Time Of Contact	Date and time when the telephone facilities actually became energized or effected, as a result of a foreign source such as lightening or power.
	Date Service Restored and Time	Date and time when all phone service was back in service even if the repairs are temporary.
	Date Permanent Repairs Completed and Time	Date and time all work was actually completed. NOTE: Indicated a.m. or p.m. for all times.
2	Work Order Number (W.O. #)	The Work Order Number assigned to make repairs. If a work order is not required enter NA.
3	Name and Number of Telephone Line	The name and number of the effected telephone line and the name and number of the power line, if applicable.
4	Name of the Power Company	The full name of the power company or serving electric utility. NOTE: For lightning, enter NA.
5	Location of Contact	Location of physical plant damage. Attach a sketch or print showing the exact location. Pole and Pedestal number.

(continued)

3. Documenting Contact with Lightning and Power, continued

3.4 Instructions, continued

Number	Item...	Enter...
6	Voltage and Type of Supply Circuit AC or DC	<p>For a power incident:</p> <ul style="list-style-type: none"> ● Line-to-ground voltage. ● Number of phases. ● Power line configuration: <ul style="list-style-type: none"> - Wye. - Grounded Wye. - Delta. ● Classification of line: <ul style="list-style-type: none"> - Transmission. - Primary. - Secondary. <p>For a lightning incident: <i>Lightning.</i></p>
7	Approximate Duration of Energized Contact	<p>The power company's maximum expected clearing time and actual duration of contact or fault.</p> <p>For a lightning incident: <i>Lightning.</i></p>
8	Type of Construction	<p>The type of construction:</p> <ul style="list-style-type: none"> ● Aerial, buried, underground, etc. ● Joint. ● Parallel. ● Separations. ● Clearances. <p>For a lightning incident: <i>Lightning.</i></p>

(continued)

3. Documenting Contact with Lightning and Power, continued

3.4 Instructions, continued

Number	Item...	Enter...
9	Telephone Plant in Contact	<p>All types of plant contact:</p> <ul style="list-style-type: none"> ● Cable: <ul style="list-style-type: none"> - Type. - Size. - Gauge, etc. ● Strand: <ul style="list-style-type: none"> - Type. - Size, etc. ● Terminal: <ul style="list-style-type: none"> - Type. - Size, etc. ● Protectors: <ul style="list-style-type: none"> - Type. - Make, etc.
10	Describe Cause of Contact	<p>Description of possible or known causes of incident:</p> <ul style="list-style-type: none"> ● Vehicle accident. ● Fallen tree limb on: <ul style="list-style-type: none"> - Cable. - Power line. ● Lightning hit: <ul style="list-style-type: none"> - Cable. - Nearby structure.
11	Were Unsatisfactory Plant Conditions Evident? Explain.	<ul style="list-style-type: none"> ● Whether or not plant was in satisfactory condition. ● Provide explanation and attach copy of plant Maintenance Order or other appropriate documentation.

(continued)

3. Documenting Contact with Lightning and Power, continued

3.4 Instructions, continued

Number	Item...	Enter...
12	Damage to Telephone Property	<ul style="list-style-type: none"> Brief description of damage. Is this incident a reoccurrence? If so, when was the last time? Attach a copy of the work order if applicable.
13	Approximate Cost of Repairs to Telephone Property	Cost of repairs to restore service. Obtain information from: <ul style="list-style-type: none"> OSP Engineering. AND Service Maintenance and Provisioning/CZT.
14	Damage to Property Other than Telephone Property	Description of damage to others' property. NOTE: This is the result of careful inspection. Do not admit liability.
15	Was Telephone Protection Standard and in Good Condition?	<ul style="list-style-type: none"> For cable plant, the results of a thorough protection inspection within a ½ mile (0.8 km) radius of the contact point. The cable protection scheme must meet GTE specifications. Record and correct all violations as soon as possible. NOTE: Refer to GTE Telephone Operations Practices in the following Divisions: <ul style="list-style-type: none"> - 604. - 605. - 621. - 007. - 903. - 909.

(continued)

3. Documenting Contact with Lightning and Power, continued

3.4 Instructions, continued

Number	Item...	Enter...
16	What Telephone Protective Devices Were Found in the Plant?	For cable plant (OSP), type of: <ul style="list-style-type: none"> ● Protectors. ● Fuses. ● Bridle wire. ● Ground rods. ● Bonding connections, etc.
17	Weather Conditions	Weather conditions prevalent at the time of contact.
18	Describe Any Injuries to Persons	Type of injuries to any employee or customer, such as: <ul style="list-style-type: none"> . Shocks. ● Burns. Detailed information about the injuries: <ul style="list-style-type: none"> ● How they occurred? ● Degree of severity. Did the person(s) require: <ul style="list-style-type: none"> ● Medical attention. ● Emergency treatment. <p>NOTE: Do not admit liability.</p> <p>See GTE Telephone Operations Practice 887-000-008.</p>
19	Other Information of Interest	Additional information that may be helpful, such as: <ul style="list-style-type: none"> ● Witness' names. ● Witness' address. ● Statements. ● Diagrams of damage locations, etc.
20	Describe in Detail Corrective Action Taken to Prevent Recurring Damages of this Nature	Any and all corrective action taken to prevent reoccurrences.

(continued)

3. Documenting Contact with Lightning and Power, continued

3.4

Instructions, continued

Number	Item...	Enter...
21	Date Corrective Work Completed	Date work was completed and inspected per GTE Telephone Operations Practices.
22	Place Checkmark if Attachments are Included	Checkmark to indicate that attachments are included with the original form.
	Prepared by	Originator's name.
	Title	Originator's title.

4. Responsibilities

4.1

Origination

Form 90002209 is normally originated by the first GTE supervisory employee to arrive at the scene.

4.2

Inspections

The Facilities Supervisor (Cable Maintenance, CZT and/or I&M) performs the inspection after completion of repairs to ascertain that all the corrections comply with applicable GTE Telephone Operations Practices.

4.3

Reviews

The T&P Engineer/Administrator is responsible for reviewing all reports of power/lightning contacts received from local plant forces, in her or her division.

4.4

Investigations

On-site investigations must be performed by T&P personnel when persons are injured or damages to customer's equipment or property is suspected or reported.

4.5

Reports

Issue a formal report when any investigation is completed. Send the report to NOC-OLS Power with copies to those work groups involved with corrective action.

4.6

Extended Duration of Contact

If the duration of the energized power contact extended over several seconds, it is possible that the:

- Fault current relays of the electrical power company's circuit did not operate.
- OR
- Power lead is not fault-current protected.

If the Report of Contact with Power/Lightning, Form 90002209 indicates this condition exists, then the T&P Engineer/Administrator and the power company determine that:

- Adequate protection has been provided and in operative condition.
- Ground measures provided by GTE safely carry or divert the fault.

4. Responsibilities, continued

- 4.7**
Preserving Evidence
- Damaged items, such as the protector or NID, service drop wire, terminal blocks, telephone instruments, that are GTE property must be adequately preserved for evidence, and properly labelled. Photograph the damaged items before removing them from the scene.
- 4.8**
Injuries
- Refer to GTE Telephone Operations Practice 887-000-008 for procedures to follow whenever personnel injuries occur during the electrical accident, power contact or lightning activity.

Exhibits

REPORT OF DAMAGE
FROM POWER/LIGHTNING
FORM 90002209 (11/85)
REF GTEP 887-000-007

DISTRIBUTION
White - T&P Engineer/Admin
Yellow - NOC-OLS (Power)
Pink - Originator

PREPARED FOR COUNSEL

Date _____
Exchange _____

1. Date of Contact _____ Time _____
Date of Service Restored _____ Time _____
Date Permanent Repairs Completed _____ Time _____
2. W.O. # _____
3. Name and Number of Telephone Line _____
4. Name of Power Company _____
5. Location of Contact _____
6. Voltage and Type of Supply Circuit AC or DC _____
7. Approximate Duration of Energized Contact _____
8. Type of Construction (crossing conflict or joint use) _____
9. Telephone Plant in Contact _____
10. Describe Cause of Contact _____
11. Were Unsatisfactory Plant Conditions Evident? Explain. _____
12. Damage to Telephone Property _____
13. Approximate Cost of Repairs to Telephone Property _____
14. Damage to Property Other Than Telephone Property _____
15. Was Telephone Protection Standard and in Good Condition? _____
16. What Telephone Protective Devices Were Found in the Plant? _____
17. Weather Conditions _____
18. Describe Any Injuries to Persons _____
19. Other Information of Interest _____
20. Describe in Detail Corrective Action Taken to Prevent Recurring Damage of this Nature _____
21. Date Corrective Work Completed _____
22. _____ Place Checkmark if Attachments are included.

Prepared by _____
Title _____

NOTE: ATTACH ADDITIONAL SHEETS IF NEEDED AND SKETCH/PRINT SHOWING THE LOCATION.

Exhibit 1 - Report of Damage From Power/Lighting, Form 90002209