General Disclaimer

One or more of the Following Statements may affect this Document

- This document has been reproduced from the best copy furnished by the organizational source. It is being released in the interest of making available as much information as possible.

- This document may contain data, which exceeds the sheet parameters. It was furnished in this condition by the organizational source and is the best copy available.

- This document may contain tone-on-tone or color graphs, charts and/or pictures, which have been reproduced in black and white.

- This document is paginated as submitted by the original source.

- Portions of this document are not fully legible due to the historical nature of some of the material. However, it is the best reproduction available from the original submission.

Produced by the NASA Center for Aerospace Information (CASI)

INVESTIGATION FOR IMPROVED PRECISION IN AERIAL APPLICATION EQUIPMENT Final Technical Report, 1 Oct. 1977 - 30 Sep. 1981 (Oklahoma State Univ., Stillwater.) 209 p HC A10/MF A01 CSCL 13B G3/45

N82-22797

Unclas 09506

FINAL TECHNICAL REPORT

FOR

NASA GRANT NO. NSG-6018

INVESTIGATION FOR IMPROVED PRECISION IN AERIAL APPLICATION EQUIPMENT

1 OCTOBER 1977 TO 30 SEPTEMBER 1981

APR 1982
RECEIVED
NASA STI FACILITY
ACCESS DEPT.

LAWRENCE O. ROTH
PRINCIPAL INVESTIGATOR
AGRICULTURAL ENGINEERING DEPARTMENT
OKLAHOMA STATE UNIVERSITY
STILLWATER, OK 74078

PHONE: 405-624-5432

PROJECT ACCOMPLISHMENT

One of the major accomplishments of the project has been the development of equipment and operating techniques to facilitate rapid field measurement and evaluation of spray distribution patterns from agricultural aircraft and the introduction and acceptance of this new equipment and technology by the agricultural aviation industry. Indeed, the results of this project were directly responsible for the formulation and initiation of Operation SAFE (Self-regulating Application and Flight Efficiency), an industry-wide continuing education national program sponsored by the National Agricultural Aviation Association (NAAA) to enhance the safety and efficiency of the application of agricultural chemicals by aircraft. One important component of Operation SAFE involving spray distribution pattern checking of all aircraft will be accomplished following the techniques and procedures developed on the project and will use commercial equipment, the design of which was based on the prototype set of equipment developed on this project.

The project has also resulted in equipment and techniques that are currently being used in a research program to develop basic performance data on aircraft spray dispersal systems that will be used to not only improve the performance of systems now in use, but also to suggest possible design improvements for new systems. The information gathered over the past three years on current system

ORIGINAL PAGE IS
OF POOR QUALITY

configuration and performance will form a reference base against which future improvements may be compared.

Priorities and time limitations precluded significant accomplishment with aircraft granule dispersing systems. However, the equipment and techniques developed on the project will provide a valuable base from which further research can be initiated in this important area.

PROJECT SUMMARY

The project developed in essentially three phases. The first phase involved the development of techniques and procedures to rapidly sample and analyze aircraft spray and granule distribution patterns along with a set of portable and mobile field equipment. During this phase, the equipment was repeatedly taken to the field to expose the techniques, procedures and equipment to field conditions and to evaluate and refine the procedures and improve equipment reliability.

As the equipment and techniques evolved into a useable and reliable configuration, phase two was initiated. The mechanism of "fly-in clinics" was used during this phase as a means of bringing a large number of currently used aircraft and equipment to a selected site for the purpose of measuring and, if needed, making corrective changes to the spray system to enhance distribution pattern uniformity. The data base appended to this report is a result of this activity. During phase two, the pattern measuring equipment was used to record the spray distribution patterns from nearly all of the different current makes

ORIGINAL PAGE IS
OF POOR QUALITY

of agricultural aircraft in common use throughout the United States with the exception of the far-west and the southeastern part of the country.

The third phase of the project began to evolve while phase two was underway, and was concerned with the development of techniques and procedures to acquire the more basic information that was needed to define and understand the fundamental nature of the entire system, i. e., the aircraft and its flow field. Sampling and analysis techniques and procedures were developed to enable efficient nozzle-by-nozzle studies and were used on a limited basis prior to the termination of this project. However, research is continuing in this important area.

DESCRIPTION OF EQUIPMENT AND TECHNIQUES DEVELOPED DURING THE PROJECT

A. Rapid Spray Distribution Pattern Measuring Equipment. The system that finally evolved during the course of the project consists of a field sampling unit and an analysis unit.

The field sampling unit consists of 30.5 m tee-shaped extruded aluminum track with a 38 mm wide lipped channel on the top to contain and support a 37 mm continuous paper tape. The track is assembled from twenty-five 1.2 m sections that are pinned together to form a continuous and semi-rigid sample line that can be moved about easily by three persons. The track is supported by several short bases to keep it from overturning. The sampling surface is inclined about 20 degrees from horizontal to enhance spray deposition and is approximately 10 cm from the ground surface. One end of the track has a paper tape supply

ORIGINAL PAGE IS
OF POOR QUALITY

magazine designed to hold a 214 m roll of paper tape. The other end has a manual paper tape windup magazine. At the center of of the track a wind directional/anemometer unit is mounted on a .5 m staff. The remainder of the field sampling unit consists of a microprocessor-controlled photographic and aircraft velocity data system designed to measure, record and printout aircraft and test identification, aircraft ground velocity, wind direction and wind velocity at the moment the aircraft crosses the sample line as well as to trigger a Polaroid camera. The resulting photograph is used to determine aircraft altitude and lateral displacement from a reference point on the sample line. Two skyward-pointed modified microwave intrusion detectors spaced a measured distance apart sense the approach of an aircraft and supply signals to the microprocessor.

Following a series of test flights, data from the field sampling unit for each flight will consist of a 30.5 m cross swath paper tape, a Polaroid photograph showing aircraft altitude and lateral displacement from the track centerline, a printout from the microprocessor listing the test and aircraft identification, aircraft ground velocity, wind direction and wind velocity.

The electronic flight line equipment is operated from 12 VDC rechargeable batteries. Seven packing tubes and cases are required to transport the flight line equipment.

The analysis unit consists of a paper tape processor and a microcomputer to digitize, record and manipulate the data from each test flight. The tape processing unit and the microcomputer both require 115 VAC. The fluorescent tracer for the analysis equipment is rhodamine FB and is mixed with water in the approximate concentration of 0.2 g/l. Toxicants are not used in test work.

ORIGINAL PAGE IS
OF POOR QUALITY

Each aircraft to be tested is first cleaned and flushed before preparing and loading the dye/water mixture. The analytical instrument in the paper tape processor is a Turner Model 111 filter fluorometer equipped with a special drum to facilitate movement of the continuous paper tape through it. A constant speed drive unit draws the paper tape through the fluorometer at 15.2 m/min from a supply reel and delivers it to a take up reel. The filter fluorometer is equipped with filters so the instrument sees only the 585 nm peak of the rhodamine dye on the paper tape. As the fluorometer scans the sprayed paper tape passing through it, a millivolt signal is generated and is fed to both a stripchart recorder and an Apple II computer system. No attempt is made to quantify the fluorometer output or to relate it to the actual quantity of spray (rhodamine) deposited on the paper tape. Rather, the analog and digitized output is considered a relative measure of the amount of deposition occurring across the swath. The strip chart generated as a 30.5 m length of paper tape is analyzed provides an immediate graphic display of the across-swath spray distribution pattern for a single pass of the aircraft.

Immediately following the processing of a 30.5 m length of sprayed paper tape, the digitized data entering the computer memory is stored on a disk. And following the analysis of the paper tapes for a test series, the results can be recalled, viewed in graphic form on the monitor and electronically manipulated and printed out using the computer system software developed for this purpose.

The entire analysis unit is designed to fit into 3 cases including a special case for the Apple II computer, disk drive units, Silentype printer and the monitor.

Equipment and procedures were also developed early in the project to collect

ORIGINAL PAGE IS
OF POOR QUALITY

and analyze discrete samples taken at intervals across the sample line. For this purpose, 35 mm Eastman 5980 clear leader film was placed in a channel across the 30.5 m sample line. Following spraying and drying of the spray on the film, 19 mm by 35 mm samples were removed (punched) at regular intervals across the film and put into small plastic containers for subsequent analysis for the rhodamine dye. The analysis involved injecting a measured quantity of diluent (water/alcohol mixture) into the container, vigorous shaking to remove the spray from the film, pipetting a quantity into a sample cuvette, placing the cuvette into the fluorometer, noting and recording the reading and calculations and plotting the results. Calibration samples were taken from the aircraft hopper during a test series.

Although this technique could be used to quantify the amount of spray deposition across the pattern, the time required to process a set of samples (about 1 min/sample) precluded its usefulness in the field test program. The discrete sampling procedure was used only in limited test work to establish a correlation between the results of continuous and discrete sampling.

A paper, "Rapid Distribution Pattern Measurement for Agricultural Aircraft", prepared for and presented at the 1979 ASAE/NAAA Technical Session on Agricultural Aviation Research at Las Vegas, NV, describes these techniques as they had been developed at that point in the project.

B. Granule Distribution Pattern Measuring Equipment. This equipment consists of an assembly of 24 sampling bins each having a one square meter top area. The individual bins are designed with tapering bottoms to minimize bouncing of material from the bins and are equipped with removable sample collection tubes at each bin outlet. For transport and maneuverability, four 6-bin assemblies

ORIGINAL PAGE IS
OF POOR QUALITY

were developed. The 6 bins are mounted in a structural frame equipped with pneumatic-tired caster wheels. Each assembly features a quick coupling arrangement to provide a continuous 24 m sampling width. The caster wheels expedite sample line orientation with respect to the wind and facilitate handling, movement and loading of the units. The bins are moved about in the field with a 6 kW garden tractor. A specially fitted fifth-wheel hitch system trailer and crew-cab pickup combination is used to transport the sampling equipment where needed. A 2500 W generator in the pickup bed supplies 115 VAC to a voltage regulator and electrical control system in the cab to enable operation of instruments. The interior of the vehicle has been modified to serve as a mobile field laboratory through the removal of the rear seats and the installation of a laboratory bench top. The front seats are swivel mounted to permit work at the laboratory bench (facing rearward) and operation of the vehicle (facing forward).

The samples of granular material collected from the sampling bins are analyzed (weighed) using a Scientech electronic balance/Hewlett Packard HP-97 programmable calculator assembly with an interface unit. A stripchart recorder is used to generate a graph of the distribution pattern as the samples are weighed. The samples are manually placed on the balance pan and the weights are entered into the calculator memory when a key is pressed. As each sample is weighed, the stripchart recorder pen draws a line proportional in length to the sample weight. Between the samples, a controller circuit lifts the recorder pen, advances the chart 5 mm and then lowers the pen for the next sample entry. Following entry of the last sample, the calculator generates pattern statistics to go along with the stripchart recorder graph. The data is stored on a HP-97 magnetic card.

ORIGINAL PAGE IS
OF POOR QUALITY

DISCUSSION AND SUMMARY OF DISTRIBUTION PATTERN DATA

Extensive use of the pattern measuring equipment was made at a number of different sites around the country during scheduled fly-ins. The equipment was used at several different sites in Oklahoma, Kansas and Illinois as well as in the states of Arizona, Iowa, and Maryland (which drew aircraft from a 5-state area). The spray distribution patterns of nearly 200 different aircraft were measured which represented nearly every type of agricultural aircraft in commercial use in the United States.

During the first year of field work it was believed necessary to be to measure both granule patterns and spray patterns for whatever aircraft equipment would appear at the fly-ins. This required transporting the granular bin assembly and all of the equipment associated with spray pattern measurement to each site. After the first few fly-ins, however, it became apparent that the major interest in the industry was with spray pattern analysis as, typically, only one (or no) aircraft would arrive equipped with a granule spreader. Thus, it was decided to separate the granule work and the spray work and develop a separate light-weight and highly portable spray pattern measurement system. The relative interest and press of activity with the spray equipment, then, precluded further significant activity with the granule distribution pattern measuring equipment during the remainder of the project.

A. Spray Distribution Pattern Data. The general operating procedure at the fly-ins to collect spray pattern data involved establishing 1) a loading area where the aircraft would be flushed (if necessary), loaded with the dye/water mixture and spraying system documented, 2) a test flight area to

ORIGINAL PAGE IS
OF POOR QUALITY

position and set up the flightline sampling equipment and 3) an analysis area where the analytical equipment (fluorometer and computer) could be set up near a 115 VAC source.

At the loading area, the aircraft spray system would be documented, recording nozzle type, angle and pressure, boom type and location and individual nozzle positions along the boom. The aircraft hopper would be normally loaded with about 100, 200, or 300 l of water into which the rhodamine dye would be poured. Pre-measured 100 ml bottles of dye solution enabled adding one container or dye for each 100 l of water in the hopper to produce the desired dye concentration of about 0.2 g/l. An assigned person at the loading area would brief the pilot as to flight procedures.

The pattern sampling procedure developed was to orient the sample line for each flight so that the aircraft would fly directly into the wind, the sample line and flight line equipment being relatively easy to re-orient quickly when a wind shift would occur. Each test series for a given aircraft consisted of three consecutive passes or replications over the sample line at the altitude and air speed normally used by the pilot. The test series were completed in 10 to 15 min, depending mainly on the time required for the spray on the paper tape to dry before it could be rolled up on the take-up reel and a new length of tape to be drawn across the sample line. On the last replication of each test series, small (25mm by 75 mm) water sensitive cards were placed at 1 m intervals across the sample line to provide a visual assessment of the spray drops being deposited in the swath. These cards were assembled side by side and were helpful in identifying and verifying system leaks and other pattern characteristics. Following a test flight series, the flightline data was

ORIGINAL PAGE IS
OF POOR QUALITY

gathered and taken to the analysis area and the flightline made ready for the next series.

At the analysis area, the sprayed tapes from the sample line were processed through the fluorometer, each 30.5 m tape requiring about 2 min. The other data collected at the flight line (aircraft position and velocity and wind direction and velocity) for each replication was entered into the computer and stored in a single textfile on a disk along with the distribution pattern data. A flightline and analysis procedure was established to provide a standard graphic output format such that the lefthand side of the graphic display would correspond to the lefthand side of the aircraft as viewed by the pilot in the cockpit looking forward.

The appendix of this report contains a compilation of the aircraft system and spray distribution pattern data collected during the project.

B. Single Nozzle Distribution Pattern Data. The single nozzle distribution pattern studies were designed to show where the spray goes from each nozzle position on a spray boom and to characterize the shape of the deposition pattern from each nozzle location. A testing protocol was established (following some preliminary tests) where the maximum number of nozzles could be operated at the same time without any overlapping of the individual deposition patterns. The tests were conducted flying directly into the wind and under low-wind (under 8 km/hr) conditions. Computer software was developed to plot and analyze data. A paper, "Speed, Altitude and Nozzle Angle Effects on Single Nozzle Patterns", prepared for and presented to the 1981 ASAE/NAAA Technical Session on Agricultural Aviation Research at Las Vegas, NV, describes this technique in detail and presents the results of a test series with an Eagle aircraft.

C. Granule Distribution Pattern Data. In operation, the 24 m bin assembly is placed across the flightline with sample collection tubes at each bin outlet. The flightline microprocessor-controlled data collection system (for aircraft position and velocity and weather data) is positioned along the flightline. Following a test flight, the sample tubes are collected in a rack and, along with the other flightline data, are taken to the mobile laboratory. The individual samples are weighed and recorded using the electronic balance/programmable calculator system. The stripchart recorder graph provides an immediate visual portrayal of the distribution pattern and following the weighing of the last sample, the calculator can generate pattern statistics.

Distribution patterns from several granule dispensing systems tested are presented in the appendix.

D. Discussion of Appendix Data. The appendix of this report is a data base that describes the aircraft and spray systems and resulting spray distribution patterns for the aircraft subjected to this test procedure. In examining the data, it is quite apparent that seldom are two aircraft encountered (even of the same make and model) that are equipped with the same type and arrangement of spraying system components. The conditions under which many of the test flights were made were frequently less than desired from a controlled experiment standpoint. Excessive wind velocity or crosswind component, inconsistent aircraft altitude, attitude and velocity as the machines crossed the sample line all contributed to variation in the patterns. Thus it is literally impossible to subject these data to any analysis that will show differences that can be attributed to differences in system arrangement or adjustment. This data base is intended, however, to show the range of equipment

ORIGINAL PAGE IS
OF POOR QUALITY

and equipment setups that are being used in the field and the resulting spray distribution patterns being produced by them.

Data Sheet Format. Each data sheet in the appendix is a compilation of the data collected for each aircraft for a test series (usually three replications). Early in phase two of the project, as field operating procedures and techniques were developing and evolving, the spray systems were not adequately documented and the weather data and aircraft position data from the flight line were not available or consistently recorded and cataloged. As a result, some of the data sheets have missing data elements and in those cases where nozzle location data could not be found or interpreted, the pattern data has been omitted.

Information on the data sheet includes a) test number, b) aircraft make or type, c) boom shape and location with respect to the wing, d) spray nozzle type, size and angle, and e) a line drawing (to scale) showing the position of the "on" nozzles along the spray boom. A test number followed by a hyphen and a number indicates that more than one test series was conducted with the aircraft. Each subsequent test series is unique and generally was made following changes in "on" nozzle positions in attempts to correct some observed pattern deficiency. A key to the aircraft make is presented on the first page of the appendix. The spray nozzle angle convention used has the nozzle pointed straight back for an angle of 180 deg and straight down or sideways for an angle of 90 deg. The boom drawings and the pattern graphs indicate left and right as the pilot would view them from the cockpit.

For each test flight or pass, the flight line data is shown to assist in pattern interpretation. These data include aircraft altitude and lateral

ORIGINAL PAGE IS
OF POOR QUALITY

displacement left or right of the sample line center (taken from the photograph), aircraft ground velocity, and wind velocity and direction. The convention used for wind direction is that a wind direction of 180 deg represents flying directly into the wind. Wind directions greater than 180 deg create crosswind components that move from right to left and consequently would tend to move the spray and the resulting deposition pattern to the left. Wind directions less than 180 deg would produce the opposite effect and would tend to move the spray and deposition pattern to the right.

The scale at the top of each pattern graph provides a horizontal distance reference. This scale is different than that shown with the boom drawing. Since only a relative measure of spray deposition is measured, no scale is provided on the vertical axis of the pattern graphs.

Aircraft Types and Makes. Nearly every make of United States production aircraft was tested during the course of the project. Only a very few helicopters were encountered, perhaps in proportion to the relative numbers of fixed and rotary wing agricultural aircraft operating in the United States. Turbine configurations of the Thrush, Air Tractor, Weatherly and Agcat were encountered at least one time. No attempt was made to distinguish between the different models within a particular make of aircraft on the data sheets.

Spray System Components and Arrangement. Only rather sketchy information on the booms was recorded. However, most of the booms were mounted on a few inches to the rear and below the trailing edge of the wing. Some were mounted parallel to the trailing edge of the wing while others were mounted on brackets that provided a horizontal straight boom regardless of wing dihedral. For each system, the length of the spray boom is shown along with the measured wingspan.

ORIGINAL PAGE IS
OF POOR QUALITY

The boom length shown is the distance between the outermost "on" nozzles and thus may not truly reflect the overall length of the boom. The spray nozzle assemblies were observed to be attached to the top, rear or bottom of the boom whether round or airfoiled shaped. The more common arrangement was the top boom connection, presumably to minimize boom outlet plugging and to enhance boom flushing and cleaning.

The nozzle equipment reported was, in most cases, what the pilot indicated he was currently using. No verification was made of either the types and sizes of the nozzles or their relative condition. Practically all types of atomizing equipment was encountered, the disk and core assembly being the most common. No examinations were made of the system filters or nozzle strainers.

Spray Distribution Pattern Interpretations. Some orientation and explanation is necessary before attempting to interpret and draw inferences from the spray distribution patterns.

The pattern traces are drawn as the pilot would see them (as the aircraft would be flying into the page). The left and right sides of the patterns are indicated at the top of the graph and along with a scale to establish a horizontal distance reference to the left and right of the sample line center. The three (or two) patterns shown are the result of separate flights or passes over the sample line, ordinarily about 5 min. apart. The vertical line in the center of the graph represents the center of the sample line and the pattern trace is not corrected for any lateral displacement of the aircraft from the sample line center. No vertical scale is provided for the patterns as only a relative measure of deposition was recorded from a zero line, the horizontal line at the bottom of each graph.

ORIGINAL PAGE IS
OF POOR QUALITY

Because of sudden wind shifts and the failure to re-orient the sample line with respect to the wind or the occurrence of crosswind gusts at the moment of sampling, many of the passes were made with crosswind components that caused a shifting and distortion in the measured pattern. The wind velocity and direction (if recorded) will provide a basis for judging the effect of crosswind on the pattern. A wind direction of greater than 180 deg will cause a pattern shift to the left and would cause a "piling up" of the small drop component of the spray on the right end of the pattern and would be manifested by a sharply rising pattern trace at the right end of the pattern. The opposite would occur when the wind direction would be at an angle less than 180 degrees. Of course, the magnitude of the wind velocity would determine the amount of effect of the crosswind.

An examination of the patterns on most of the data sheets will show pronounced similarities among the three patterns. Occasionally, however, the cumulative effects of the several variations involved may cause one or more of the patterns to appear quite different from the others. In these cases, it is not possible to interpret the data with much confidence as it is difficult to know which of the patterns is truly representative.

The major effects on the pattern by the aircraft that can be readily observed are propwash and outboard deposition caused by entrainment in the wingtip vortices. The aircraft propellor, as viewed by the pilot, normally rotates in a clockwise direction and causes a leftward lateral displacement of air (and spray) under the body of the aircraft propwash). The effect of propwash on the pattern will appear near the center of the pattern as a "peak" to the left of the centerline with a corresponding "valley" immediately to the

ORIGINAL PAGE IS
OF POOR QUALITY

right of the peak. Propwash is generally the result of a symmetrical or uniform nozzle spacing across the boom or may be due to insufficient compensation in nozzle placement to fill in the valley (by turning nozzles on) or to reduce the peak (by turning nozzles off). At best, this is currently a trial and error procedure for most aircraft.

Wingtip vortex deposition may appear as small short spikes on the outer edges of the pattern. This deposition is the result of the larger spray particles from the outermost few nozzle positions becoming entrained temporarily in the wingtip vortex and then falling out and being deposited at or near the edge of the pattern. The smaller drop component of the spray from these outer nozzles, once entrained in the vortex, will likely be reduced further in size through evaporation and may not fall to the ground within the sample area.

A study of the nozzle position configuration for the different aircraft will show that most systems make some provision to compensate for propwash through a clustering of nozzles to the right of the aircraft centerline and a removal of some nozzles to the left of the centerline. Those systems featuring uniformly spaced and symmetrical nozzle locations will, almost without exception, display a pronounced propwash characteristic in the pattern. Also, where the boom length is greater than about 75% of the wingspan, wingtip vortex induced pattern spikes will appear at the edges of the patterns.

Granule Distribution Pattern Interpretation. The granule distribution pattern data sheets in the appendix present some data for spreaders dispensing seed, fertilizer and granular herbicide pellets. The settings of the spreaders are unknown, but were what the operators were normally using in their granular applications. Though very limited and incomplete, these data do indicate that

ORIGINAL PAGE IS
OF POOR QUALITY

rather large variations in the distribution pattern can occur and that system adjustments would need to be made to produce uniform patterns. Once a uniform pattern is obtained, it would then be possible to establish an effective swath width for proper overlapping of adjacent swaths to produce a uniform deposition on a field.

At this time, little is known about the effects of the aircraft flow field on particle trajectories for different kinds of granular materials or the influence of spreader discharge points on the lateral movement of the particles. Thus, adjustment of these systems is strictly a trial and error procedure.

ORIGINAL PAGE IS
OF POOR QUALITY

PUBLICATIONS PREPARED DURING PROJECT

The following papers and publication were prepared during the project:

1. "Rapid Distribution Pattern Measurement for Agricultural Aircraft". Roth, L. O., R. W. Whitney, S. W. Searcy, and T. L. Underwood. ASAE Paper No. AA79-006, ASAE, St. Joseph, MI 49085. Prepared for and presented at the ASAE/NAAA Joint Technical Session on Agricultural Aviation Research, Las Vegas, NV. December, 1979.

2. "Position Assessment for Agricultural Aircraft". Whitney, R. W., L. O. Roth, and T. L. Underwood. Transactions of the ASAE, Vol. 24, No. 2, 1981.

3. "Speed, Altitude and Nozzle Angle Effects on Single Nozzle Patterns". Whitney, R. W., L. O. Roth, and D. K. Kuhlman. ASAE Paper No. AA81-005, ASAE, St. Joseph, MI 49085. Prepared for and presented at the ASAE/NAAA Joint Technical Session on Agricultural Aviation Research, Las Vegas, NV. December, 1981.

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX

AIRCRAFT SYSTEM AND DISTRIBUTION PATTERN DATA

Key to Abbreviations Used:

NA = Not Available

RD = Round

DEG = Degrees

FT = Feet

CL = Center line

MPH = Miles Per Hour

A/C = Aircraft

AC = Agcat

AT = Air Tractor

B = Bell

C = Callair

CS = Cessna

E = Eagle

H = Hiller

HU = Hughes

N = Navion

PB = Piper Brave

PP = Piper Pawnee

S = Stearman

T = Thrush

TT = Thrush Turbine

WX = Weatherly

ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 1 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = NA POSITION = NA

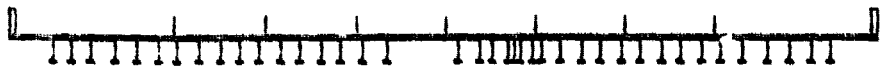
----- NOZZLE -----

TYPE = NA SIZE = 12-56 ANGLE = 180 DEG

----------WING SPAN = 47.5 FEET----------

LEFT BOOM LENGTH = 42.6 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

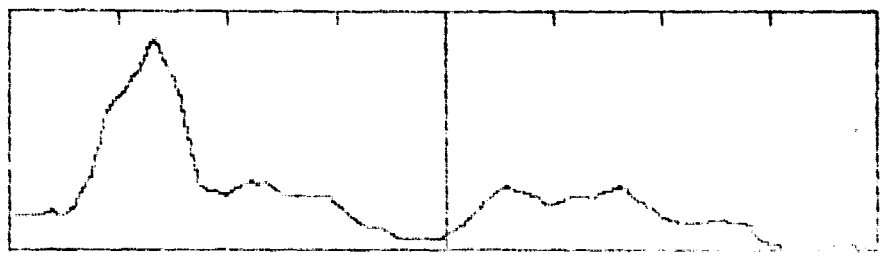


PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

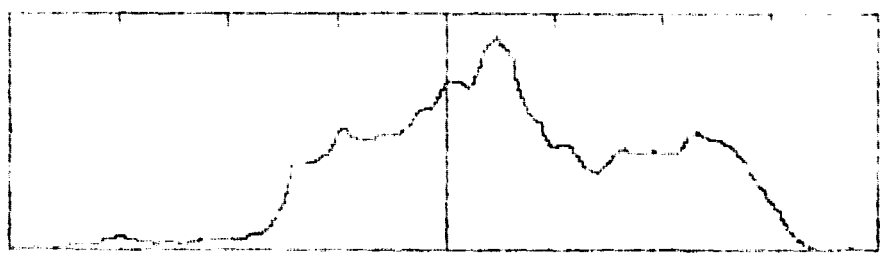


PASS NO 1B SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

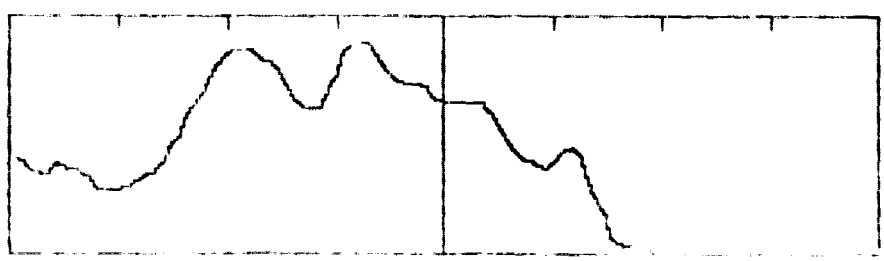


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 3 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = NA POSITION = NA

----- NOZZLE -----

TYPE = NA SIZE = 8-45 ANGLE = NA DEG

----------WING SPAN = 44.6 FEET----------

LEFT BOOM LENGTH = 38.1 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 4 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

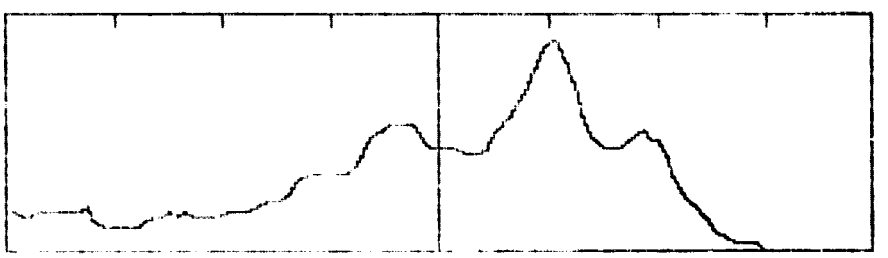
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

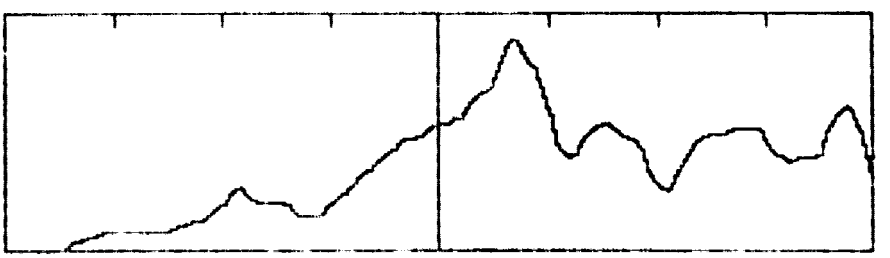


PASS NO 1C SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 8-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = 5" BEHIND; ST

----- NOZZLE -----

TYPE = TEEJET SIZE = 6 ANGLE = 180 DEG

----------WING SPAN = 42.5 FEET----------

LEFT BOOM LENGTH = 31 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

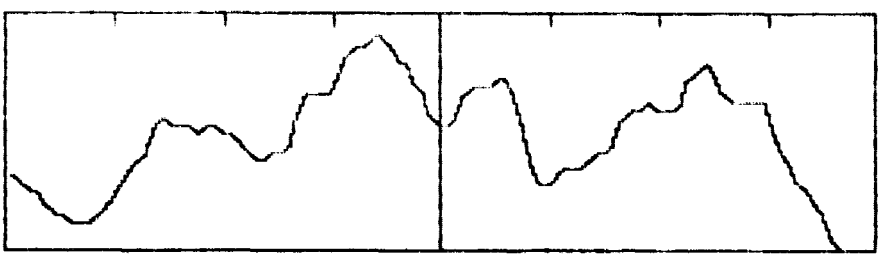
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 8-2 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = 5" BEHIND; ST

----- NOZZLE -----

TYPE = TEEJET SIZE = 6 ANGLE = 45 DEG

----------WING SPAN = 42.5 FEET----------

LEFT BOOM LENGTH = 31 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 2B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 9-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = ROUND POSITION = 4" BEHIND

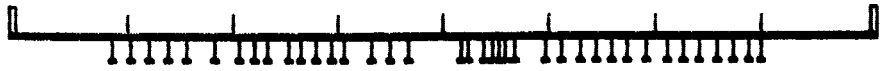
----- NOZZLE -----

TYPE = TURRET SIZE = 8 ANGLE = 135 DEG

----------WING SPAN = 40.3 FEET----------

LEFT BOOM LENGTH = 34 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

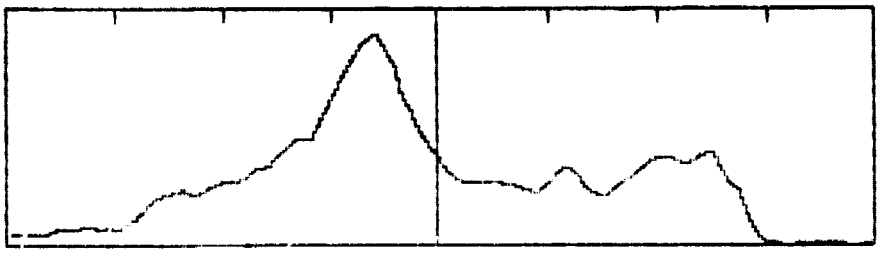


PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

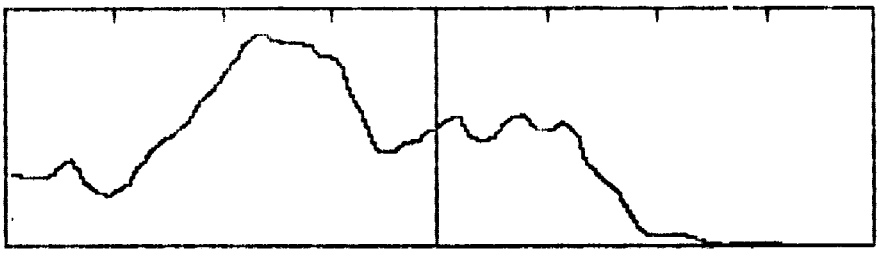


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

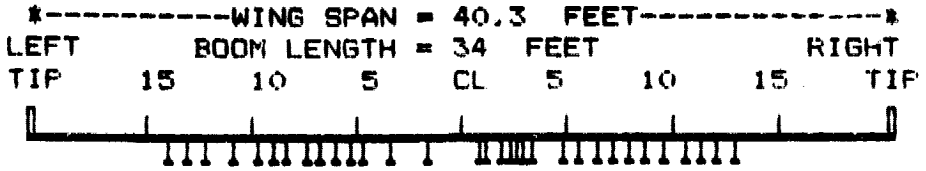
TEST NO = 9-2 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = ROUND POSITION = 4" BEHIND

----- NOZZLE -----

TYPE = TURRET SIZE = 8 ANGLE = 135 DEG

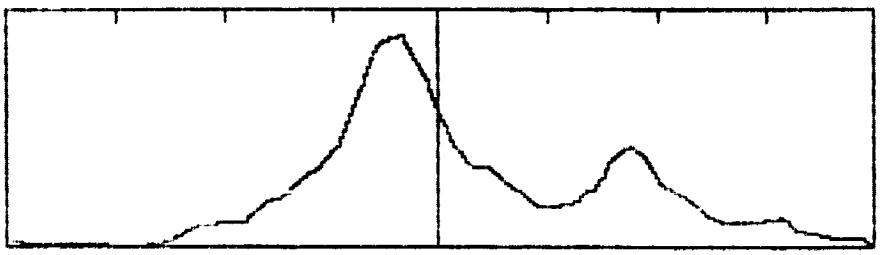


PASS NO 2A SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

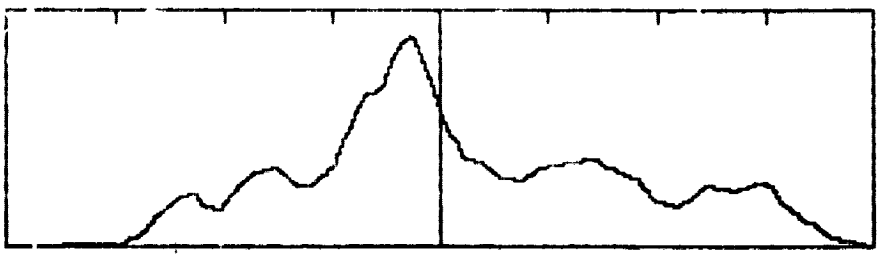


PASS NO 2B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 11-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4" BEHIND; 7" BELOW

----- NOZZLE -----

TYPE = TURRET SIZE = 2-45 ANGLE = 180 DEG

----------WING SPAN = 34.9 FEET----------

LEFT BOOM LENGTH = 29.4 FEET RIGHT

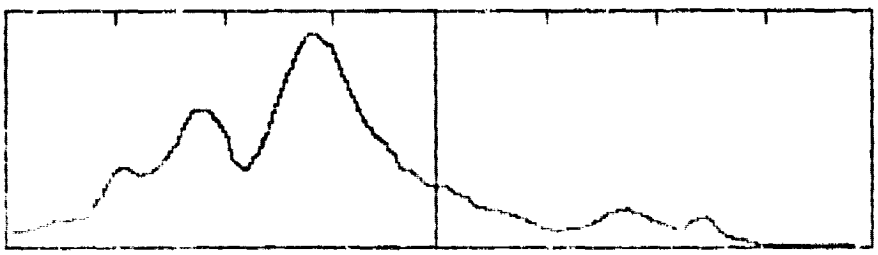
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 14 SPEED = NA MPH

ALTITUDE = 4.5 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

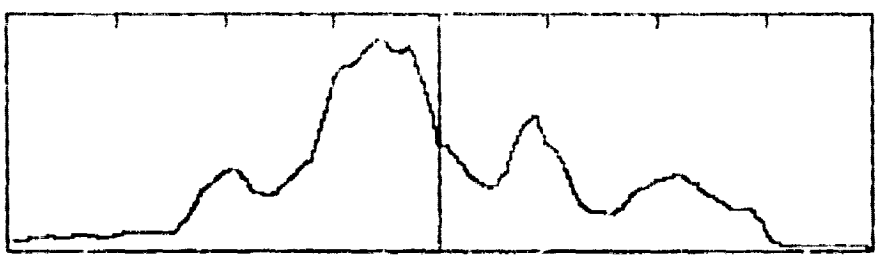


PASS NO 15 SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = .5 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS OF POOR QUALITY

TEST NO = 12-1 A/C MAKE/TYPE = WX

----- BOOM -----

SHAPE = AIRFOIL + WX POSITION = 9" BEHIND; 4" BELOW

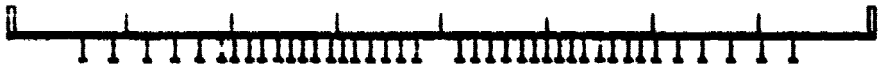
----- NOZZLE -----

TYPE = TURRET SIZE = 6 ANGLE = 180 DEG

----------WING SPAN = 40.8 FEET----------

LEFT BOOM LENGTH = 33.6 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

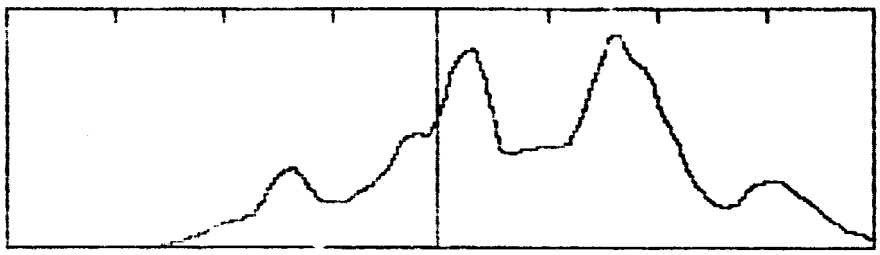


PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

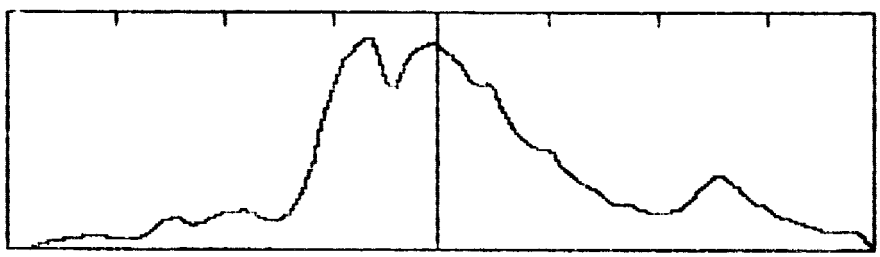


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 12-2 A/C MAKE/TYPE = WX

----- BOOM -----

SHAPE = AIRFOIL + WX POSITION = 9" BEHIND; 4" BELOW

----- NOZZLE -----

TYPE = TURRET SIZE = 6 ANGLE = 180 DEG

----------WING SPAN = 40.8 FEET----------

LEFT BOOM LENGTH = 33.6 FEET RIGHT

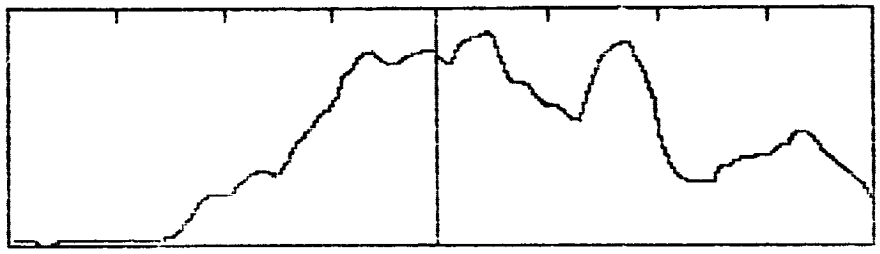
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

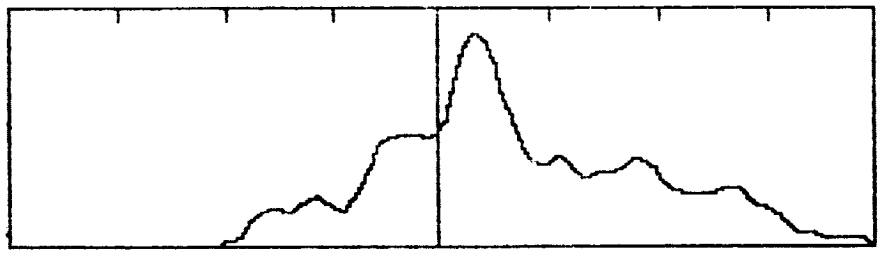


PASS NO 2B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 12-4 A/C MAKE/TYPE = WX

----- BOOM -----

SHAPE = AIRFOIL + WX POSITION = 9" BEHIND; 4" BELOW

----- NOZZLE -----

TYPE = TURRET SIZE = 6 ANGLE = 180 DEG

----------WING SPAN = 40.8 FEET----------

LEFT BOOM LENGTH = 33.6 FEET RIGHT

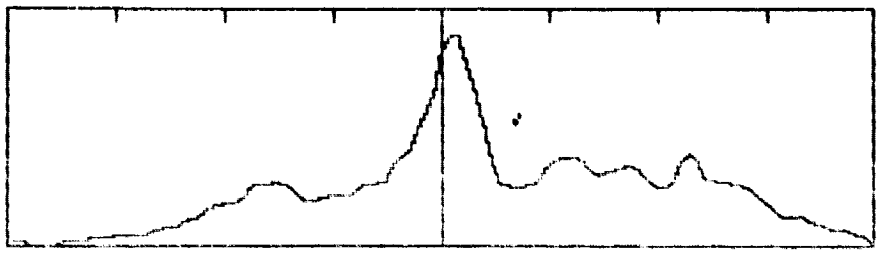
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 4A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

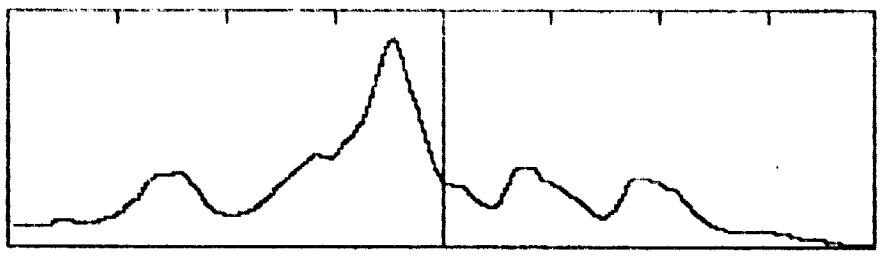


PASS NO 4B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 12-5 A/C MAKE/TYPE = WX

----- BOOM -----

SHAPE = AIRFOIL + WX POSITION = 9" BEHIND; 4" BELOW

----- NOZZLE -----

TYPE = TURRET SIZE = 6 ANGLE = 180 DEG

----------WING SPAN = 40.8 FEET----------

LEFT BOOM LENGTH = 33.6 FEET RIGHT

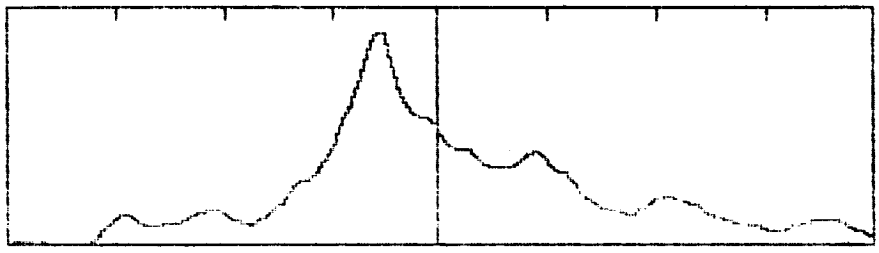
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 5A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

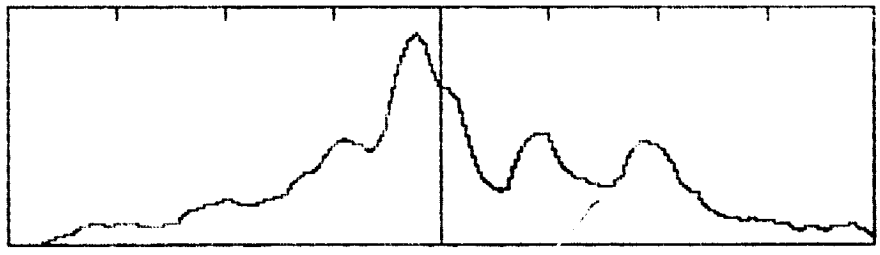


PASS NO 5B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS OF POOR QUALITY

TEST NO = 12-8 A/C MAKE/TYPE = WX

----- BOOM -----

SHAPE = AIRFOIL + WX POSITION = 9" BEHIND; 4" BELOW

----- NOZZLE -----

TYPE = ACCUMIST SIZE = NA ANGLE = 180 DEG

----------WING SPAN = 41 FEET----------

LEFT BOOM LENGTH = 29.7 FEET RIGHT

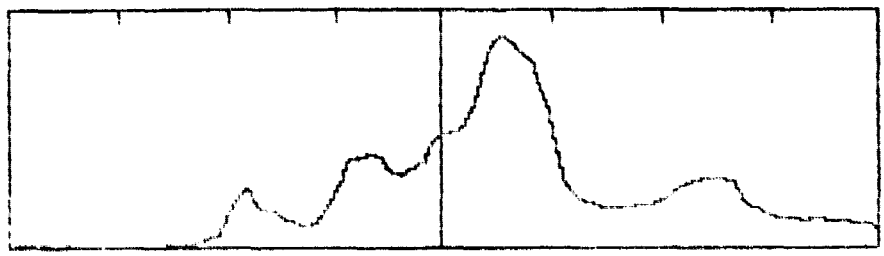
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 8A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

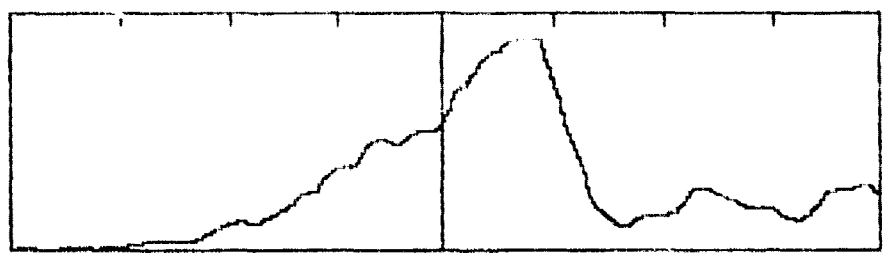


PASS NO 8B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 12-11 A/C MAKE/TYPE = WX

----- BOOM -----

SHAPE = AIRFOIL + WX POSITION = 9" BEHIND; 4" BELOW

----- NOZZLE -----

TYPE = ACCUMIST SIZE = NA ANGLE = 180 DEG

----------WING SPAN = 40.9 FEET----------

LEFT BOOM LENGTH = 25.2 FEET RIGHT

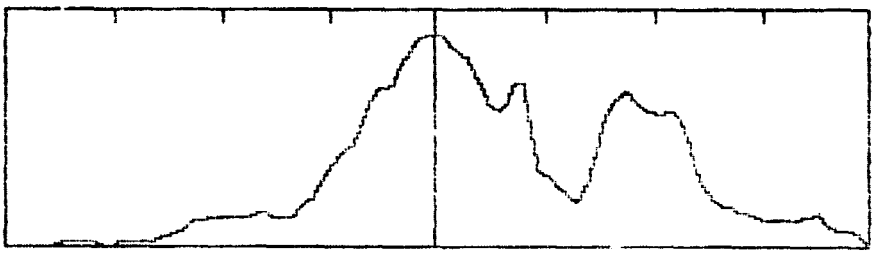
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 11A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

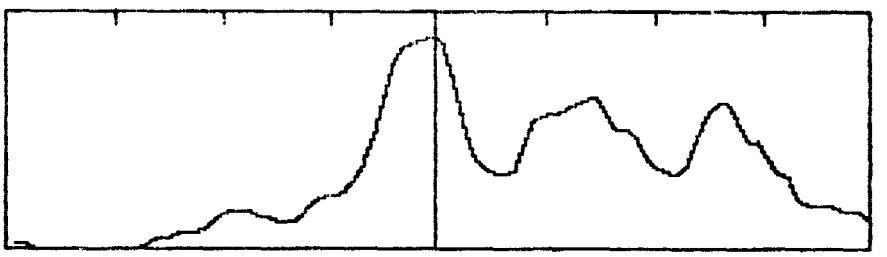


PASS NO 11B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 13-3 A/C MAKE/TYPE = PP

----- BOOM -----

SHAPE = RD POSITION = 4" BEHIND

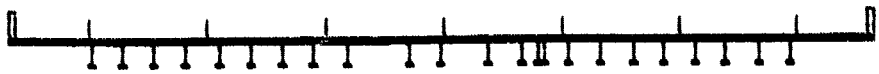
----- NOZZLE -----

TYPE = NA SIZE = 4-45 ANGLE = 180 DEG

----------WING SPAN = 36.2 FEET----------

LEFT BOOM LENGTH = 29.2 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

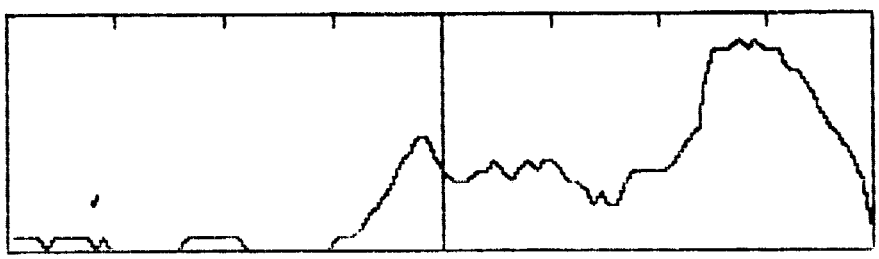


PASS NO 3A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

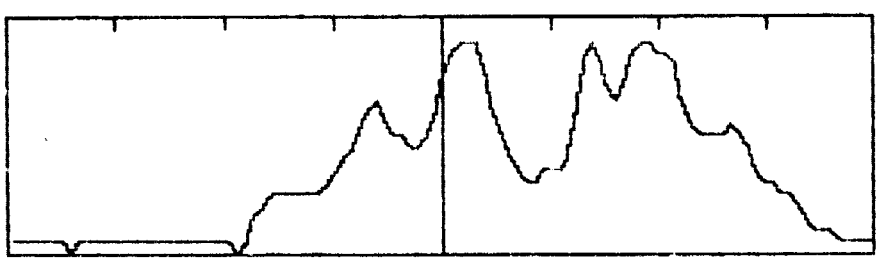


PASS NO 3B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

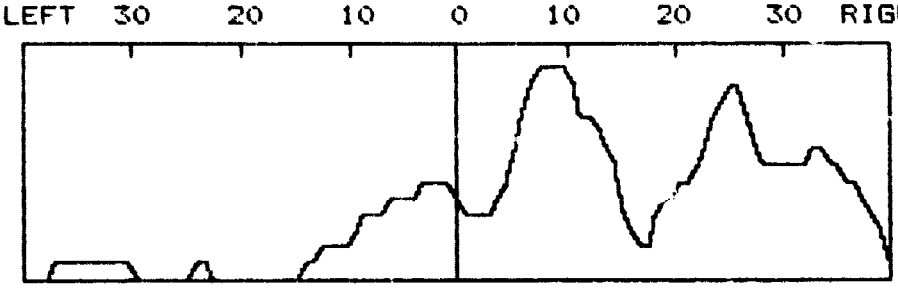


PASS NO 3C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 14-2 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 9" BEHIND; 6" BELOW

----- NOZZLE -----

TYPE = TEEJETS SIZE = 3 ANGLE = 0 DEG

----------WING SPAN = 46.4 FEET----------

LEFT BOOM LENGTH = 41.1 FEET RIGHT

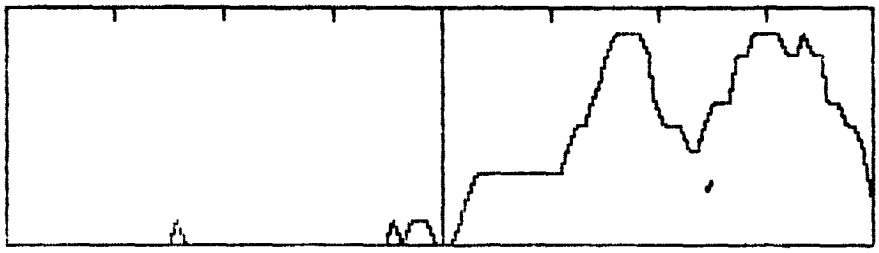
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

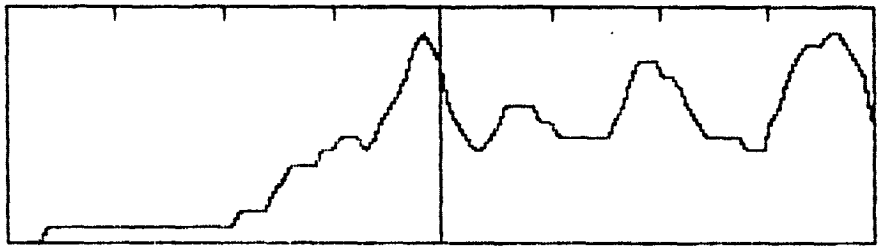


PASS NO 2C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

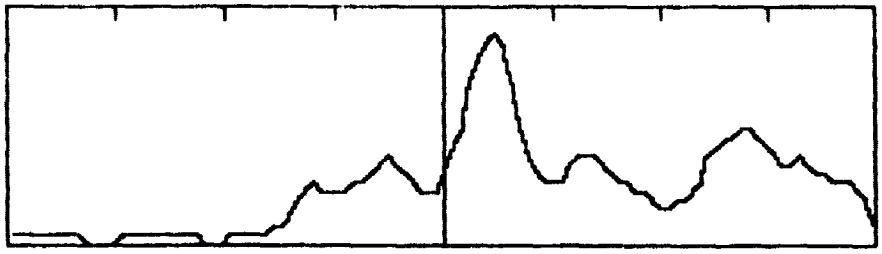


PASS NO 2D SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 15 A/C MAKE/TYPE = WX

----- BOOM -----

SHAPE = NA POSITION = 11" BEHIND

----- NOZZLE -----

TYPE = T & WH JETS SIZE = NA ANGLE = 90; 180 DEG

----------WING SPAN = 40.3 FEET----------

LEFT BOOM LENGTH = 32.8 FEET RIGHT

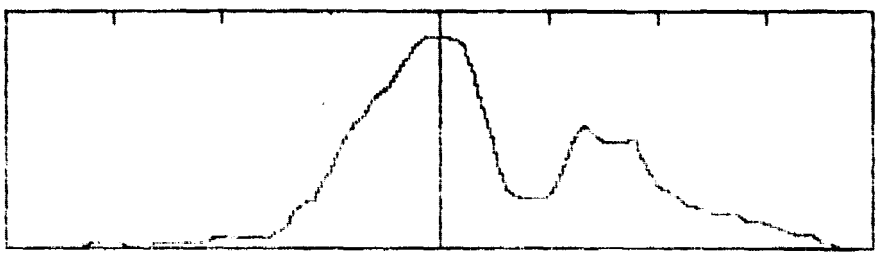
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

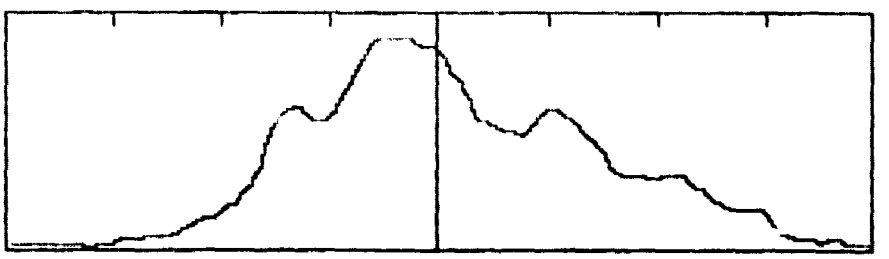


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 17-1 A/C MAKE/TYPE = PP

----- BOOM -----

SHAPE = RD POSITION = 3.5" BEHIND; 1" ABOVE

----- NOZZLE -----

TYPE = NA SIZE = 8-45 ANGLE = 135 DEG

----------WING SPAN = 36.2 FEET----------

LEFT BOOM LENGTH = 30.3 FEET RIGHT

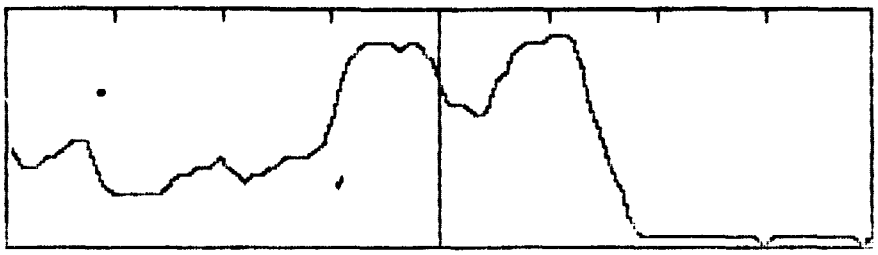
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

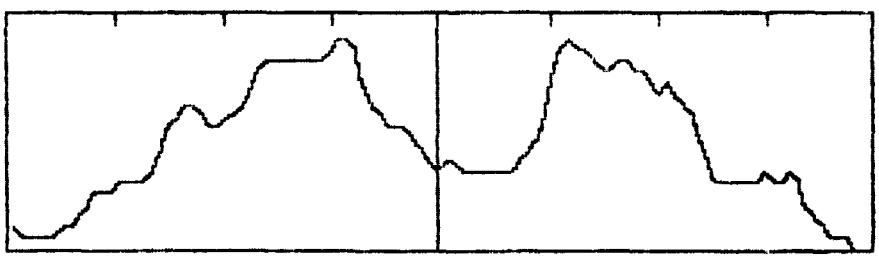


PASS NO 1B SPEED = NA MPH

ALTITUDE = 8.5 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

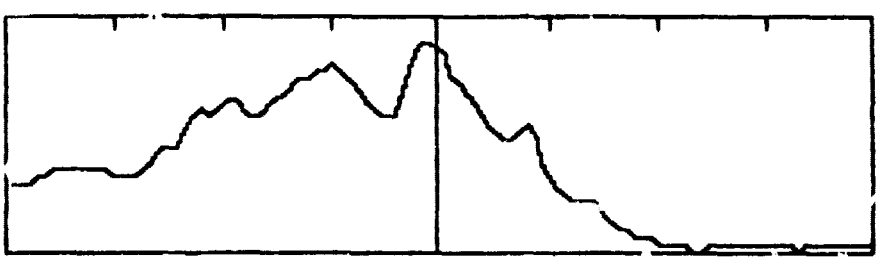


PASS NO 1C SPEED = NA MPH

ALTITUDE = 9.5 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 18 A/C MAKE/TYPE = S

----- BOOM -----

SHAPE = RD POSITION = 5" BEHIND; 5" BELOW

----- NOZZLE -----

TYPE = NA SIZE = 10-56 ANGLE = 135 DEG

----------WING SPAN = 30.6 FEET----------

LEFT BOOM LENGTH = 26.6 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

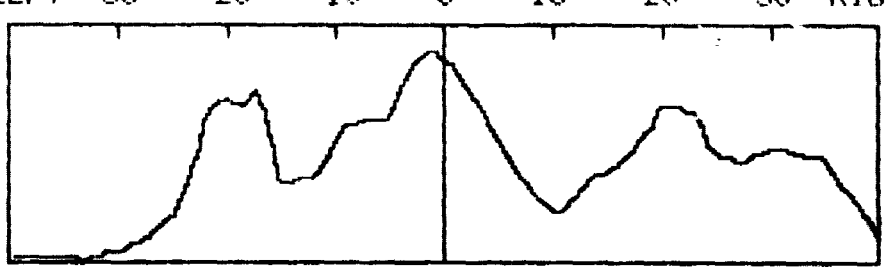
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 19 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 5" BEHIND; 2" ABOVE

----- NOZZLE -----

TYPE = NA SIZE = 10-56 ANGLE = 135 DEG

----------WING SPAN = 36.9 FEET----------

LEFT BOOM LENGTH = 29.5 FEET RIGHT

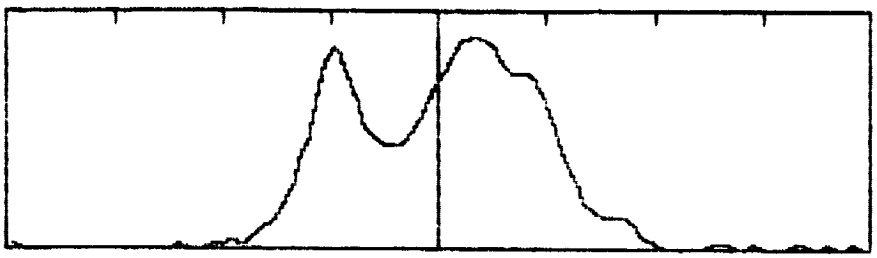
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

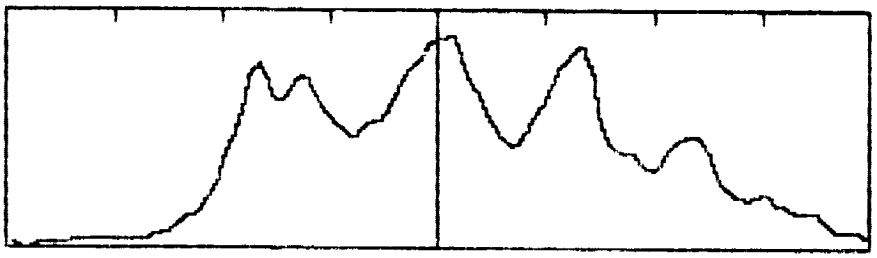


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

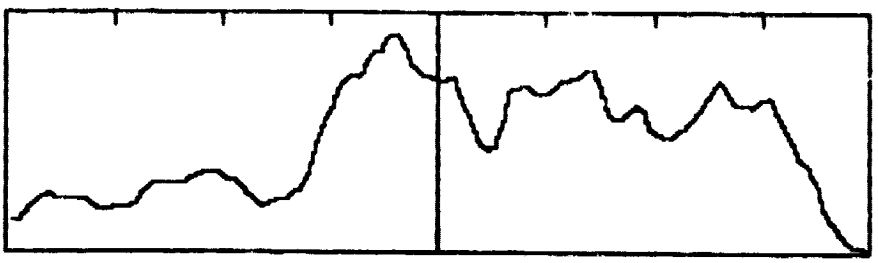


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 20-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = 8" BEHIND; 4" ABOVE

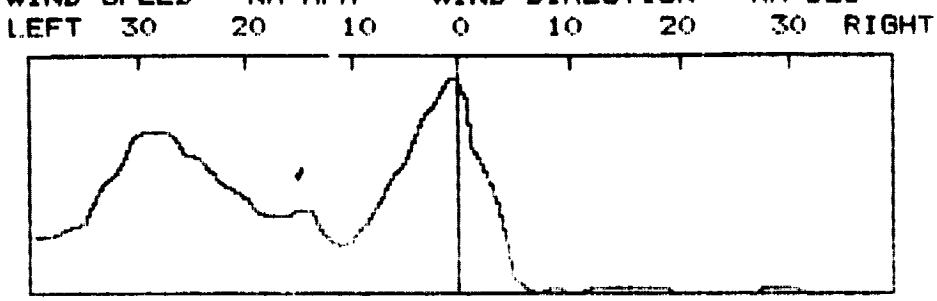
----- NOZZLE -----

TYPE = NA SIZE = 10 ANGLE = 135 DEG

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

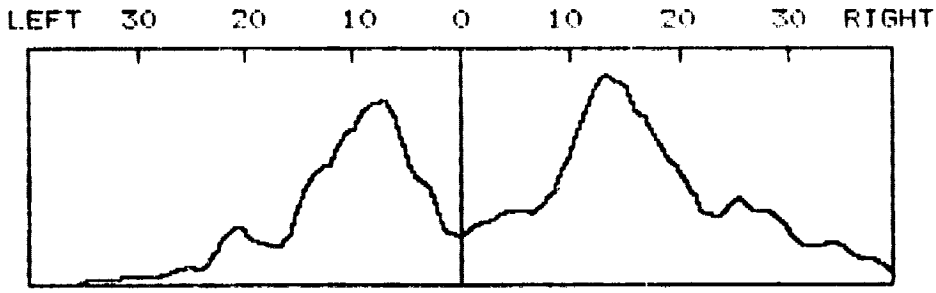
WIND SPEED = NA MPH WIND DIRECTION = NA DEG



PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 21 A/C MAKE/TYPE = C6

----- BOOM -----

SHAPE = RD POSITION = 16" BEHIND; 8" BELOW

----- NOZZLE -----

TYPE = FAN SIZE = 15 ANGLE = 180 DEG

----------WING SPAN = 43.2 FEET----------

LEFT BOOM LENGTH = 34.2 FEET RIGHT

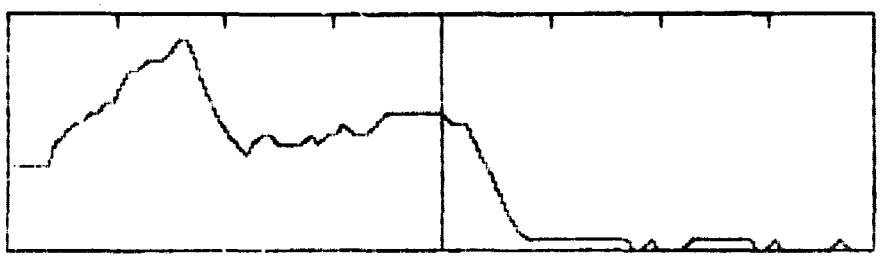
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

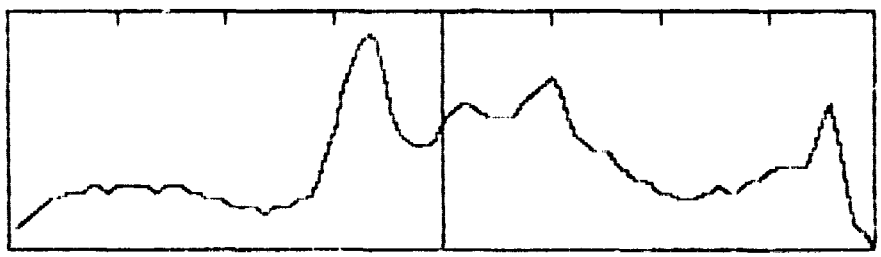


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

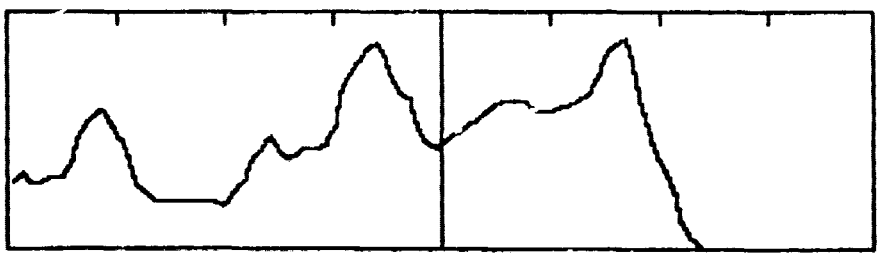


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 22-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = LDG EDG POSITION = 6.5" BEHIND; 12" BELOW

----- NOZZLE -----

TYPE = NA SIZE = 8-45 ANGLE = 135 DEG

----------WING SPAN = 37.7 FEET----------

LEFT BOOM LENGTH = 31.1 FEET RIGHT

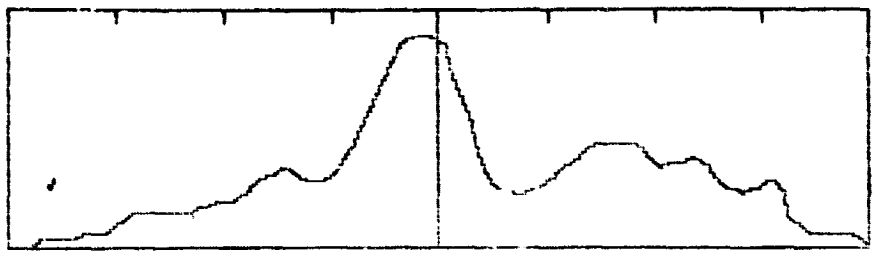
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 3.5 FT LATERAL DISPL = .5 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

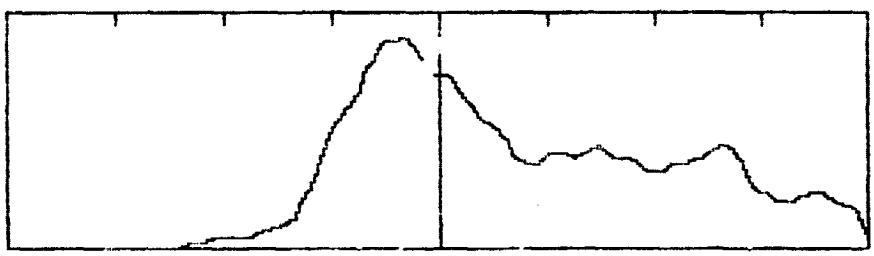


PASS NO 1B SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1C SPEED = NA MPH

ALTITUDE = 5.9 FT LATERAL DISPL = 1.3 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 23-2 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = 8" BEHIND; 1" ABOVE

----- NOZZLE -----

TYPE = NA SIZE = 8 ANGLE = 180 DEG

----------WING SPAN = 42.4 FEET----------

LEFT BOOM LENGTH = 33.2 FEET RIGHT

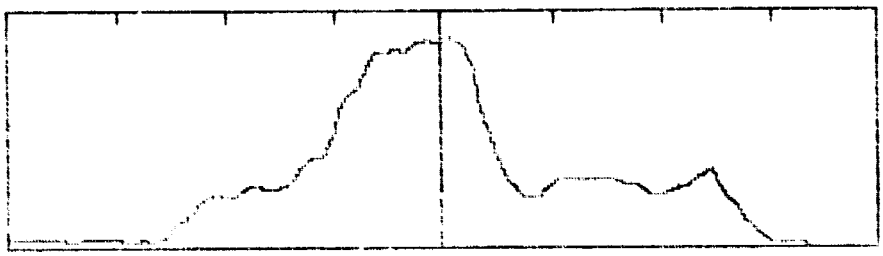
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

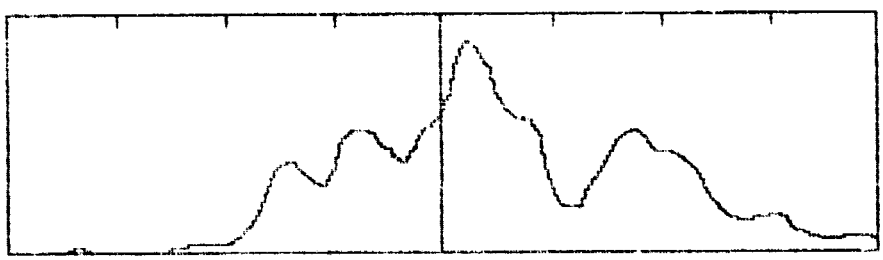


PASS NO 2B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 2C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

ORIGINAL PAGE IS
OF POOR QUALITY

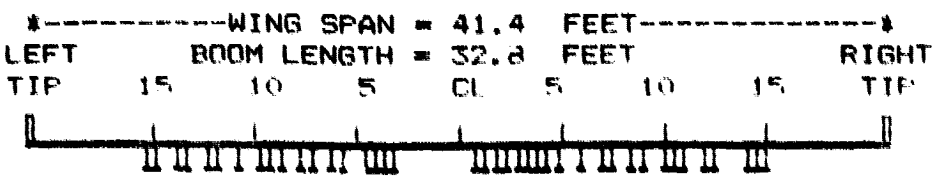
TEST NO = 24 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = 7" BEHIND; 1" ABOVE

----- NOZZLE -----

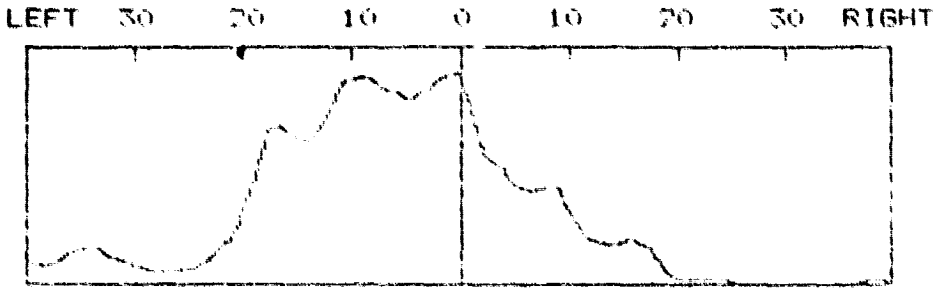
TYPE = NA SIZE = 12-45 ANGLE = 180 DEG



PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

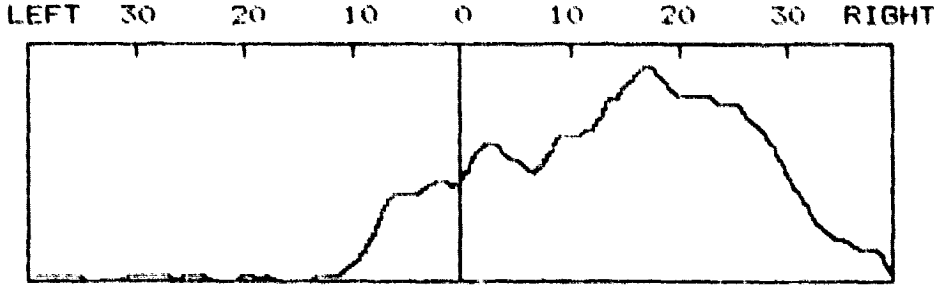
WIND SPEED = NA MPH WIND DIRECTION = NA DEG



PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 25 A/C MAKE/TYPE = C6

----- BOOM -----

SHAPE = RD POSITION = BEHIND

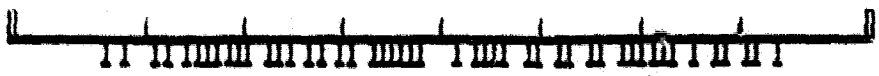
----- NOZZLE -----

TYPE = TURRET SIZE = 8 ANGLE = 120 DEG

----------WING SPAN = 43 FEET----------

LEFT BOOM LENGTH = 33.5 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

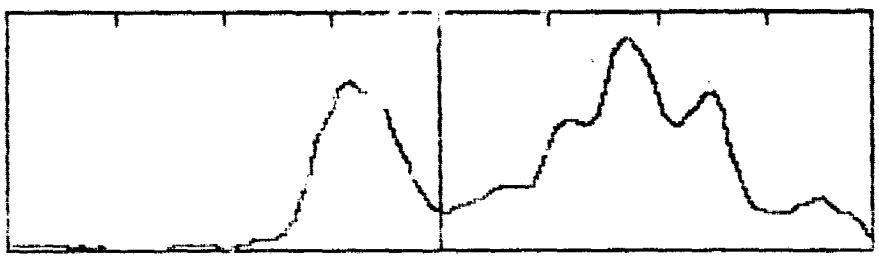


PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

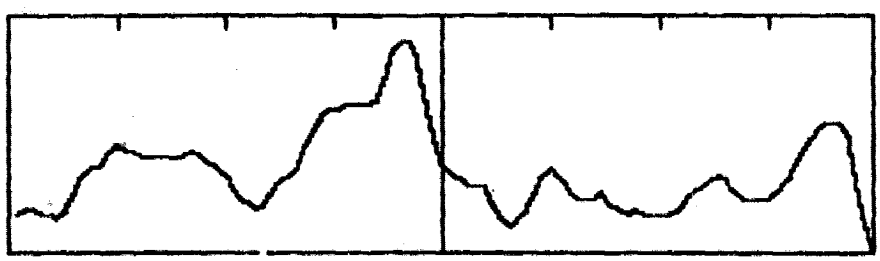
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 25-2 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = NA

----- NOZZLE -----

TYPE = TEEJETS SIZE = #8 ANGLE = 120 DEG

----------WING SPAN = 41.5 FEET----------

LEFT BOOM LENGTH = 32 FEET RIGHT

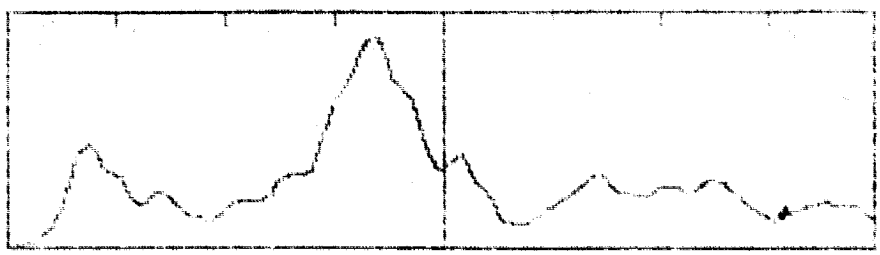
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

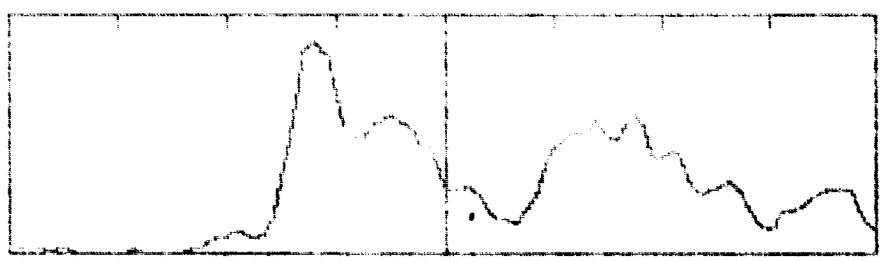


PASS NO 2B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

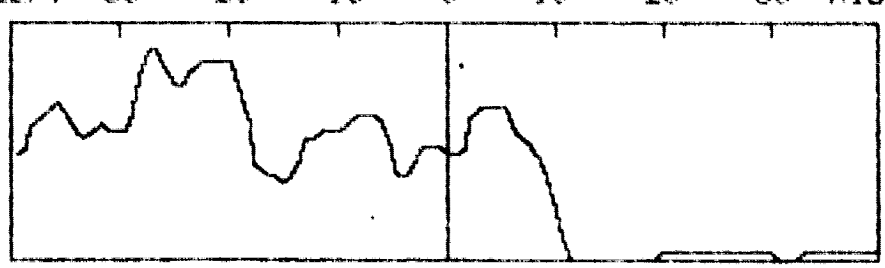


PASS NO 2C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 27 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = BELOW & BEHIND

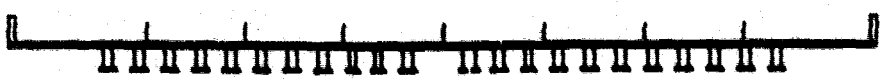
----- NOZZLE -----

TYPE = NA SIZE = 10-45 ANGLE = 180 DEG

----------WING SPAN = 42.3 FEET----------

LEFT BOOM LENGTH = 33.1 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

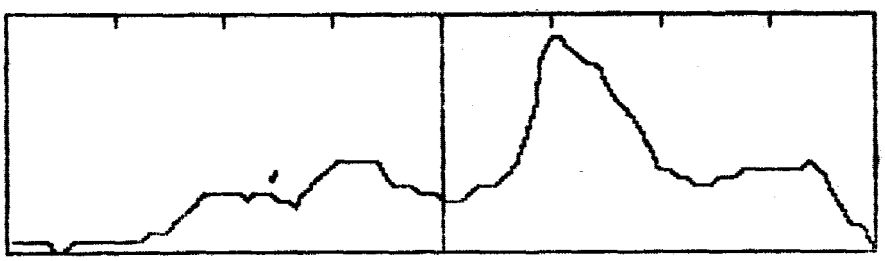


PASS NO 1A SPEED = NA MPH

ALTITUDE = 6 FT LATERAL DISPL = .5 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

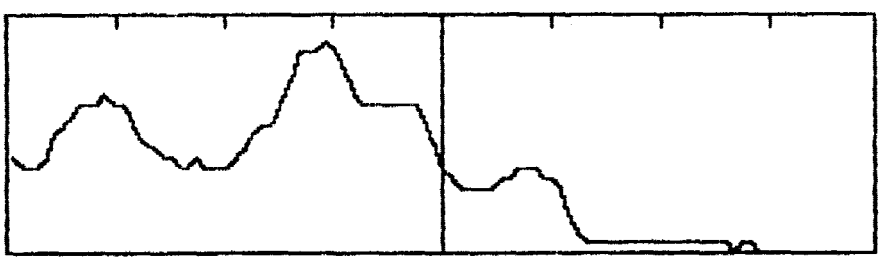


PASS NO 1B SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1C SPEED = NA MPH

ALTITUDE = 6.25 FT LATERAL DISPL = .5 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 28 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = BELOW & BEHIND

----- NOZZLE -----

TYPE = TURRET SIZE = 8 ANGLE = 180 DEG

----------WING SPAN = 38.4 FEET----------

LEFT BOOM LENGTH = 29 FEET RIGHT

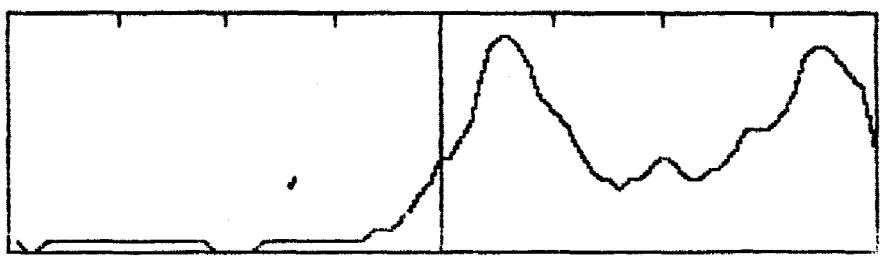
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

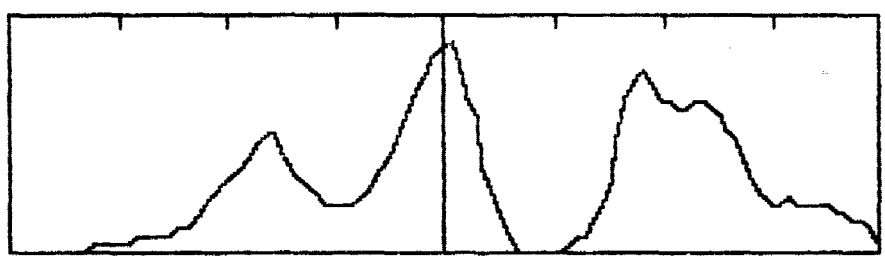


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

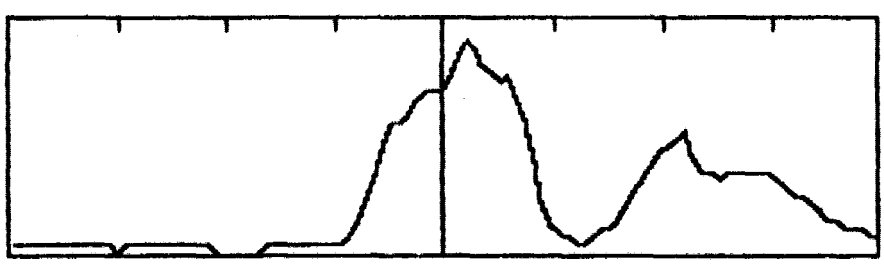


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 29 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = BELOW & BEHIND

----- NOZZLE -----

TYPE = TURRENT SIZE = 12 ANGLE = 90 DEG

----------WING SPAN = 41.2 FEET----------

LEFT BOOM LENGTH = 32.4 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 6 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

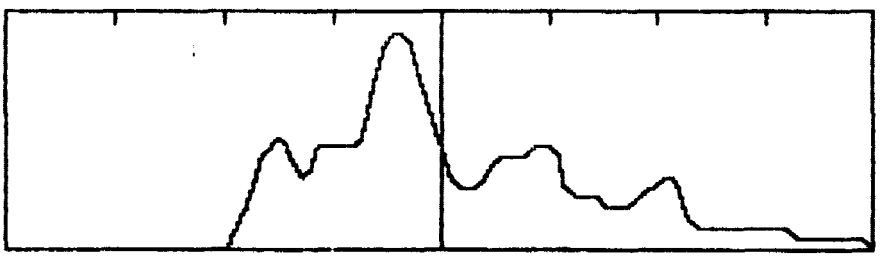
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1B SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 30 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = BELOW & BEHIND

----- NOZZLE -----

TYPE = TURRET SIZE = 8 ANGLE = 180 DEG

----------WING SPAN = 45.2 FEET----------

LEFT BOOM LENGTH = 35 FEET RIGHT

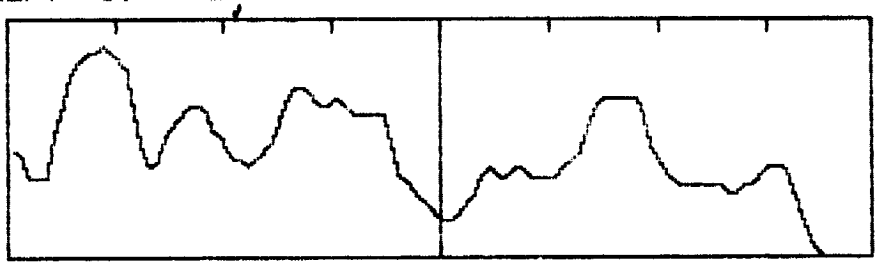
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1B SPEED = NA MPH

ALTITUDE = 8 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

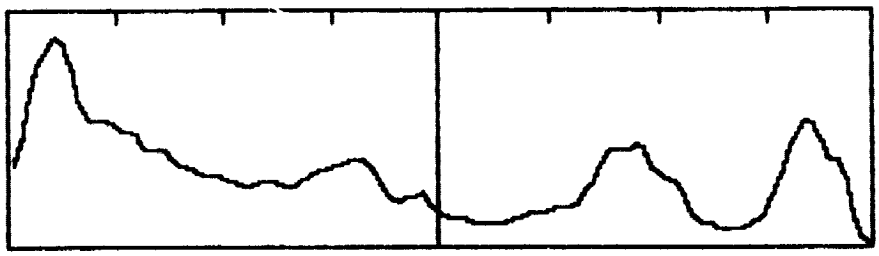


PASS NO 1C SPEED = NA MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 31 A/C MAKE/TYPE = PP

----- BOOM -----

SHAPE = RD POSITION = BELOW & BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 10-45 ANGLE = 170 DEG

----------WING SPAN = 37 FEET----------

LEFT BOOM LENGTH = 28.9 FEET RIGHT

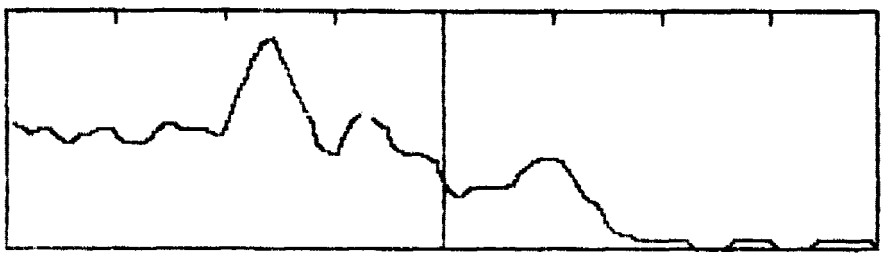
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 10 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

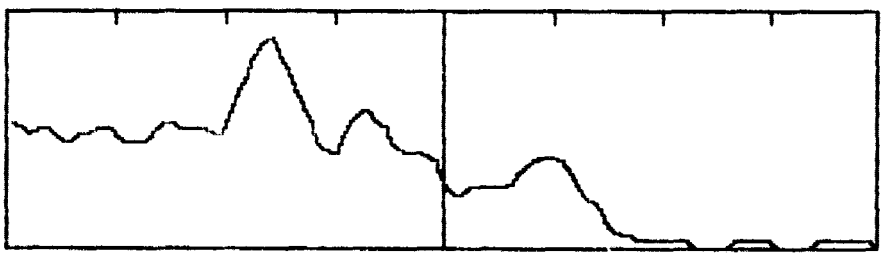


PASS NO 1B SPEED = NA MPH

ALTITUDE = 10.5 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1C SPEED = NA MPH

ALTITUDE = 9 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

OF POOR QUALITY

TEST NO = 32 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 8 ANGLE = 135 DEG

----------WING SPAN = 42.3 FEET----------

LEFT BOOM LENGTH = 32.3 FEET RIGHT

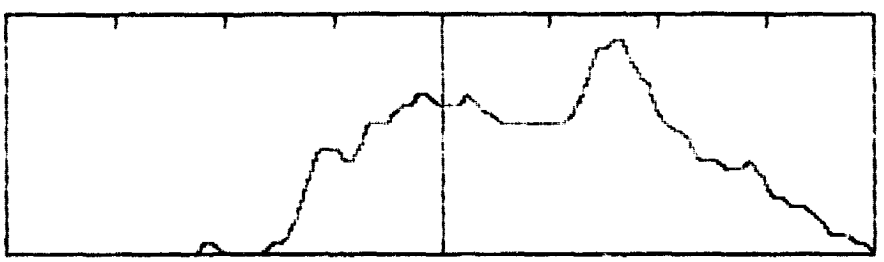
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

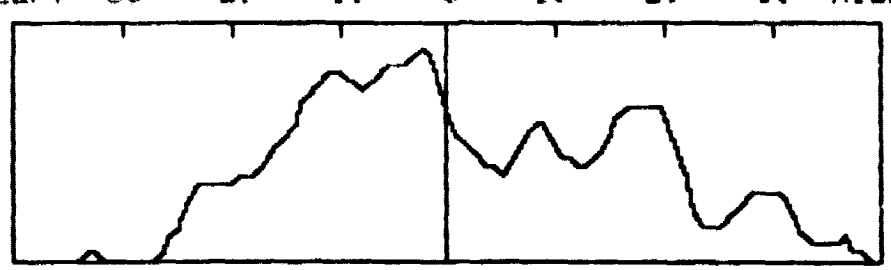


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 33-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = BELOW & BEHIND

----- NOZZLE -----

TYPE = TURRENT SIZE = 4 ANGLE = 135 DEG

----------WING SPAN = 42.3 FEET----------

LEFT BOOM LENGTH = 36.9 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 5.5 MPH WIND DIRECTION = 210 DEG

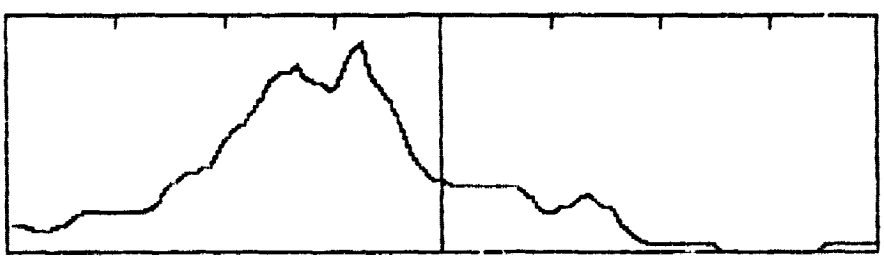
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1B SPEED = NA MPH

ALTITUDE = 4.5 FT LATERAL DISPL = .5 FT LEFT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 240 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

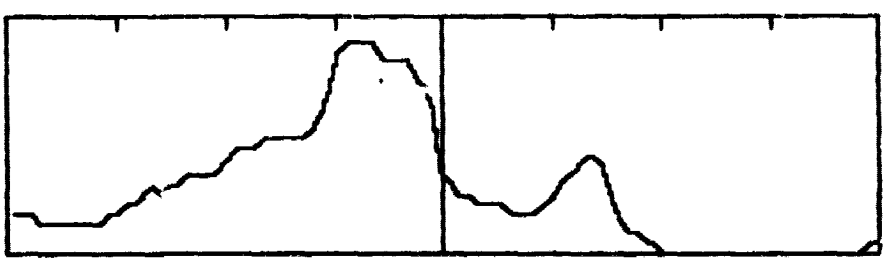


PASS NO 1C SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4.5 MPH WIND DIRECTION = 230 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 33-2 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = BELOW & BEHIND

----- NOZZLE -----

TYPE = TURRET SIZE = 4 ANGLE = 135 DEG

----------WING SPAN = 42.3 FEET----------

LEFT BOOM LENGTH = 36.9 FEET RIGHT

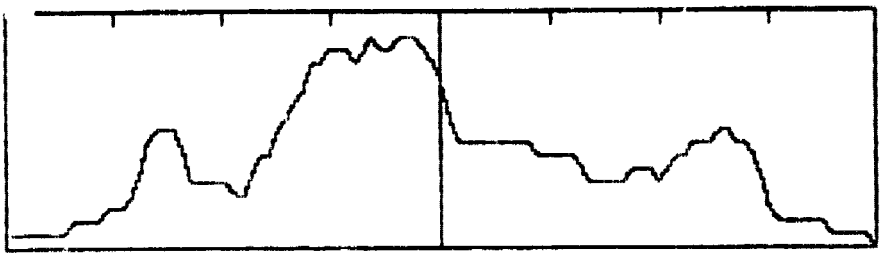
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 210 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

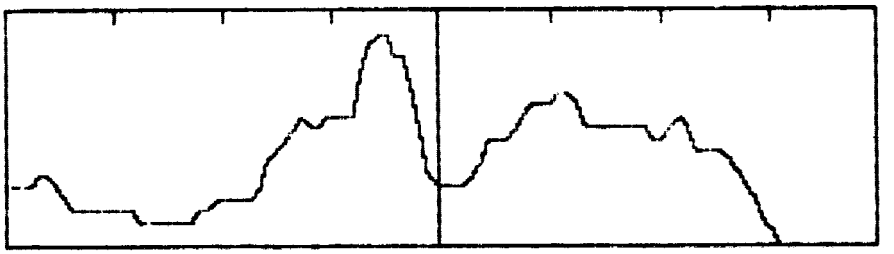


PASS NO 2B SPEED = NA MPH

ALTITUDE = 4.5 FT LATERAL DISPL = .5 FT RIGHT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 200 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

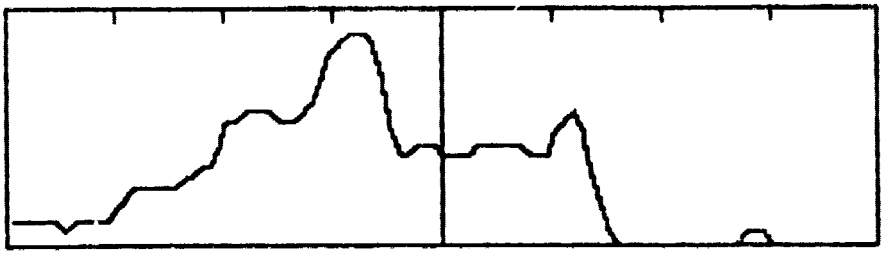


PASS NO 2C SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 200 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 34-1 A/C MAKE/TYPE = PP

----- BOOM -----

SHAPE = RD POSITION = BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 8 ANGLE = 135 DEG

----------WING SPAN = 35 FEET----------

LEFT BOOM LENGTH = 28.6 FEET RIGHT

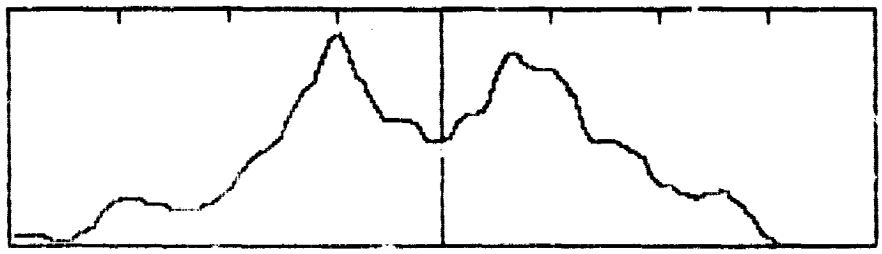
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 4 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

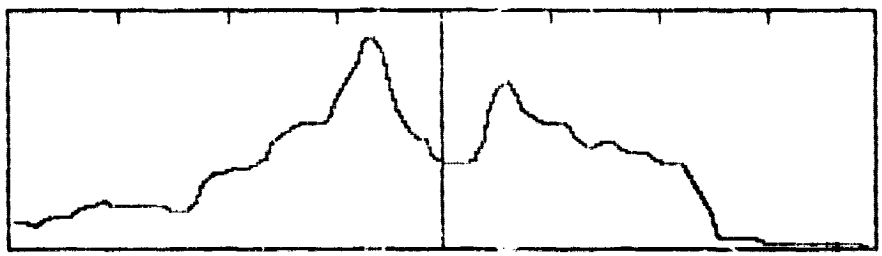


PASS NO 1B SPEED = NA MPH

ALTITUDE = 4 FT LATERAL DISPL = .5 FT LEFT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

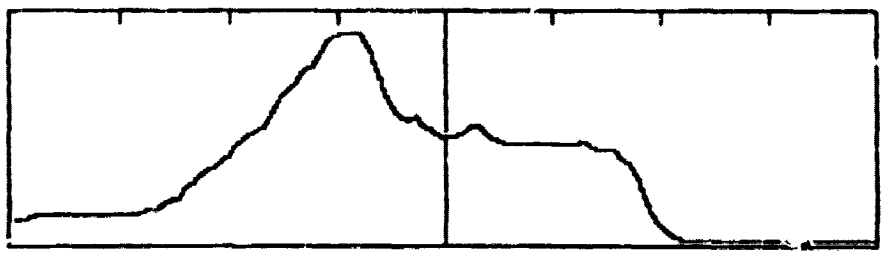


PASS NO 1C SPEED = NA MPH

ALTITUDE = 4 FT LATERAL DISPL = .5 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 34-3 A/C MAKE/TYPE = PP

----- BOOM -----

SHAPE = RD POSITION = BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 8 ANGLE = 135 DEG

----------WING SPAN = 35 FEET----------

LEFT BOOM LENGTH = 28.6 FEET RIGHT

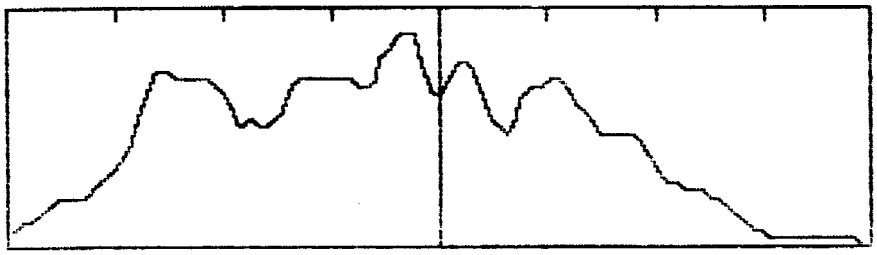
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 3A SPEED = NA MPH

ALTITUDE = 3.5 FT LATERAL DISPL = 3.5 FT LEFT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

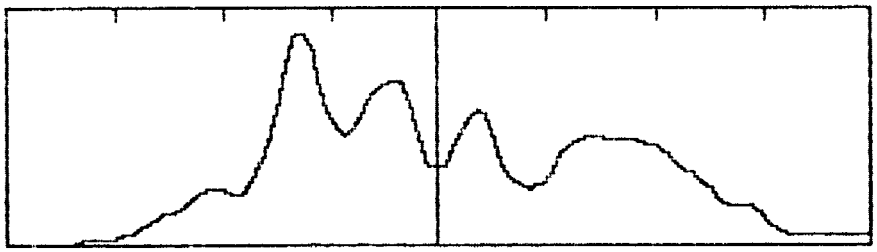


PASS NO 3B SPEED = NA MPH

ALTITUDE = 3.5 FT LATERAL DISPL = 1.5 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

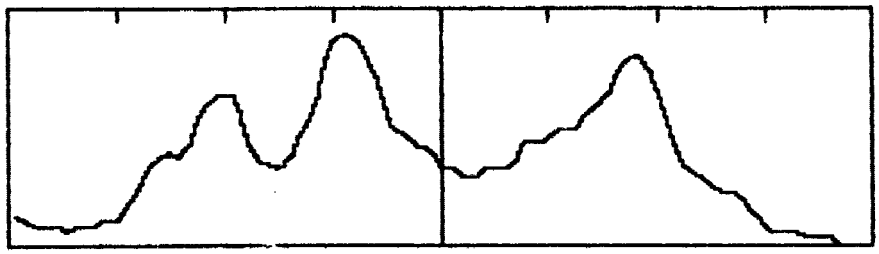


PASS NO 3C SPEED = NA MPH

ALTITUDE = 4 FT LATERAL DISPL = .5 FT RIGHT OF CL

WIND SPEED = 11 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 35-1 A/C MAKE/TYPE = C6

----- BOOM -----

SHAPE = RD POSITION = BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 10 ANGLE = 145 DEG

----------WING SPAN = 31.5 FEET----------

LEFT BOOM LENGTH = 26.7 FEET RIGHT

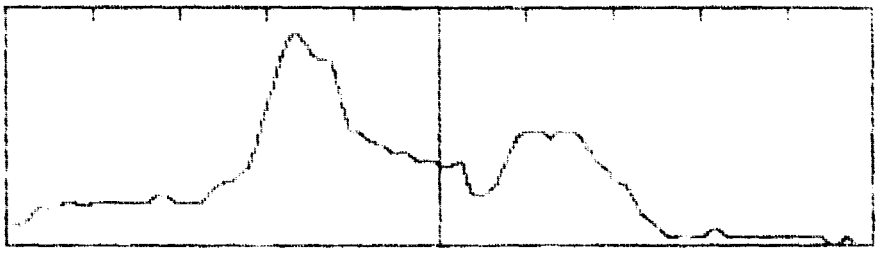
TIP 15 10 5 ℄ 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

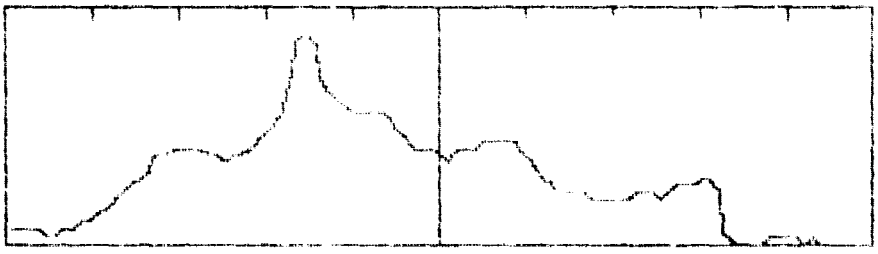


PASS NO 1B SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 200 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1C SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = .5 FT LEFT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 220 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

TEST NO = 36-1 A/C MAKE/TYPE = CS

ORIGINAL PAGE IS OF POOR QUALITY

----- BOOM -----

SHAPE = RD POSITION = BEHIND

------ NOZZLE ------

TYPE = TURRET SIZE = NA ANGLE = 145 DEG

----------WING SPAN = 34 FEET----------

LEFT BOOM LENGTH = 32.2 FEET RIGHT

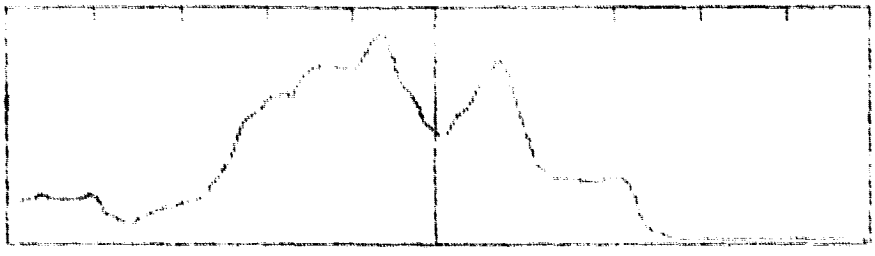
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 3A SPEED = NA MPH

ALTITUDE = 5.2 FT LATERAL DISPL = .3 FT RIGHT OF CL

WIND SPEED = 13 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

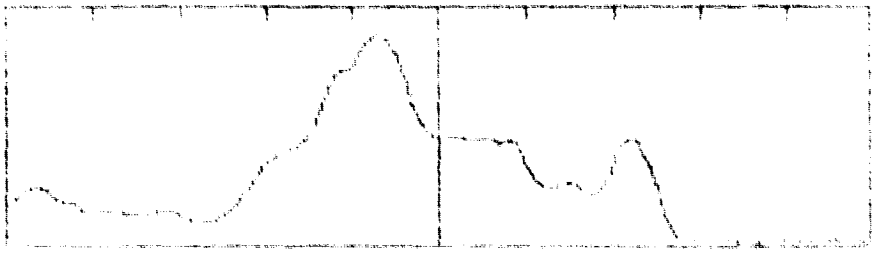


PASS NO 3B SPEED = NA MPH

ALTITUDE = [illegible] FT LATERAL DISPL = [illegible] FT RIGHT OF CL

WIND SPEED = [illegible] MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

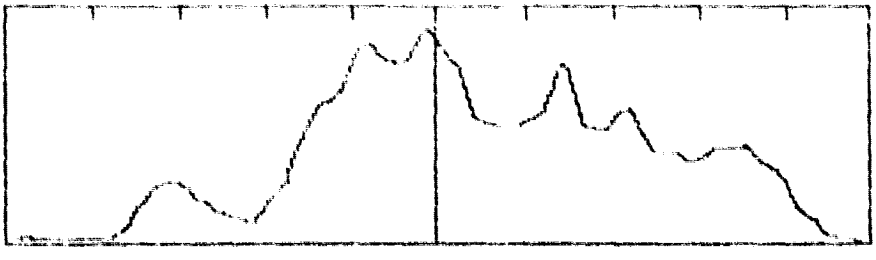


PASS NO 3C SPEED = NA MPH

ALTITUDE = 3.6 FT LATERAL DISPL = 1.6 FT RIGHT OF CL

WIND SPEED = 15 MPH WIND DIRECTION = 170 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 36-2 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = BEHIND

------ NOZZLE -----

TYPE = TURRET SIZE = NA ANGLE = 145 DEG

----------WING SPAN = 34 FEET----------

LEFT BOOM LENGTH = 32.2 FEET RIGHT

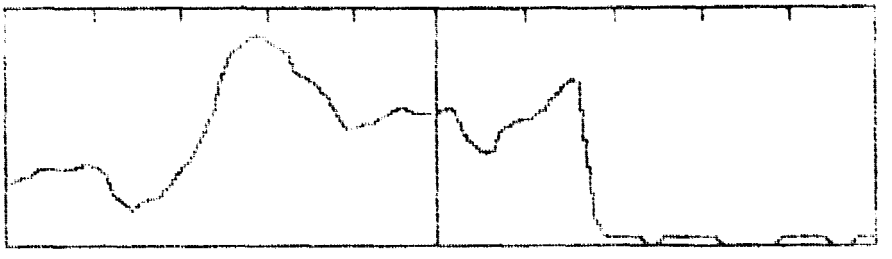
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 2.6 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 11 MPH WIND DIRECTION = 200 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

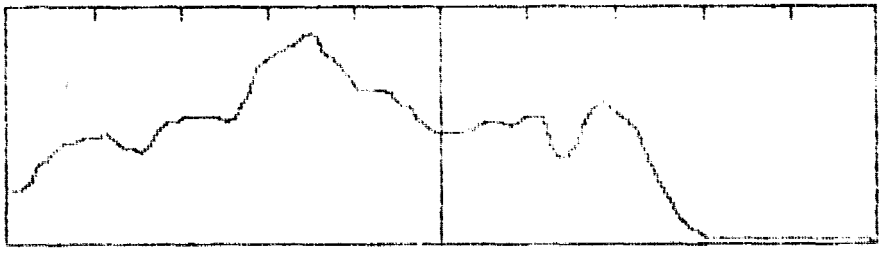


PASS NO 1B SPEED = NA MPH

ALTITUDE = 3.6 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

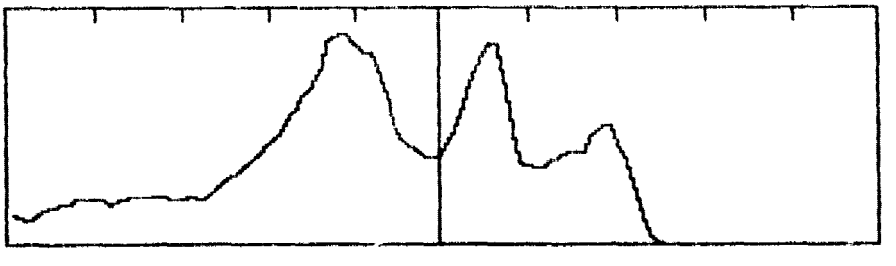


PASS NO 1C SPEED = NA MPH

ALTITUDE = 5.2 FT LATERAL DISPL = .3 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 37 A/C MAKE/TYPE = PP

----- BOOM -----

SHAPE = RD POSITION = BEHIND; BELOW

----- NOZZLE -----

TYPE = NA SIZE = 4-45 ANGLE = 135 DEG

----------WING SPAN = 34 FEET----------

LEFT BOOM LENGTH = 28.6 FEET RIGHT

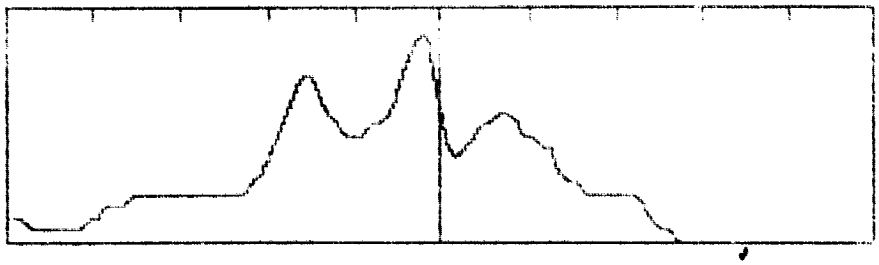
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 3.9 FT LATERAL DISPL = .3 FT LEFT OF CL

WIND SPEED = 4.5 MPH WIND DIRECTION = 230 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

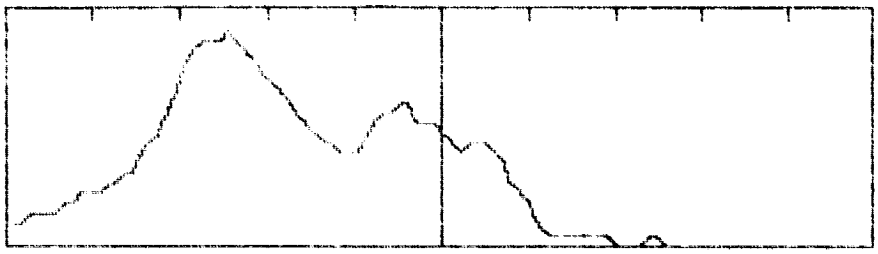


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1C SPEED = NA MPH

ALTITUDE = 3.9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 220 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

TEST NO = 38 A/C MAKE/TYPE = CS

ORIGINAL PAGE IS OF POOR QUALITY

----- BOOM -----

SHAPE = RD POSITION = BEHIND; ABOVE

----- NOZZLE -----

TYPE = TURRET SIZE = NA ANGLE = 100 DEG

----------WING SPAN = 33.8 FEET----------

LEFT BOOM LENGTH = 32.2 FEET RIGHT

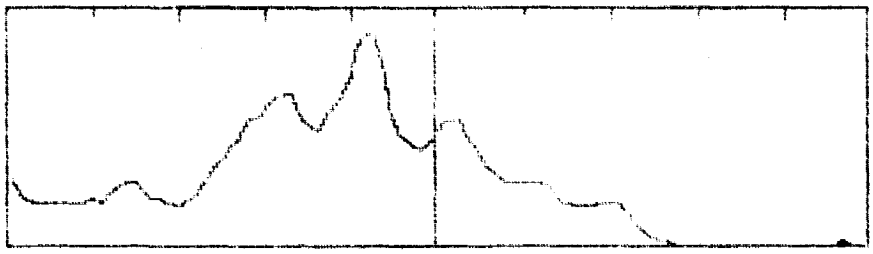
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 3.9 FT LATERAL DISPL = 3.3 FT LEFT OF CL

WIND SPEED = 4.5 MPH WIND DIRECTION = 220 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

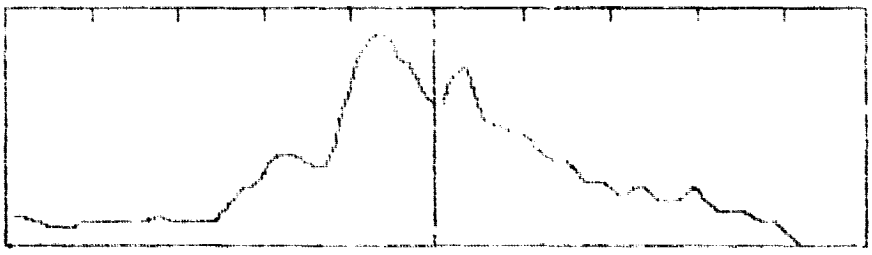


PASS NO 1B SPEED = NA MPH

ALTITUDE = 3.3 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 210 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

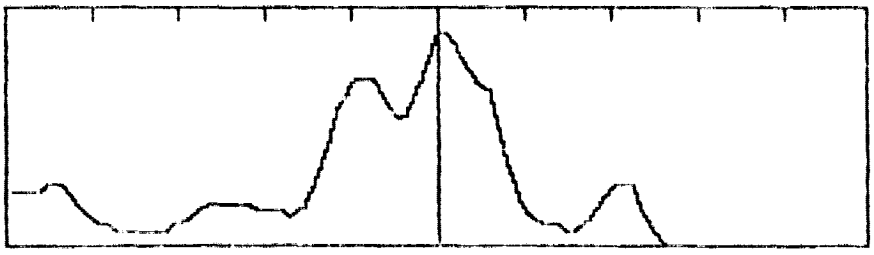


PASS NO 1C SPEED = NA MPH

ALTITUDE = 3 FT LATERAL DISPL = 3 FT LEFT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 230 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 40 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = BEHIND; ABOVE

----- NOZZLE -----

TYPE = NA SIZE = 8; 5 ANGLE = 180 DEG

----------WING SPAN = 40.7 FEET----------

LEFT BOOM LENGTH = 37.8 FEET RIGHT

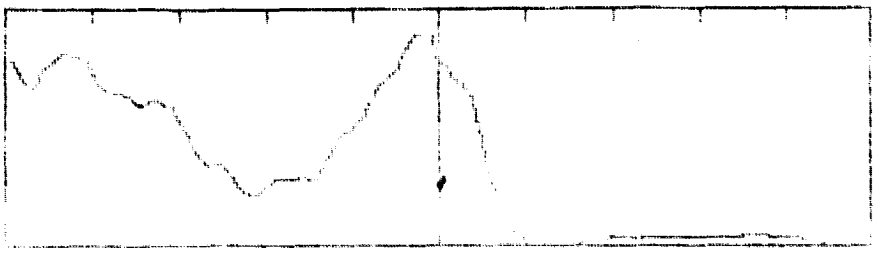
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

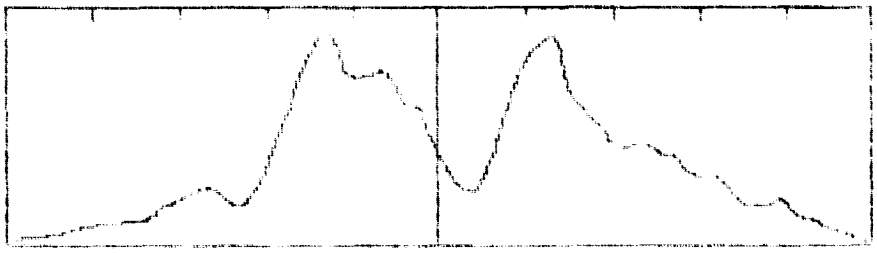


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

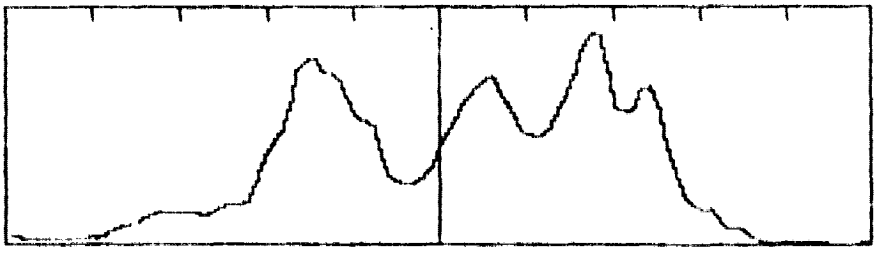


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 41 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = NA POSITION = NA

----- NOZZLE -----

TYPE = NA SIZE = 6-45 ANGLE = NA DEG

----------WING SPAN = 36.1 FEET----------

LEFT BOOM LENGTH = 29.5 FEET RIGHT

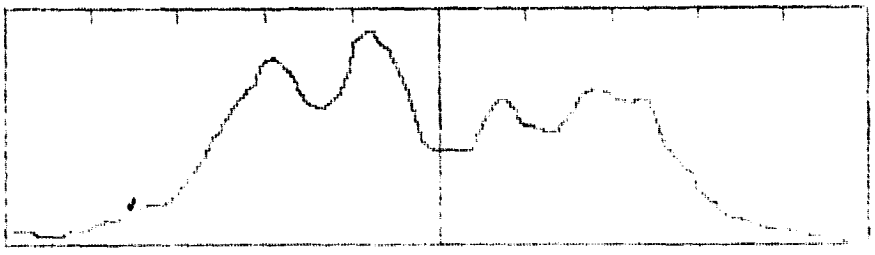
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

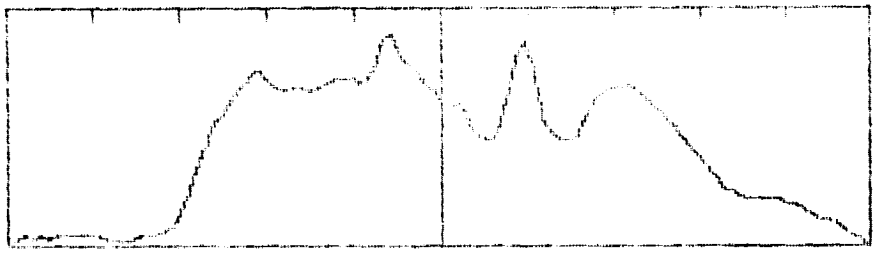


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

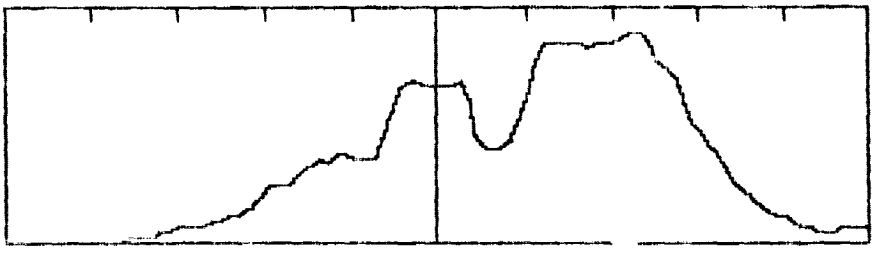


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 42 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = BEHIND; ABOVE

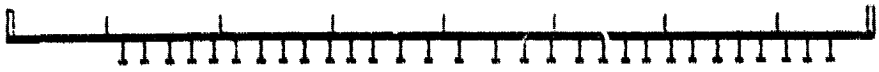
----- NOZZLE -----

TYPE = NA SIZE = 5 ANGLE = 150 DEG

----------WING SPAN = 38.6 FEET----------

LEFT BOOM LENGTH = 32.7 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

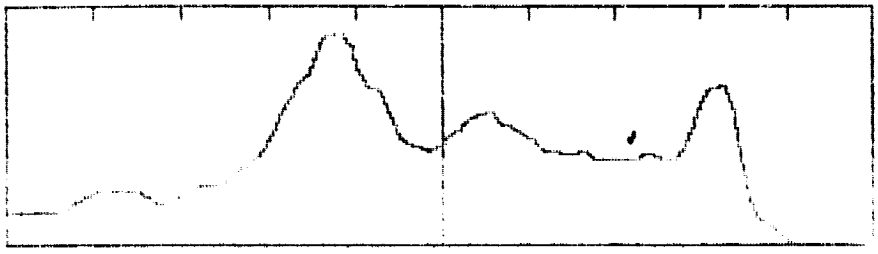


PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

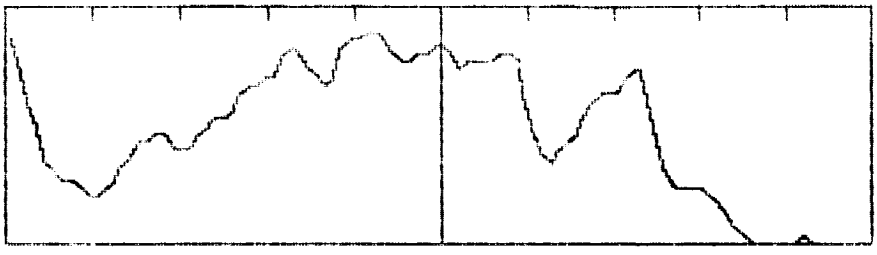


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

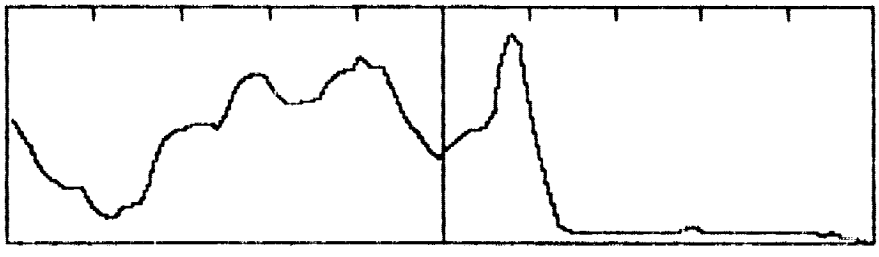


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 43 A/C MAKE/TYPE = C5

----- BOOM -----

SHAPE = AIRFOIL POSITION = BEHIND; BELOW

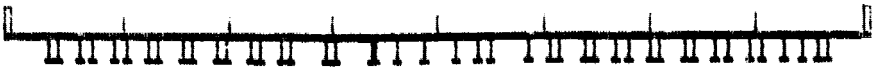
----- NOZZLE -----

TYPE = NA SIZE = 6; 10-45 ANGLE = 150 DEG

----------WING SPAN = 40.9 FEET----------

LEFT BOOM LENGTH = 36.9 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

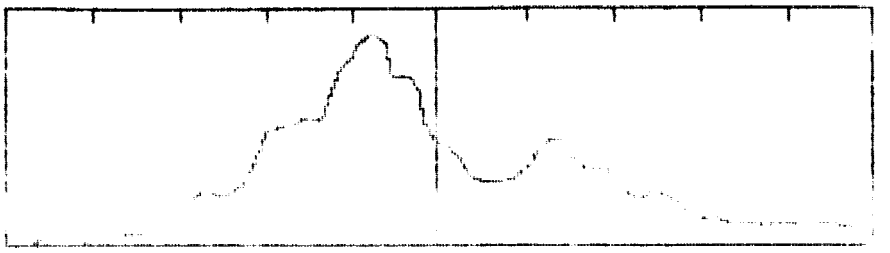


PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

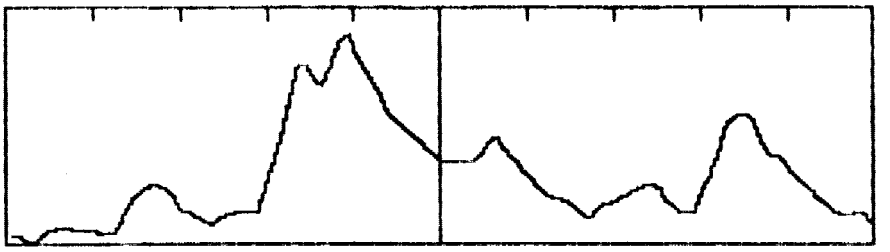
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 44-2. A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 4; 6; 10-45 ANGLE = 180 DEG

----------WING SPAN = 39.7 FEET----------

LEFT BOOM LENGTH = 37.3 FEET RIGHT

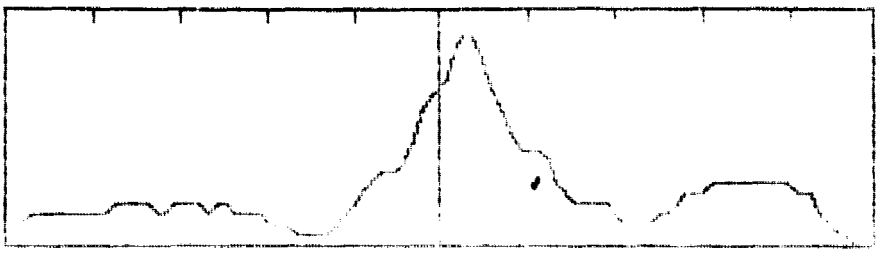
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 2B SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = .5 FT RIGHT OF CL

WIND SPEED = 4.5 MPH WIND DIRECTION = 210 DEG

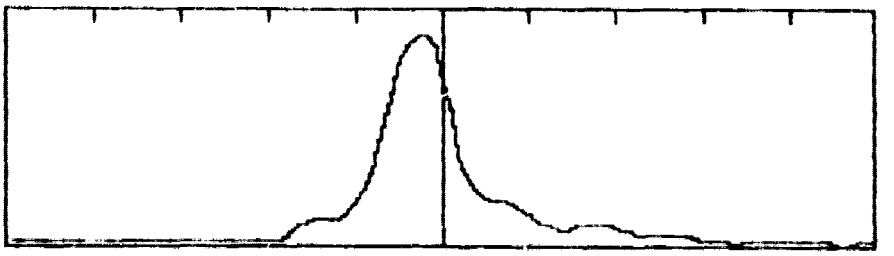
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 2C SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 3.5 MPH WIND DIRECTION = 170 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 44-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION BEHIND

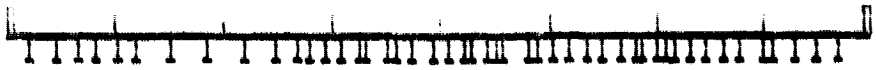
----- NOZZLE -----

TYPE = NA SIZE = 4; 6; 10-45 ANGLE = 180 DEG

----------WING SPAN = 39.7 FEET----------

LEFT BOOM LENGTH = 37.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

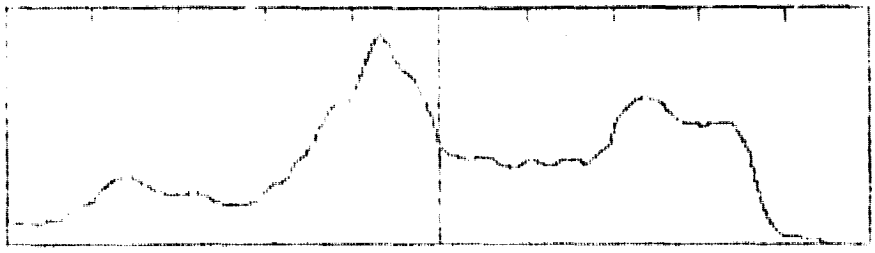


PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 3.5 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

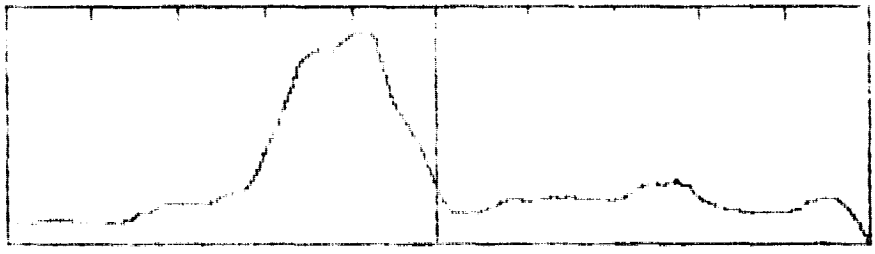


PASS NO 1B SPEED = NA MPH

ALTITUDE = 6.5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = .5 MPH WIND DIRECTION = 170 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

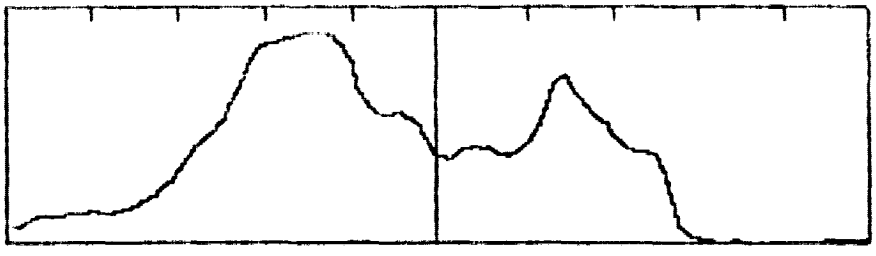


PASS NO 1C SPEED = NA MPH

ALTITUDE = 6.5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 210 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 45 . A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 4-50 ANGLE = 135 DEG

----------WING SPAN = 37.4 FEET----------

LEFT BOOM LENGTH = 30.2 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

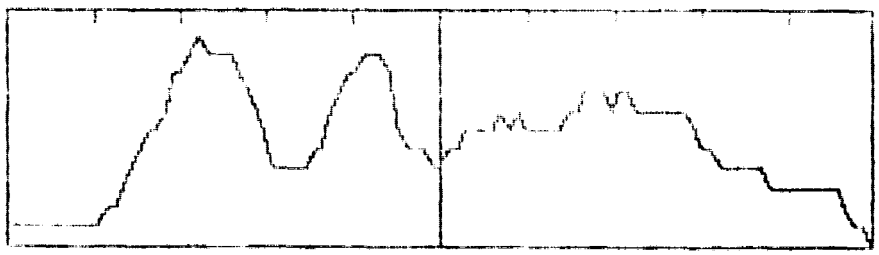
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

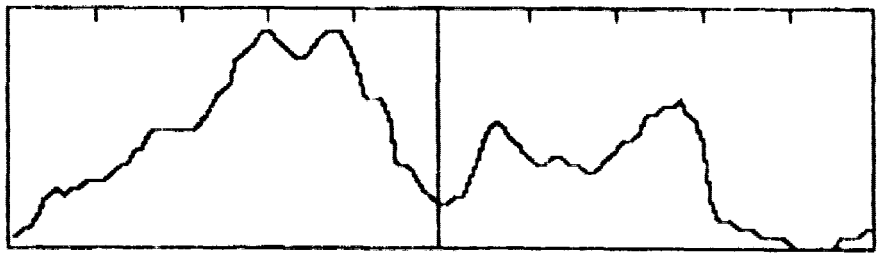


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 46-2 A/C MAKE/TYPE = TT

----- BOOM -----

SHAPE = AIRFOIL POSITION = BELOW & BEHIND

----- NOZZLE ----

TYPE = WHIRL JETS SIZE = B-10; #3 ANGLE = 180 DEG

----------WING SPAN = 44.6 FEET----------

LEFT BOOM LENGTH = 40.4 FEET RIGHT

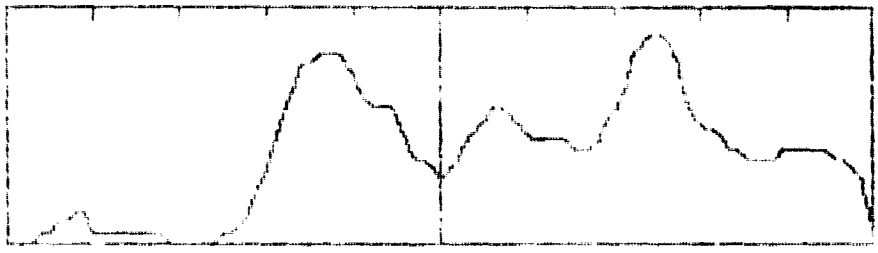
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

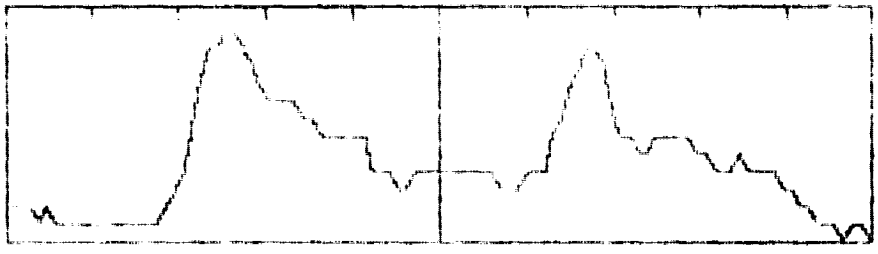


PASS NO 2B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

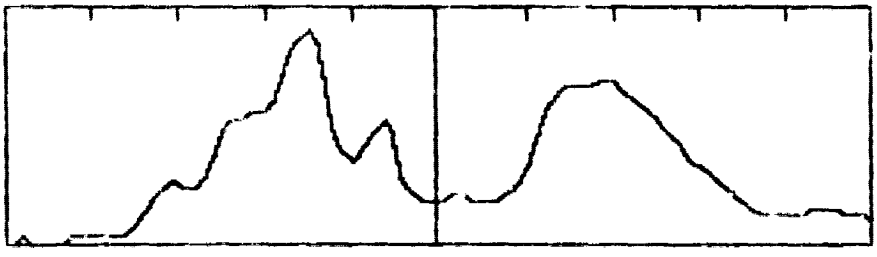


PASS NO 2C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 47 A/C MAKE/TYPE = B

----- BOOM -----

SHAPE = RD POSITION = NA

----- NOZZLE -----

TYPE = WHIRL JETS SIZE = 3; 5 ANGLE = NA DEG

----------WING SPAN = 37.2 FEET----------

LEFT BOOM LENGTH = 37 FEET RIGHT

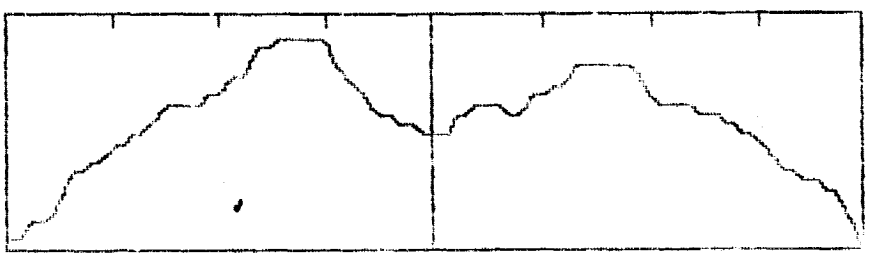
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 6 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = .5 MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

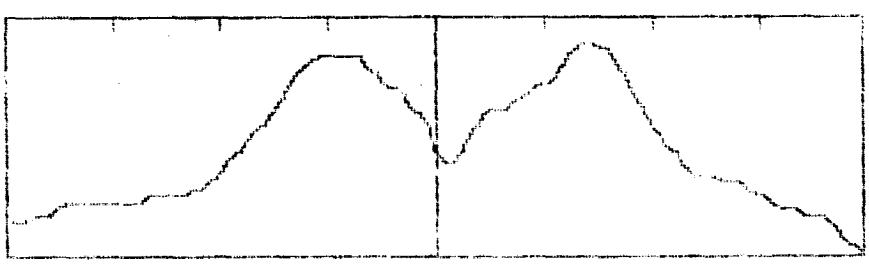


PASS NO 1B SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = .5 MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

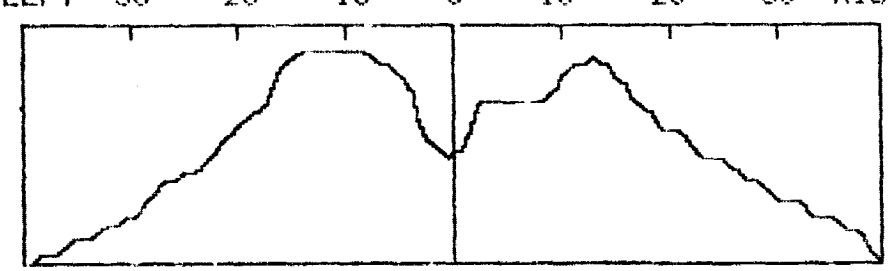


PASS NO 1C SPEED = NA MPH

ALTITUDE = 4 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = .5 MPH WIND DIRECTION = 140 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 49-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 8" BEHIND

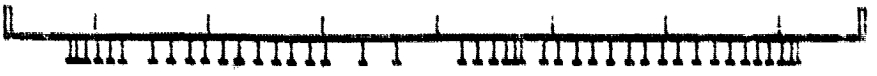
----- NOZZLE -----

TYPE = NA SIZE = 8-45 ANGLE = 135 DEG

----------WING SPAN = 37.4 FEET----------

LEFT BOOM LENGTH = 31.7 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

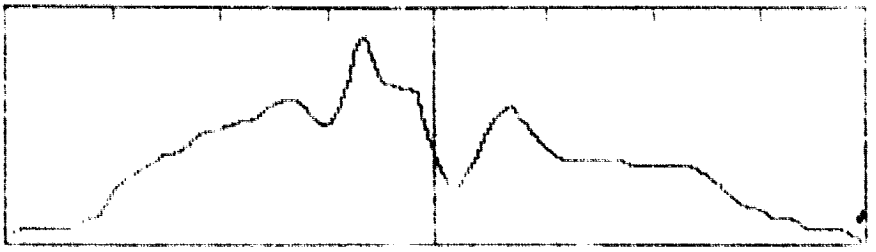


PASS NO 1A SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 4 FT LEFT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 170 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

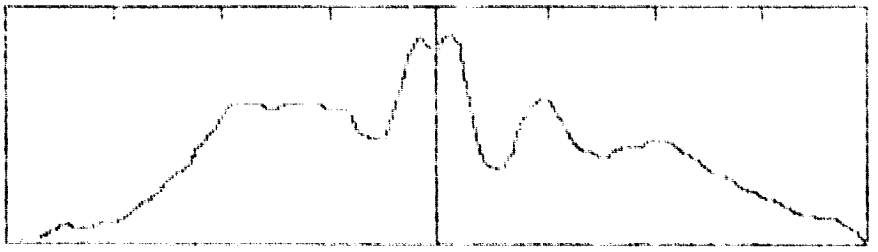


PASS NO 1B SPEED = NA MPH

ALTITUDE = 3 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 1.5 MPH WIND DIRECTION = 160 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

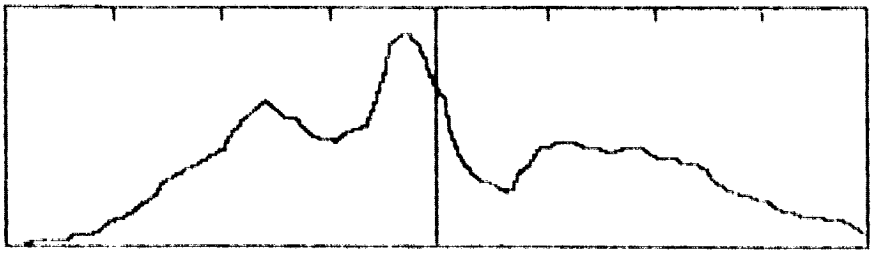


PASS NO 1C SPEED = NA MPH

ALTITUDE = 4 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 1.5 MPH WIND DIRECTION = 160 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 49-2 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 8" BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 8-45 ANGLE = 135 DEG

----------WING SPAN = 37.4 FEET----------

LEFT ROOM LENGTH = 31.7 FEET RIGHT

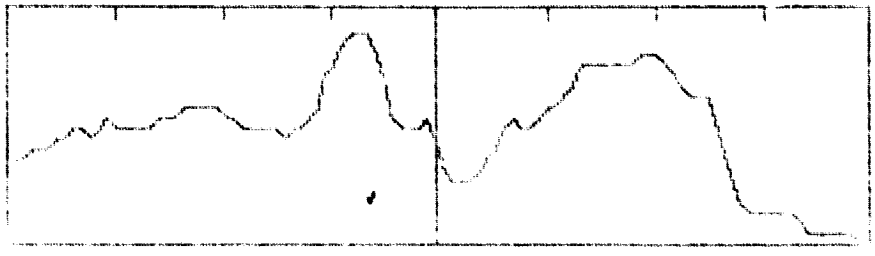
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = NA MPH

ALTITUDE = 4 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 140 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

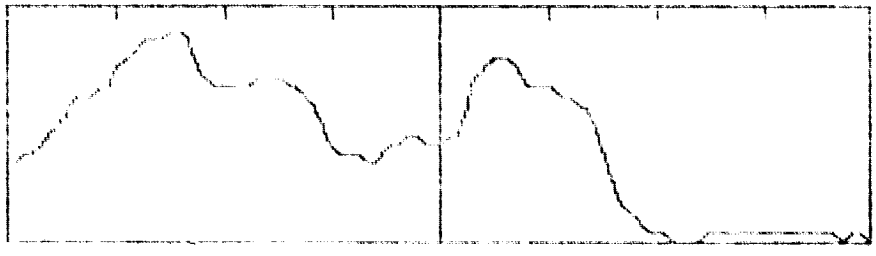


PASS NO [illegible] SPEED = NA MPH

ALTITUDE = 6 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 90 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

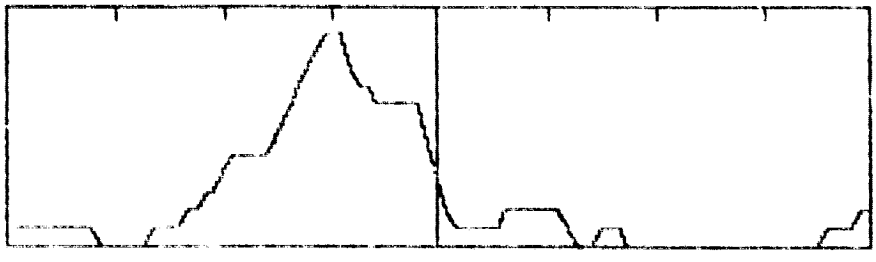


PASS NO 2C SPEED = NA MPH

ALTITUDE = 4 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



OF POOR QUALITY

TEST NO = 50-1 A/C MAKE/TYPE = PP

------ BOOM ------

SHAPE = RD POSITION = NA

------ NOZZLE ------

TYPE = NA SIZE = 7-45 ANGLE = 135 DEG

----------WING SPAN = 36.4 FEET----------

LEFT BOOM LENGTH = 29.3 FEET RIGHT

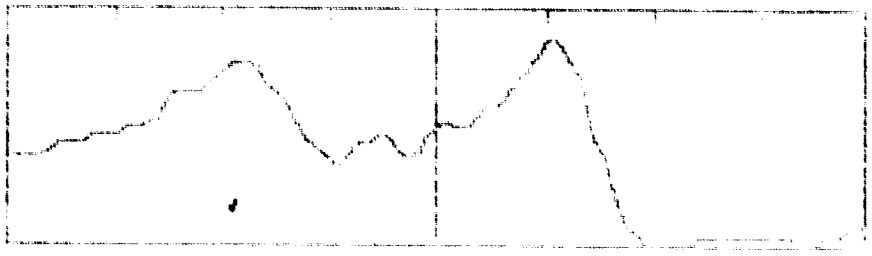
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 16 SPEED = NA MPH

ALTITUDE = 10 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 310 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

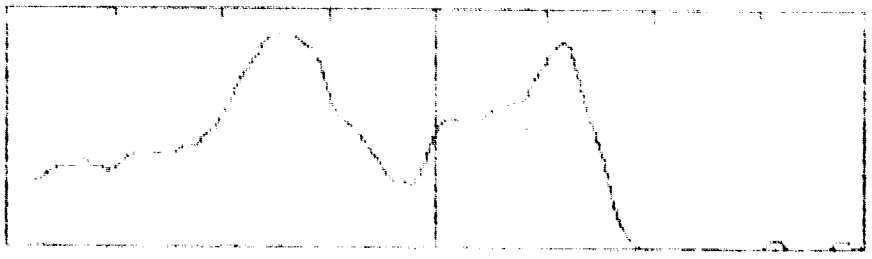


PASS NO 17 SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

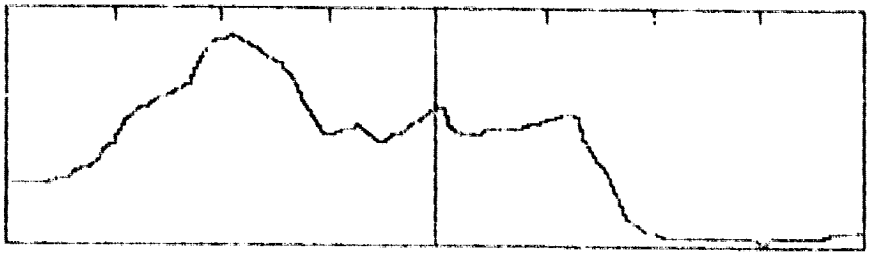


PASS NO 18 SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS OF POOR QUALITY

TEST NO = 50-2 A/C MAKE/TYPE = PP

----- BOOM -----

SHAPE = RD POSITION = NA

----- NOZZLE -----

TYPE = NA SIZE = 7-45 ANGLE = 135 DEG

----------WING SPAN = 36.4 FEET----------

LEFT BOOM LENGTH = 29.3 FEET RIGHT

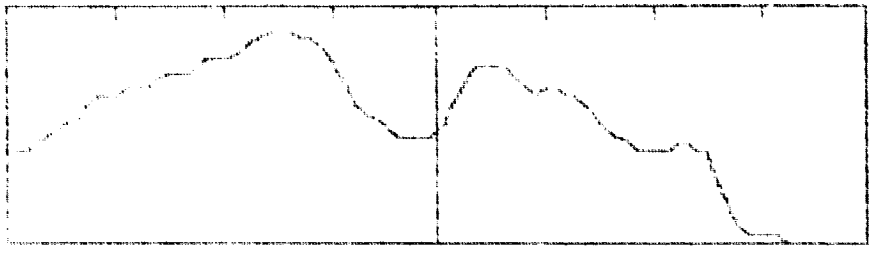
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = NA MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 230 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

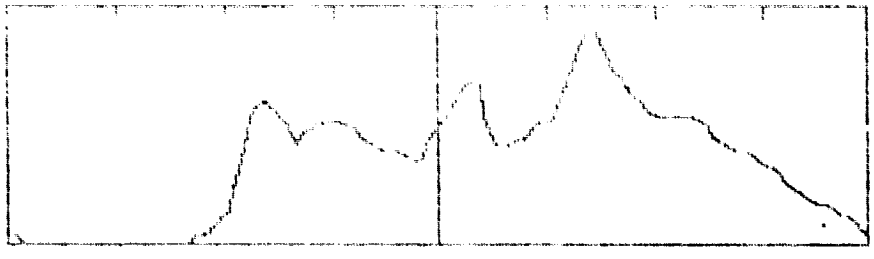


PASS NO 2B SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

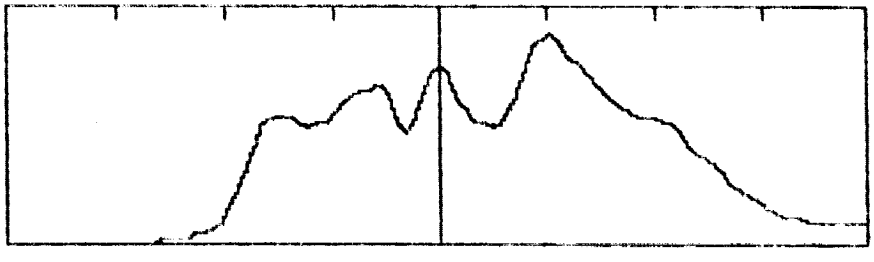


PASS NO 2C SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 51 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = RD POSITION = 5" BEHIND

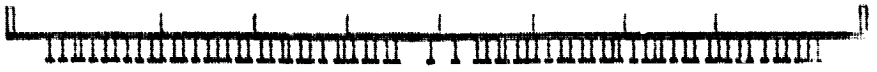
----- NOZZLE -----

TYPE = NA SIZE = 8-45 ANGLE = NA DEG

----------WING SPAN = 45.1 FEET----------

LEFT BOOM LENGTH = 40.2 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

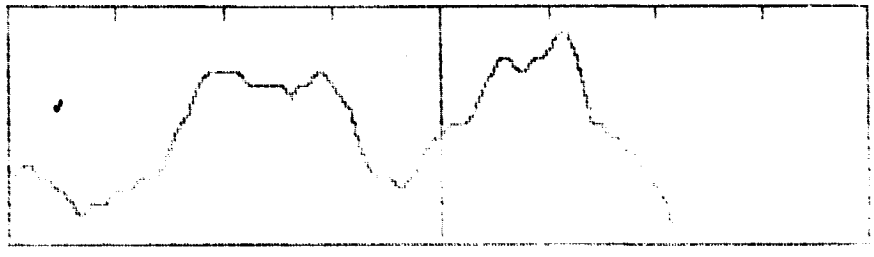


PASS NO 1B SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 1.5 MPH WIND DIRECTION = 90 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

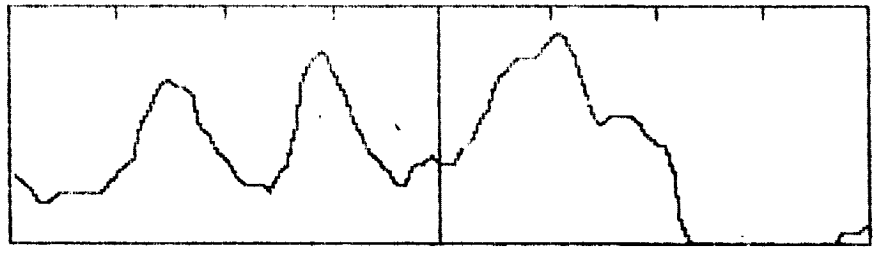


PASS NO 1C SPEED = NA MPH

ALTITUDE = 6 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 7.5 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 52 A/C MAKE/TYPE = N

----- BOOM -----

SHAPE = RD POSITION = 9.5" BEHIND

----- NOZZLE -----

TYPE = FLOOD SIZE = TK-5 ANGLE = 135 DEG

----------WING SPAN = 38.4 FEET----------

LEFT BOOM LENGTH = 30 FEET RIGHT

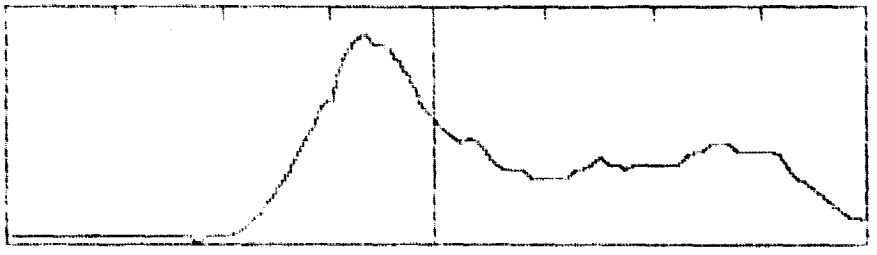
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 8 FT LATERAL DISPL = 3 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

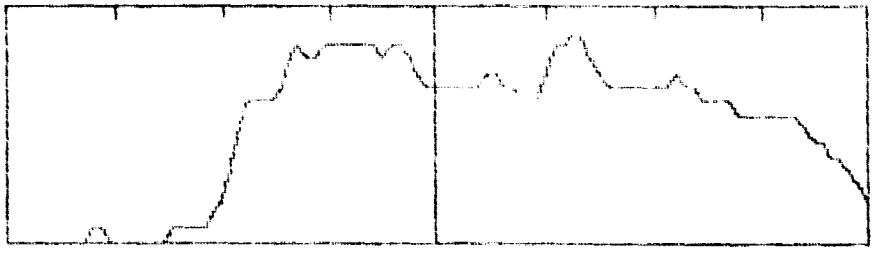


PASS NO 1B SPEED = NA MPH

ALTITUDE = 8 FT LATERAL DISPL = 5 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 210 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

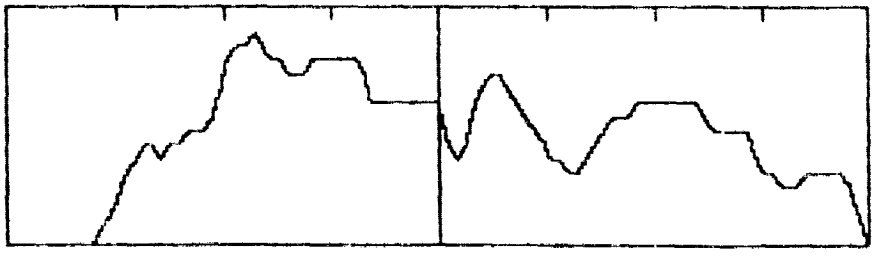


PASS NO 1C SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 5.5 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 53-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 5" BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 10-45 ANGLE = 150 DEG

----------WING SPAN = 40.4 FEET----------

LEFT ROOM LENGTH = 38.1 FEET RIGHT

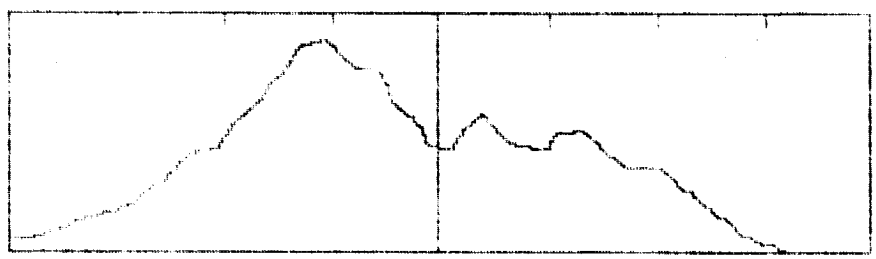
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 6 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

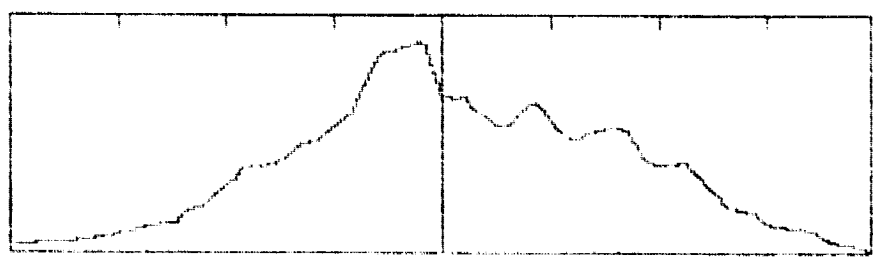


PASS NO 1B SPEED = NA MPH

ALTITUDE = 6 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 1.5 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

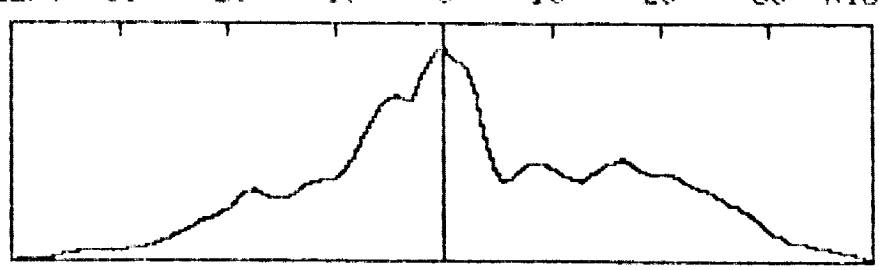


PASS NO 1C SPEED = NA MPH

ALTITUDE = 4.5 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 53-2 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 5" BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 8-45 ANGLE = 150 DEG

----------WING SPAN = 40.4 FEET----------

LEFT BOOM LENGTH = 38.1 FEET RIGHT

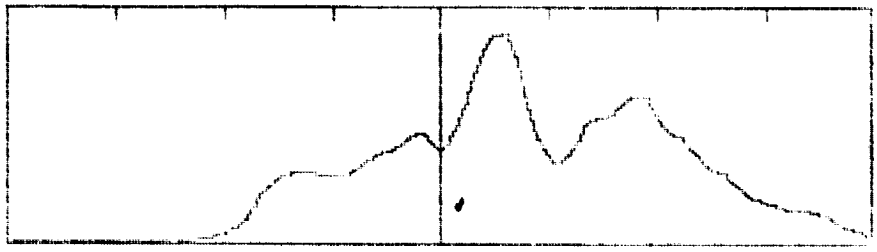
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = NA MPH

ALTITUDE = 4 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 140 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

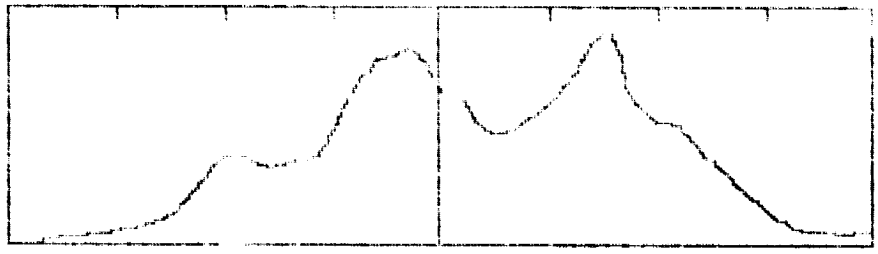


PASS NO 2C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

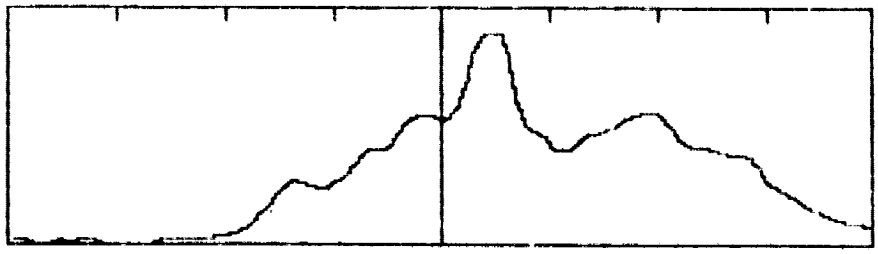


PASS NO 2B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 54 A/C MAKE/TYPE = A1

----- BOOM -----

SHAPE = AIRFOIL POSITION = 6" BEHIND; 10.5" BELOW

----- NOZZLE -----

TYPE = WHIRL JETS SIZE = 10 ANGLE = 180 DEG

----------WING SPAN = 44.9 FEET----------

LEFT BOOM LENGTH = 40.1 FEET RIGHT

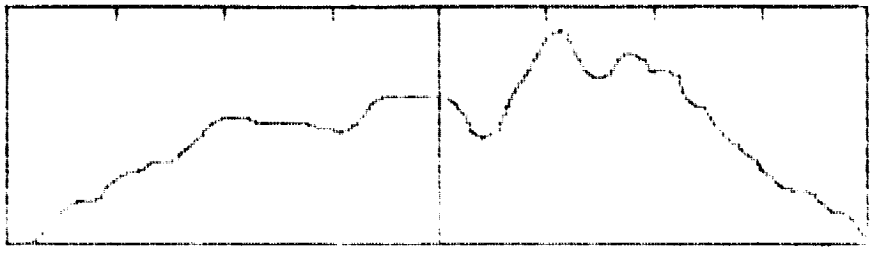
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 8 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = .5 MPH WIND DIRECTION = 200 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

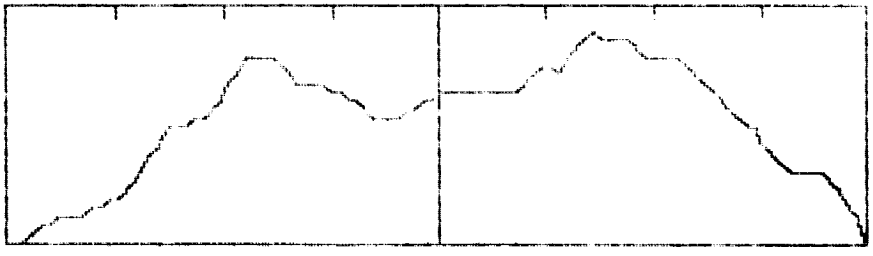


PASS NO 1B SPEED = NA MPH

ALTITUDE = 10 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = .5 MPH WIND DIRECTION = 160 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1C SPEED = NA MPH

ALTITUDE = 8 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

ORIGINAL PAGE IS OF POOR QUALITY

TEST NO = 55 A/C MAKE/TYPE = H

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

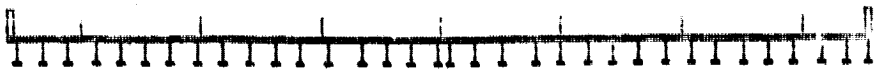
----- NOZZLE -----

TYPE = NA SIZE = 6-46 ANGLE = NA DEG

----------WING SPAN = 35.6 FEET----------

LEFT BOOM LENGTH = 35.6 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

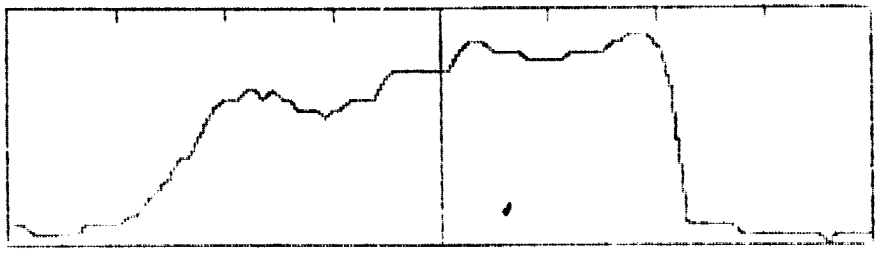


PASS NO 1A SPEED = NA MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 1.5 MPH WIND DIRECTION = 200 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

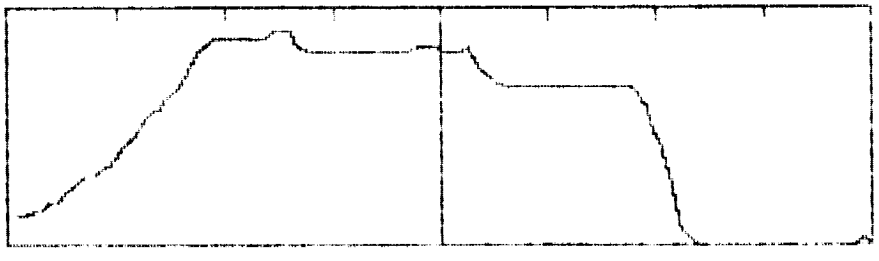


PASS NO [illegible] SPEED = NA MPH

ALTITUDE = 6 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

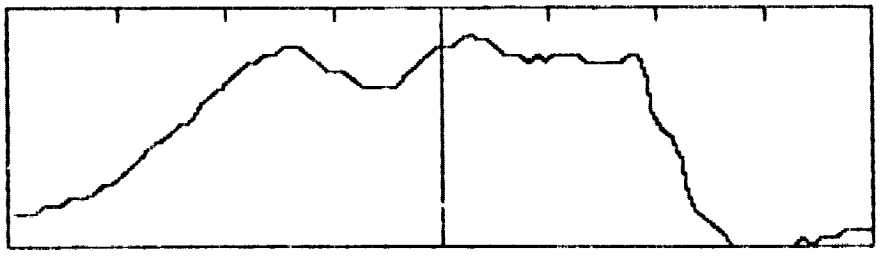


PASS NO 1C SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 2.5 MPH WIND DIRECTION = 90 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 56 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 8" BEHIND; 10" BELOW

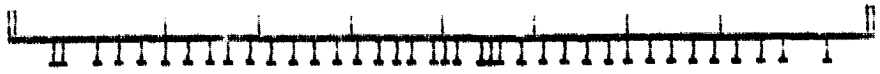
----- NOZZLE -----

TYPE = NA SIZE = 8 ANGLE = NA DEG

----------WING SPAN = 45.3 FEET----------

LEFT BOOM LENGTH = 40.6 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

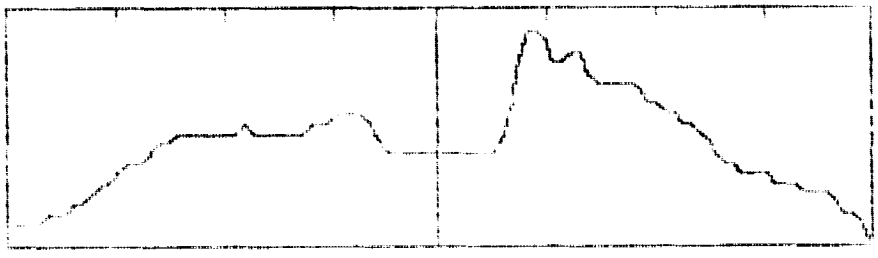


PASS NO 1A SPEED = NA MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 1.5 MPH WIND DIRECTION = 170 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

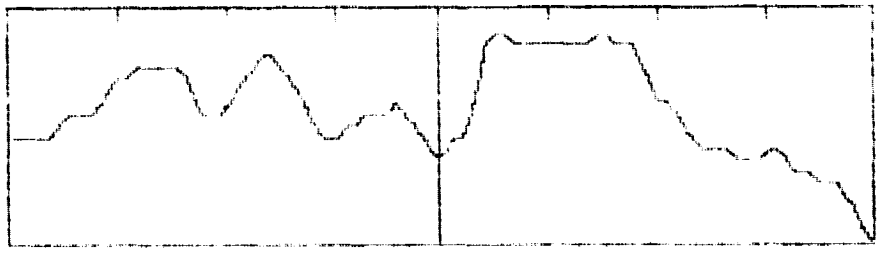


PASS NO 1B SPEED = NA MPH

ALTITUDE = 11 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 140 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

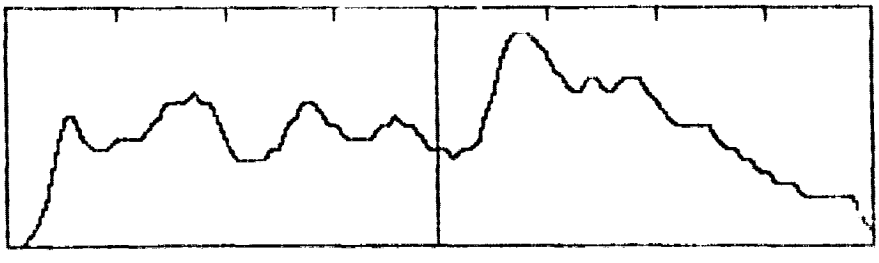


PASS NO 1C SPEED = NA MPH

ALTITUDE = 15 FT LATERAL DISPL = 3 FT LEFT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 120 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 57 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 5" BEHIND

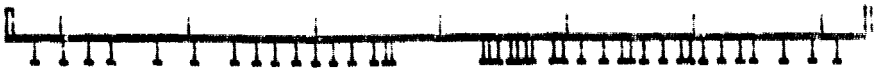
----- NOZZLE -----

TYPE = NA SIZE = 8 ANGLE = 135 DEG

----------WING SPAN = 33.8 FEET----------

LEFT BOOM LENGTH = 31.4 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

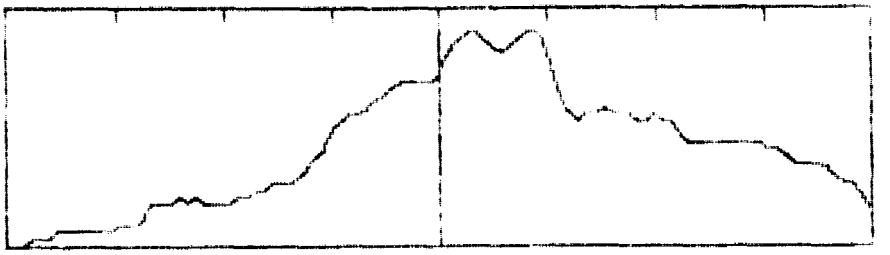


PASS NO 1A SPEED = NA MPH

ALTITUDE = 12 FT LATERAL DISPL = 6 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 160 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

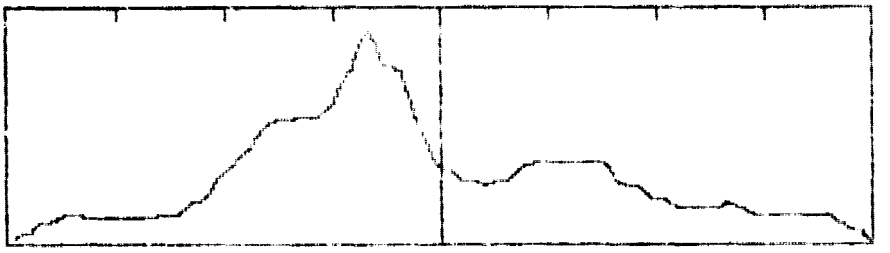


PASS NO 1B SPEED = NA MPH

ALTITUDE = 11 FT LATERAL DISPL = 4 FT LEFT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 160 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

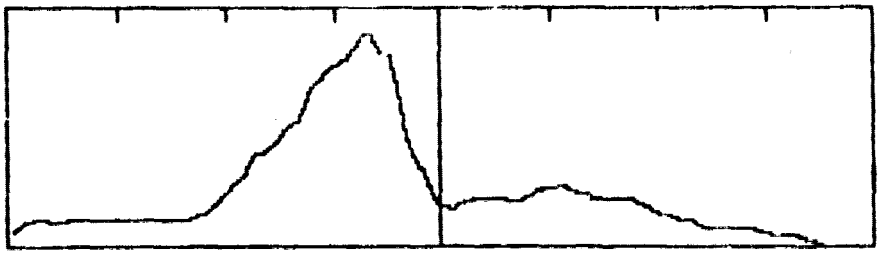


PASS NO 1C SPEED = NA MPH

ALTITUDE = 9 FT LATERAL DISPL = 3 FT LEFT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 170 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 58 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 6" BEHIND

----- NOZZLE -----

TYPE = TEEJETS SIZE = NA ANGLE = 135 DEG

----------WING SPAN = 38.4 FEET----------

LEFT BOOM LENGTH = 30 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

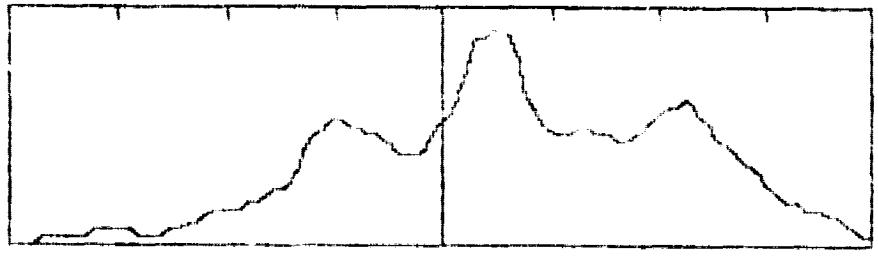
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1B SPEED = NA MPH

ALTITUDE = 6 FT LATERAL DISPL = 3 FT RIGHT OF CL

WIND SPEED = 1.5 MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

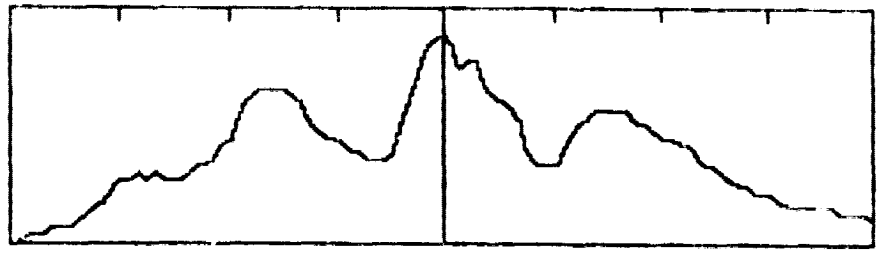


PASS NO 1C SPEED = NA MPH

ALTITUDE = 4 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 59 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 5" BEHIND

----- NOZZLE -----

TYPE = TEEJETS SIZE = 6 ANGLE = 135 DEG

----------WING SPAN = 41.3 FEET----------

LEFT BOOM LENGTH = 38.6 FEET RIGHT

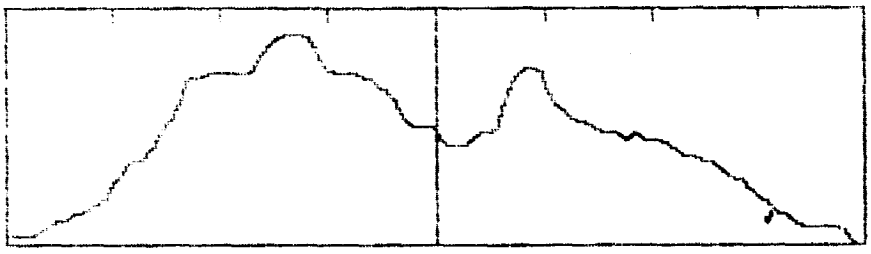
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

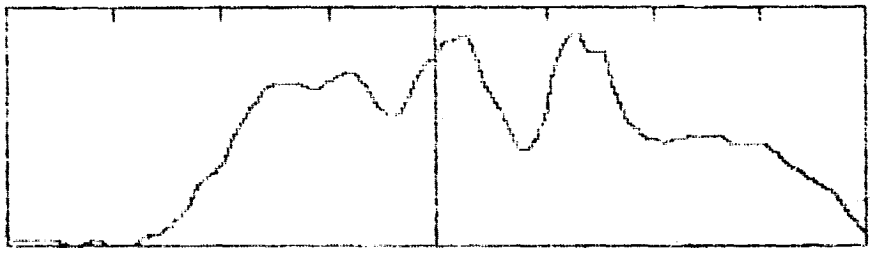


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

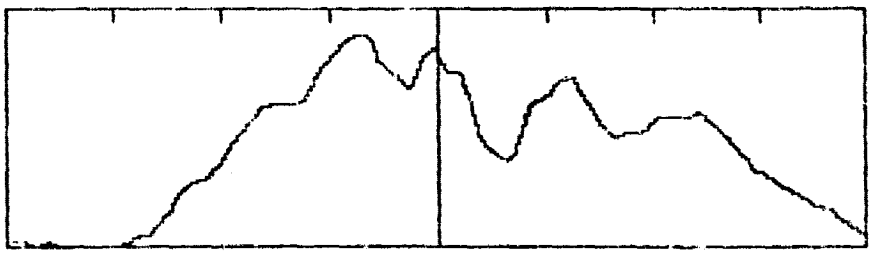


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 60 A/C MAKE/TYPE = AC

------ BOOM ------

SHAPE = RD POSITION = 5" BEHIND

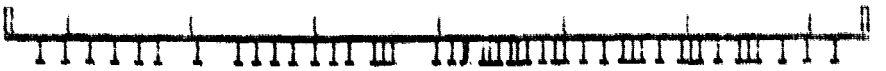
------ NOZZLE ------

TYPE = NA SIZE = 6 ANGLE = NA DEG

----------WING SPAN = 34.1 FEET----------

LEFT BOOM LENGTH = 31.4 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

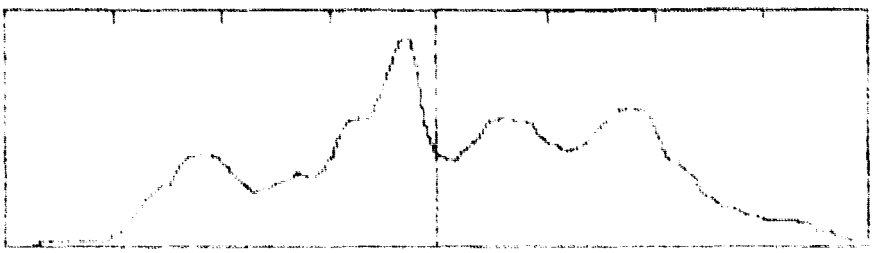


PASS NO 1A SPEED = NA MPH

ALTITUDE = 9 FT LATERAL DISPL = 4 FT LEFT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 90 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

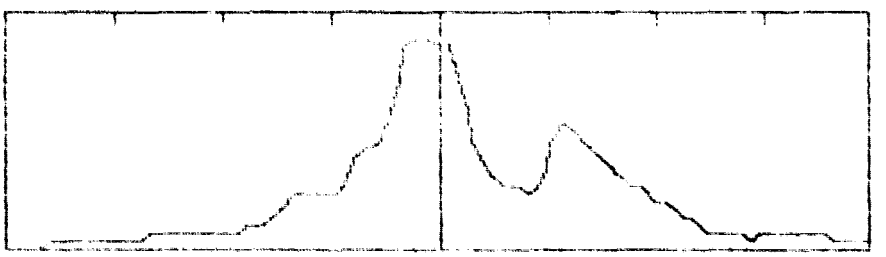


PASS NO 1B SPEED = NA MPH

ALTITUDE = 8 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 1.5 MPH WIND DIRECTION = 90 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

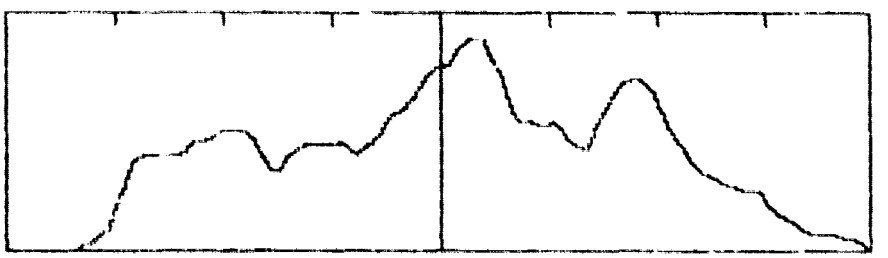


PASS NO 1C SPEED = NA MPH

ALTITUDE = 12 FT LATERAL DISPL = 3 FT LEFT OF CL

WIND SPEED = 1.5 MPH WIND DIRECTION = 170 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 61-1 A/C MAKE/TYPE = TT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 10" BEHIND; 4" BELOW

----- NOZZLE -----

TYPE = FLOOD SIZE = NA ANGLE = 180 DEG

----------WING SPAN = 44.4 FEET----------

LEFT BOOM LENGTH = 39.7 FEET RIGHT

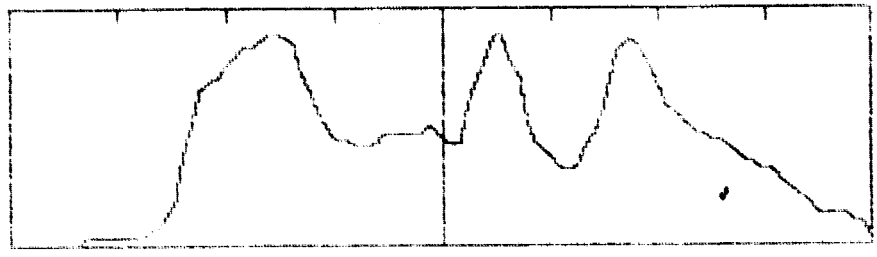
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

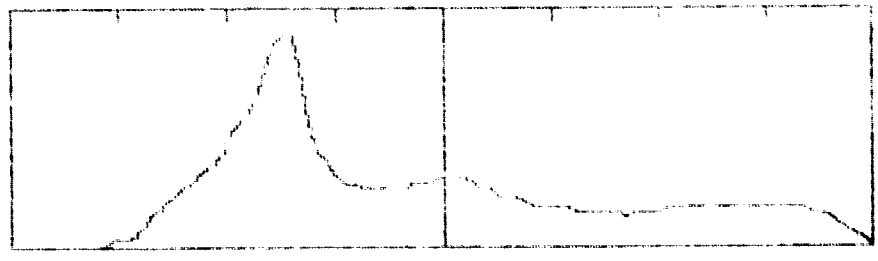


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

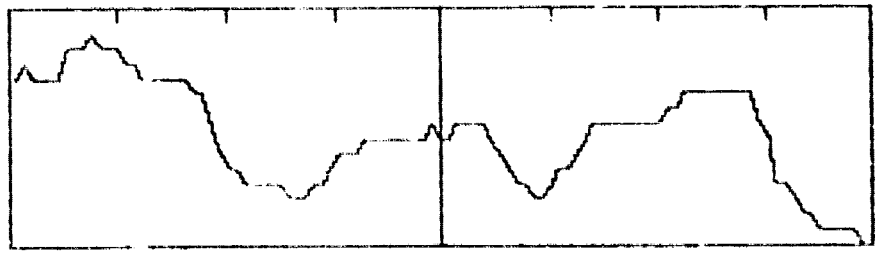


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS OF POOR QUALITY

TEST NO = 61-2 A/C MAKE/TYPE = TT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 10" BEHIND; 4" BELOW

----- NOZZLE -----

TYPE = FLOOD SIZE = NA ANGLE = 180 DEG

----------WING SPAN = 44.4 FEET----------

LEFT BOOM LENGTH = 39.7 FEET RIGHT

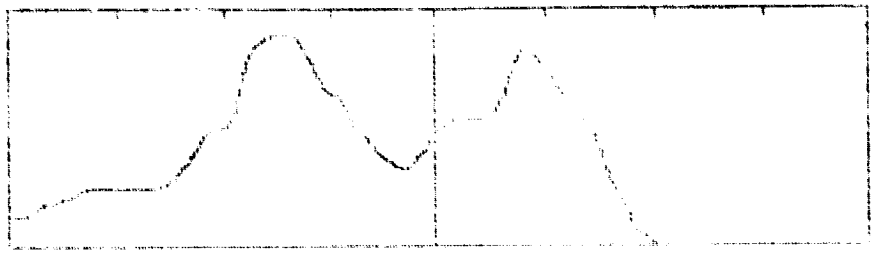
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

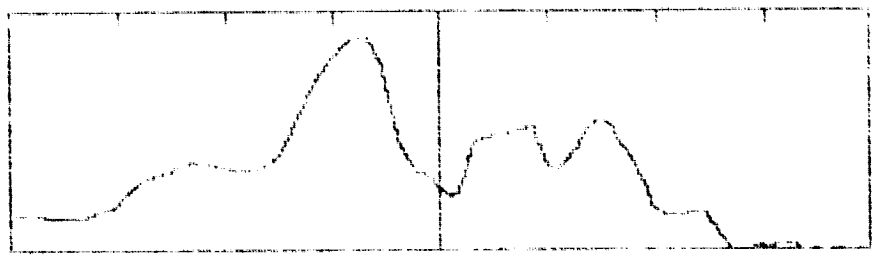


PASS NO 2B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

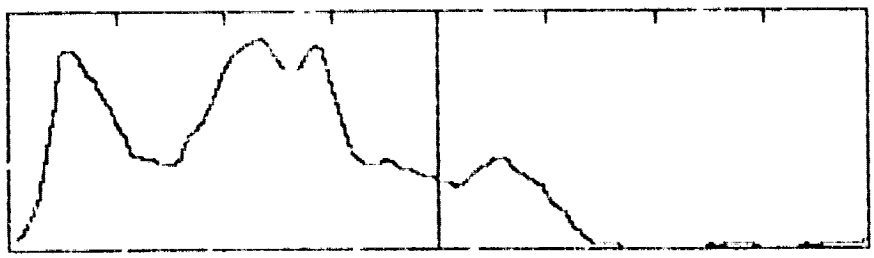


PASS NO 2C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 64 A/C MAKE/TYPE = TT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 3.5" BEHIND; 9" BELOW

----- NOZZLE -----

TYPE = NA SIZE = 6-46 ANGLE = 90 DEG

----------WING SPAN = 44.6 FEET----------

LEFT BOOM LENGTH = 40 FEET RIGHT

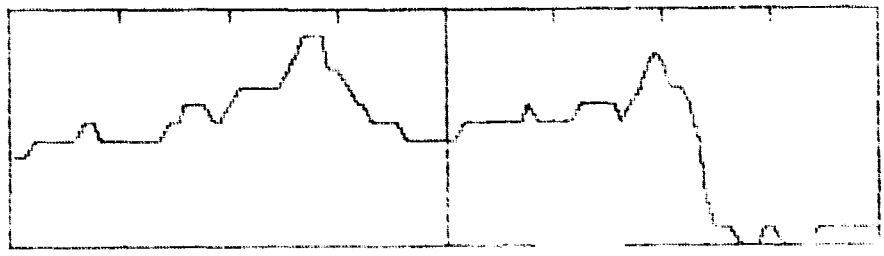
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 16 FT LATERAL DISPL = 4 FT RIGHT OF CL

WIND SPEED = 3.5 MPH WIND DIRECTION = 330 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

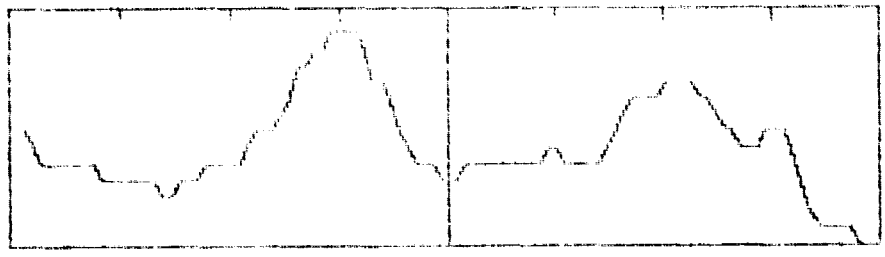


PASS NO 1B SPEED = NA MPH

ALTITUDE = 10 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 2.5 MPH WIND DIRECTION = 350 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

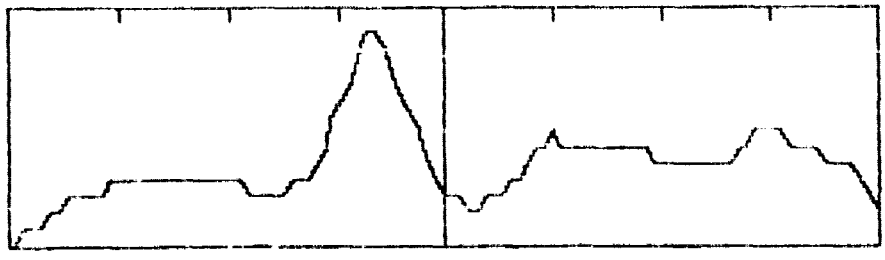


PASS NO 1C SPEED = NA MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 67-1 A/C MAKE/TYPE = C5

----- BOOM -----

SHAPE = AIRFOIL POSITION = 22" BEHIND; 32" BELOW

----- NOZZLE -----

TYPE = SP. SYS. ADJ. SIZE = D-8 ANGLE = 180 DEG

----------WING SPAN = 40.4 FEET----------

LEFT BOOM LENGTH = 38.1 FEET RIGHT

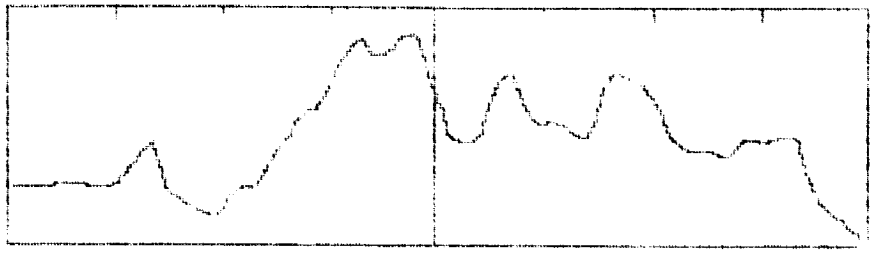
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 6.5 FT LATERAL DISPL = 1.5 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

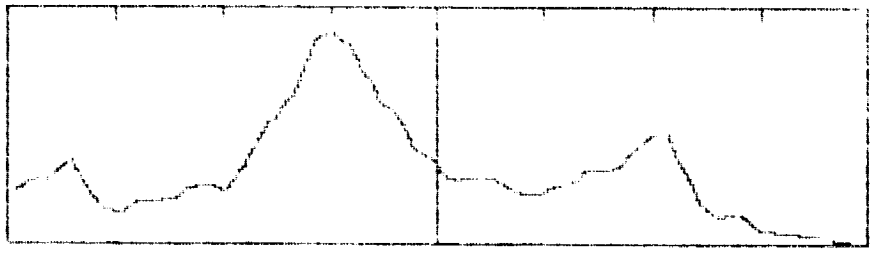


PASS NO 1B SPEED = NA MPH

ALTITUDE = 6.5 FT LATERAL DISPL = .5 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

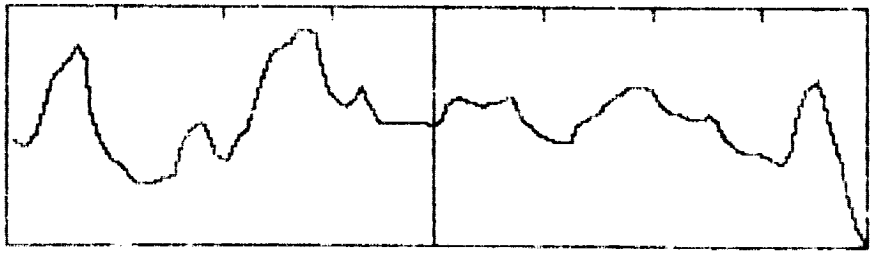


PASS NO 1C SPEED = NA MPH

ALTITUDE = 8 FT LATERAL DISPL = 2.5 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 67-3 A/C MAKE/TYPE = CS

------ BOOM ------

SHAPE = AIRFOIL POSITION = 22" BEHIND; 32" BELOW

------ NOZZLE ------

TYPE = SP. SYS. ADJ. SIZE = D-8 ANGLE = 180 DEG

----------WING SPAN = 40.4 FEET----------

LEFT BOOM LENGTH = 38.1 FEET RIGHT

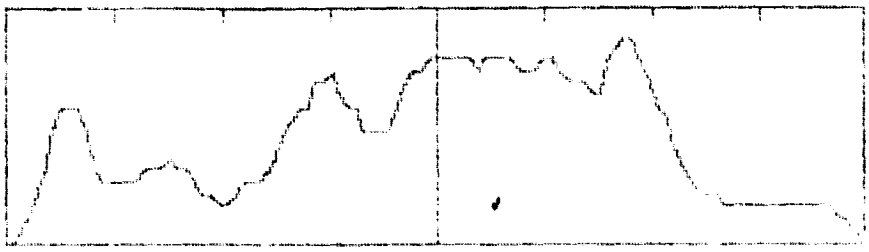
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 3A SPEED = NA MPH

ALTITUDE = 8 FT LATERAL DISPL = .5 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



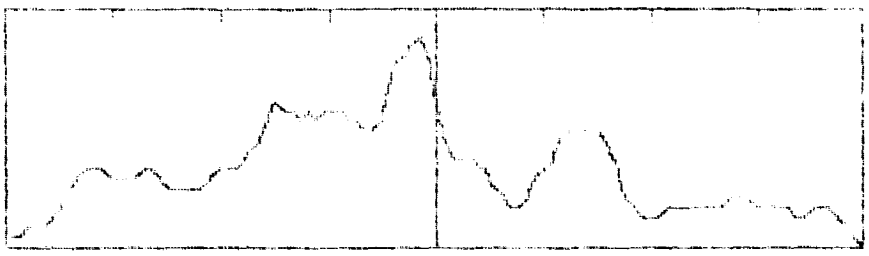
ORIGINAL PAGE IS OF POOR QUALITY

PASS NO 3B SPEED = NA MPH

ALTITUDE = 6.5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

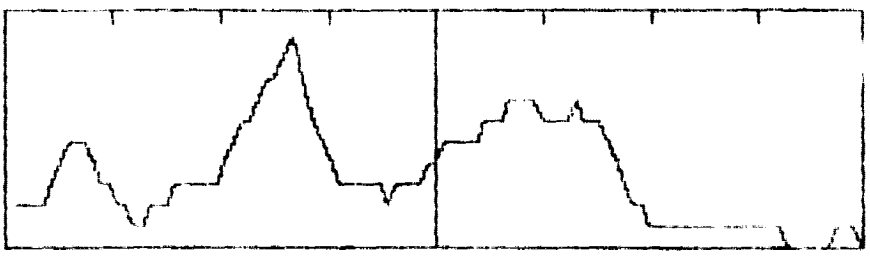


PASS NO 3C SPEED = NA MPH

ALTITUDE = 8 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 68-2 A/C MAKE/TYPE = PB

----- BOOM -----

SHAPE = AIRFOIL POSITION = 6" BEHIND

----- NOZZLE -----

TYPE = SMITH FAIRE SIZE = NA ANGLE = 180 DEG

----------WING SPAN = 38.7 FEET----------

LEFT BOOM LENGTH = 34.7 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

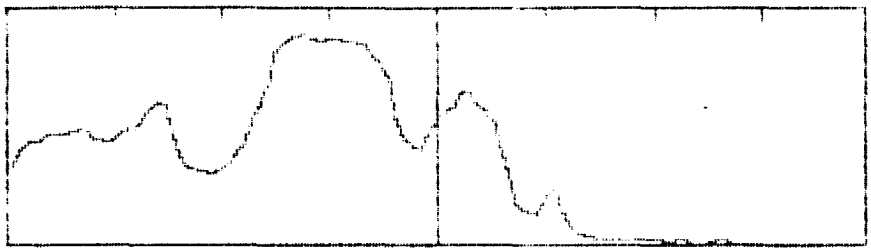
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 2A SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 2.5 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

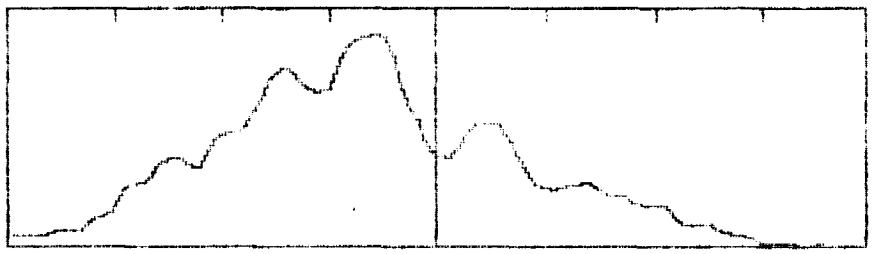


PASS NO 2B SPEED = NA MPH

ALTITUDE = 6.5 FT LATERAL DISPL = 3.5 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

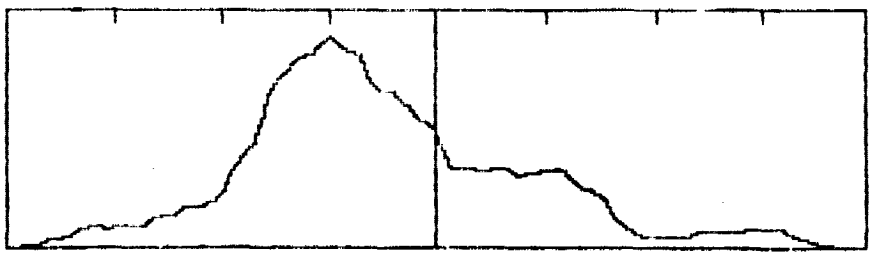


PASS NO 2C SPEED = NA MPH

ALTITUDE = 6 FT LATERAL DISPL = .5 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 68-3 A/C MAKE/TYPE = FB

----- BOOM -----

SHAPE = AIRFOIL POSITION = 6" BEHIND

----- NOZZLE -----

TYPE = SMITH FAIRE SIZE = NA ANGLE = 180 DEG

----------WING SPAN = 38.7 FEET----------

LEFT BOOM LENGTH = 34.7 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

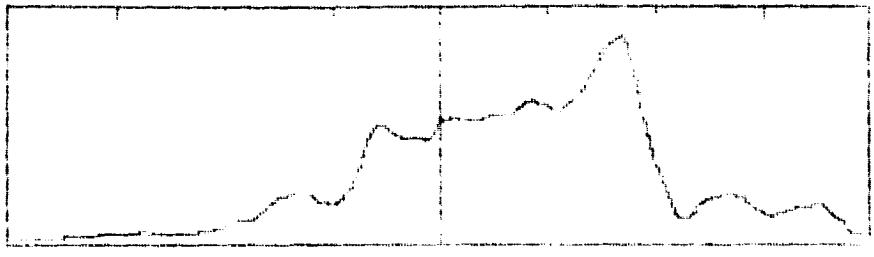
ORIGINAL PAGE IS OF POOR QUALITY

PASS NO 3A SPEED = NA MPH

ALTITUDE = 6.5 FT LATERAL DISPL = 9 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

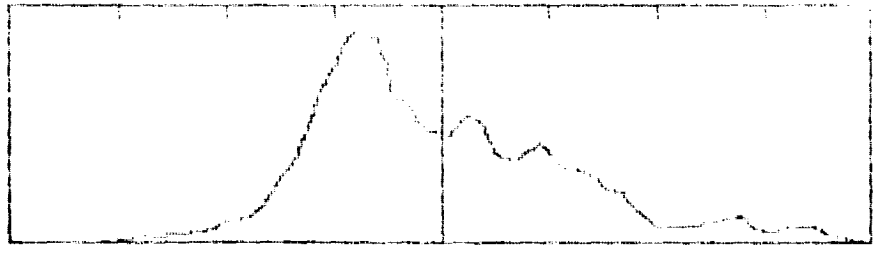


PASS NO 3B SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = .5 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

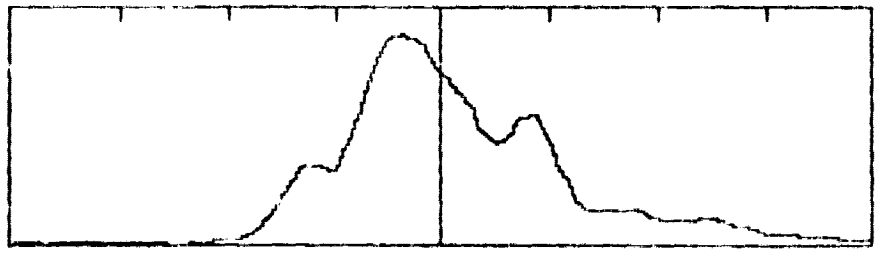


PASS NO 3C SPEED = NA MPH

ALTITUDE = 6.5 FT LATERAL DISPL = .5 FT LEFT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 69 A/C MAKE/TYPE = T

----- BOOM -----

SHAPE = RD POSITION = 12" BEHIND

----- NOZZLE -----

TYPE = MICRONAIR SIZE = 11 ANGLE = NA DEG

----------WING SPAN = 44.3 FEET----------

LEFT BOOM LENGTH = 26.5 FEET RIGHT

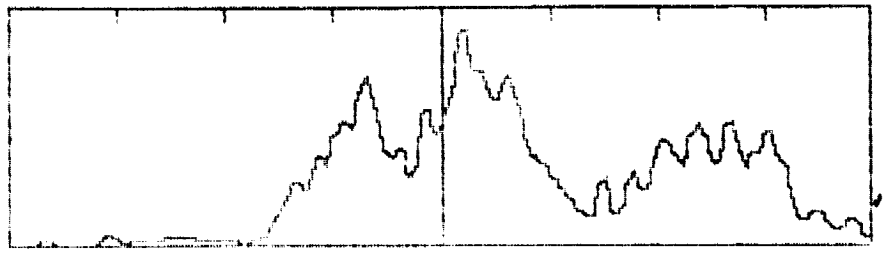
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



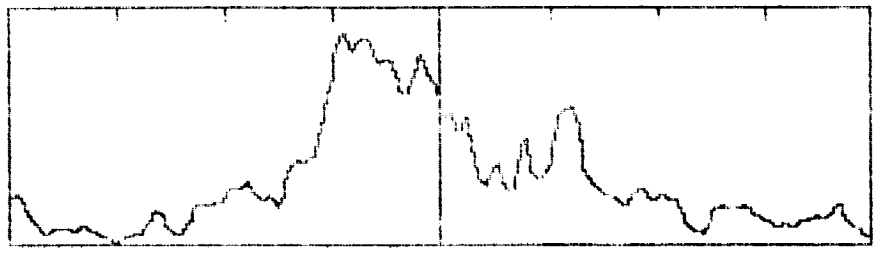
ORIGINAL PAGE IS OF POOR QUALITY

PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

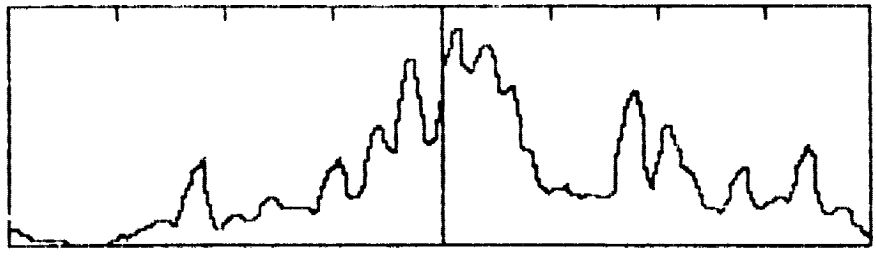


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 73 A/C MAKE/TYPE = TB

----- BOOM -----

SHAPE = RD POSITION = 4" BEHIND

----- NOZZLE -----

TYPE = WHIRLJET SIZE = #5 TIP-4666 ANGLE = 90 DEG

----------WING SPAN = 47.5 FEET----------

LEFT BOOM LENGTH = 38.8 FEET RIGHT

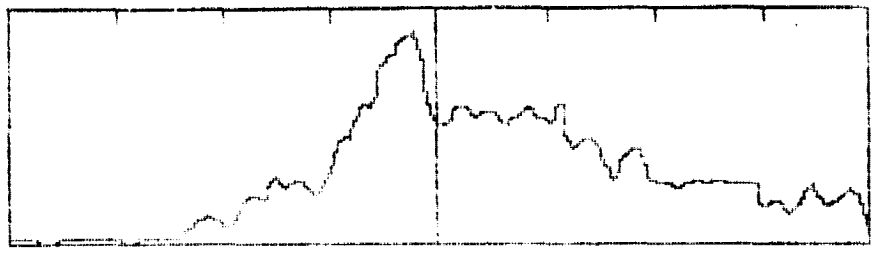
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



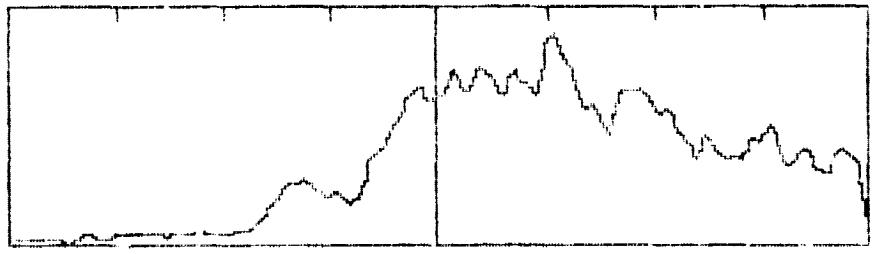
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

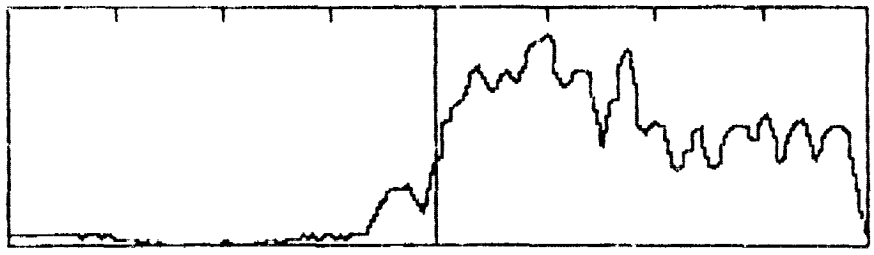


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 74 A/C MAKE/TYPE = C5

----- BOOM -----

SHAPE = RD POSITION = 8" BEHIND

----- NOZZLE -----

TYPE = NA SIZE = D 10-45 ANGLE = 135 DEG

----------WING SPAN = 41.3 FEET----------

LEFT BOOM LENGTH = 32.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

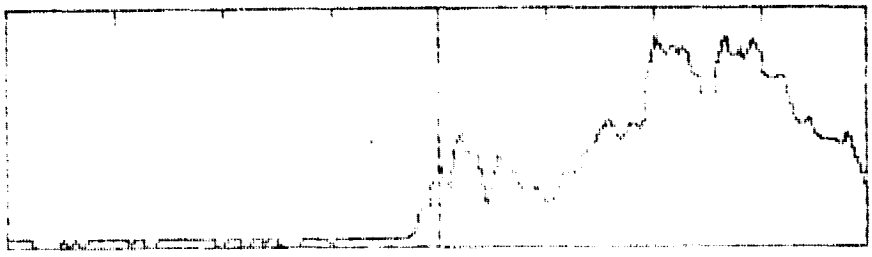
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 16 SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

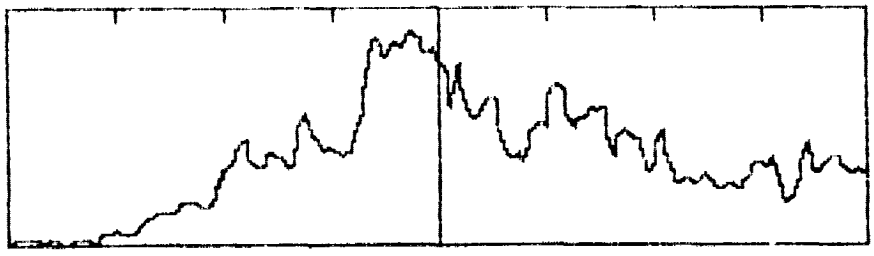


PASS NO 10 SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 78-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = 9" BEHIND

----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = 135 DEG

----------WING SPAN = 42.1 FEET----------

LEFT BOOM LENGTH = 33 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

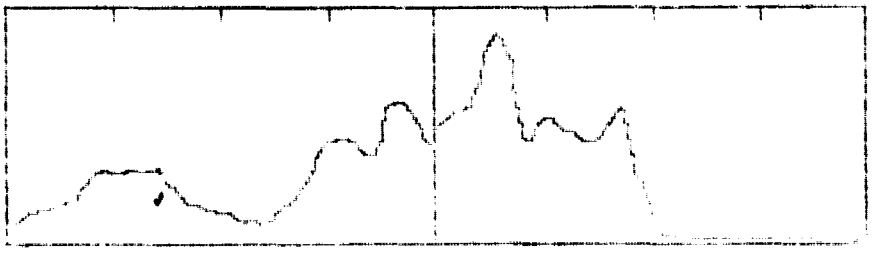
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

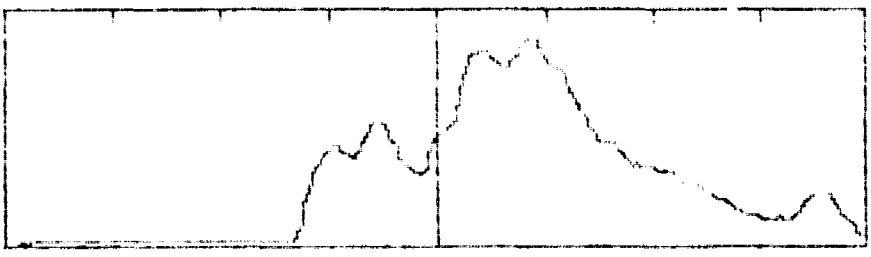


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

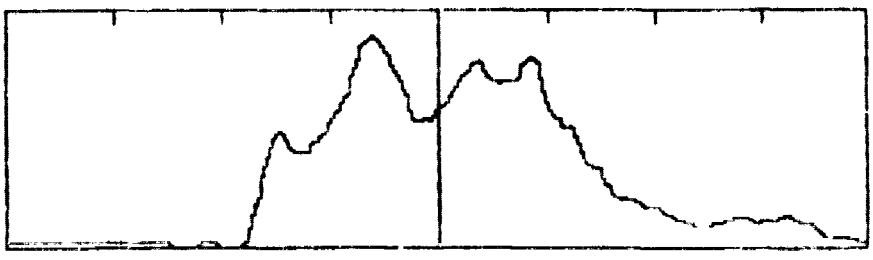


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 79-1 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 7" BEHIND; 9" BELOW

----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = 180 DEG

----------WING SPAN = 45.6 FEET----------

LEFT BOOM LENGTH = 40.4 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

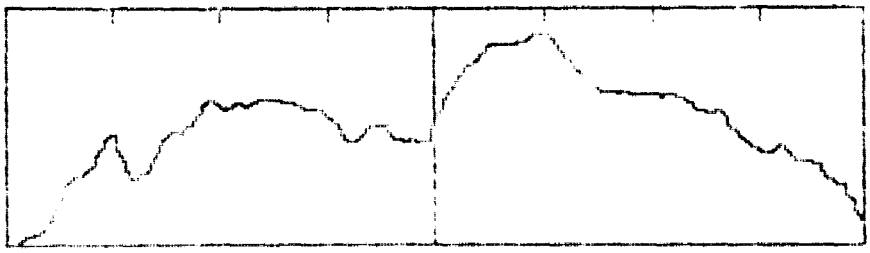
ORIGINAL PAGE IS OF POOR QUALITY

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

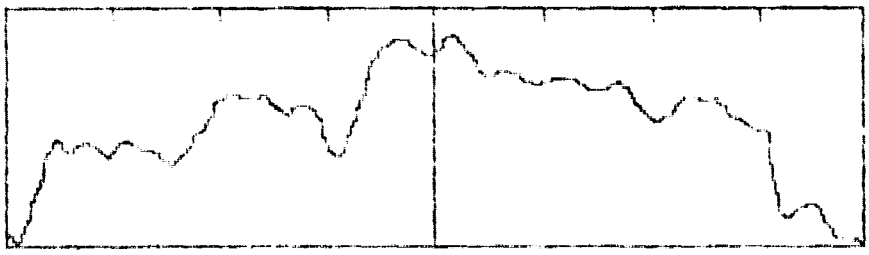


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

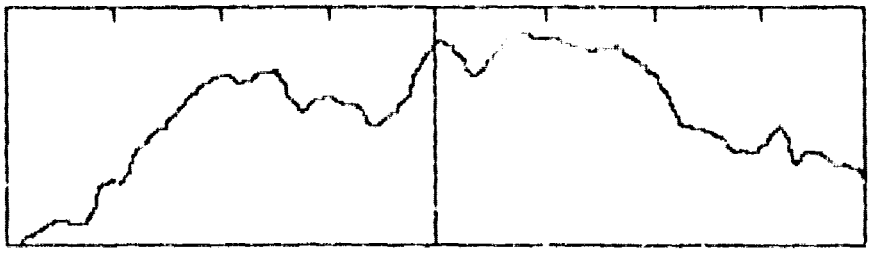


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 79-2 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 7" BEHIND; 9" BELOW

----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = 180 DEG

----------WING SPAN = 45.6 FEET----------

LEFT BOOM LENGTH = 40.4 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

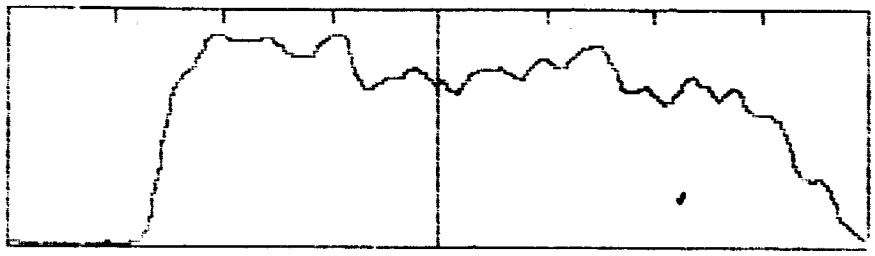
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 2A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

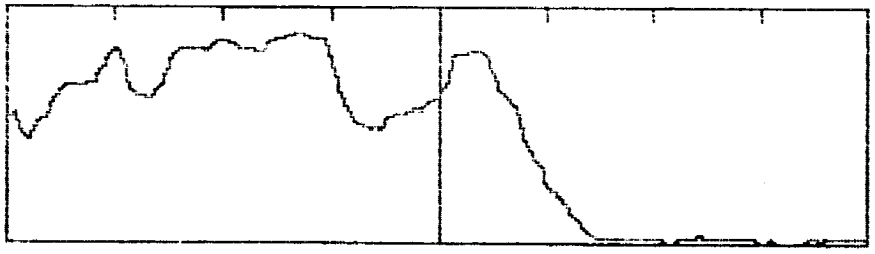


PASS NO 3B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

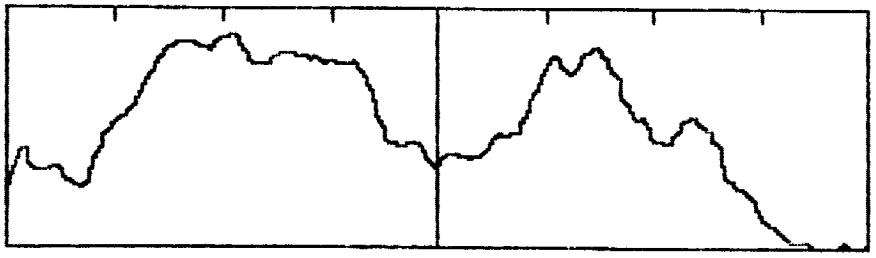


PASS NO 4C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 80-1 A/C MAKE/TYPE = PB

----- BOOM -----

SHAPE = RD POSITION = 6" BEHIND

----- NOZZLE -----

TYPE = SP. SYS. SIZE = D12-56 ANGLE = 135 DEG

----------WING SPAN = 38.5 FEET----------

LEFT BOOM LENGTH = 35.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

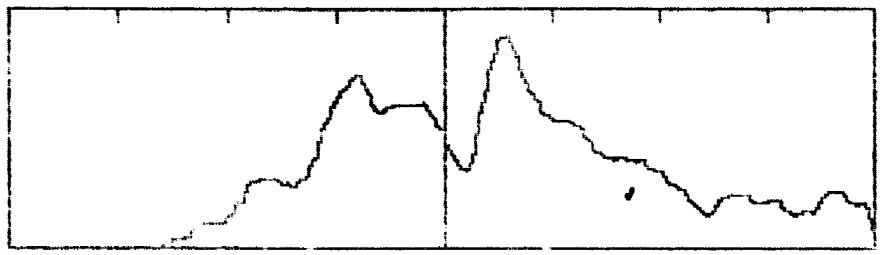
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

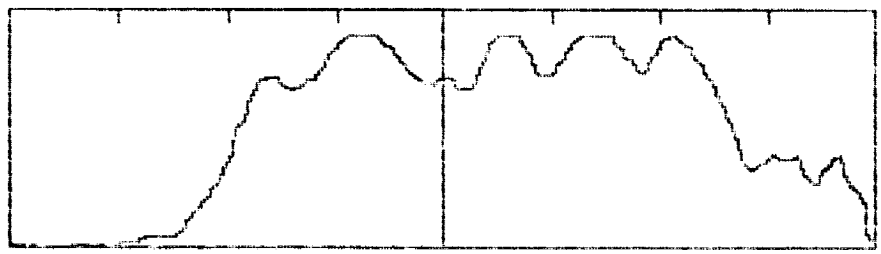


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

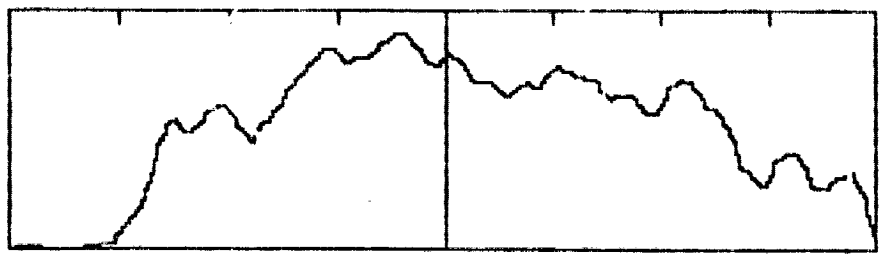


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 83-2 A/C MAKE/TYPE = PP

----- BOOM -----

SHAPE = RD POSITION = 4" BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 8-45 ANGLE = 135 DEG

----------WING SPAN = 36.3 FEET----------

LEFT BOOM LENGTH = 29.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

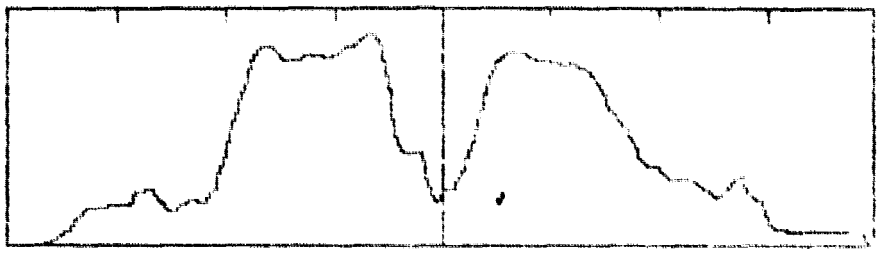
ORIGINAL PAGE IS OF POOR QUALITY

PASS NO 2A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

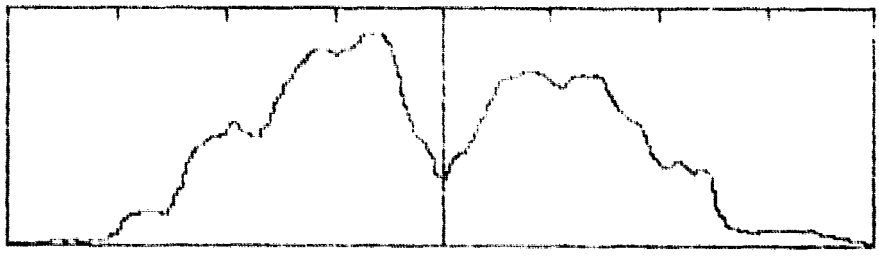


PASS NO 2B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

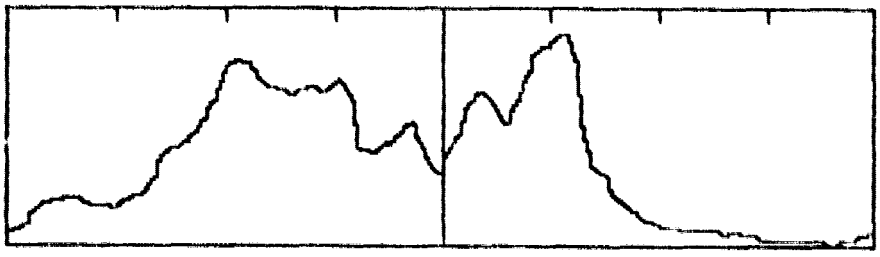


PASS NO 2C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 84 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

----- NOZZLE -----

TYPE = WHIRL JETS SIZE = #3 ANGLE = 180 DEG

----------WING SPAN = 45.2 FEET----------

LEFT BOOM LENGTH = 40.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

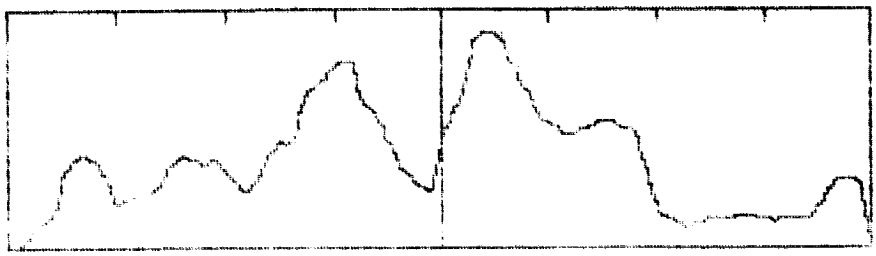
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

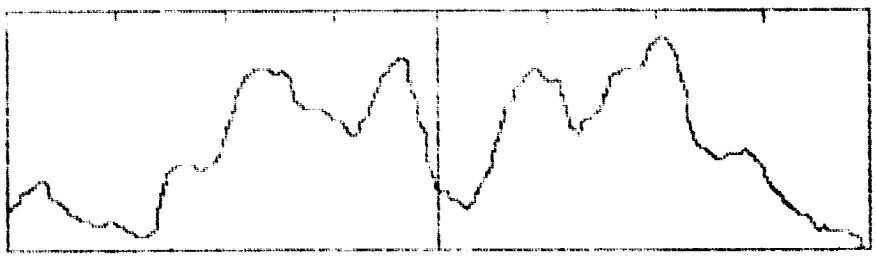


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

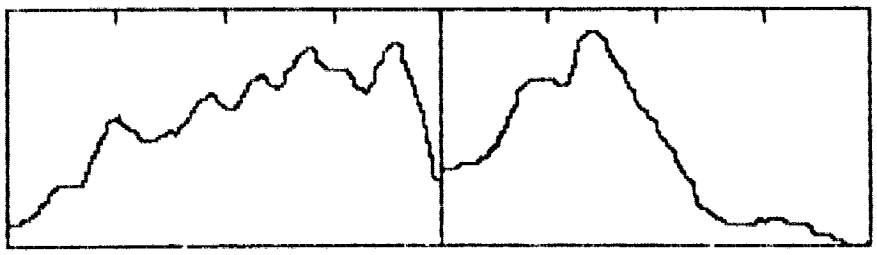


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 85-1 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 6" BEHIND; 10" BELOW

----- NOZZLE -----

TYPE = SMITH FAIR SIZE = D 6 ANGLE = 180 DEG

----------WING SPAN = 47.7 FEET----------

LEFT BOOM LENGTH = 42.8 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

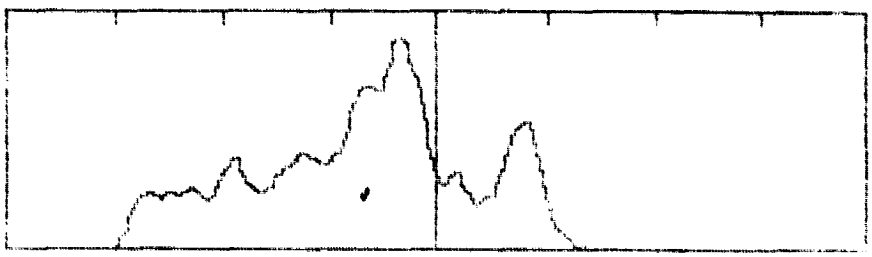
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

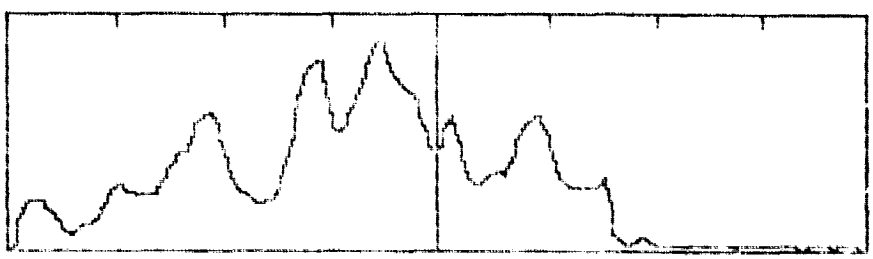


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

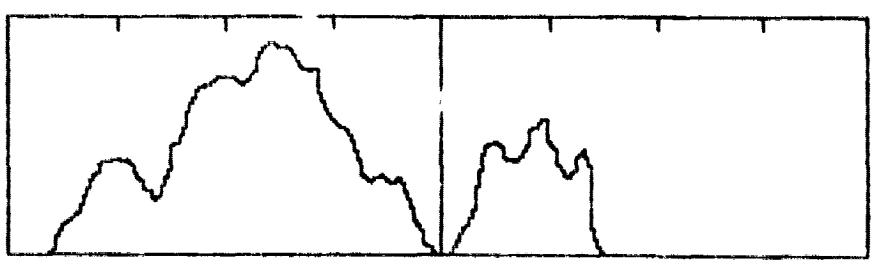


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 85-3 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 6" BEHIND; 10" BELOW

----- NOZZLE -----

TYPE = SMITH FAIR SIZE = D 6 ANGLE = 180 DEG

----------WING SPAN = 47.7 FEET----------

LEFT BOOM LENGTH = 42.8 FEET RIGHT

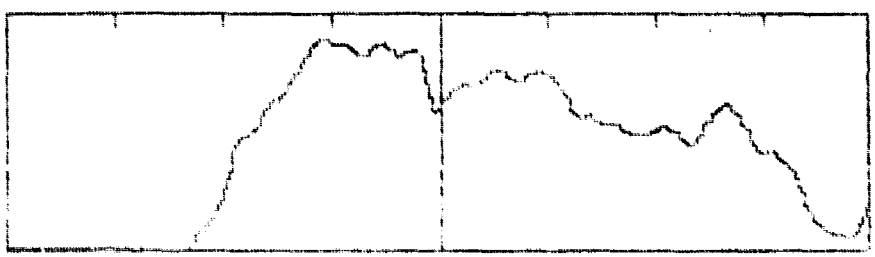
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 3A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



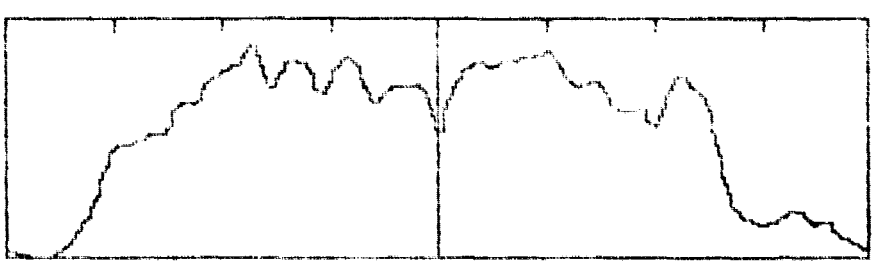
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 3B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

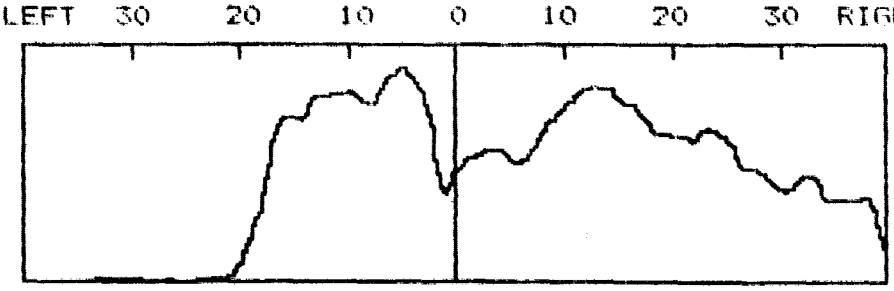


PASS NO 3C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 86 A/C MAKE/TYPE = HU

----- BOOM -----

SHAPE = RD POSITION = NA

----- NOZZLE -----

TYPE = SP. SYS. SIZE = 8-45 ANGLE = 90 DEG

----------WING SPAN = 30.2 FEET----------

LEFT BOOM LENGTH = 29.9 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

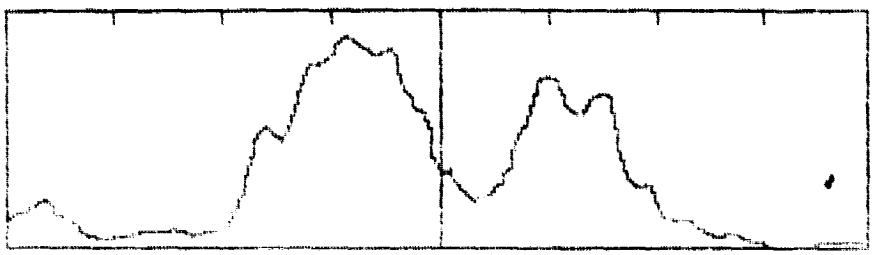
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

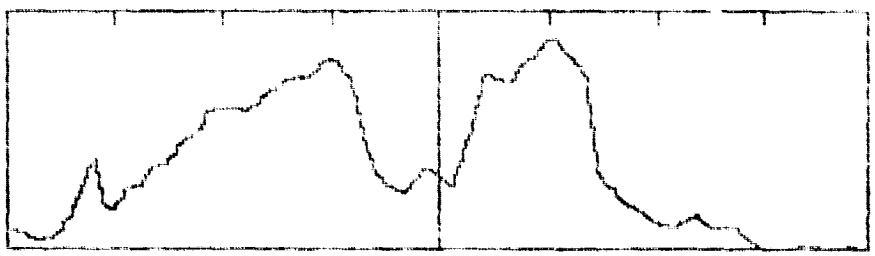


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

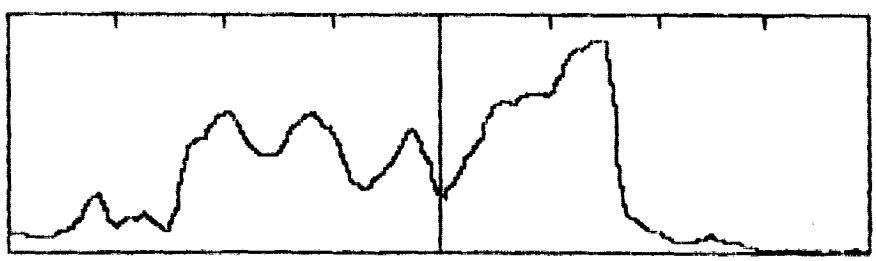


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 87-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = NA

----- NOZZLE -----

TYPE = NA SIZE = 8 ANGLE = 135 DEG

----------WING SPAN = 38.9 FEET----------

LEFT BOOM LENGTH = 33.5 FEET RIGHT

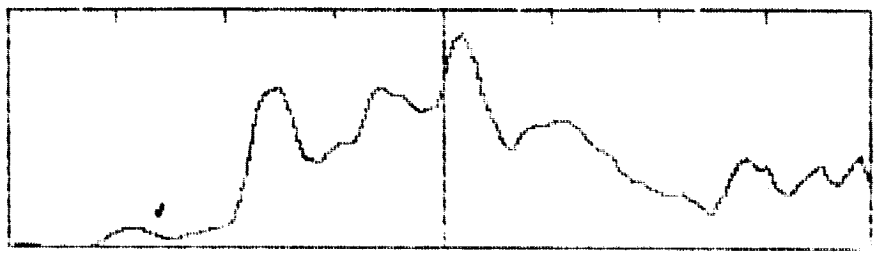
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 74 MPH

ALTITUDE = 7 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 172 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



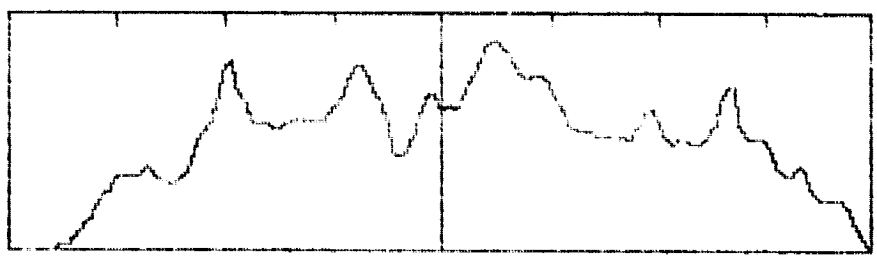
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1B SPEED = 97 MPH

ALTITUDE = 6 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 162 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

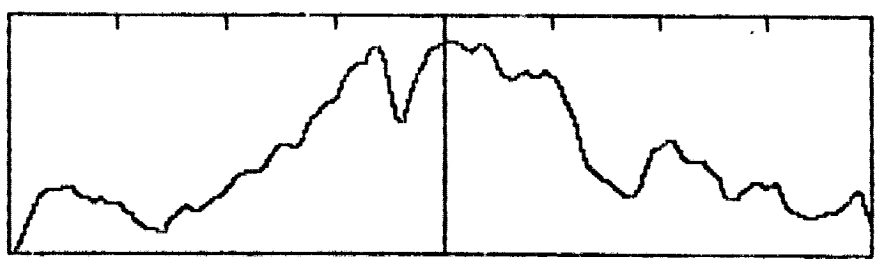


PASS NO 1C SPEED = 86 MPH

ALTITUDE = 5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 171 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 88-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

----- NOZZLE -----

TYPE = NA SIZE = 8-46 ANGLE = 135 DEG

----------WING SPAN = 41.8 FEET----------

LEFT BOOM LENGTH = 33.2 FEET RIGHT

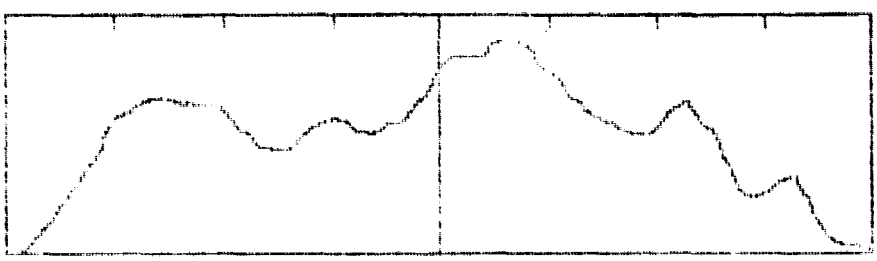
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = NA MPH

ALTITUDE = 10 FT LATERAL DISPL = 1.5 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 181 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



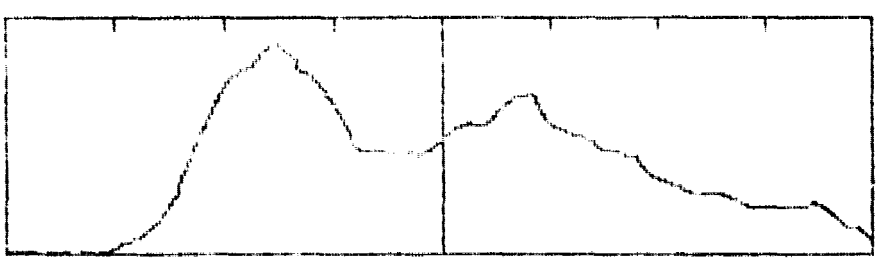
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1B SPEED = 123 MPH

ALTITUDE = 9.2 FT LATERAL DISPL = .8 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 116 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

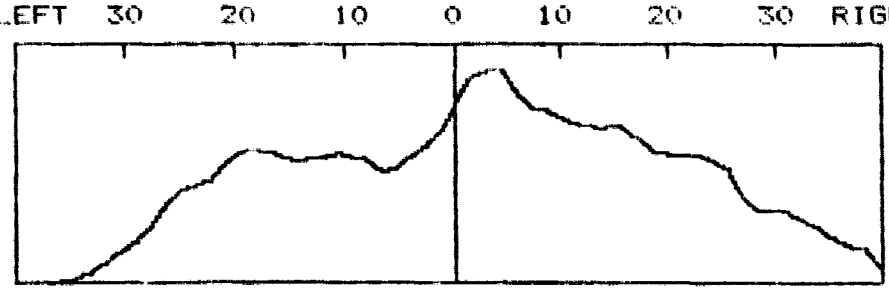


PASS NO 1C SPEED = NA MPH

ALTITUDE = 9.2 FT LATERAL DISPL = 1.5 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 176 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 89 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = NA

----- NOZZLE -----

TYPE = NA SIZE = 8-56 ANGLE = 135 DEG

----------WING SPAN = 42 FEET----------

LEFT BOOM LENGTH = 27.6 FEET RIGHT

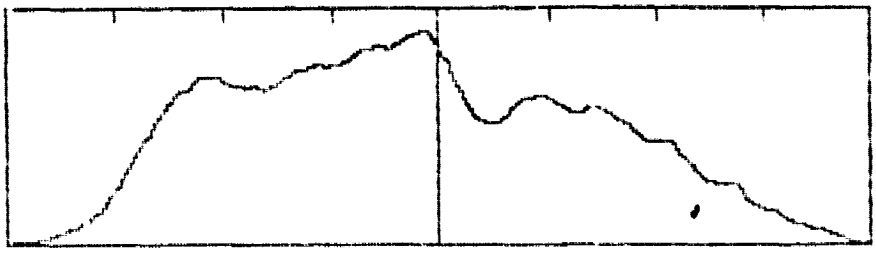
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 133 MPH

ALTITUDE = 10 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 183 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



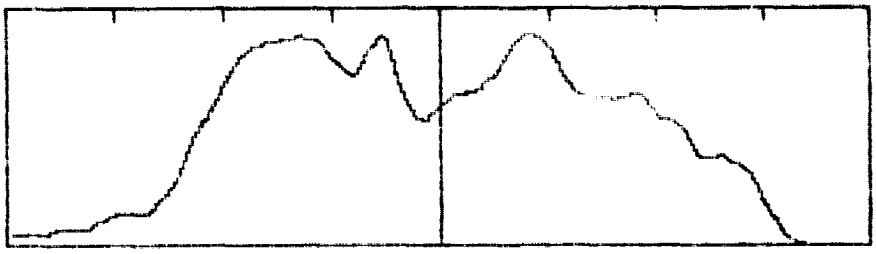
ORIGINAL PAGE IS OF POOR QUALITY

PASS NO 1B SPEED = 118 MPH

ALTITUDE = 10 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 170 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

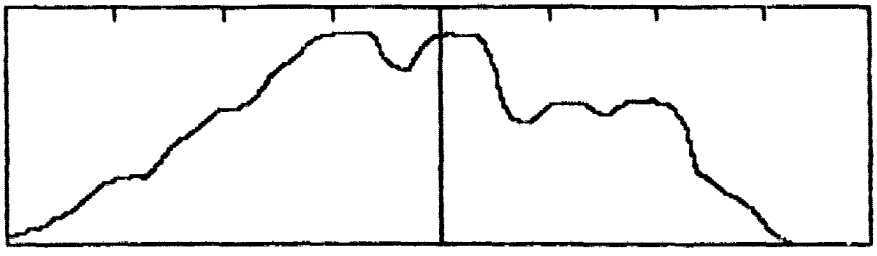


PASS NO 1C SPEED = 115 MPH

ALTITUDE = 10 FT LATERAL DISPL = .8 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 184 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 90 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = 9" BEHIND; 3.5" ABOVE

----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = 90 DEG

----------WING SPAN = 41.3 FEET----------

LEFT BOOM LENGTH = 33 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

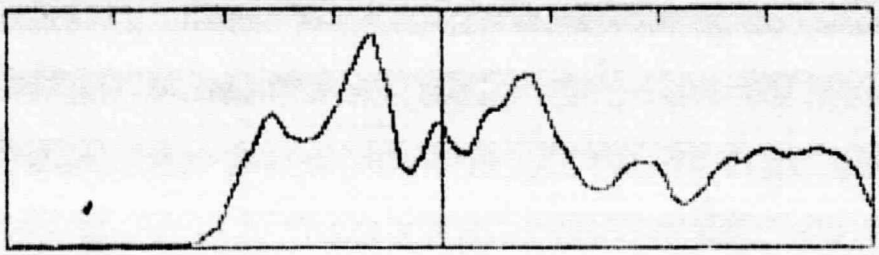
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = 86 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 12 MPH WIND DIRECTION = 157 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

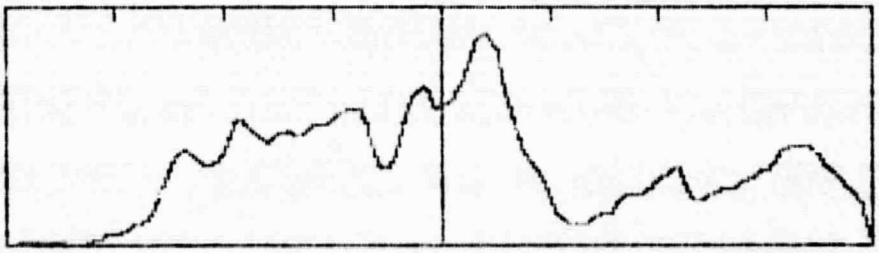


PASS NO 1B SPEED = 84 MPH

ALTITUDE = 9.6 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 13 MPH WIND DIRECTION = 179 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

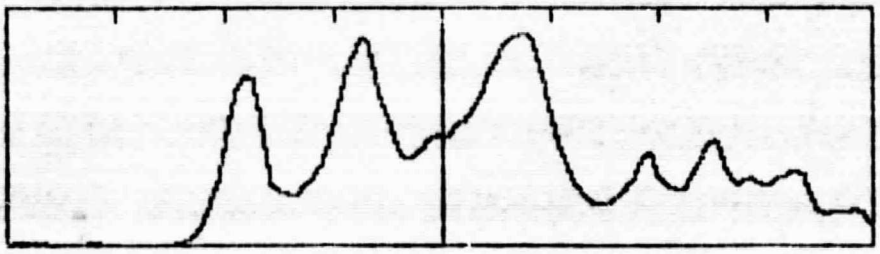


PASS NO SPEED = 83 MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 11 MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 91 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = NA

----- NOZZLE -----

TYPE = NA SIZE = D4-6 ANGLE = NA DEG

----------WING SPAN = 33.8 FEET----------

LEFT BOOM LENGTH = 32.2 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

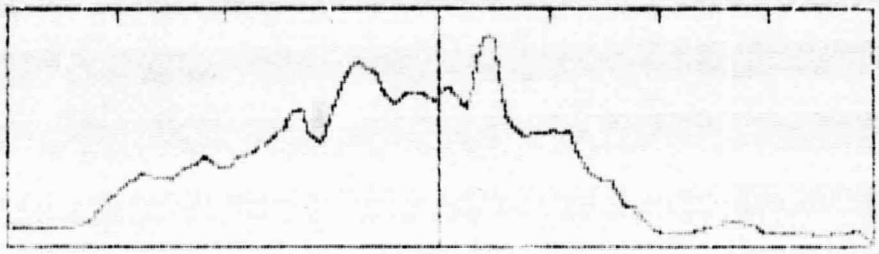
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = 82 MPH

ALTITUDE = 9.1 FT LATERAL DISPL = .6 FT LEFT OF CL

WIND SPEED = 11 MPH WIND DIRECTION = 189 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

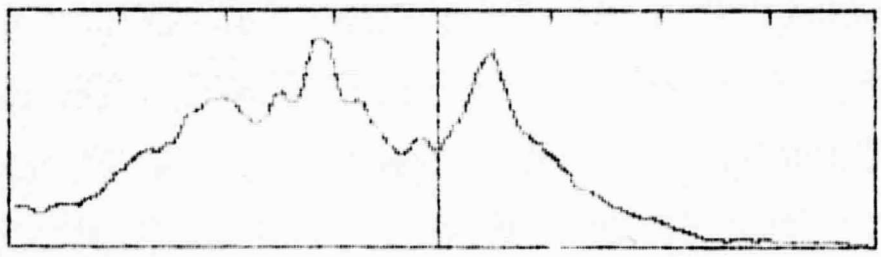


PASS NO 1B SPEED = 90 MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 188 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

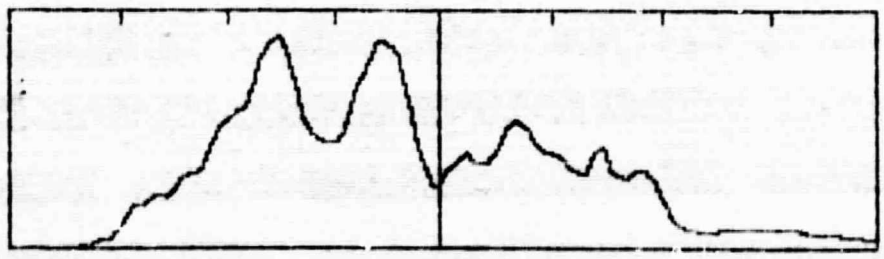


PASS NO 1C SPEED = 84 MPH

ALTITUDE = 7.5 FT LATERAL DISPL = .8 FT RIGHT OF CL

WIND SPEED = 13 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 92-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 5" BEHIND; 6" BELOW

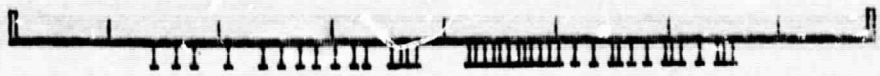
----- NOZZLE -----

TYPE = NA SIZE = D12-45 ANGLE = 135 DEG

----------WING SPAN = 38.1 FEET----------

LEFT BOOM LENGTH = 31.2 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

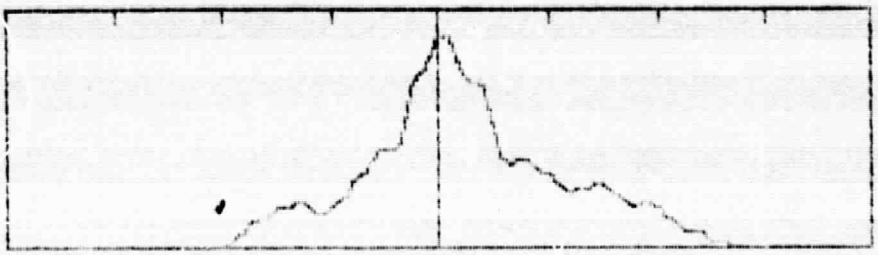


PASS NO 1A SPEED = 146 MPH

ALTITUDE = 6 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



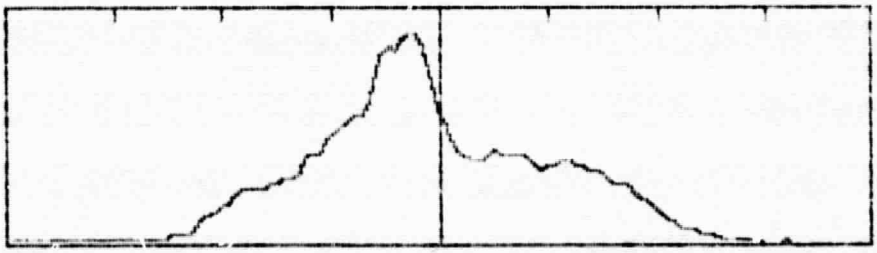
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1B SPEED = 105 MPH

ALTITUDE = 7 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 183 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

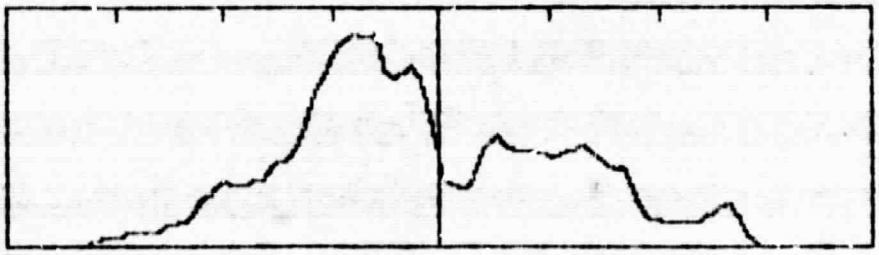


PASS NO 1C SPEED = 71 MPH

ALTITUDE = 6 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 92-2 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 5" BEHIND; 6" BELOW

----- NOZZLE -----

TYPE = NA SIZE = D12-45 ANGLE = 135 DEG

----------WING SPAN = 38.1 FEET----------

LEFT BOOM LENGTH = 31.2 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

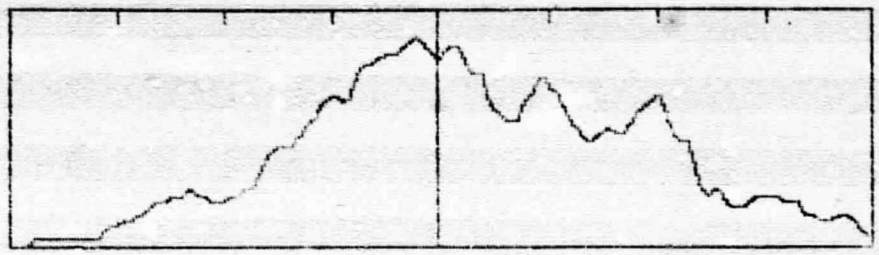
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 2A SPEED = NA MPH

ALTITUDE = 6 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 174 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

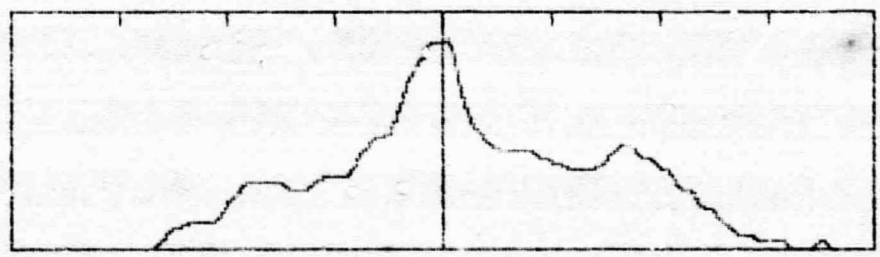


PASS NO 2B SPEED = NA MPH

ALTITUDE = 7.5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 170 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

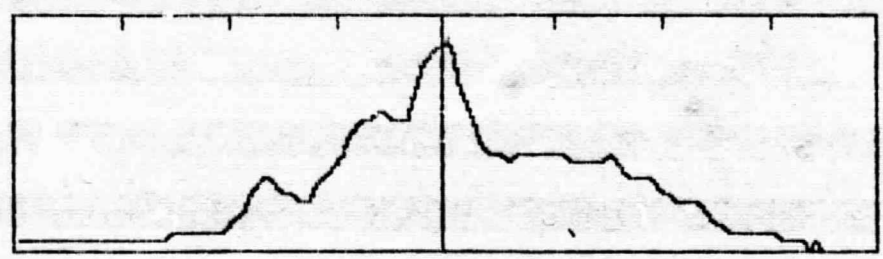


PASS NO 2C SPEED = NA MPH

ALTITUDE = 6.5 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 172 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 93-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = AIRFOIL POSITION = 6" BEHIND; 8" BELOW

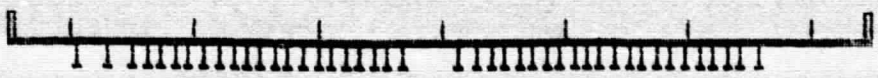
----- NOZZLE -----

TYPE = NA SIZE = D12-45 ANGLE = 180 DEG

----------WING SPAN = 34.4 FEET----------

LEFT BOOM LENGTH = 28.8 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

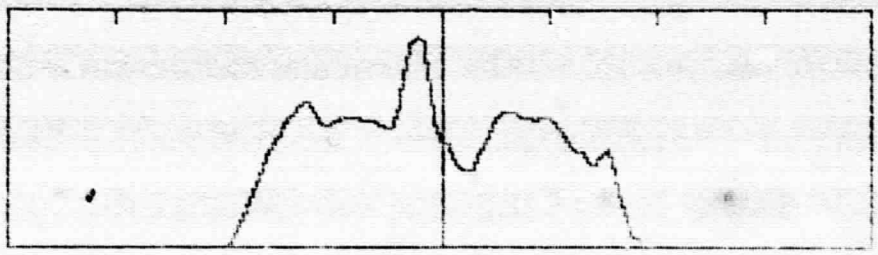


PASS NO 1A SPEED = 131 MPH

ALTITUDE = 5.5 FT LATERAL DISPL = 3 FT LEFT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 147 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

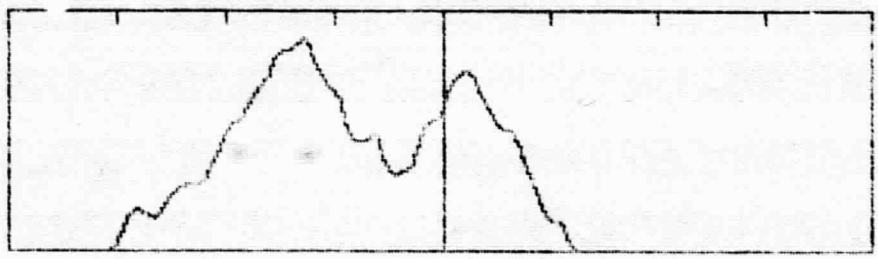


PASS NO 1B SPEED = 155 MPH

ALTITUDE = 5 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 213 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

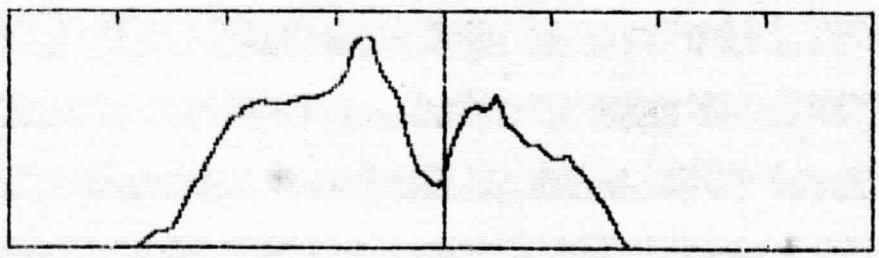


PASS NO 1C SPEED = 186 MPH

ALTITUDE = 5 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 189 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



GINAL PAGE IS
POOR QUALITY

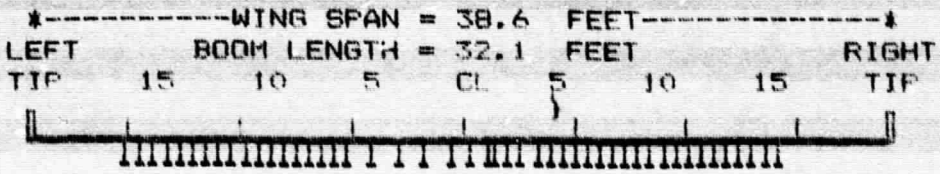
TEST NO = 94-2 A/C MAKE/TYPE = PP

----- BOOM -----

SHAPE = AIRFOIL POSITION = 5" BEHIND; 8" BELOW

----- NOZZLE -----

TYPE = NA SIZE = 8-45 ANGLE = 180 DEG

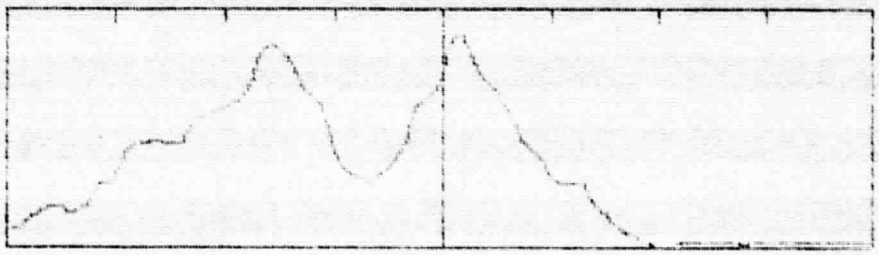


PASS NO 2A SPEED = 102 MPH

ALTITUDE = 7 FT LATERAL DISPL = 3.5 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 189 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

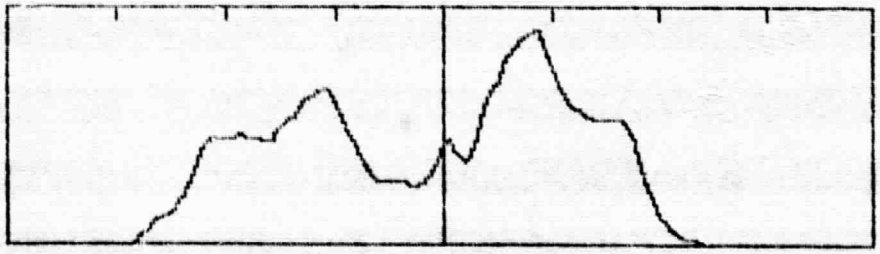


PASS NO 2B SPEED = 107 MPH

ALTITUDE = 7.5 FT LATERAL DISPL = 1.5 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 176 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 95 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 6.5" BEHIND

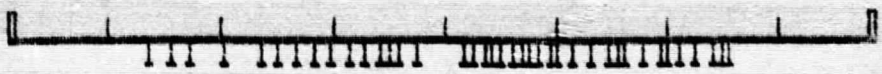
----- NOZZLE -----

TYPE = NA SIZE = 12-45 ANGLE = NA DEG

----------WING SPAN = 37.8 FEET----------

LEFT BOOM LENGTH = 31.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

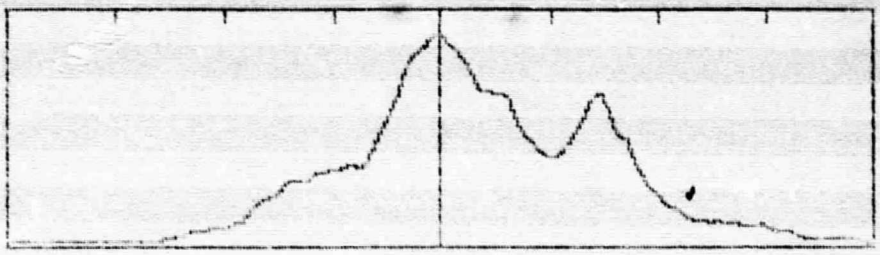


PASS NO 1A SPEED = 114 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 165 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

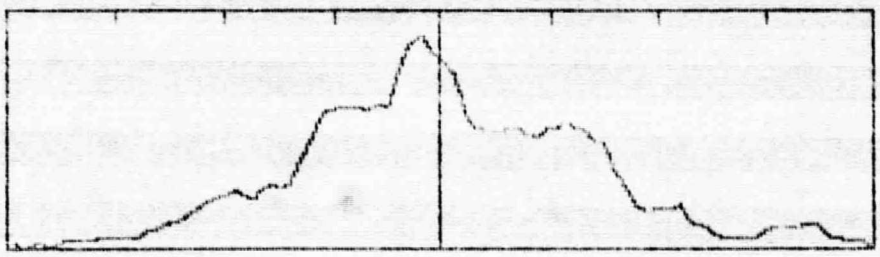


PASS NO 1B SPEED = 95 MPH

ALTITUDE = 8 FT LATERAL DISPL = 3 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 176 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 96 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = 8" BEHIND

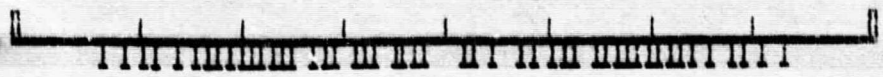
----- NOZZLE -----

TYPE = NA SIZE = LF-10 ANGLE = NA DEG

----------WING SPAN = 41.9 FEET----------

LEFT BOOM LENGTH = 33.1 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

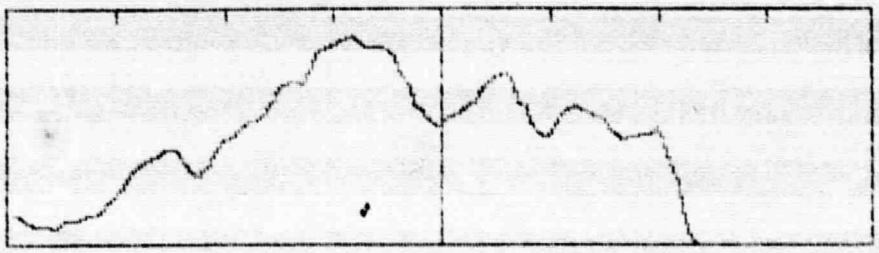


PASS NO 1A SPEED = 97 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 12 MPH WIND DIRECTION = 185 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1B SPEED = 95 MPH

ALTITUDE = 7 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 180 DEG

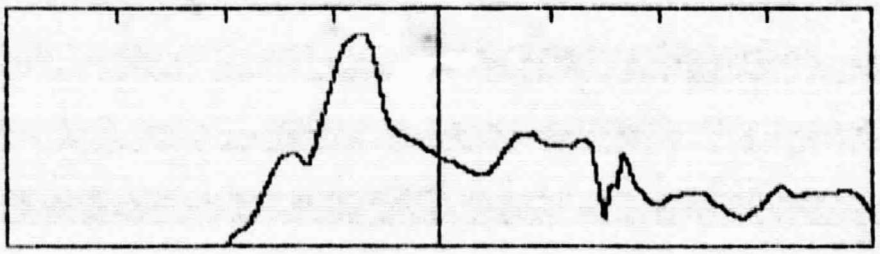
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1C SPEED = 90 MPH

ALTITUDE = 6 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 12 MPH WIND DIRECTION = 160 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 97 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = 8" BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 8010 ANGLE = NA DEG

----------WING SPAN = 42.3 FEET----------

LEFT BOOM LENGTH = 33.1 FEET RIGHT

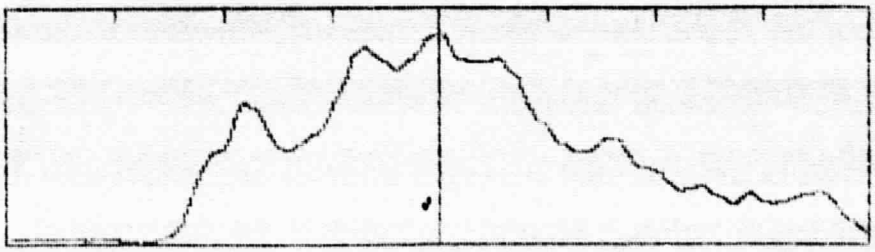
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 91 MPH

ALTITUDE = 11 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 182 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

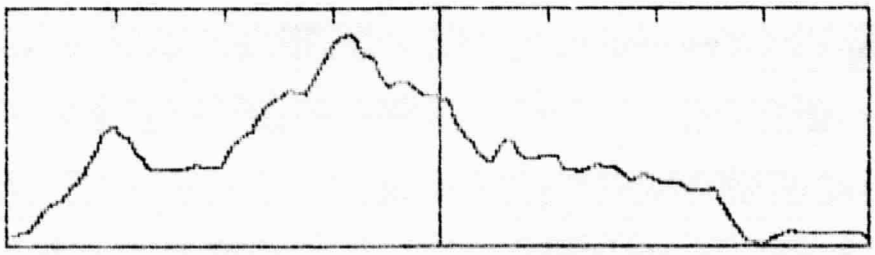


PASS NO 1B SPEED = 87 MPH

ALTITUDE = 8 FT LATERAL DISPL = 3 FT LEFT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 188 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

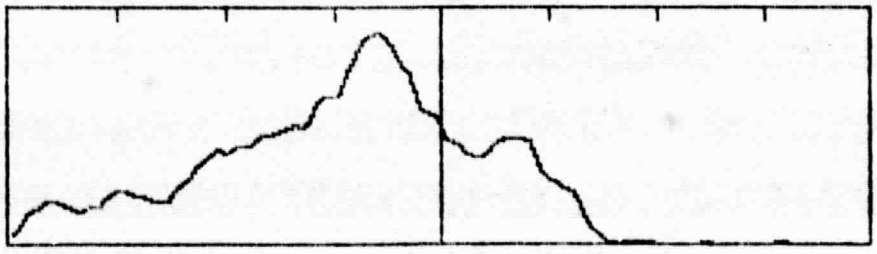


PASS NO 1C SPEED = 93 MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 169 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS OF POOR QUALITY

TEST NO = 98 A/C MAKE/TYPE = B

----- BOOM -----

SHAPE = RD POSITION = 0.5" BELOW

----- NOZZLE -----

TYPE = NA SIZE = 6-45 ANGLE = 135 DEG

----------WING SPAN = 37 FEET----------

LEFT BOOM LENGTH = 35.1 FEET RIGHT

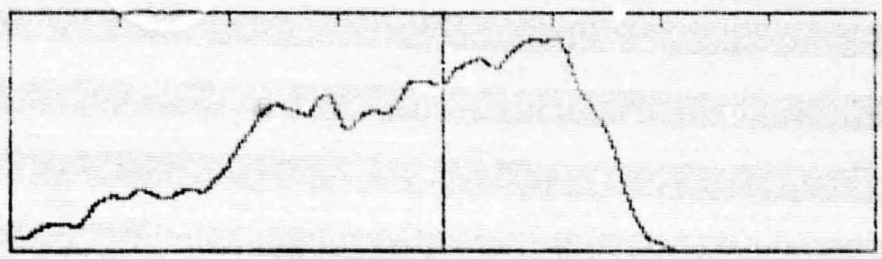
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1B SPEED = 86 MPH

ALTITUDE = 6 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 12 MPH WIND DIRECTION = 219 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

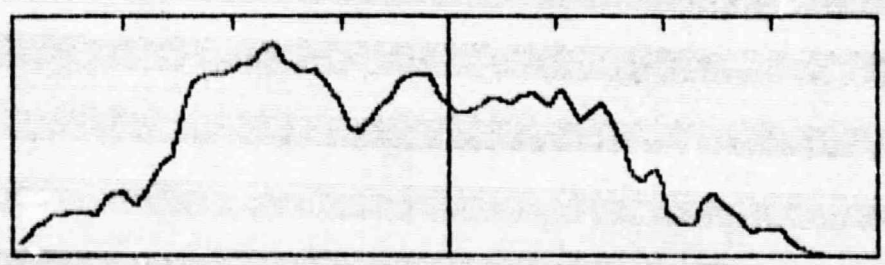


PASS NO 1C SPEED = 118 MPH

ALTITUDE = 6 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 200 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 99 A/C MAKE/TYPE = PP

----- BOOM -----

SHAPE = RD POSITION = 5.5 BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 8-45 ANGLE = 135 DEG

ORIGINAL PAGE IS
OF POOR QUALITY

----------WING SPAN = 35.8 FEET----------

LEFT BOOM LENGTH = 26.6 FEET RIGHT

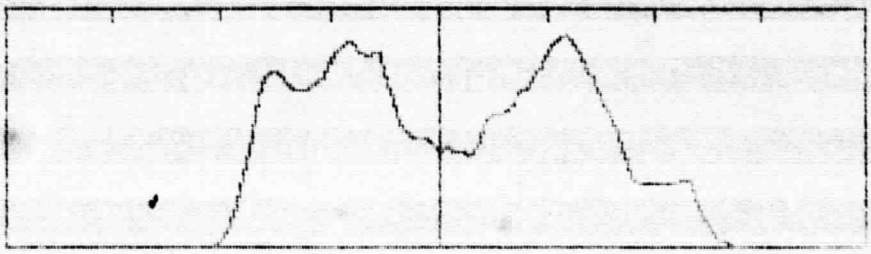
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 78 MPH

ALTITUDE = 10 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 177 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

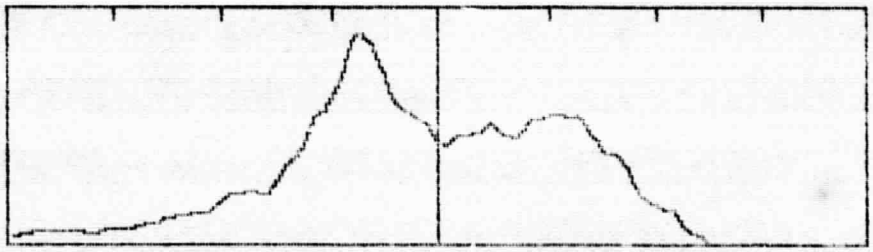


PASS NO 1B SPEED = 74 MPH

ALTITUDE = 8 FT LATERAL DISPL = 4 FT LEFT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 181 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

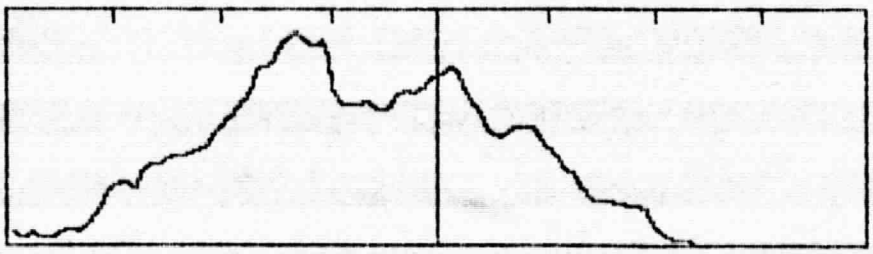


PASS NO 1C SPEED = 70 MPH

ALTITUDE = 7 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 11 MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 100-2 A/C MAKE/TYPE = T

----- BOOM -----

SHAPE = AIRFOIL POSITION = 9" BEHIND

----- NOZZLE -----

TYPE = MICRONAIR SIZE = NA ANGLE = 180 DEG

----------WING SPAN = 43.5 FEET----------

LEFT BOOM LENGTH = 25.8 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

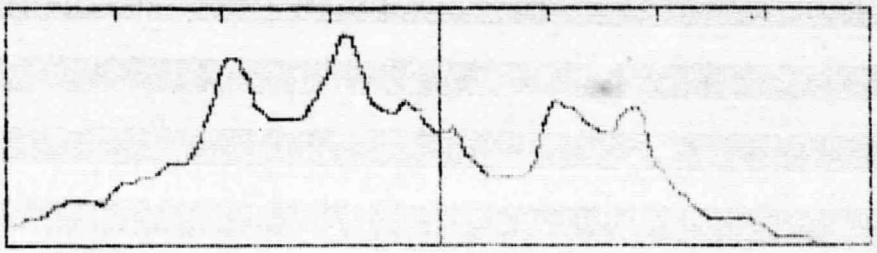
ORIGINAL PAGE IS OF POOR QUALITY

PASS NO 2A SPEED = NA MPH

ALTITUDE = 8 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 162 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

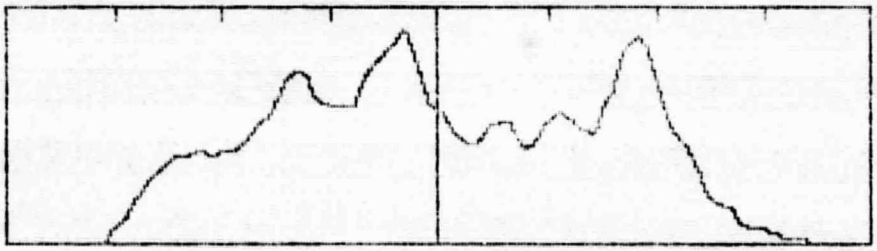


PASS NO 2B SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 4 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

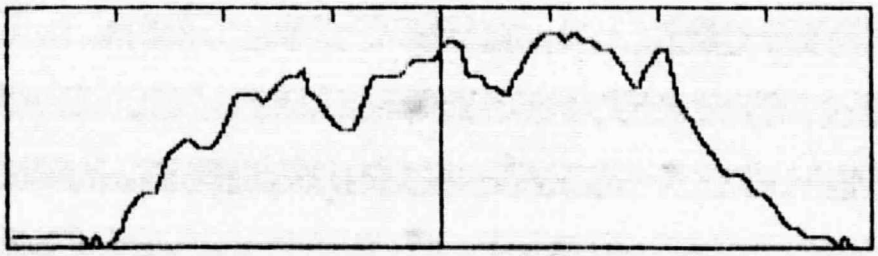


PASS NO 2C SPEED = 118 MPH

ALTITUDE = 14 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 150 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 101-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 3" BEHIND; 5" BELOW

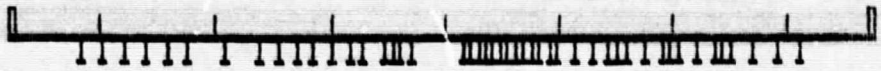
----- NOZZLE -----

TYPE = NA SIZE = 6-45 ANGLE = NA DEG

----------WING SPAN = 37.6 FEET----------

LEFT BOOM LENGTH = 31.4 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

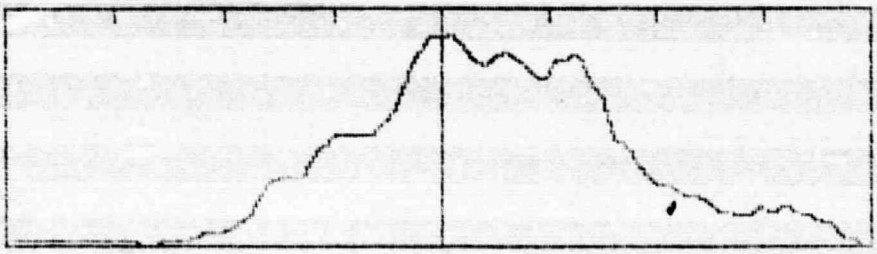


PASS NO 1A SPEED = 81 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 164 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

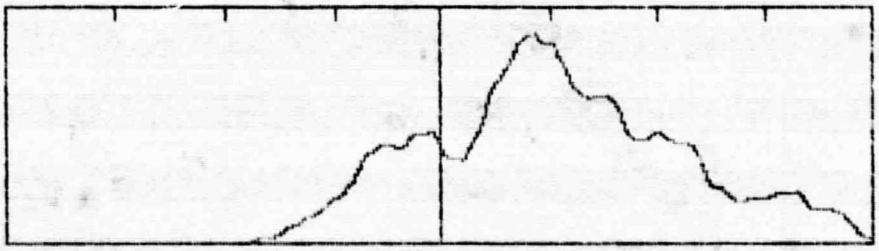


PASS NO 1B SPEED = 81 MPH

ALTITUDE = 11 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 15 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

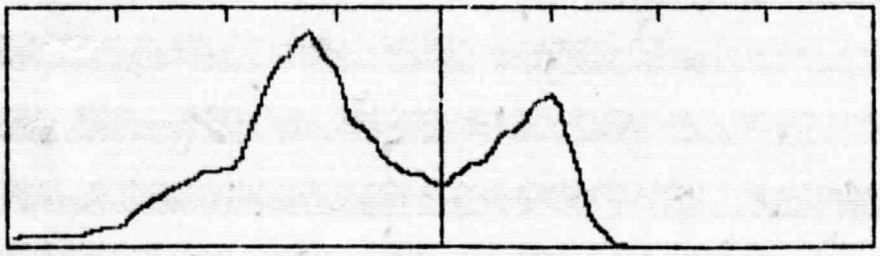


PASS NO 1C SPEED = 79 MPH

ALTITUDE = 5 FT LATERAL DISPL = 3 FT LEFT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 183 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 101-2 A/C MAKE/TYPE = AG

----- BOOM -----

SHAPE = RD POSITION = 3" BEHIND; 5" BELOW

----- NOZZLE -----

TYPE = NA SIZE = 6-45 ANGLE = NA DEG

----------WING SPAN = 37.6 FEET----------

LEFT BOOM LENGTH = 31.4 FEET RIGHT

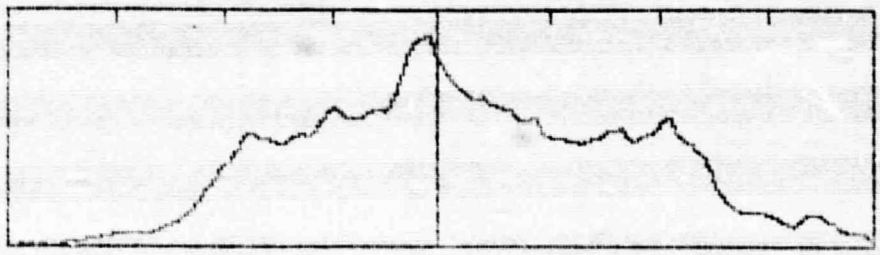
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = 97 MPH

ALTITUDE = 12 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

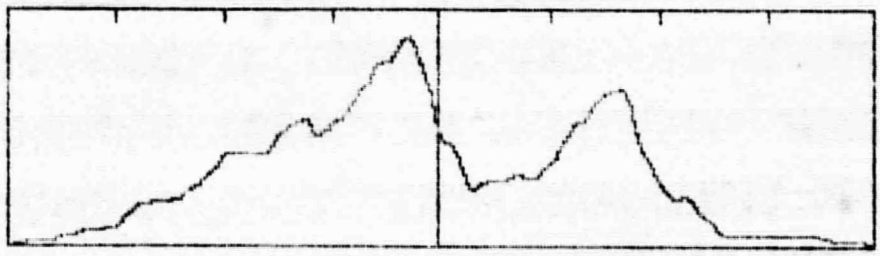


PASS NO 2B SPEED = 104 MPH

ALTITUDE = 12.5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 172 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

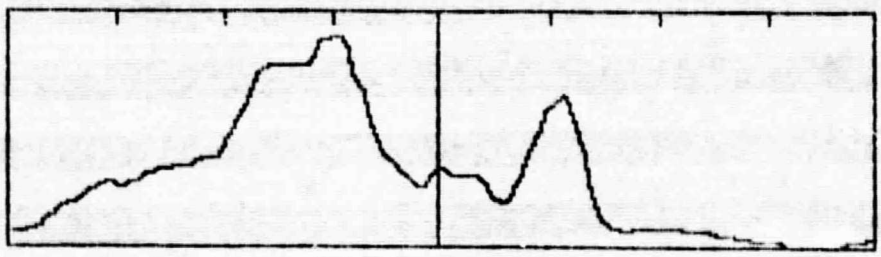


PASS NO 2C SPEED = 107 MPH

ALTITUDE = 15 FT LATERAL DISPL = 1.5 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 200 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 102 A/C MAKE/TYPE = TC

----- BOOM -----

SHAPE = RD POSITION = 7"FWD 5.5"BLW LDG EDG

----- NOZZLE -----

TYPE = NA SIZE = D6-45 ANGLE = 90 DEG

----------WING SPAN = 36.7 FEET----------

LEFT BOOM LENGTH = 35 FEET RIGHT

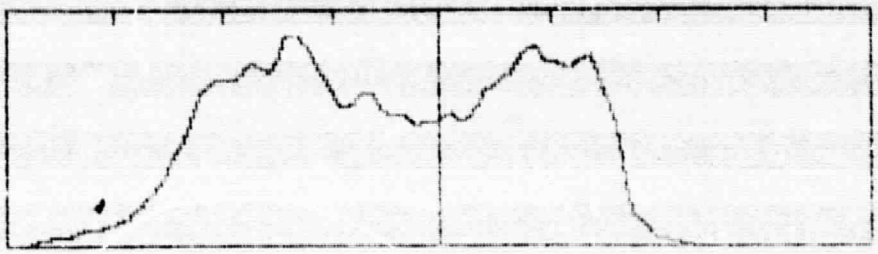
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 142 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 184 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1B SPEED = 86 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 193 DEG

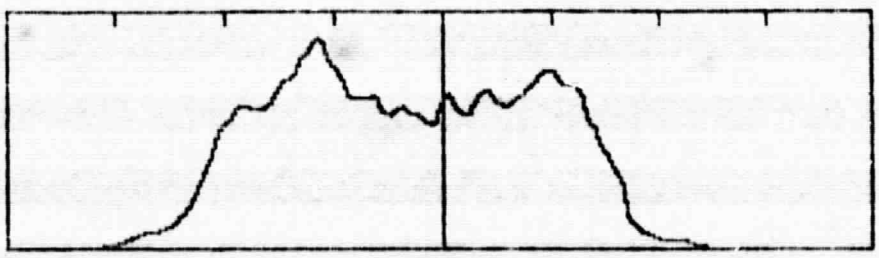
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1C SPEED = 198 MPH

ALTITUDE = 5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 171 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 103 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = 8" BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 8-46 ANGLE = NA DEG

----------WING SPAN = 42.3 FEET----------

LEFT BOOM LENGTH = 32.4 FEET RIGHT

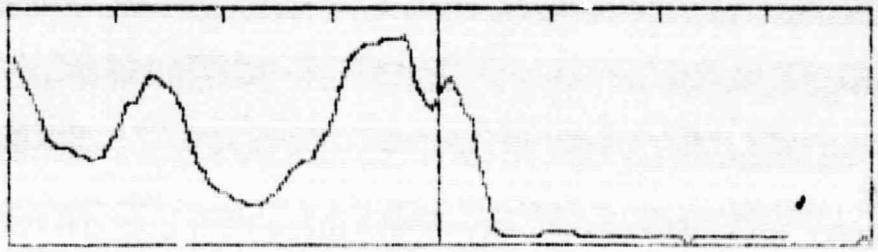
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 136 MPH

ALTITUDE = 14 FT LATERAL DISPL = 6 FT LEFT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 186 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

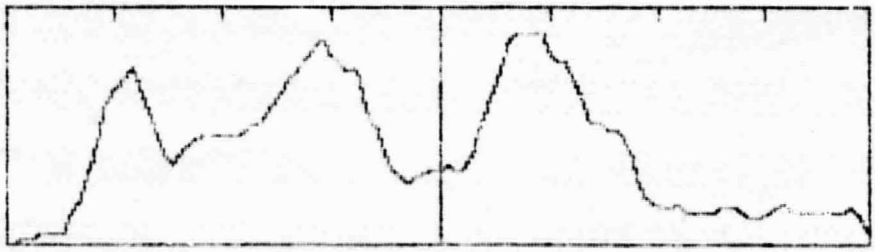


PASS NO 1B SPEED = 112 MPH

ALTITUDE = 12.5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 181 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

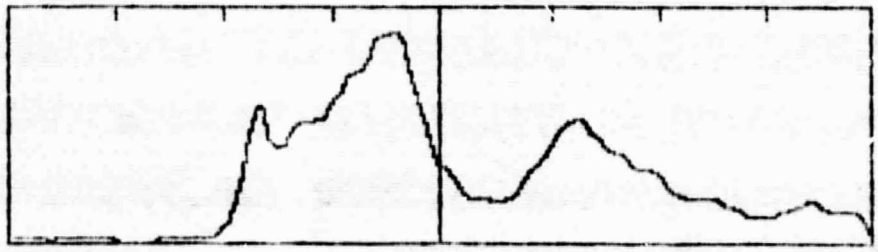


PASS NO 1C SPEED = 117 MPH

ALTITUDE = 12 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 162 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

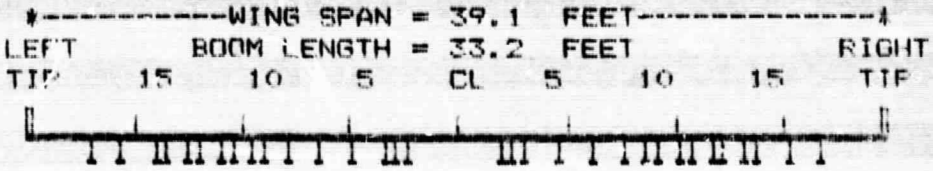
TEST NO = 104-1 A/C MAKE/TYPE = PB

----- BOOM -----

SHAPE = RD POSITION = 6" BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 8-45 ANGLE = 135 DEG

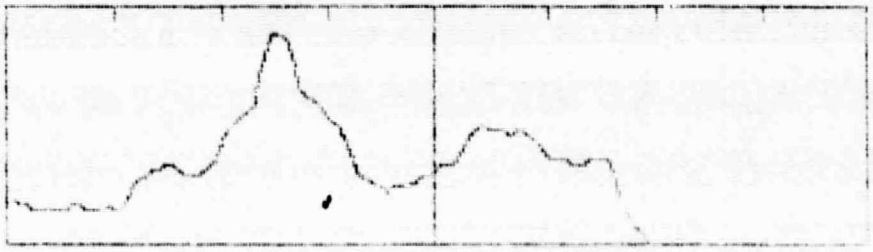


PASS NO 1A SPEED = 129 MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 217 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

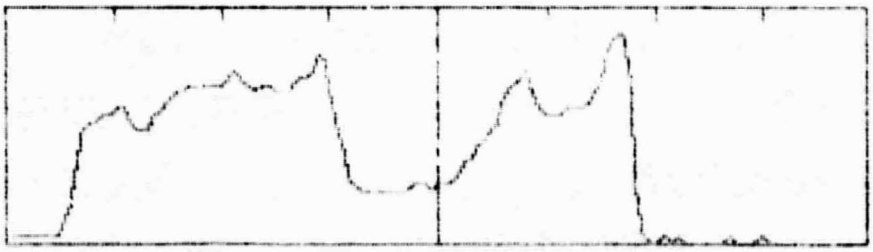


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 174 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

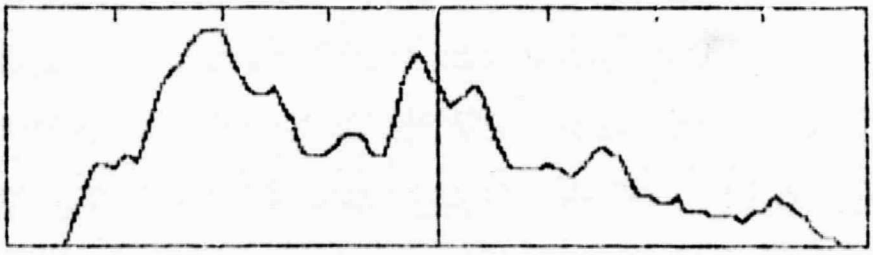


PASS NO 1C SPEED = NA MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 204 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 104-2 A/C MAKE/TYPE = PB

----- BOOM -----

SHAPE = RD POSITION = 6" BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 6-45 ANGLE = NA DEG

----------WING SPAN = 39.1 FEET----------

LEFT BOOM LENGTH = 33.2 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = 124 MPH

ALTITUDE = 8 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 193 DEG

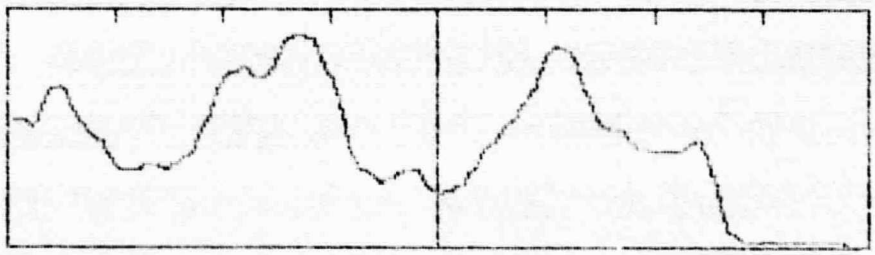
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 2B SPEED = 124 MPH

ALTITUDE = 10 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 207 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

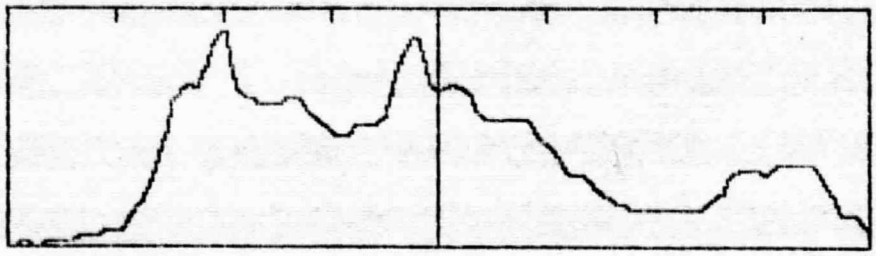


PASS NO 2C SPEED = 133 MPH

ALTITUDE = 12 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 144 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 105-2 A/C MAKE/TYPE = HU

----- BOOM -----

SHAPE = RD POSITION = NA

----- NOZZLE -----

TYPE = NA SIZE = 6-45 ANGLE = NA DEG

----------WING SPAN = 30.6 FEET----------

LEFT BOOM LENGTH = 28 FEET RIGHT

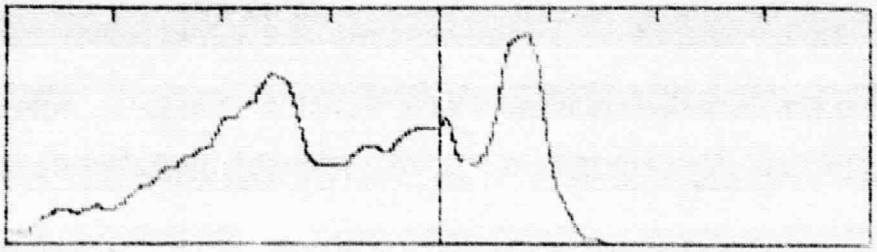
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = 64 MPH

ALTITUDE = 7 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 197 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

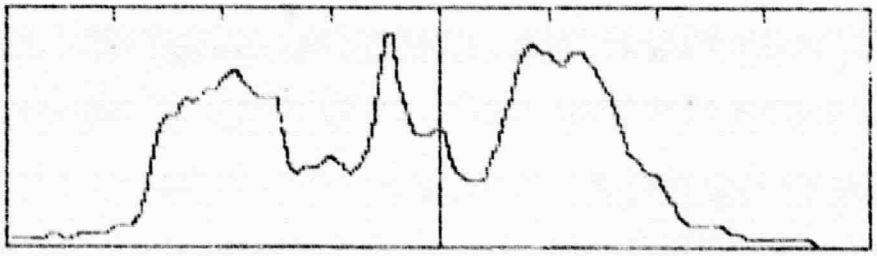


PASS NO 2B SPEED = 65 MPH

ALTITUDE = 6 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 169 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

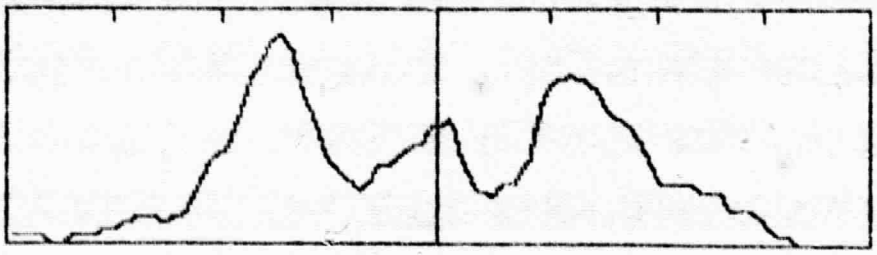


PASS NO 2C SPEED = 114 MPH

ALTITUDE = 7 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 166 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



GINAL PAGE IS
POOR QUALITY

TEST NO = 106-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = 8" BEHIND

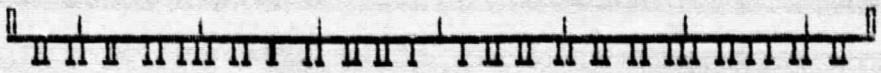
----- NOZZLE -----

TYPE = NA SIZE = 10-45 ANGLE = NA DEG

----------WING SPAN = 35.3 FEET----------

LEFT BOOM LENGTH = 33 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

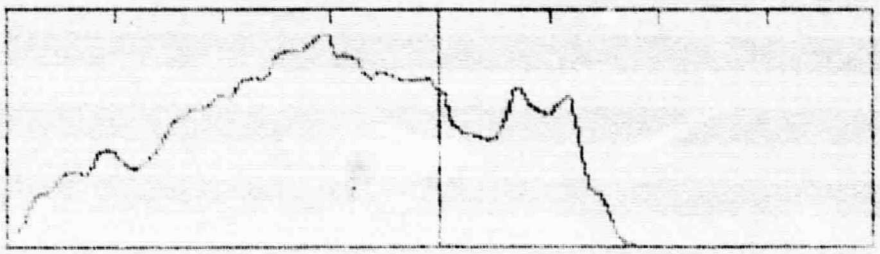


PASS NO 1A SPEED = 127 MPH

ALTITUDE = 11 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 169 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

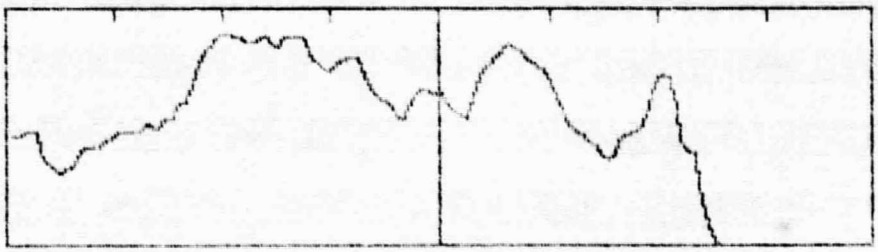


PASS NO 1B SPEED = 136 MPH

ALTITUDE = 12 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 179 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

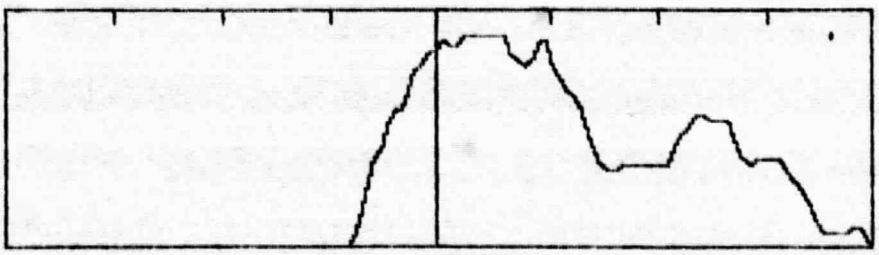


PASS NO 1C SPEED = 123 MPH

ALTITUDE = 13 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 104 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 107-1 A/C MAKE/TYPE = PB

----- BOOM -----

SHAPE = RD POSITION = 6" BEHIND

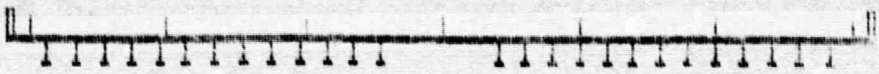
----- NOZZLE -----

TYPE = NA SIZE = 12-46 ANGLE = 135 DEG

----------WING SPAN = 31.7 FEET----------

LEFT BOOM LENGTH = 28.5 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

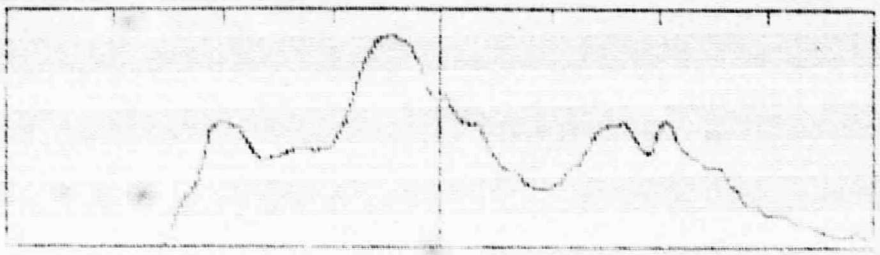


PASS NO 1A SPEED = 138 MPH

ALTITUDE = 14 FT LATERAL DISPL = 3 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 161 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

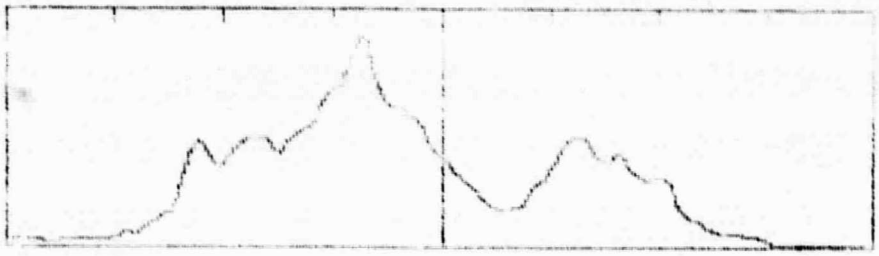


PASS NO 1B SPEED = 131 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 166 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

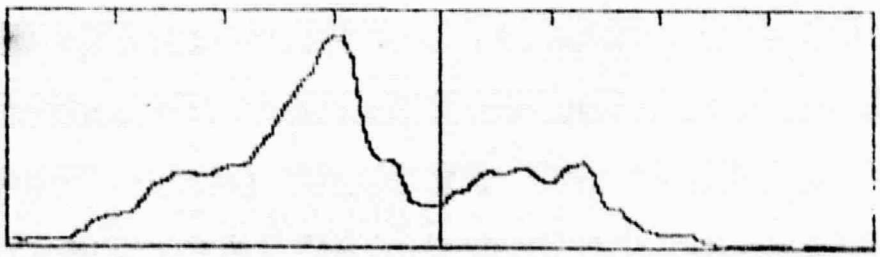


PASS NO 1C SPEED = 138 MPH

ALTITUDE = 11 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 191 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 108-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = 7"BEHIND; 3" ABOVE

----- NOZZLE -----

TYPE = NA SIZE = 6 ANGLE = NA DEG

----------WING SPAN = 41 FEET----------

LEFT BOOM LENGTH = 32.6 FEET RIGHT

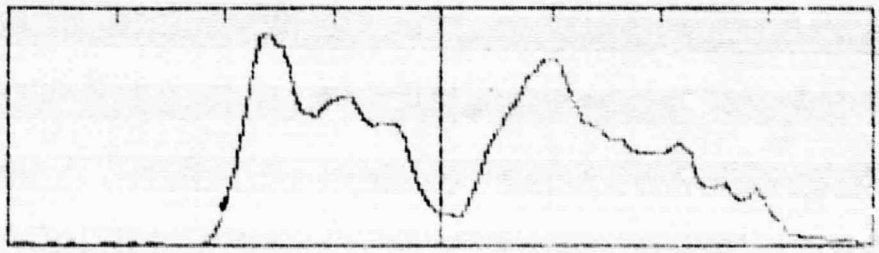
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 101 MPH

ALTITUDE = 8.5 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 155 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

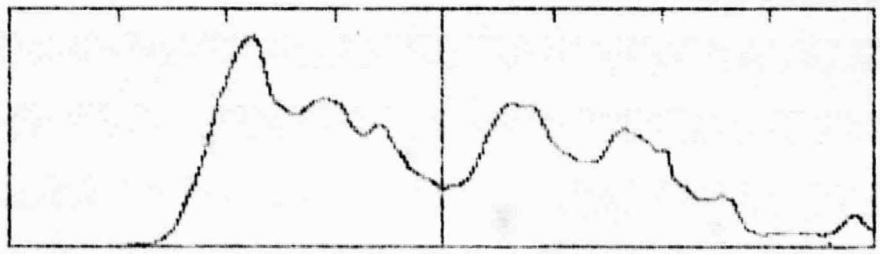


PASS NO 1B SPEED = 114 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 175 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

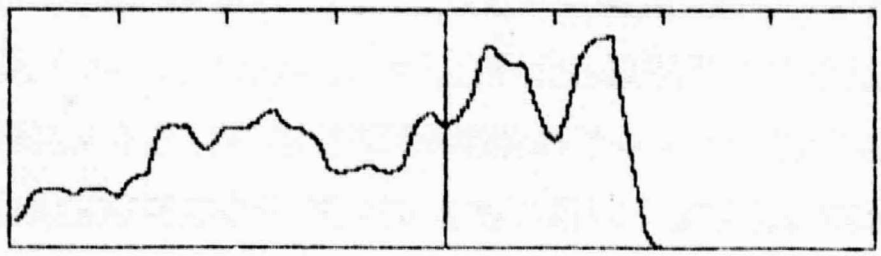


PASS NO 1C SPEED = NA MPH

ALTITUDE = 8 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 181 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 109 A/C MAKE/TYPE = T

----- BOOM -----

SHAPE = AIRFOIL POSITION = 12" BEHIND

----- NOZZLE -----

TYPE = MICRONAIR SIZE = NA ANGLE = NA DEG

----------WING SPAN = 44.3 FEET----------

LEFT BOOM LENGTH = 26.5 FEET RIGHT

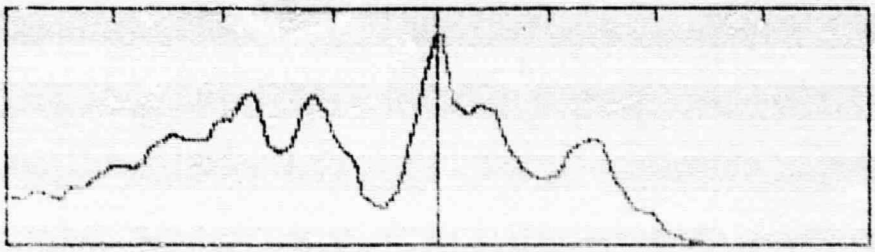
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 74 MPH

ALTITUDE = 13 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 201 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

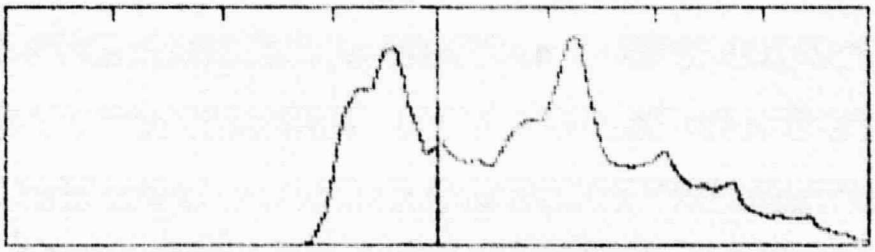


PASS NO 1B SPEED = 106 MPH

ALTITUDE = 12 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 174 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

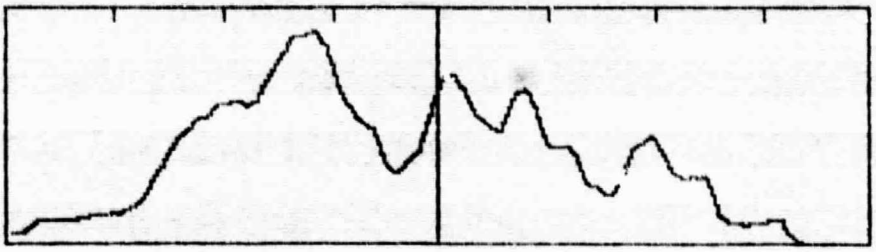


PASS NO 1C SPEED = 121 MPH

ALTITUDE = 13 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 150 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 110 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 6" BEHIND

----- NOZZLE -----

TYPE = NA SIZE = 8-46 ANGLE = NA DEG

----------WING SPAN = 37.3 FEET----------

LEFT BOOM LENGTH = 28.1 FEET RIGHT

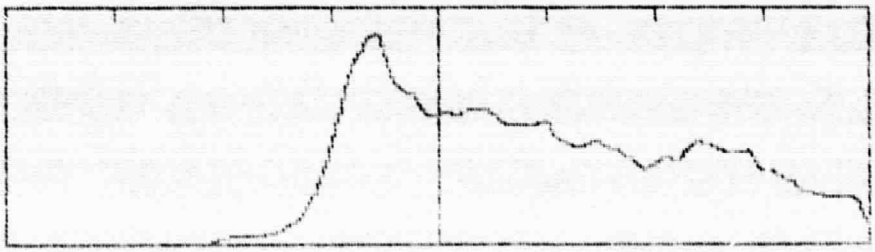
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 117 MPH

ALTITUDE = 15 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 168 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

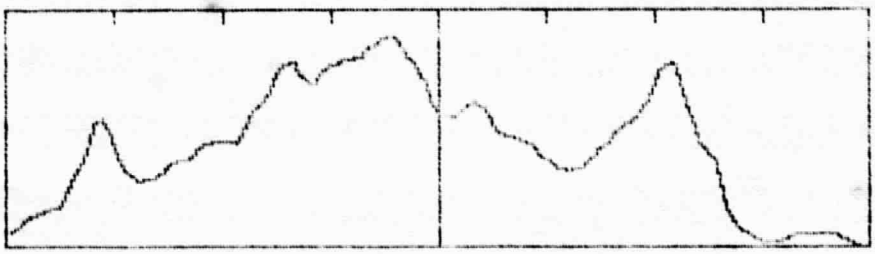


PASS NO 1B SPEED = 118 MPH

ALTITUDE = 16 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 172 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

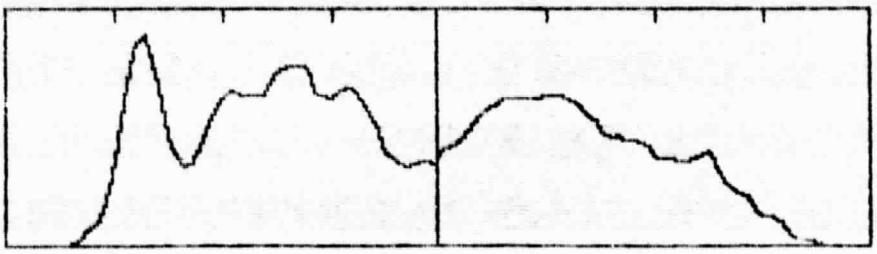


PASS NO 1C SPEED = 87 MPH

ALTITUDE = 15 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 169 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 111-2 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = STD. CESSNA

----- NOZZLE -----

TYPE = NA SIZE = D10-45 ANGLE = NA DEG

----------WING SPAN = 41.7 FEET----------

LEFT BOOM LENGTH = 33.2 FEET RIGHT

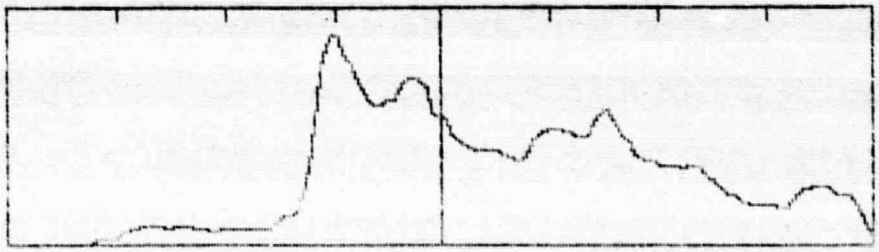
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = 84 MPH

ALTITUDE = 5.5 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 13 MPH WIND DIRECTION = 186 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

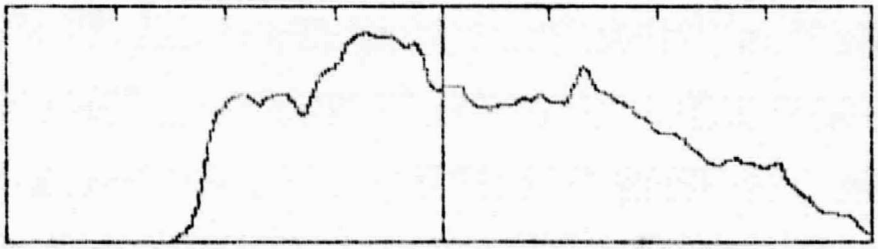


PASS NO 2B SPEED = 81 MPH

ALTITUDE = 5.5 FT LATERAL DISPL = .5 FT RIGHT OF CL

WIND SPEED = 13 MPH WIND DIRECTION = 176 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

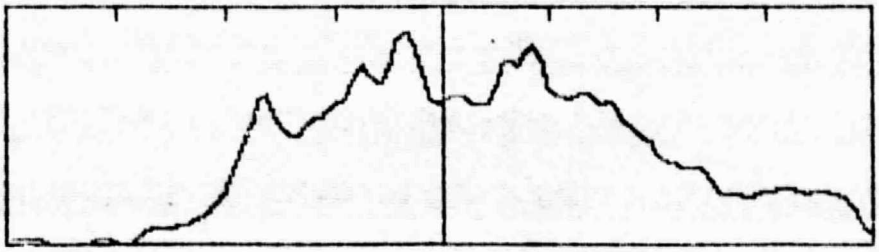


PASS NO 2C SPEED = 84 MPH

ALTITUDE = 4 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 12 MPH WIND DIRECTION = 167 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 111-3 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = STD. CESSNA

----- NOZZLE -----

TYPE = NA SIZE = D10-45 ANGLE = NA DEG

----------WING SPAN = 41.7 FEET----------

LEFT BOOM LENGTH = 33.2 FEET RIGHT

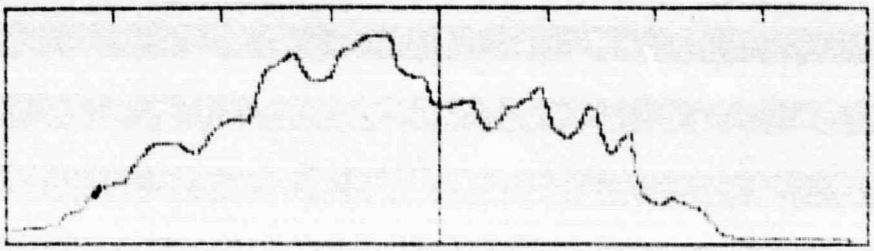
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 3A SPEED = 79 MPH

ALTITUDE = 7 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 15 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

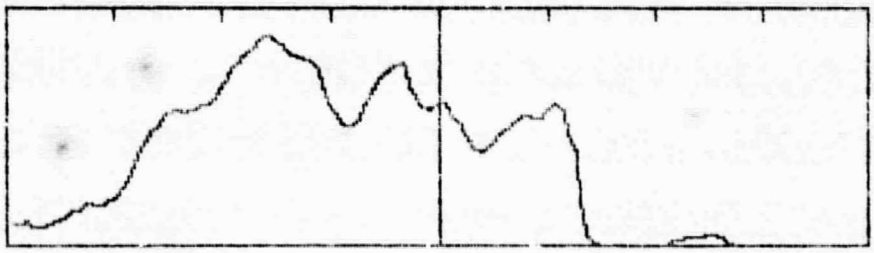


PASS NO 3B SPEED = 79 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 12 MPH WIND DIRECTION = 192 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

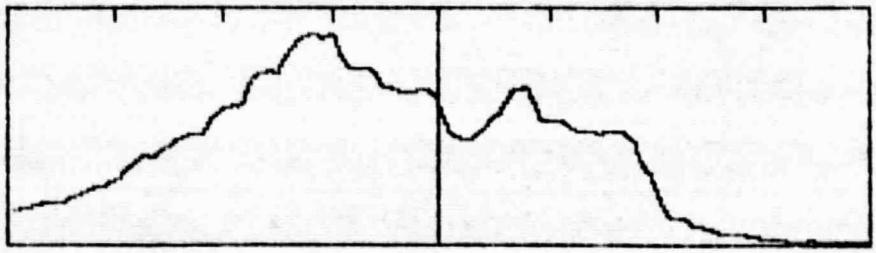


PASS NO 3C SPEED = 77 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 18 MPH WIND DIRECTION = 184 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 114-1 A/C MAKE/TYPE = C5

----- BOOM -----

SHAPE = AIRFOIL POSITION = 10" BEHIND; 11" BELOW

----- NOZZLE -----

TYPE = TEEJET SIZE = D6-46 ANGLE = NA DEG

----------WING SPAN = 41.9 FEET----------

LEFT BOOM LENGTH = 33.7 FEET RIGHT

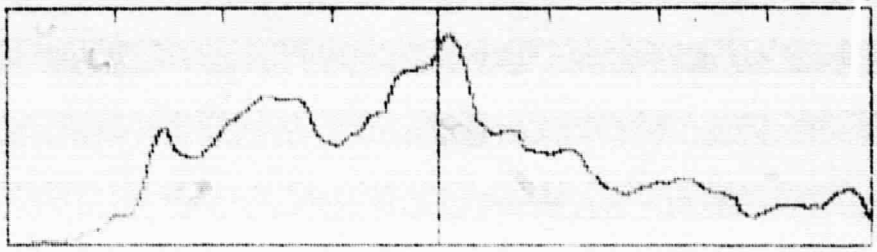
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 118 MPH

ALTITUDE = 13 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 176 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

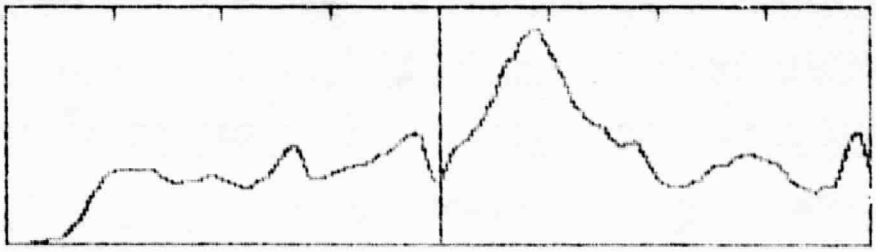


PASS NO 1B SPEED = 113 MPH

ALTITUDE = 12 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 156 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

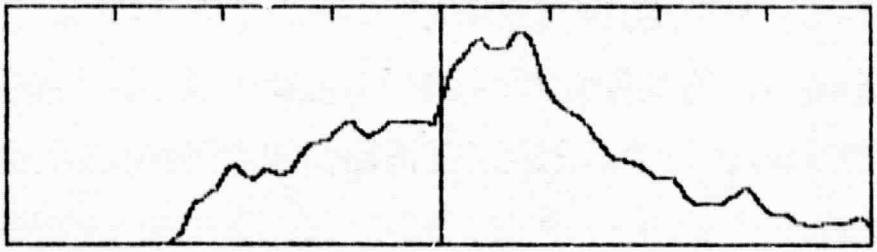


PASS NO 1C SPEED = 113 MPH

ALTITUDE = 15 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 149 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS OF POOR QUALITY

TEST NO = 114-3 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = 10" BEHIND; 11" BELOW

----- NOZZLE -----

TYPE = TEEJET SIZE = 6-10 ANGLE = NA DEG

----------WING SPAN = 41.9 FEET----------

LEFT BOOM LENGTH = 33.7 FEET RIGHT

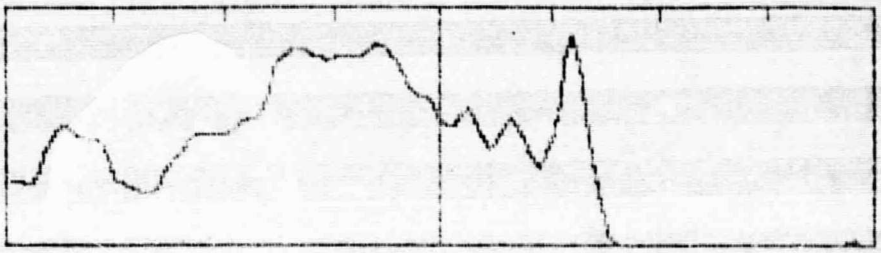
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 5A SPEED = 113 MPH

ALTITUDE = 12 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 213 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

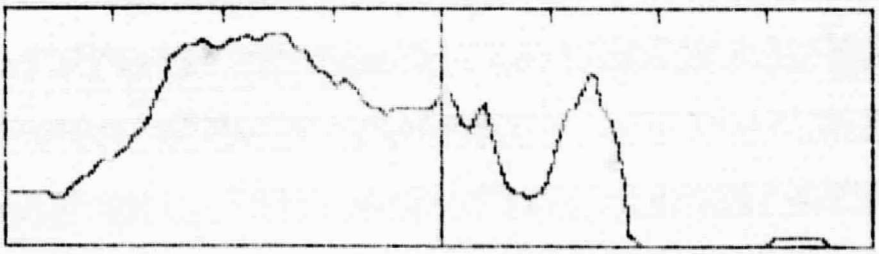


PASS NO 7B SPEED = 108 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 264 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

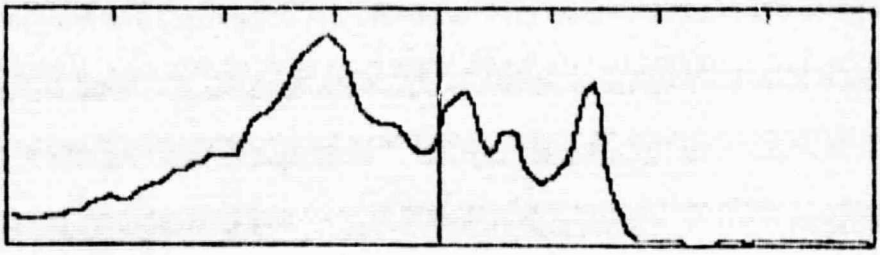


PASS NO 5C SPEED = 116 MPH

ALTITUDE = 12 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 197 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 115-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4" BEHIND; 9.5" BELOW

----- NOZZLE -----

TYPE = SPG SYS SIZE = 6-45 ANGLE = 180 DEG

----- ----WING SPAN = 40.7 FEET----------

LEFT BOOM LENGTH = 36.1 FEET RIGHT

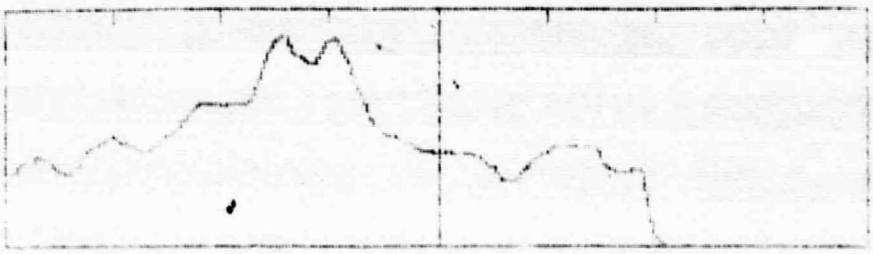
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 107 MPH

ALTITUDE = 12 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 197 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

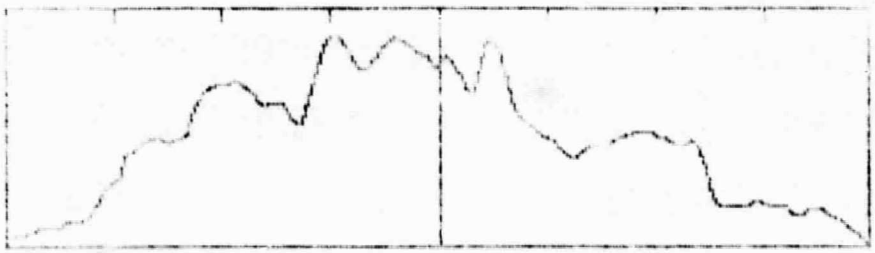


PASS NO 1B SPEED = 101 MPH

ALTITUDE = 11 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 165 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

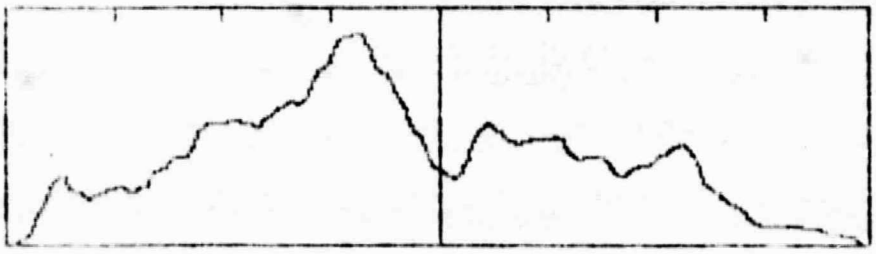


PASS NO 1C SPEED = 97 MPH

ALTITUDE = 10 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 174 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 115-3 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4" BEHIND; 9.5" BELOW

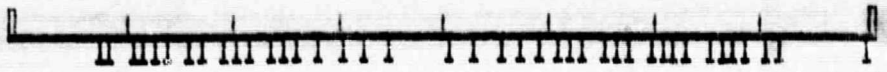
----- NOZZLE -----

TYPE = SPG SYS SIZE = 6-45 ANGLE = 180 DEG

----------WING SPAN = 40.7 FEET----------

LEFT BOOM LENGTH = 36.1 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

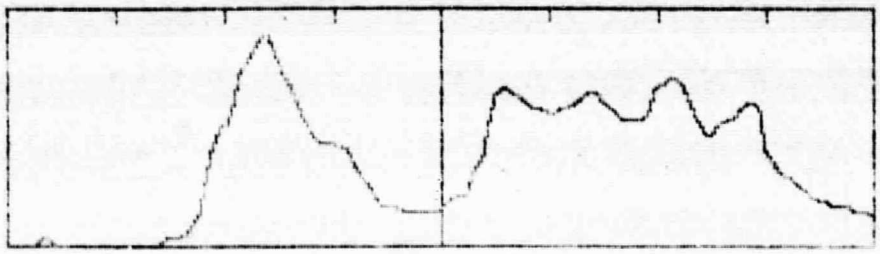


PASS NO 3A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

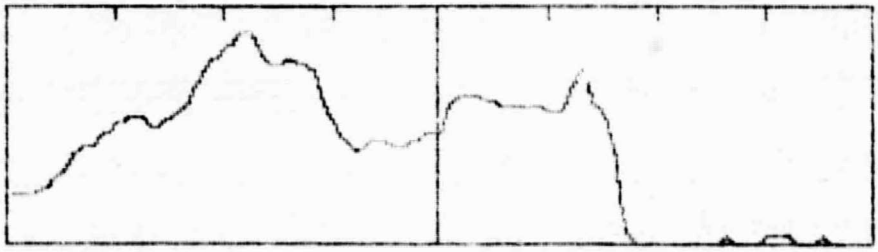


PASS NO 3B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

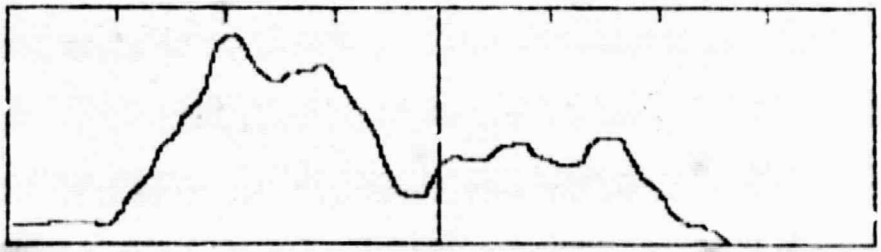


PASS NO 3C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 116-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = 8.5" BEHIND; 10" BELOW

----- NOZZLE -----

TYPE = NA SIZE = D4 ANGLE = NA DEG

----------WING SPAN = 38.8 FEET----------

LEFT BOOM LENGTH = 31.8 FEET RIGHT

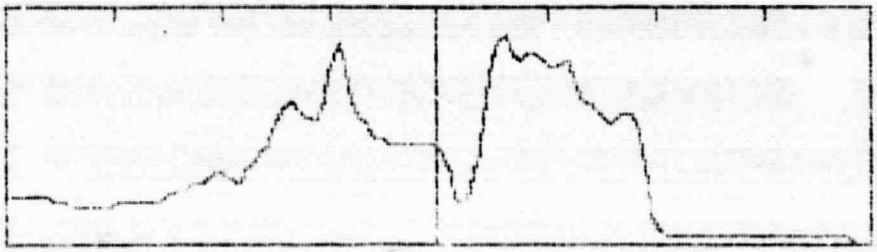
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 106 MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

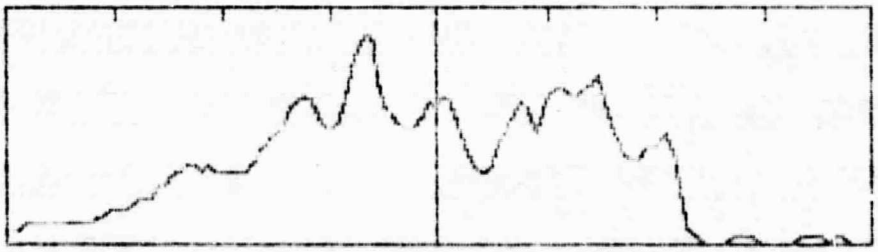


PASS NO 1B SPEED = 107 MPH

ALTITUDE = 8.5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 171 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

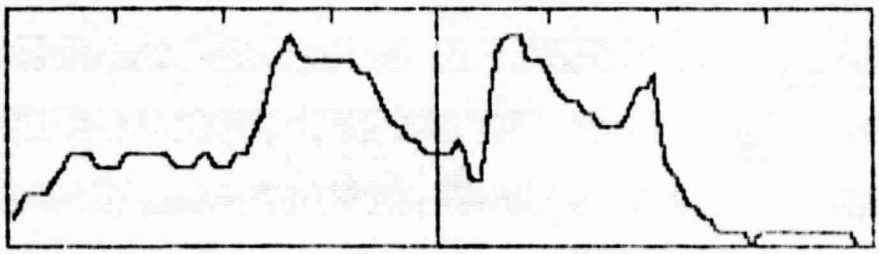


PASS NO 1C SPEED = 110 MPH

ALTITUDE = 10 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 172 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 116-2 A/C MAKE/TYPE = C5

----- BOOM -----

SHAPE = AIRFOIL POSITION = 8.5" BEHIND; 10" BELOW

----- NOZZLE -----

TYPE = NA SIZE = D4 ANGLE = NA DEG

----------WING SPAN = 38.8 FEET----------

LEFT BOOM LENGTH = 31.8 FEET RIGHT

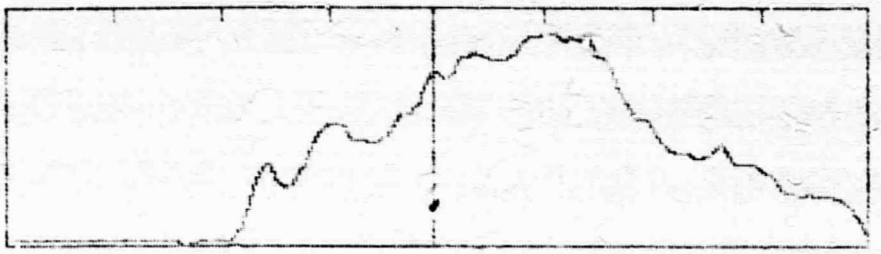
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = 113 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 151 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

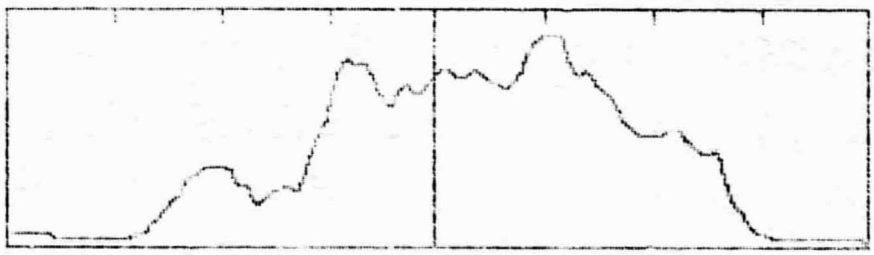


PASS NO 2B SPEED = 114 MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 132 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

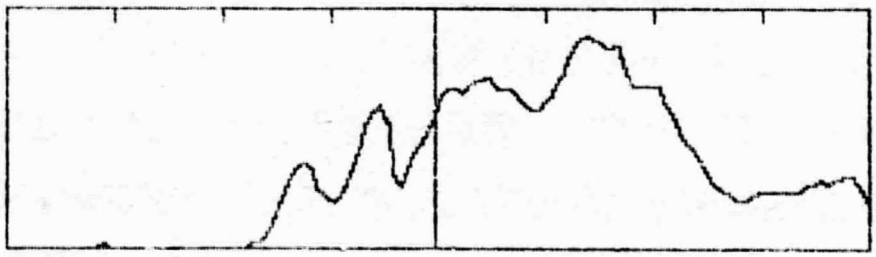


PASS NO 2C SPEED = 107 MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 151 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

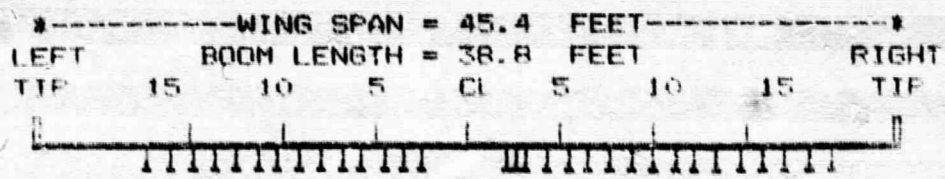
TEST NO = 117-1 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4.5" BEHIND; 10.5" BELOW

----- NOZZLE -----

TYPE = WHIRLJETS SIZE = NA ANGLE = 180 DEG

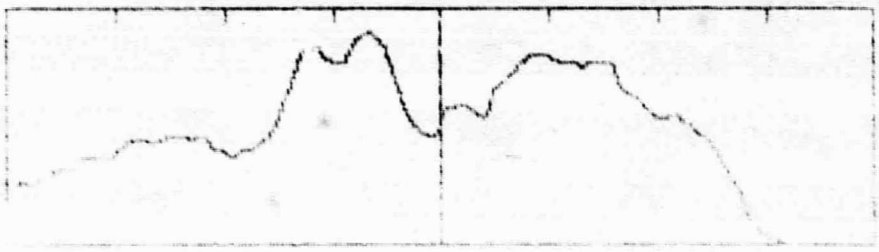


PASS NO 1A SPEED = 113 MPH

ALTITUDE = 9 FT LATERAL DISPL = 3.5 FT RIGHT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 185 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

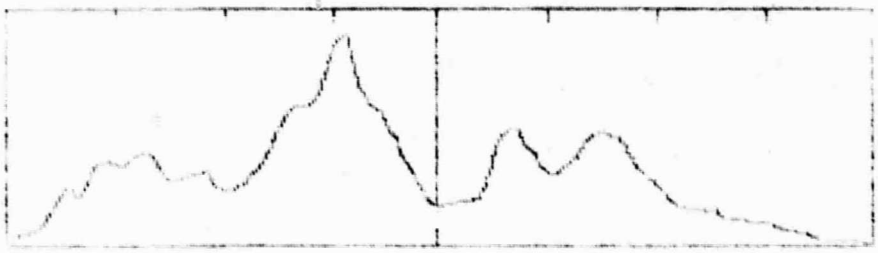


PASS NO 1B SPEED = 113 MPH

ALTITUDE = 8.5 FT LATERAL DISPL = 1.5 FT LEFT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 175 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

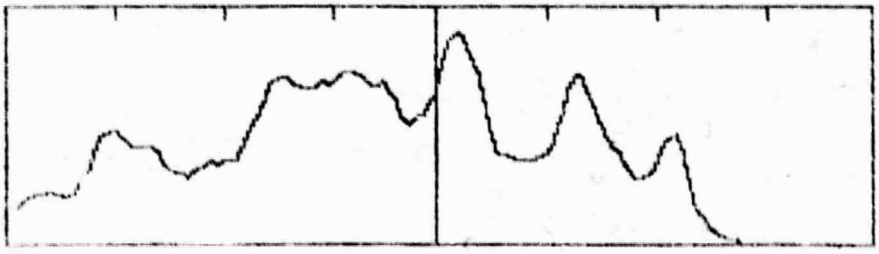


PASS NO 1C SPEED = 113 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 177 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

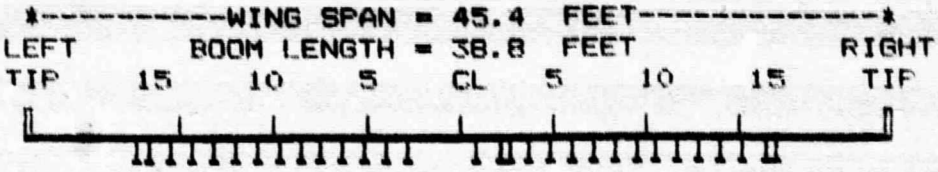
TEST NO = 117-4 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4.5" BEHIND; 10.5" BELOW

----- NOZZLE -----

TYPE = WHIRLJETS SIZE = NA ANGLE = 180 DEG

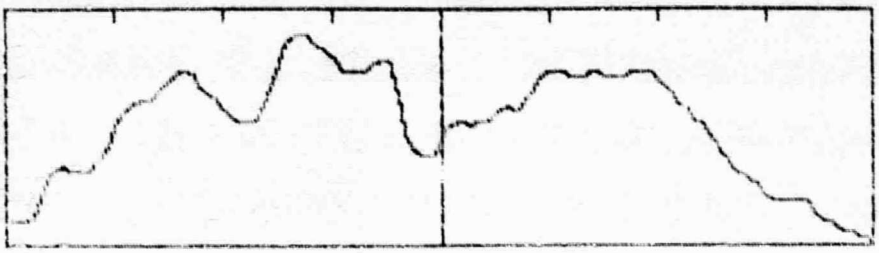


PASS NO 4A SPEED = 120 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 149 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

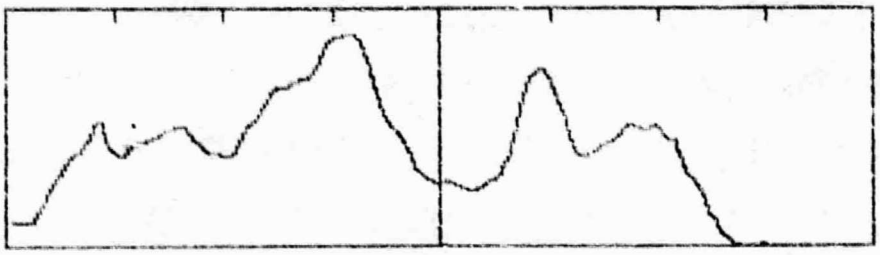


PASS NO 4B SPEED = 120 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 149 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

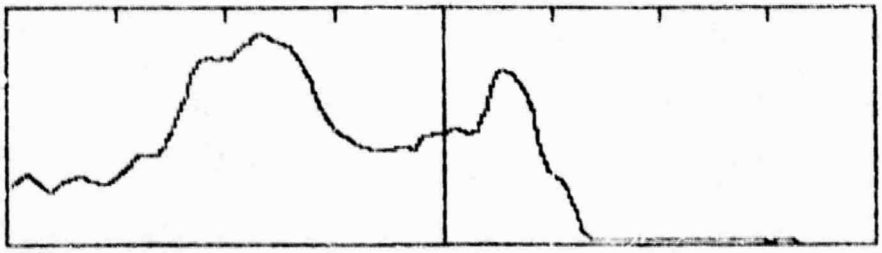


PASS NO 4C SPEED = 116 MPH

ALTITUDE = 11 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 207 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 118-1 A/C MAKE/TYPE = E

----- BOOM -----

SHAPE = NA POSITION = TRAILING EDGE

----- NOZZLE -----

TYPE = TEEJET SIZE = D6-45 ANGLE = NA DEG

----------WING SPAN = 52.2 FEET----------

LEFT BOOM LENGTH = 49 FEET RIGHT

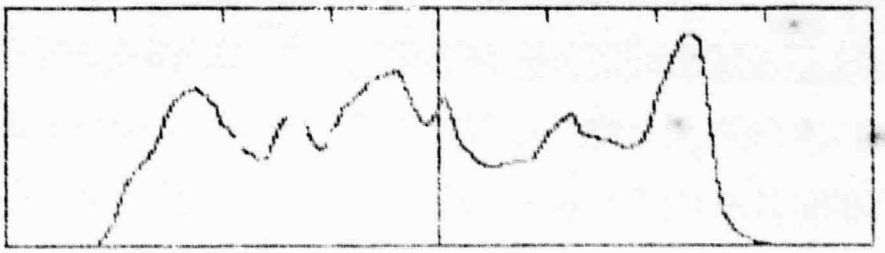
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 99 MPH

ALTITUDE = 9.5 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 173 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

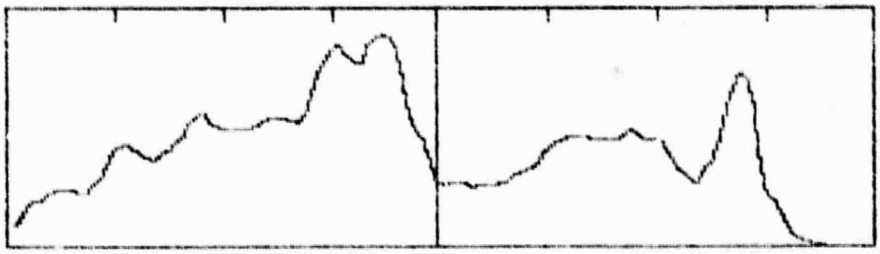


PASS NO 1B SPEED = 96 MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

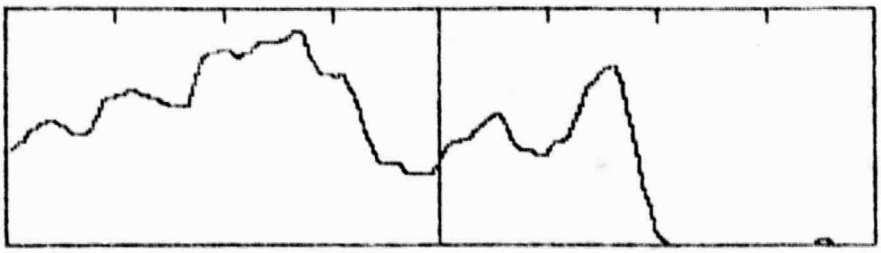


PASS NO 1C SPEED = 102 MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 202 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 119 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = 7" BEHIND; 4.5" ABOVE

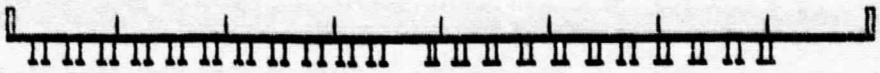
----- NOZZLE -----

TYPE = SPG SYS SIZE = 10-45 ANGLE = NA DEG

----------WING SPAN = 38.8 FEET----------

LEFT BOOM LENGTH = 33.1 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

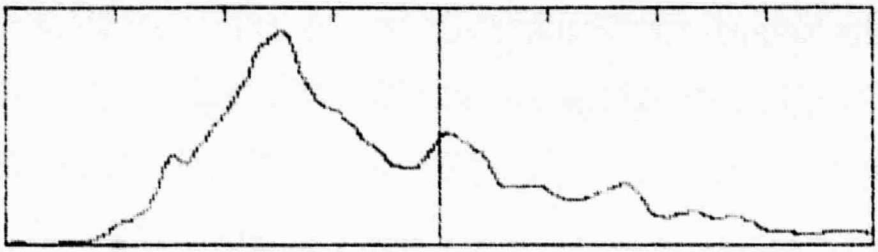


PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

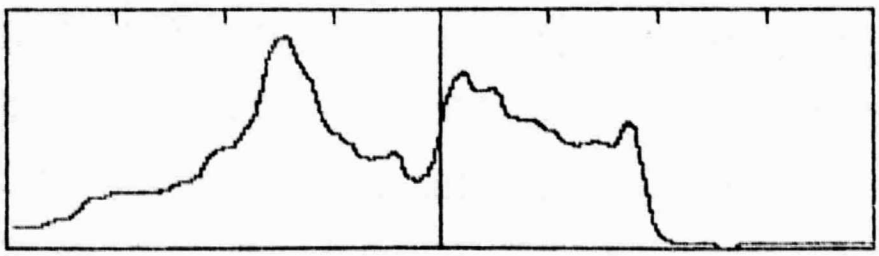


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

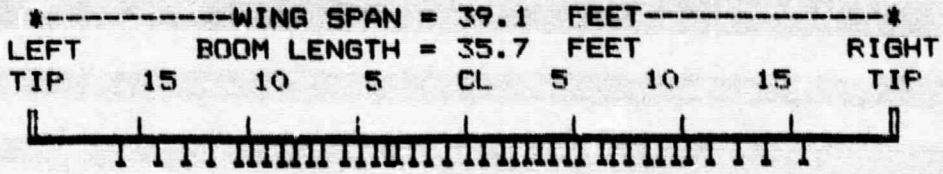
TEST NO = 120 A/C MAKE/TYPE = WX

----- BOOM -----

SHAPE = RD POSITION = 6" BEHIND

----- NOZZLE -----

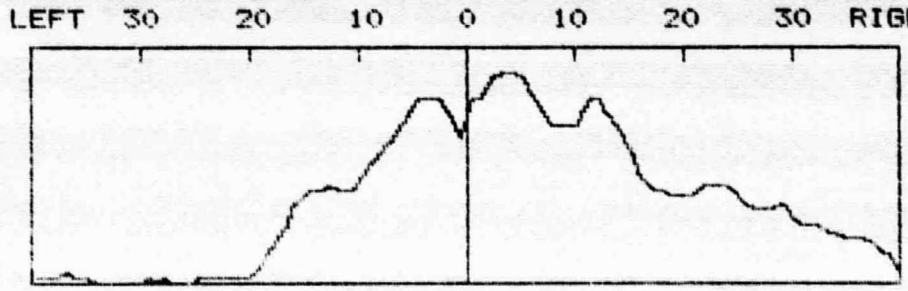
TYPE = TURRENT SIZE = 4 ANGLE = NA DEG



PASS NO 1A SPEED = 79 MPH

ALTITUDE = 10 FT LATERAL DISPL = 7 FT RIGHT OF CL

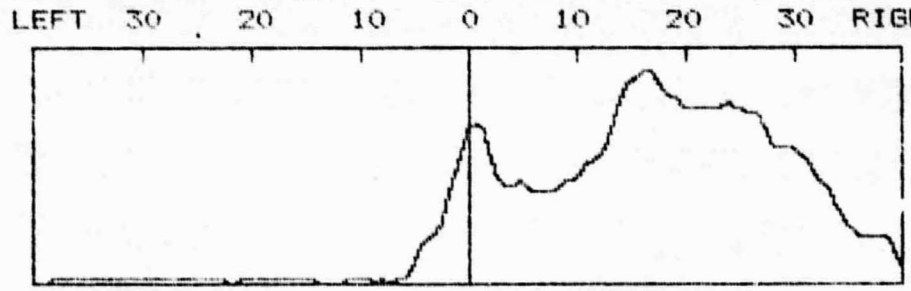
WIND SPEED = 6 MPH WIND DIRECTION = 174 DEG



PASS NO 1B SPEED = 90 MPH

ALTITUDE = 11 FT LATERAL DISPL = 7 FT RIGHT OF CL

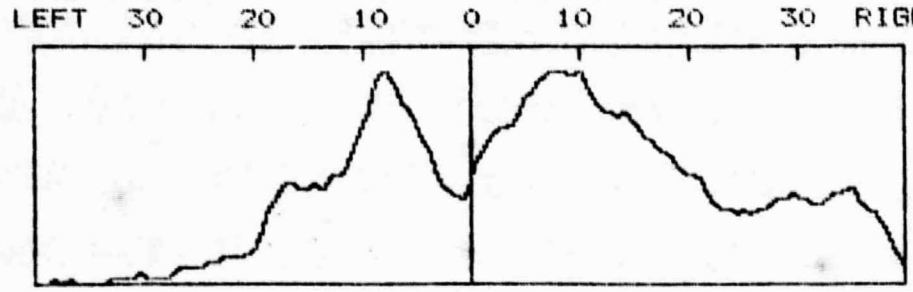
WIND SPEED = 6 MPH WIND DIRECTION = 139 DEG



PASS NO 1C SPEED = 93 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 147 DEG



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 121-1 A/C MAKE/TYPE = WX

----- BOOM -----

SHAPE = AIRFOIL POSITION = 8.5" BEHIND

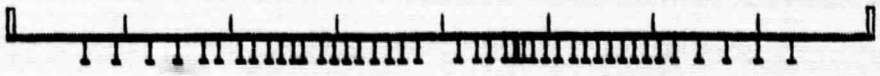
----- NOZZLE -----

TYPE = TEEJET SIZE = D8 ANGLE = NA DEG

----------WING SPAN = 40.9 FEET----------

LEFT BOOM LENGTH = 33.4 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

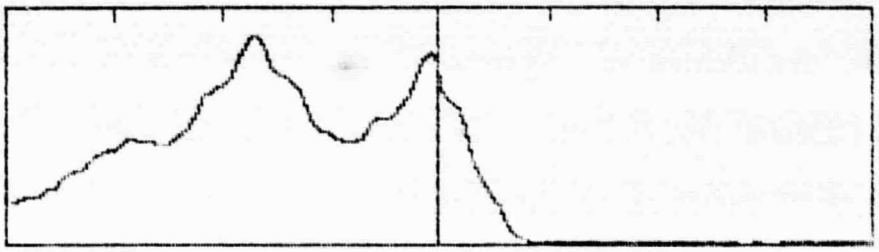


PASS NO 1A SPEED = 111 MPH

ALTITUDE = 7 FT LATERAL DISPL = 5 FT LEFT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 202 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

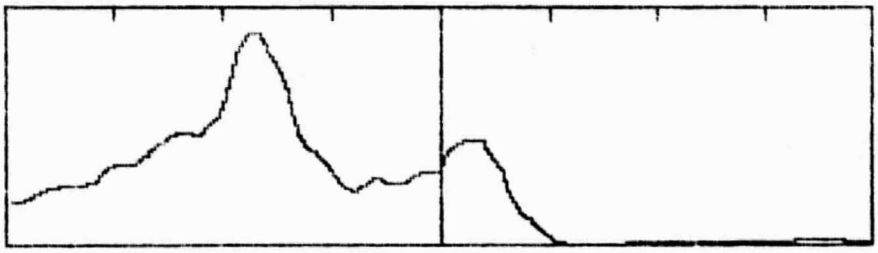


PASS NO 1B SPEED = 107 MPH

ALTITUDE = 10 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 210 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

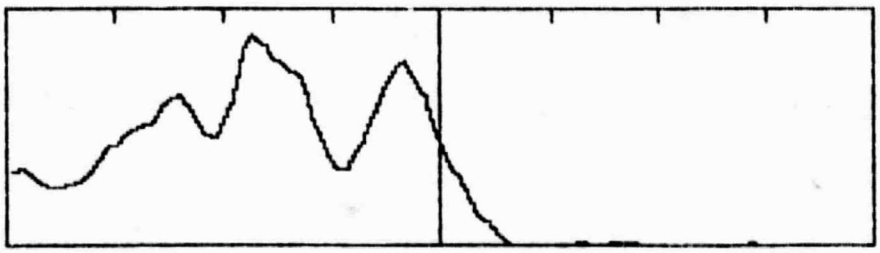


PASS NO 1CD SPEED = 107 MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 193 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 121-3 A/C MAKE/TYPE = WX

----- BOOM -----

SHAPE = AIRFOIL POSITION = 8.5" BEHIND

----- NOZZLE -----

TYPE = TEEJET SIZE = D-8 ANGLE = NA DEG

----------WING SPAN = 40.9 FEET----------

LEFT BOOM LENGTH = 33.4 FEET RIGHT

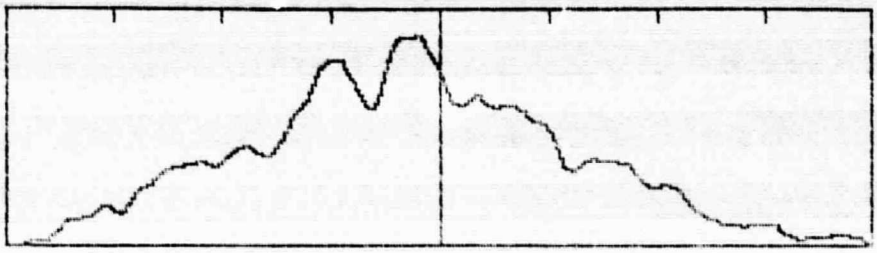
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 3A SPEED = 92 MPH

ALTITUDE = 12 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 192 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

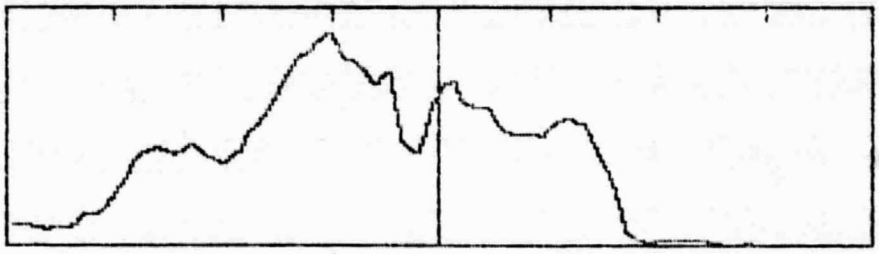


PASS NO 3B SPEED = 99 MPH

ALTITUDE = 14 FT LATERAL DISPL = 6 FT LEFT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 181 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

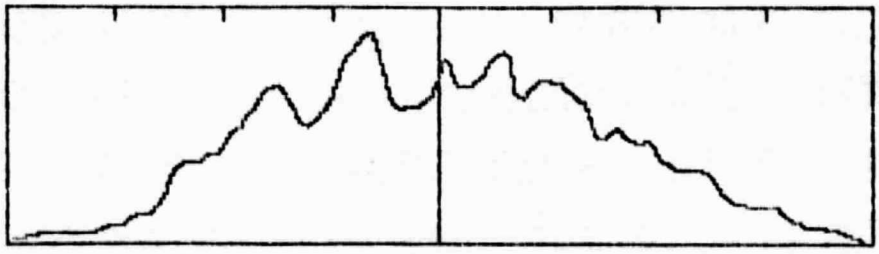


PASS NO 3C SPEED = 94 MPH

ALTITUDE = 11 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 158 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 122-2 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = 7.5" BEHIND; 4.5" ABOVE

----- NOZZLE -----

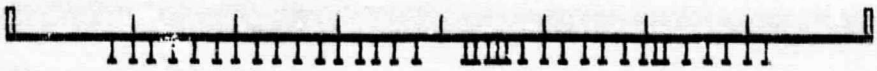
TYPE = SS SIZE = 6-45 ANGLE = NA DEG

ORIGINAL PAGE IS OF POOR QUALITY

----------WING SPAN = 42 FEET----------

LEFT BOOM LENGTH = 31.8 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

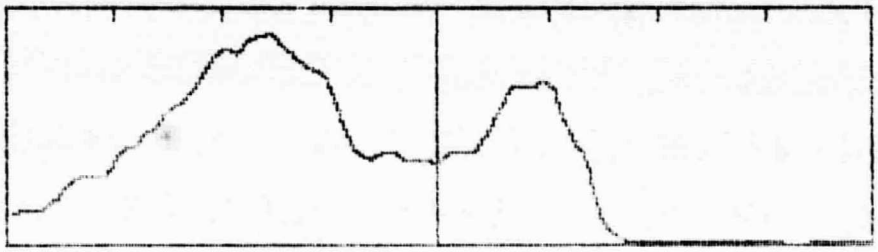


PASS NO 2A SPEED = 106 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 212 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

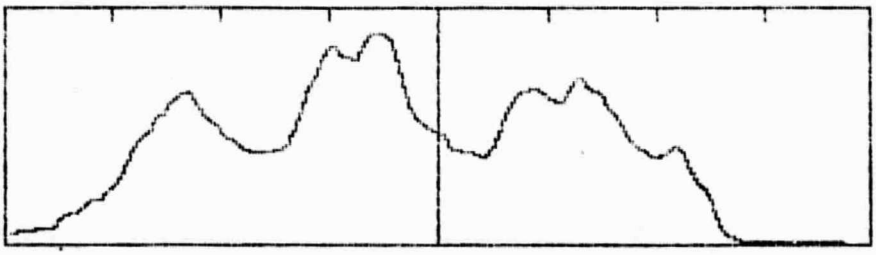


PASS NO 2B SPEED = 110 MPH

ALTITUDE = 11 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

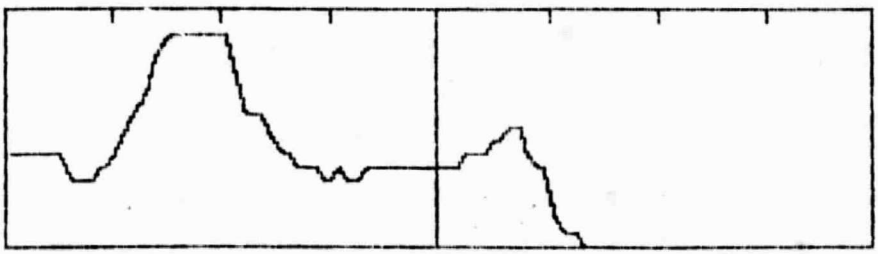


PASS NO 2C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 122-3 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = 7.5" BEHIND; 4.5"ABOVE

----- NOZZLE -----

TYPE = SS SIZE = 6-45 ANGLE = NA DEG

----------WING SPAN = 38.7 FEET----------

LEFT BOOM LENGTH = 33 FEET RIGHT

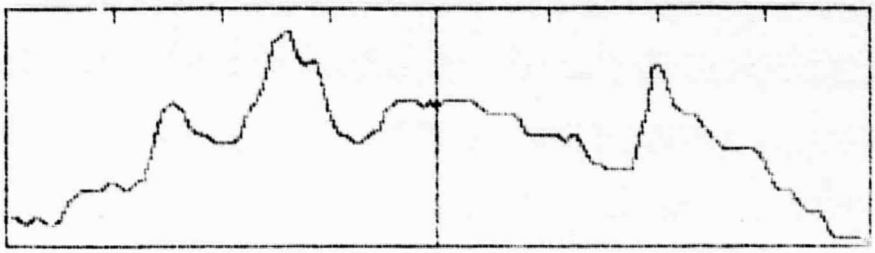
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 3A SPEED = 115 MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

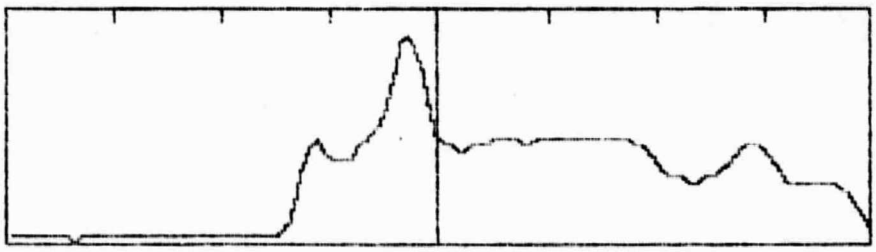


PASS NO 3B SPEED = 69 MPH

ALTITUDE = 12 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 129 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

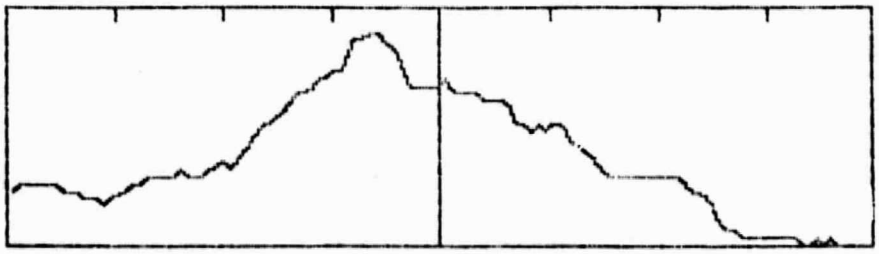


PASS NO 3C SPEED = 112 MPH

ALTITUDE = 11 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 185 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 124 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

----- NOZZLE -----

TYPE = NA SIZE = D4-45 ANGLE = NA DEG

----------WING SPAN = 42 FEET----------

LEFT BOOM LENGTH = 31.8 FEET RIGHT

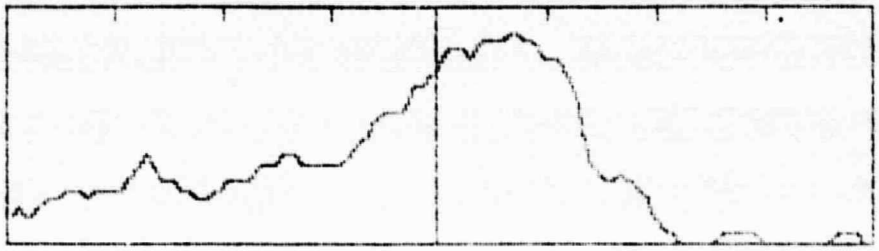
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 113 MPH

ALTITUDE = 18 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 191 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1B SPEED = 107 MPH

ALTITUDE = 18 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 197 DEG

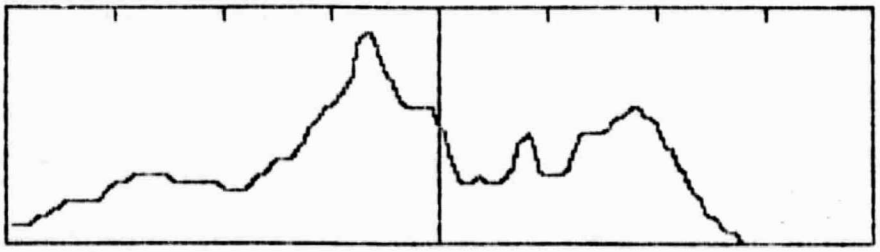
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1C SPEED = 112 MPH

ALTITUDE = 15.5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 125 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = RD POSITION = NA

----- NOZZLE -----

TYPE = NA SIZE = 6-45 ANGLE = NA DEG

----------WING SPAN = 41.8 FEET----------

LEFT BOOM LENGTH = 33.1 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

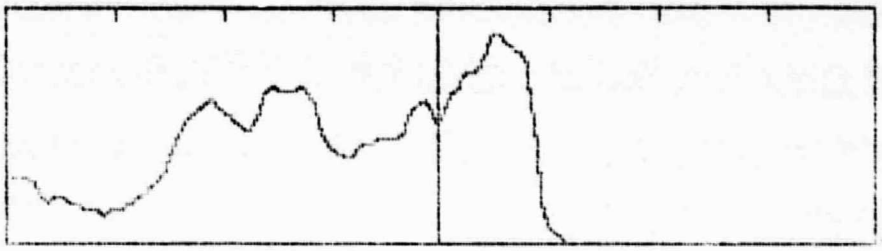
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = 100 MPH

ALTITUDE = 12 FT LATERAL DISPL = 4 FT LEFT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 196 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

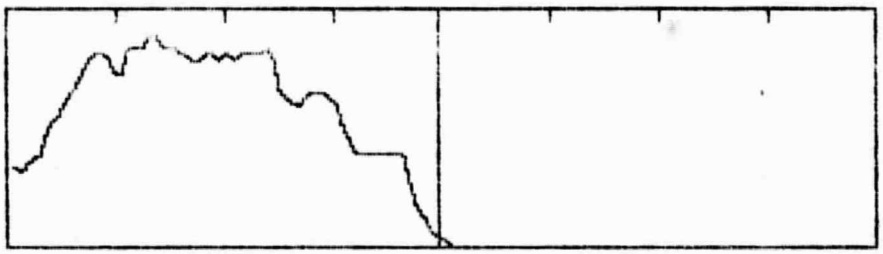


PASS NO 1B SPEED = 105 MPH

ALTITUDE = 11 FT LATERAL DISPL = 5 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 220 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



PASS NO 1C SPEED = 107 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 218 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

ORIGINAL PAGE IS
OF POOR QUALITY

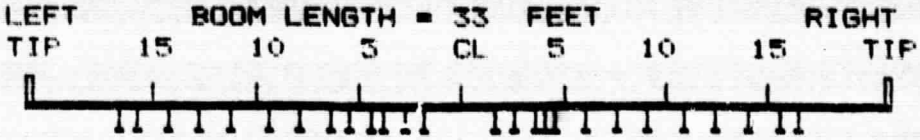
TEST NO = 126 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4" BEHIND; 8" ABOVE

----- NOZZLE -----

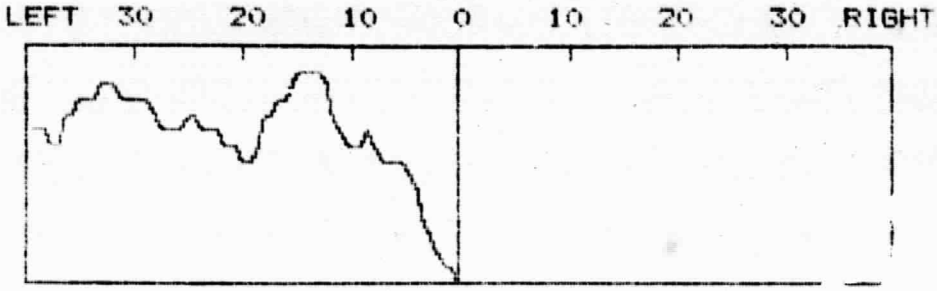
TYPE = NA SIZE = 7-45 ANGLE = NA DEG



PASS NO 1A SPEED = 107 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

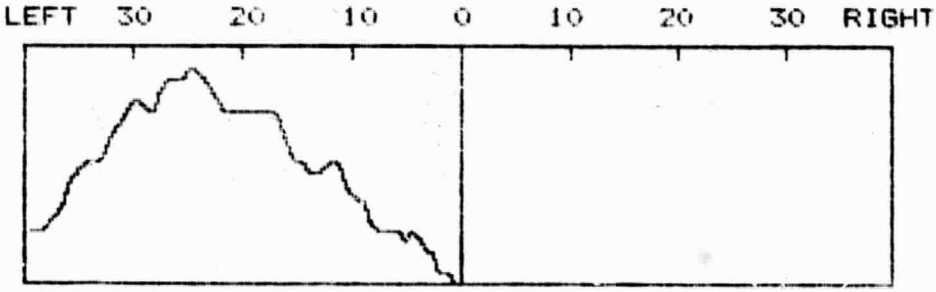
WIND SPEED = 6 MPH WIND DIRECTION = 218 DEG



PASS NO 1B SPEED = 112 MPH

ALTITUDE = 17 FT LATERAL DISPL = 2 FT RIGHT OF CL

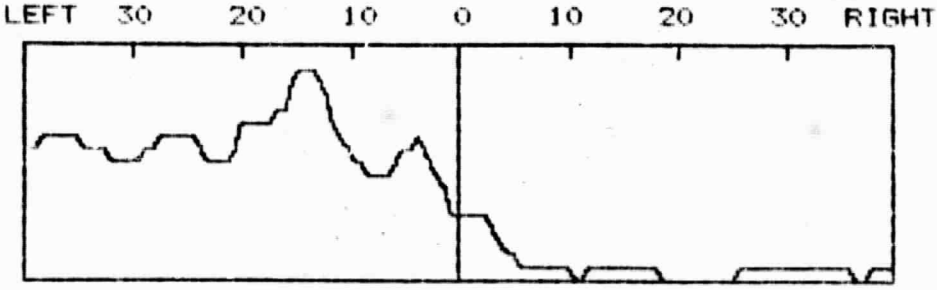
WIND SPEED = 5 MPH WIND DIRECTION = 223 DEG



PASS NO 1C SPEED = 104 MPH

ALTITUDE = 19 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 214 DEG



TEST NO = 127 A/C MAKE/TYPE = WX-TURBINE

----- BOOM -----

SHAPE = STD.WEATHERLY POSITION = NA

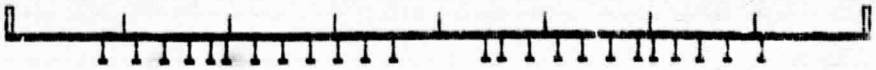
----- NOZZLE -----

TYPE = FLOODJETS SIZE = TK5 ANGLE = NA DEG

----------WING SPAN = 40.2 FEET----------

LEFT BOOM LENGTH = 30.6 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP



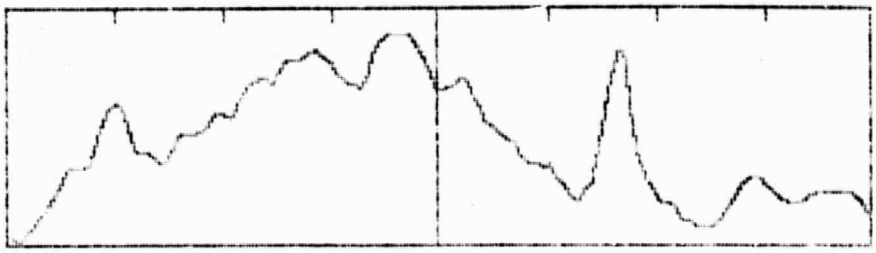
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = 75 MPH

ALTITUDE = 13 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 179 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

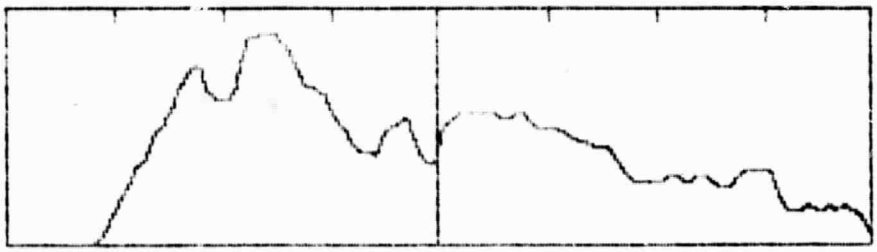


PASS NO 1B SPEED = 117 MPH

ALTITUDE = 11 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 164 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

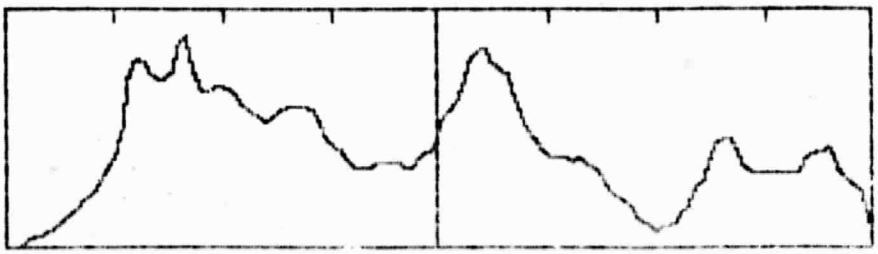


PASS NO 1C SPEED = 110 MPH

ALTITUDE = 13 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 171 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 128 A/C MAKE/TYPE = PF

----- BOOM -----

SHAPE = AIRFOIL POSITION = 6" BEHIND; 8" BELOW

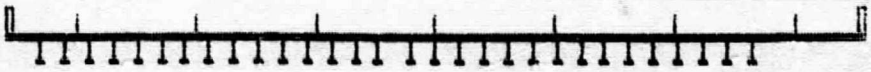
----- NOZZLE -----

TYPE = FLOODJETS SIZE = NA ANGLE = NA DEG

----------WING SPAN = 35.3 FEET----------

LEFT BOOM LENGTH = 29.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

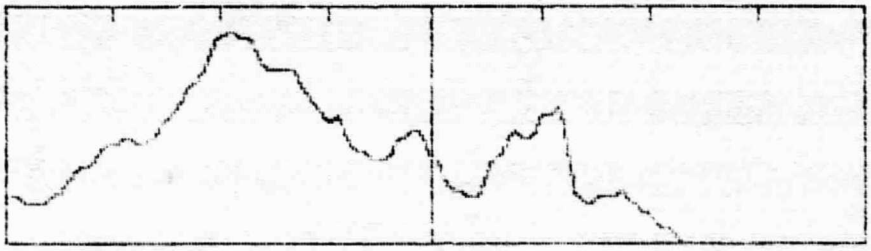


PASS NO 1A SPEED = 106 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 241 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

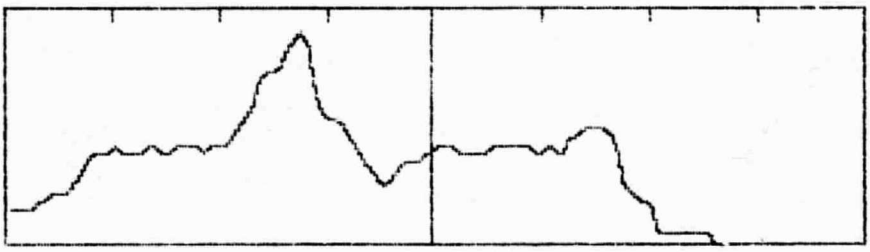


PASS NO 1B SPEED = 106 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = 255 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

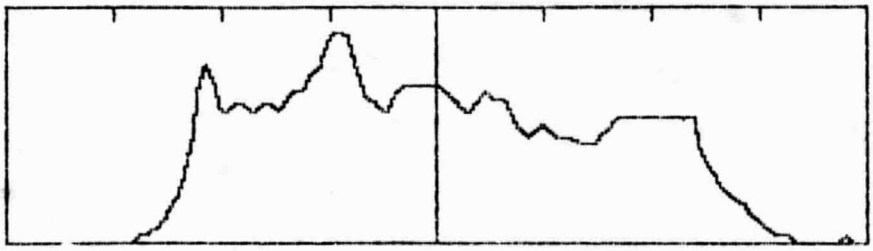


PASS NO 1C SPEED = 112 MPH

ALTITUDE = 11 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 166 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 127 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

----- NOZZLE -----

TYPE = SMITH FAIR SIZE = D10 ANGLE = NA DEG

----------WING SPAN = 42 FEET----------

LEFT BOOM LENGTH = 32.1 FEET RIGHT

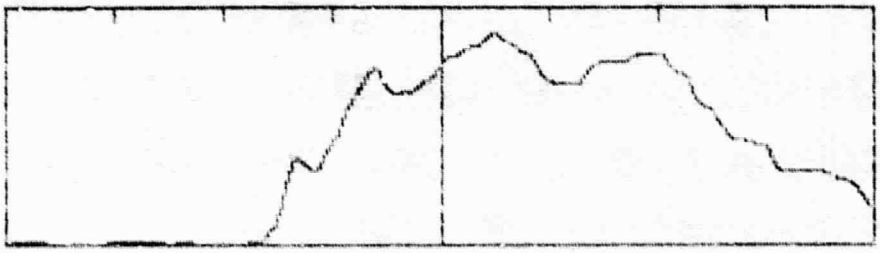
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 107 MPH

ALTITUDE = 20 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 156 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

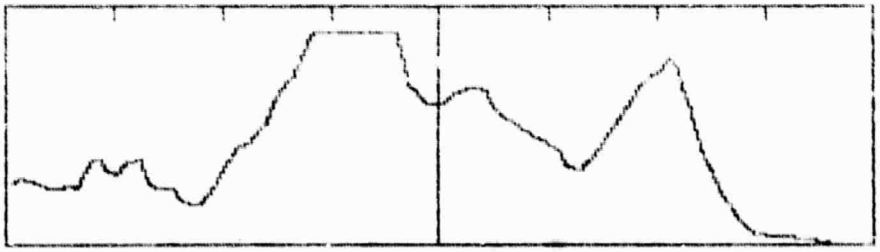


PASS NO 1B SPEED = 110 MPH

ALTITUDE = 14 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 209 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

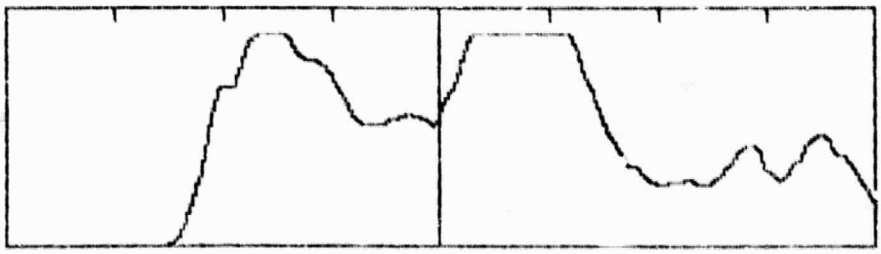


PASS NO 1C SPEED = 100 MPH

ALTITUDE = 14 FT LATERAL DISPL = 3 FT LEFT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 151 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 130-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

----- NOZZLE -----

TYPE = SMITH FAIR SIZE = D12-45 ANGLE = NA DEG

----------WING SPAN = 42 FEET----------

LEFT BOOM LENGTH = 32 FEET RIGHT

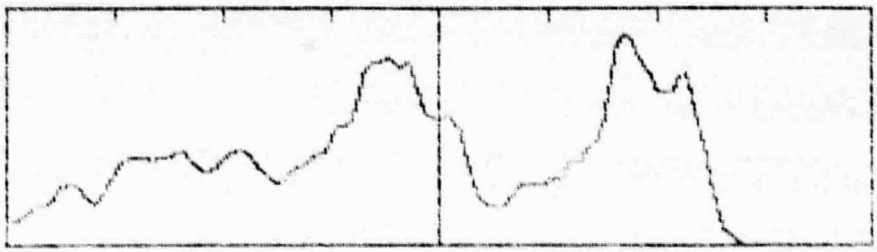
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 118 MPH

ALTITUDE = 13 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 193 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

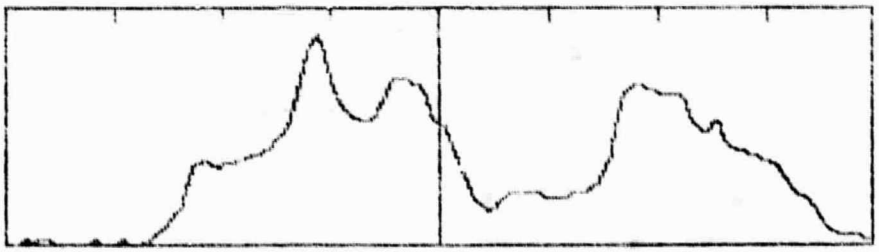


PASS NO 1B SPEED = 118 MPH

ALTITUDE = 12 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 184 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

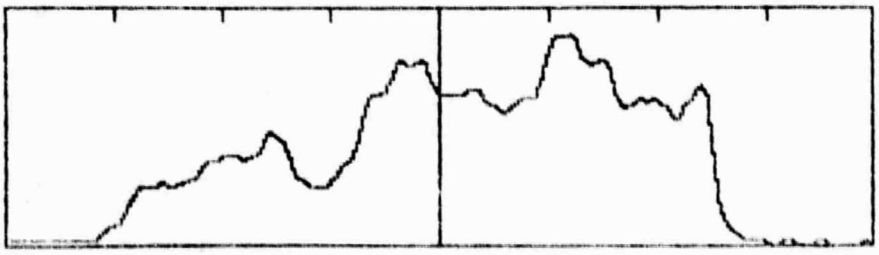


PASS NO 1C SPEED = 112 MPH

ALTITUDE = 11 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 168 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 130-2 A/C MAKE/TYPE = C5

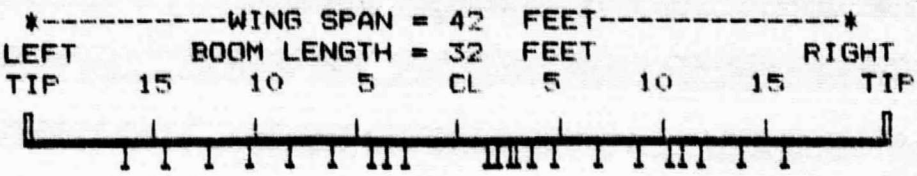
----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

----- NOZZLE -----

TYPE = SMITH FAIR SIZE = D10-45 ANGLE = NA DEG

ORIGINAL PAGE IS
OF POOR QUALITY

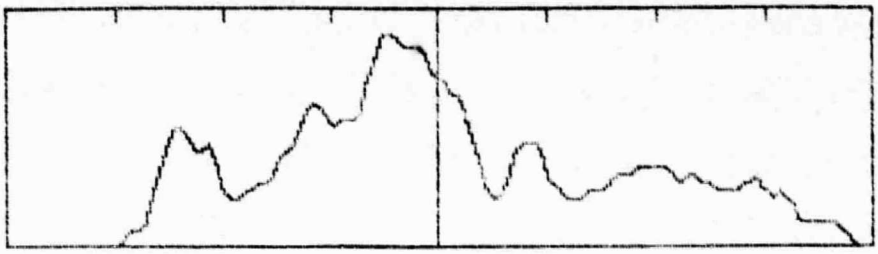


PASS NO 2A SPEED = 118 MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 171 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

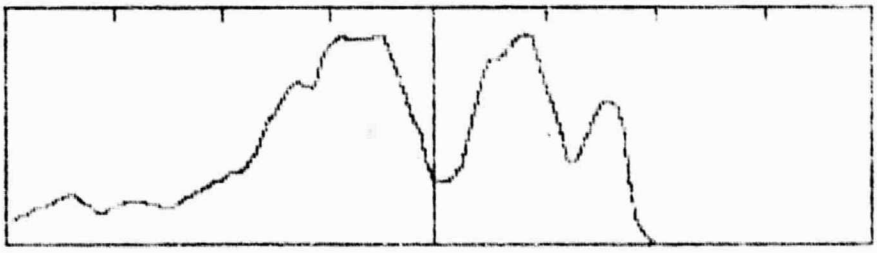


PASS NO 2B SPEED = 119 MPH

ALTITUDE = 8 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 189 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

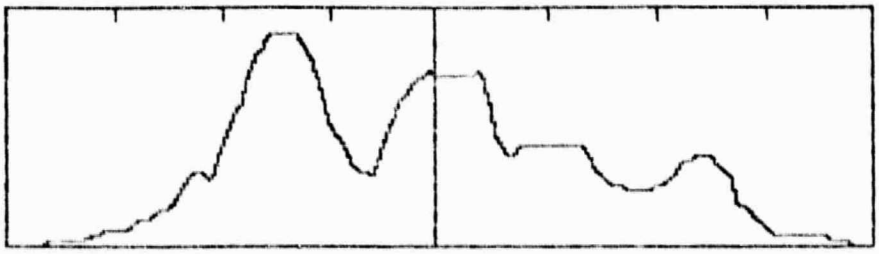


PASS NO 2C SPEED = 123 MPH

ALTITUDE = 7 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 191 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 131 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

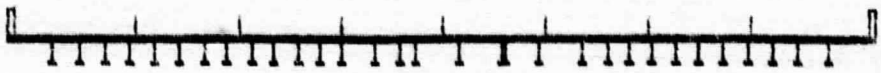
----- NOZZLE -----

TYPE = SPG SYS TURRET SIZE = D4 ANGLE = NA DEG

----------WING SPAN = 41.8 FEET----------

LEFT BOOM LENGTH = 37.8 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

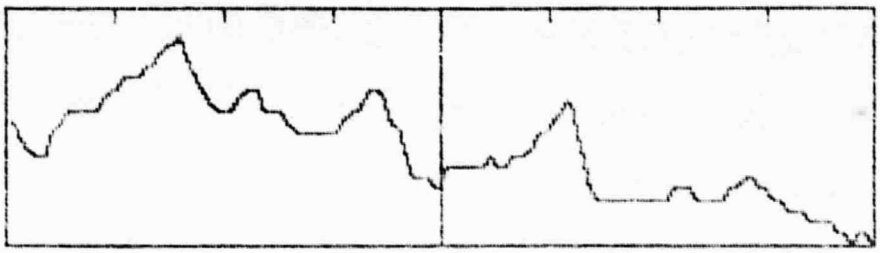


PASS NO 1A SPEED = 111 MPH

ALTITUDE = 14 FT LATERAL DISPL = 5 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 206 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

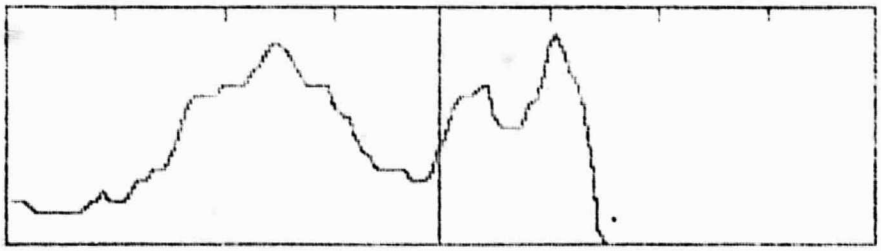


PASS NO 1B SPEED = 114 MPH

ALTITUDE = 14 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 203 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

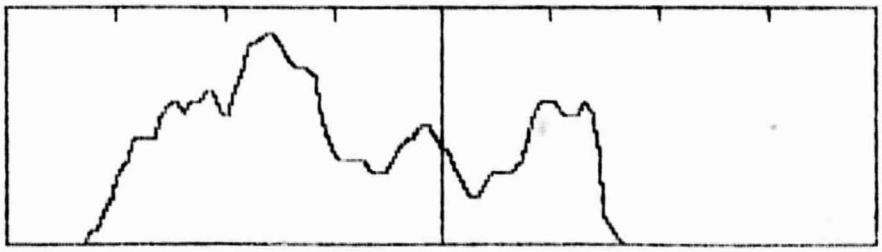


PASS NO 1C SPEED = 111 MPH

ALTITUDE = 9 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 200 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 132 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 3" BEHIND; 8" BELOW

----- NOZZLE -----

TYPE = WHIRLJETS SIZE = #3 ANGLE = 180 DEG

----------WING SPAN = 45.3 FEET----------

LEFT BOOM LENGTH = 39.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

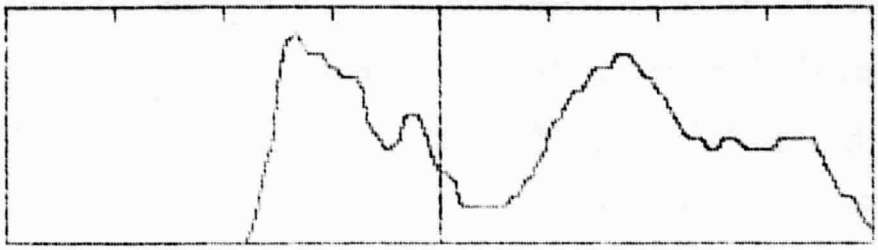
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = 121 MPH

ALTITUDE = 13 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 69 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

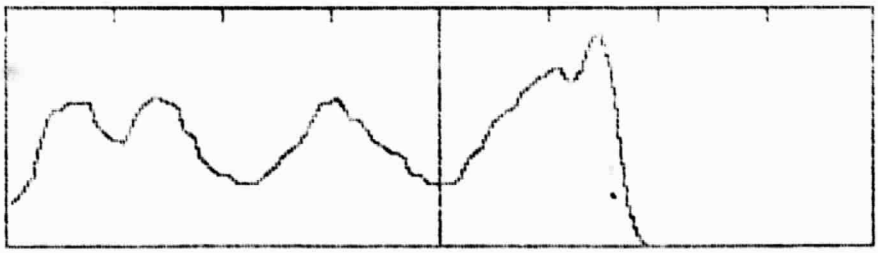


PASS NO 1B SPEED = 120 MPH

ALTITUDE = 14 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 199 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

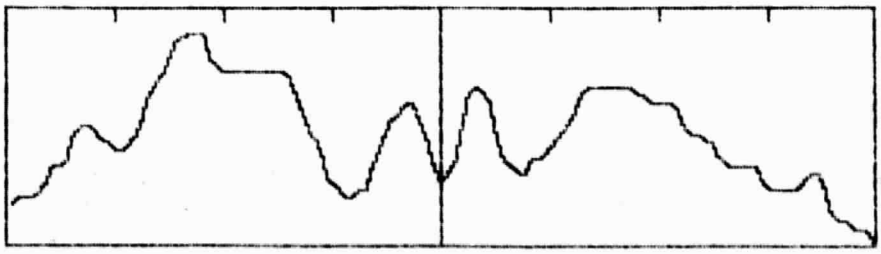


PASS NO 1C SPEED = 118 MPH

ALTITUDE = 13 FT LATERAL DISPL = 4 FT LEFT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 185 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 133-2 A/C MAKE/TYPE = TT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 3" BEHIND; 9" BELOW

----- NOZZLE -----

TYPE = WHIRLJETS SIZE = #10 ANGLE = 180 DEG

----------WING SPAN = 44 FEET----------

LEFT BOOM LENGTH = 40 FEET RIGHT

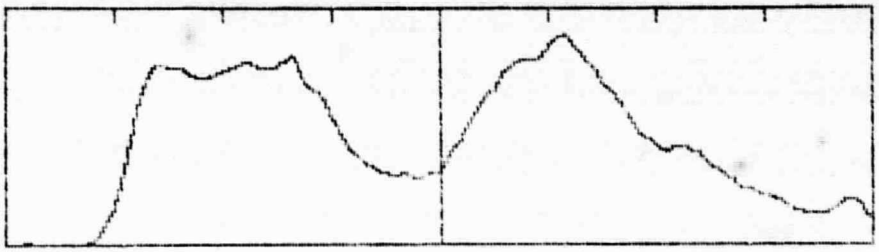
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 128 MPH

ALTITUDE = 11 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 11 MPH WIND DIRECTION = 173 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

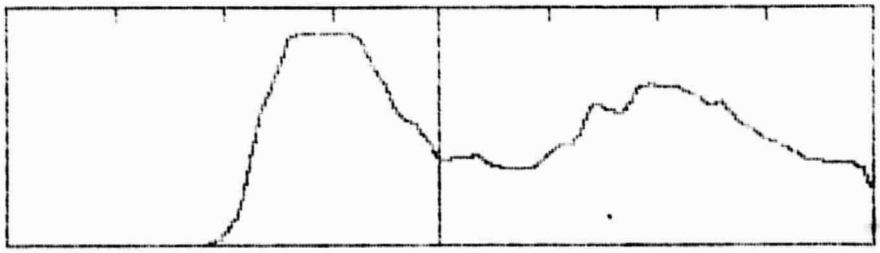


PASS NO 1B SPEED = 132 MPH

ALTITUDE = 10 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 11 MPH WIND DIRECTION = 157 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

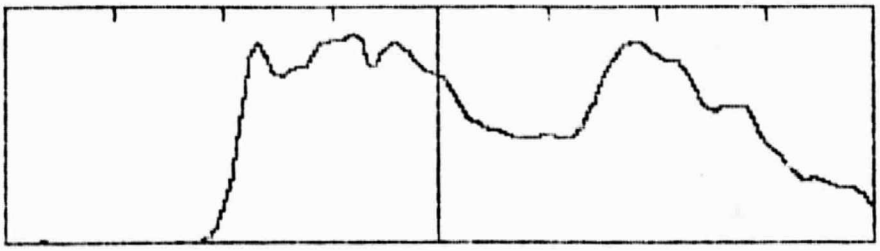


PASS NO 1C SPEED = 136 MPH

ALTITUDE = 11 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 166 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 134 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = NA

----- NOZZLE -----

TYPE = ACUMIST SIZE = NA ANGLE = NA DEG

----------WING SPAN = 37.3 FEET----------

LEFT BOOM LENGTH = 29.9 FEET RIGHT

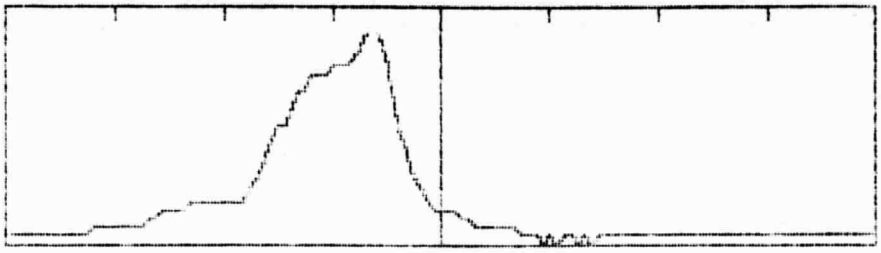
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 95 MPH

ALTITUDE = 11 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 191 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

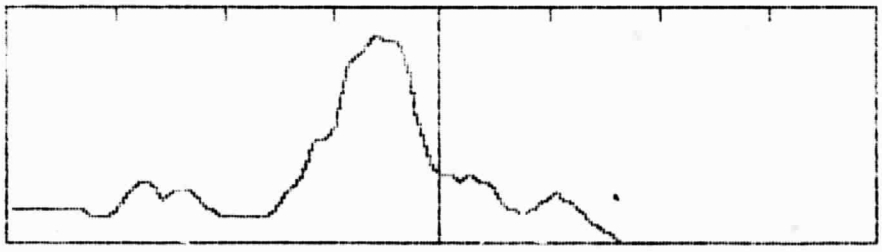


PASS NO 1B SPEED = 94 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 11 MPH WIND DIRECTION = 193 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

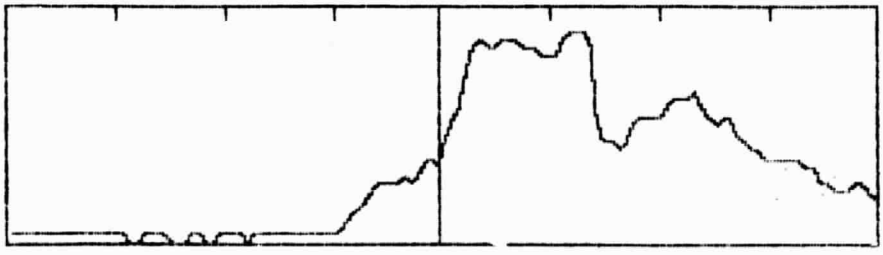


PASS NO 1C SPEED = 91 MPH

ALTITUDE = 10 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 144 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS OF POOR QUALITY

TEST NO = 135-1 A/C MAKE/TYPE = T

----- BOOM -----

SHAPE = AIRFOIL POSITION = 1" BEHIND; 9" BELOW

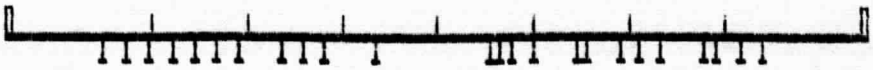
----- NOZZLE -----

TYPE = SPG SYS HOLLOW CONE SIZE = D5 ANGLE = 135 DEG

----------WING SPAN = 44.5 FEET----------

LEFT BOOM LENGTH = 37.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

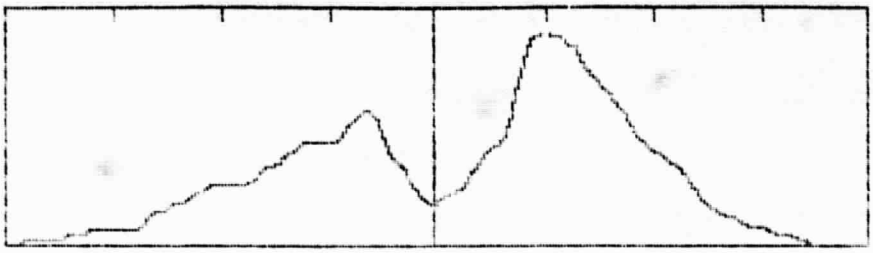


PASS NO 1A SPEED = 111 MPH

ALTITUDE = 11 FT LATERAL DISPL = 3 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 161 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

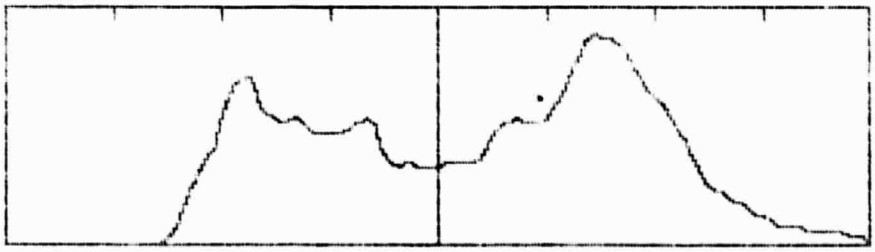


PASS NO 1B SPEED = 109 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 149 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

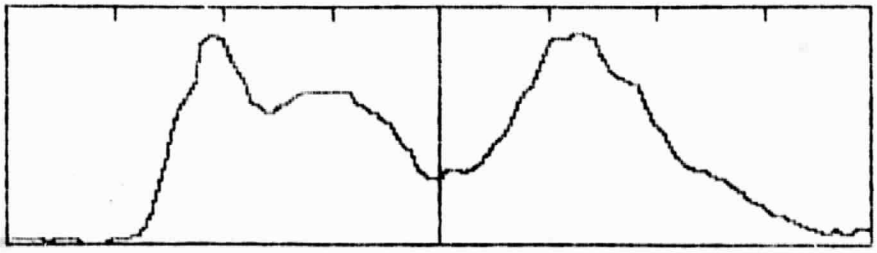


PASS NO 1C SPEED = 104 MPH

ALTITUDE = 11 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 174 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 135-2 A/C MAKE/TYPE = T

----- BOOM -----

SHAPE = AIRFOIL POSITION = 1" BEHIND; 9" BELOW

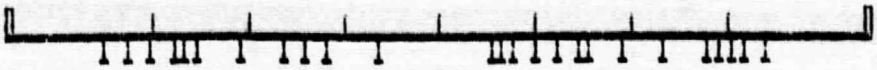
----- NOZZLE -----

TYPE = SPG SYS HOLLOW CONE SIZE = D5 ANGLE = 135 DEG

----------WING SPAN = 44.5 FEET----------

LEFT BOOM LENGTH = 37.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

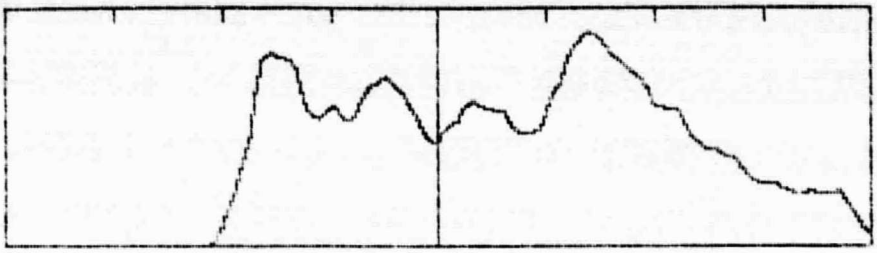


PASS NO 2A SPEED = 97 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 162 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

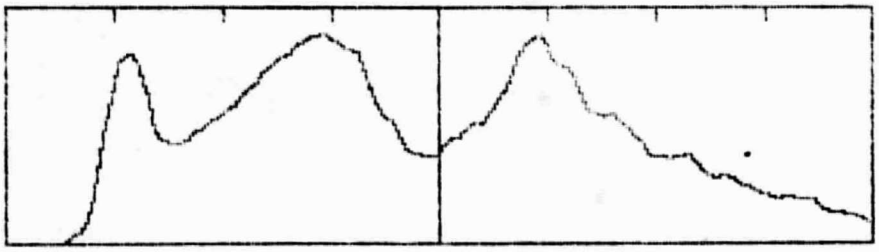


PASS NO 2B SPEED = 96 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 166 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

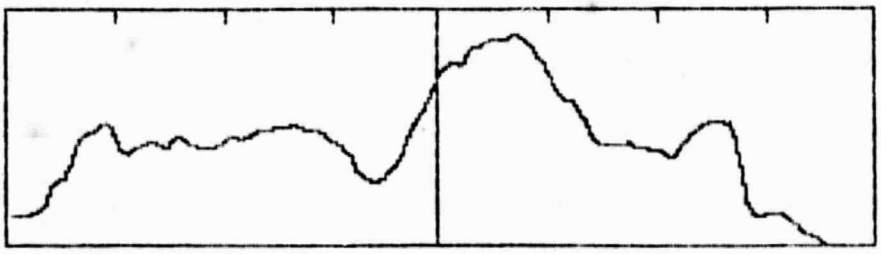


PASS NO 2C SPEED = 94 MPH

ALTITUDE = 11 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 12 MPH WIND DIRECTION = 176 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



RIGINAL PAGE IS
POOR QUALITY

TEST NO = 136-1 A/C MAKE/TYPE = A1

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4" BEHIND; 10" BELOW

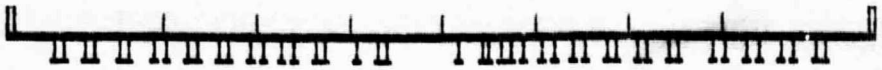
----- NOZZLE -----

TYPE = WHIRLJETS SIZE = D10 ANGLE = 180 DEG

----------WING SPAN = 45.4 FEET----------

LEFT BOOM LENGTH = 40.4 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

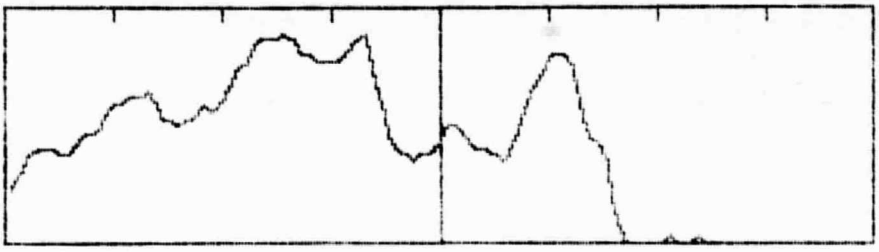


PASS NO 1A SPEED = 127 MPH

ALTITUDE = 12 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 196 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

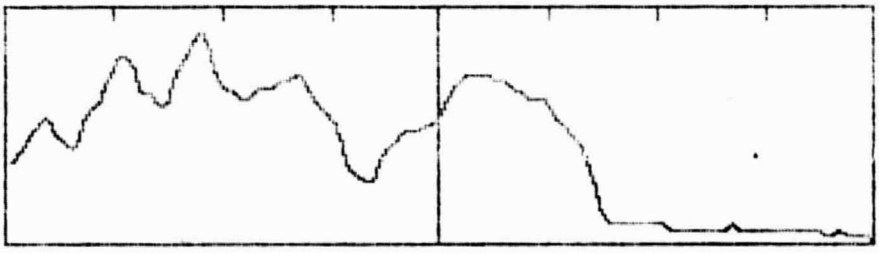


PASS NO 1B SPEED = 123 MPH

ALTITUDE = 14 FT LATERAL DISPL = 3 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 184 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

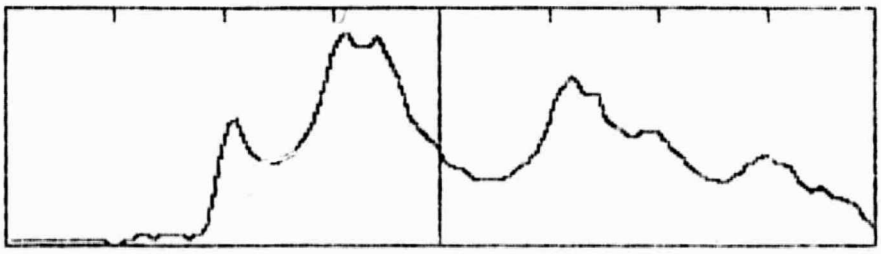


PASS NO 1C SPEED = 121 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 195 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 136-2 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4" BEHIND; 10" BELOW

----- NOZZLE -----

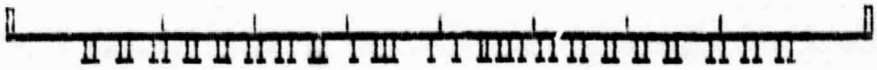
TYPE = WHIRLJETS SIZE = D10 ANGLE = 180 DEG

ORIGINAL PAGE IS OF POOR QUALITY

----------WING SPAN = 45.4 FEET----------

LEFT BOOM LENGTH = 40.4 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

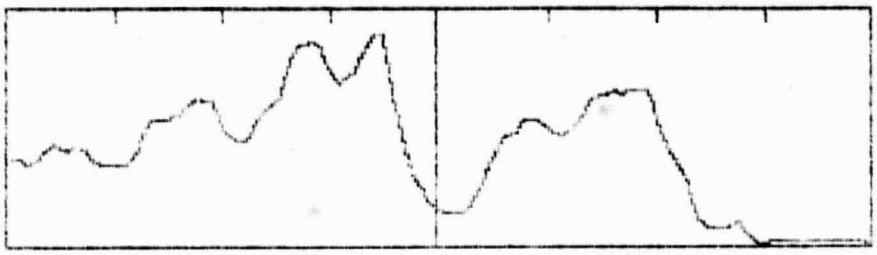


PASS NO 2A SPEED = 127 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 177 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

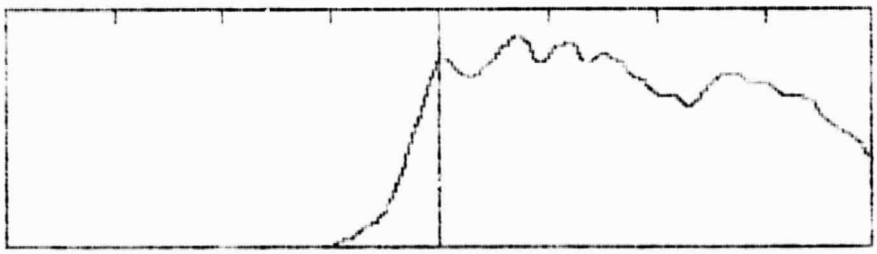


PASS NO 2B SPEED = 129 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 160 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

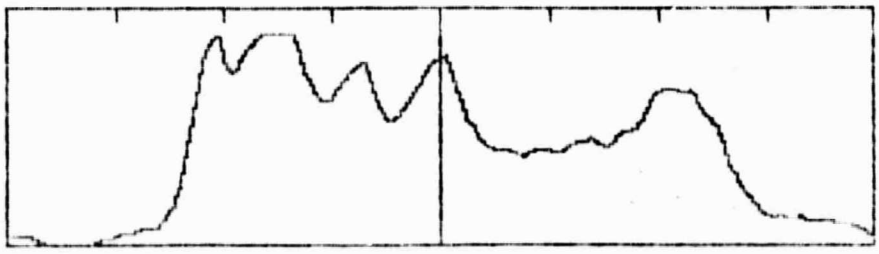


PASS NO 2C SPEED = 129 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 181 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 137-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

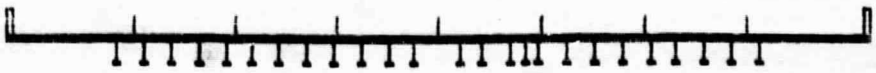
----- NOZZLE -----

TYPE = NA SIZE = 10-45 ANGLE = NA DEG

----------WING SPAN = 41.8 FEET----------

LEFT BOOM LENGTH = 32.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

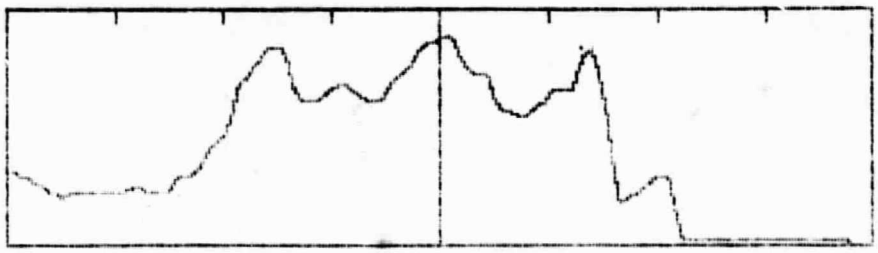


PASS NO 1A SPEED = 105 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 200 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

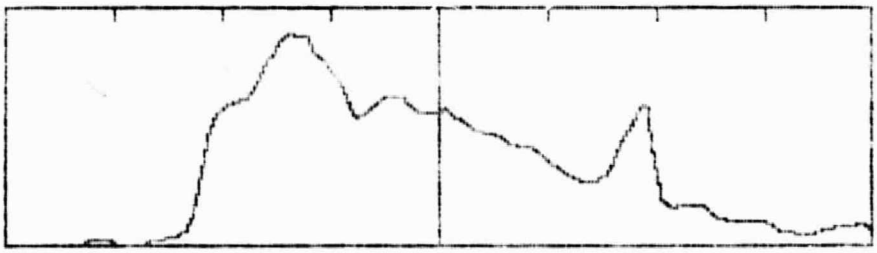


PASS NO 1B SPEED = 103 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 185 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

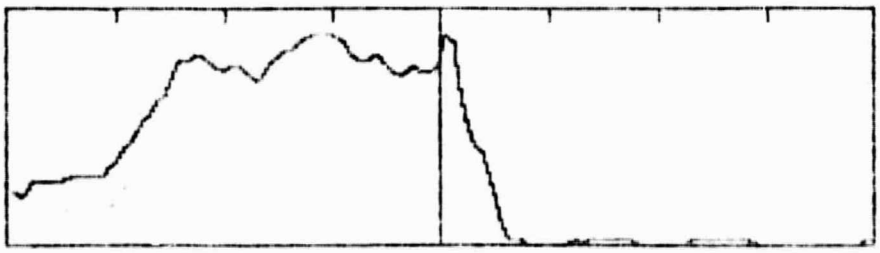


PASS NO 1C SPEED = 105 MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 205 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 137-3 A/C MAKE/TYPE = C5

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

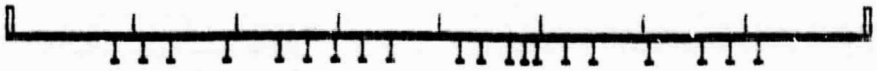
----- NOZZLE -----

TYPE = NA SIZE = 10-45 ANGLE = NA DEG

----------WING SPAN = 41.8 FEET----------

LEFT BOOM LENGTH = 32.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

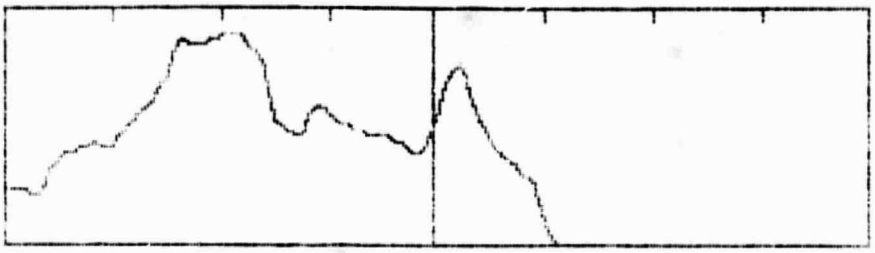


PASS NO 3A SPEED = 111 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 188 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

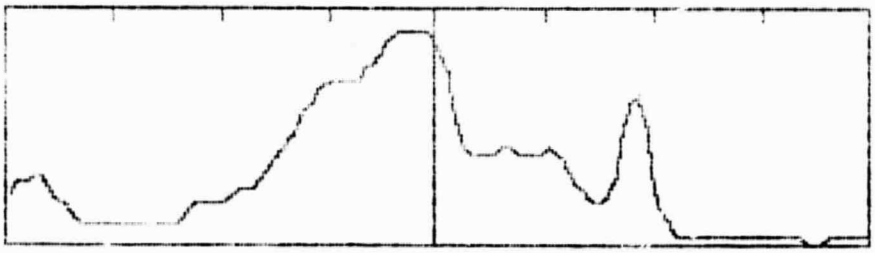


PASS NO 3B SPEED = 113 MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 207 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

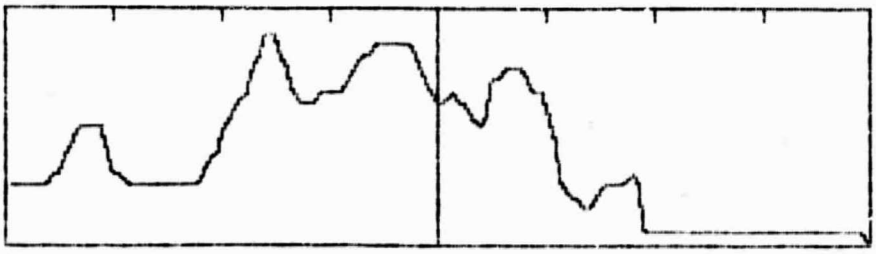


PASS NO 3C SPEED = 120 MPH

ALTITUDE = 8 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 235 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 138 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

----- NOZZLE -----

TYPE = WHIRLJETS SIZE = NA ANGLE = NA DEG

----------WING SPAN = 45.3 FEET----------

LEFT BOOM LENGTH = 37 FEET RIGHT

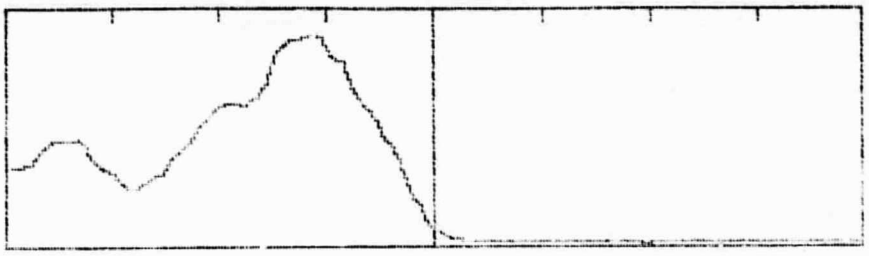
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 126 MPH

ALTITUDE = 19 FT LATERAL DISPL = 5 FT LEFT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 208 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

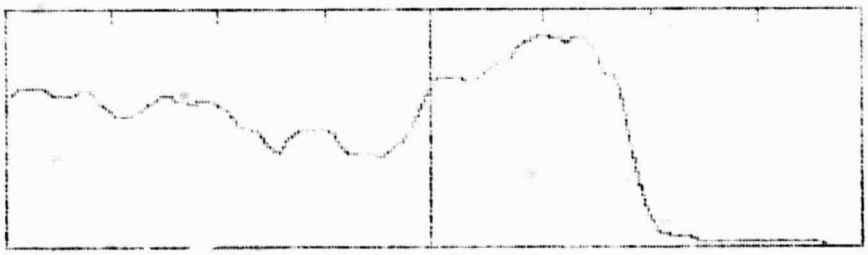


PASS NO 1B SPEED = 118 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 198 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

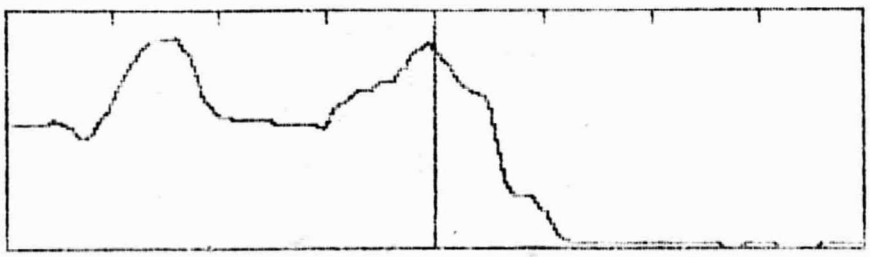


PASS NO 1C SPEED = 124 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 198 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 139-1 A/C MAKE/TYPE = PP

------ BOOM ------

SHAPE = RD POSITION = 5.5 BEHIND

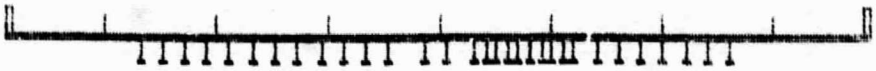
------ NOZZLE ------

TYPE = SPG SYS SIZE = 6-45 ANGLE = 180 DEG

----------WING SPAN = 38.4 FEET----------

LEFT BOOM LENGTH = 26.2 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP



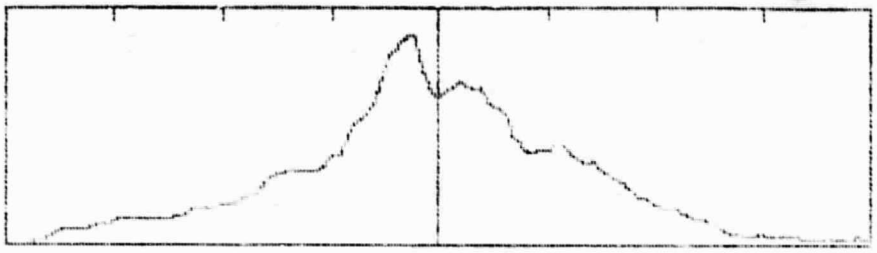
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = 91 MPH

ALTITUDE = 7 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

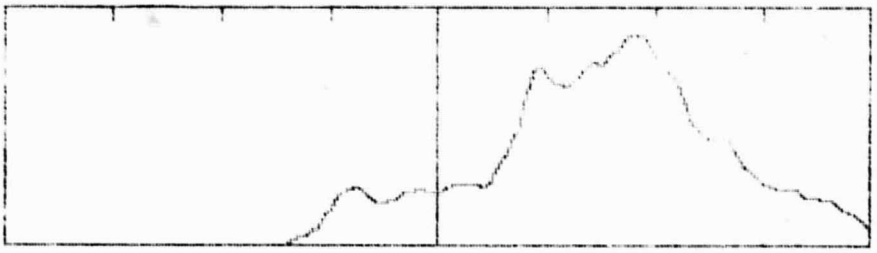


PASS NO 1B SPEED = 88 MPH

ALTITUDE = 8 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 114 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

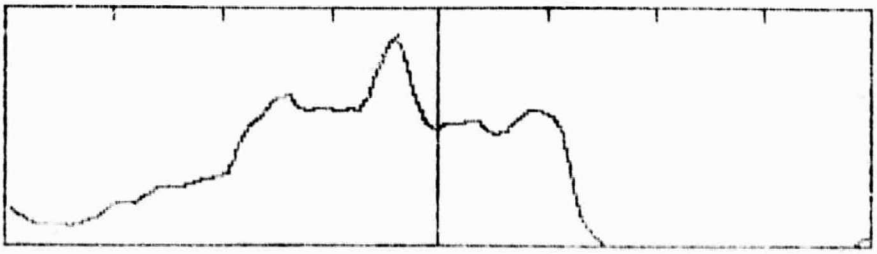


PASS NO 1C SPEED = 91 MPH

ALTITUDE = 7 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 220 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 140-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 5.5 BEHIND

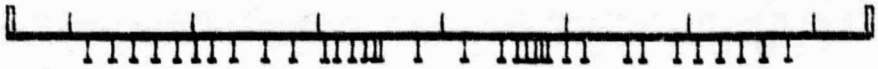
----- NOZZLE -----

TYPE = SMITH FAIR SIZE = D66 ANGLE = 180 DEG

----------WING SPAN = 34.1 FEET----------

LEFT BOOM LENGTH = 30.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

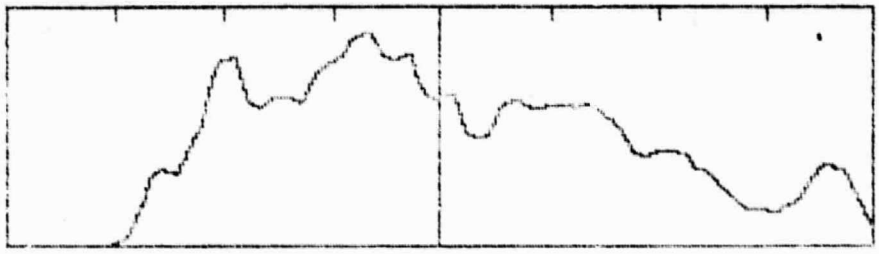


PASS NO 1A SPEED = 96 MPH

ALTITUDE = 10 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 202 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

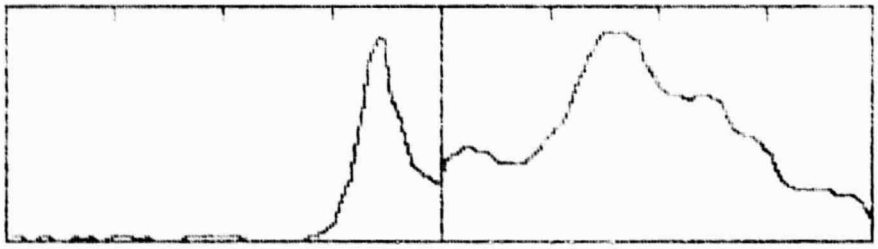


PASS NO 1B SPEED = 98 MPH

ALTITUDE = 10 FT LATERAL DISPL = 4 FT LEFT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 106 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

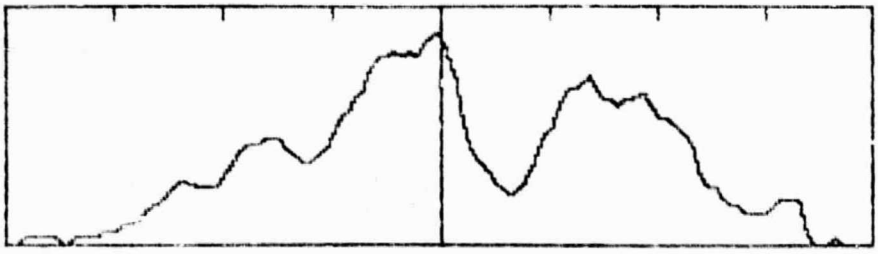


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = 217 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 141-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = AIRFOIL POSITION = 10" BEHIND; 7" BELOW

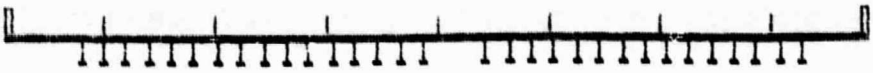
----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = 90 DEG

----------WING SPAN = 37.9 FEET----------

LEFT BOOM LENGTH = 31.7 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

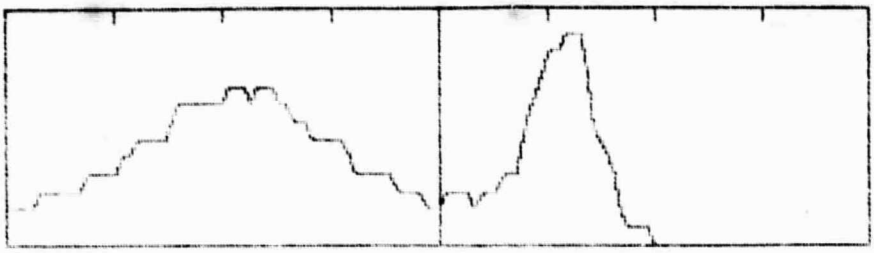


PASS NO 1A SPEED = 99 MPH

ALTITUDE = 10 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 155 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

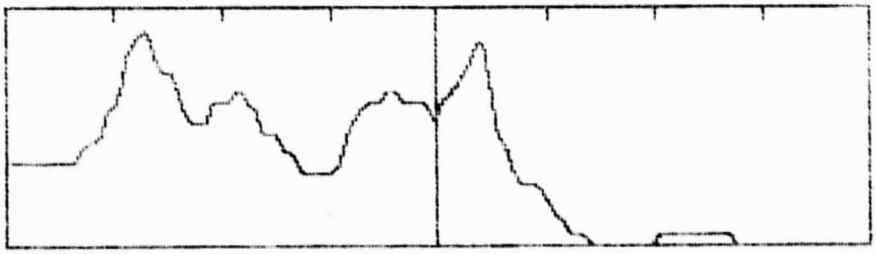


PASS NO 1B SPEED = 102 MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 247 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

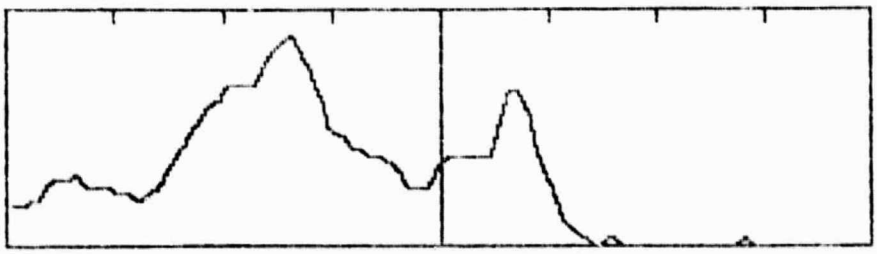


PASS NO 1C SPEED = 96 MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 199 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 141-2 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = AIRFOIL POSITION = 10" BEHIND; 7" BELOW

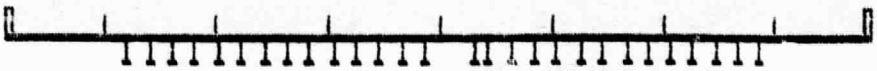
----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = 90 DEG

----------WING SPAN = 37.9 FEET----------

LEFT BOOM LENGTH = 31.7 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

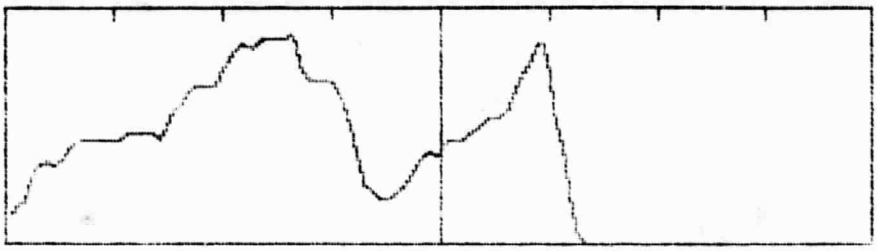


PASS NO 2A SPEED = 101 MPH

ALTITUDE = 8 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 210 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

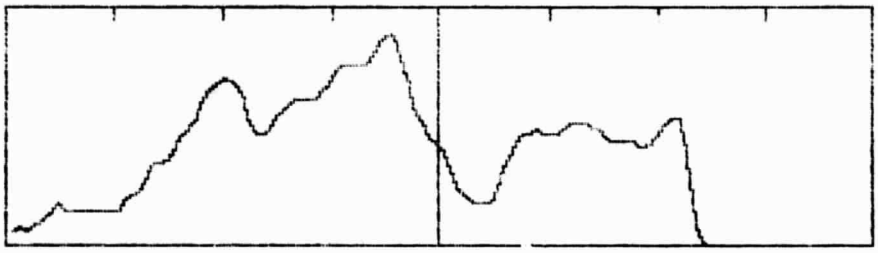


PASS NO 2B SPEED = 100 MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 190 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

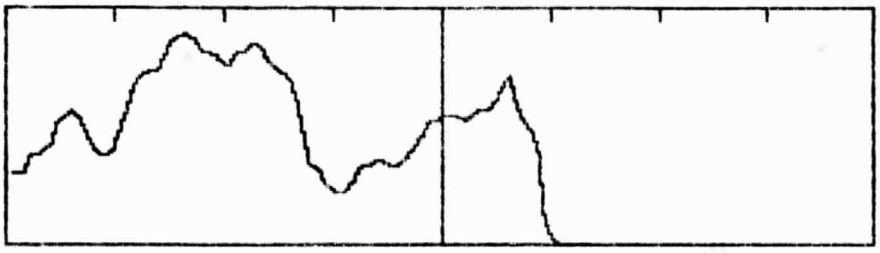


PASS NO 2C SPEED = 95 MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 218 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 142-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 4" BEHIND

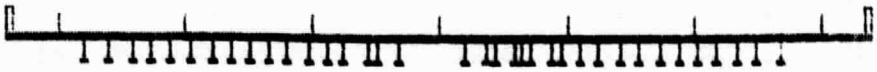
----- NOZZLE -----

TYPE = SMITH FAIR SIZE = D4-6-8 ANGLE = 180 DEG

----------WING SPAN = 34 FEET----------

LEFT BOOM LENGTH = 31.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

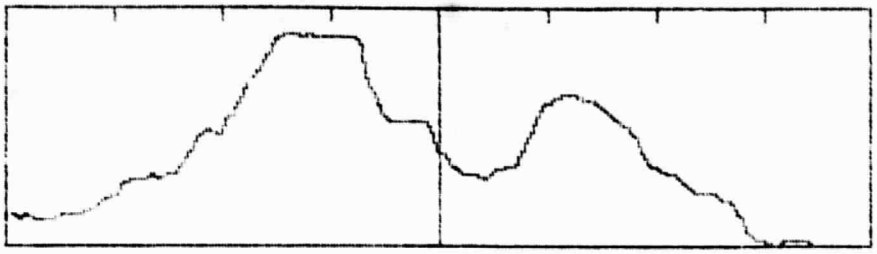


PASS NO 1A SPEED = 89 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 192 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

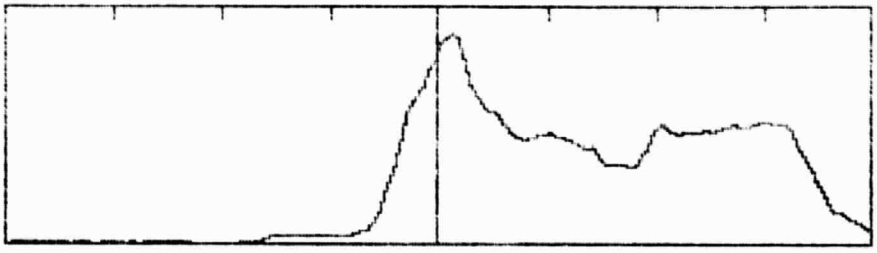


PASS NO 1B SPEED = 83 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 157 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

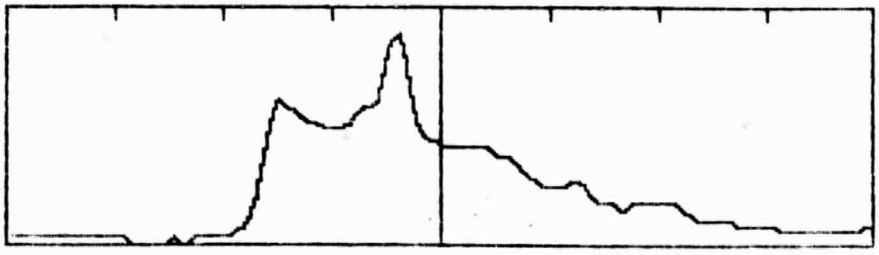


PASS NO 1C SPEED = 83 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 157 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 142-2 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 4" BEHIND

----- NOZZLE -----

TYPE = SMITH FAIR SIZE = D4-6-8 ANGLE = 180 DEG

----------WING SPAN = 34 FEET----------

LEFT BOOM LENGTH = 31.3 FEET RIGHT

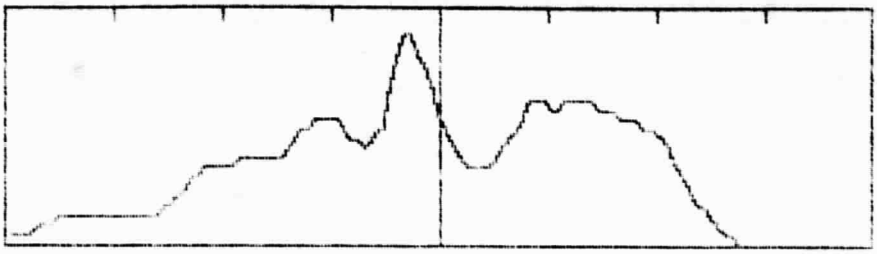
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = 96 MPH

ALTITUDE = 8 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 192 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

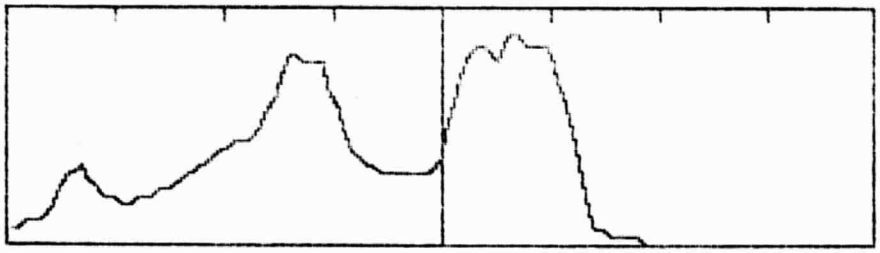


PASS NO 2B SPEED = 92 MPH

ALTITUDE = 10 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 192 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

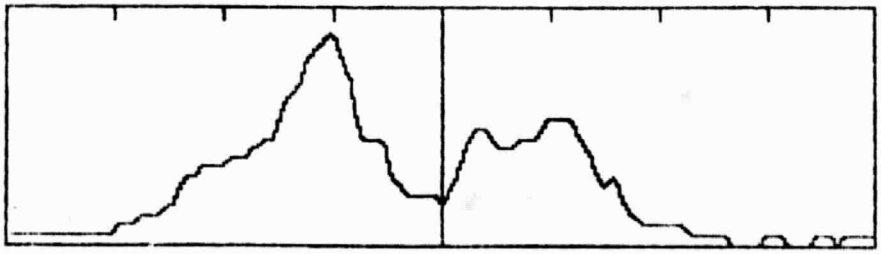


PASS NO 2C SPEED = 94 MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 194 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 143-1 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = NA

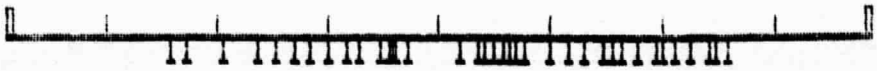
----- NOZZLE -----

TYPE = SMITH FAIR SIZE = 6 ANGLE = NA DEG

----------WING SPAN = 38.1 FEET----------

LEFT BOOM LENGTH = 31.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

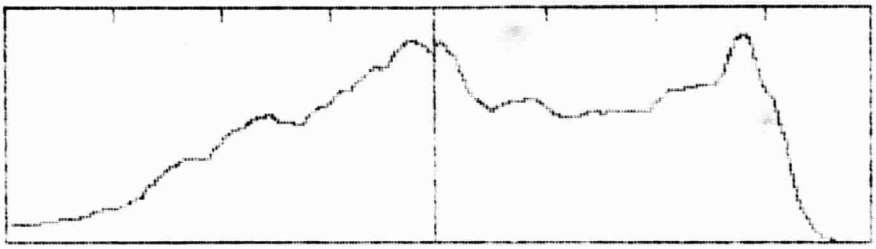


PASS NO 1A SPEED = 105 MPH

ALTITUDE = 14 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

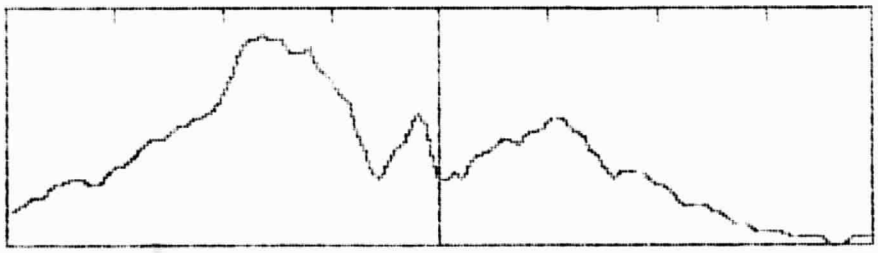


PASS NO 1B SPEED = 101 MPH

ALTITUDE = 14 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

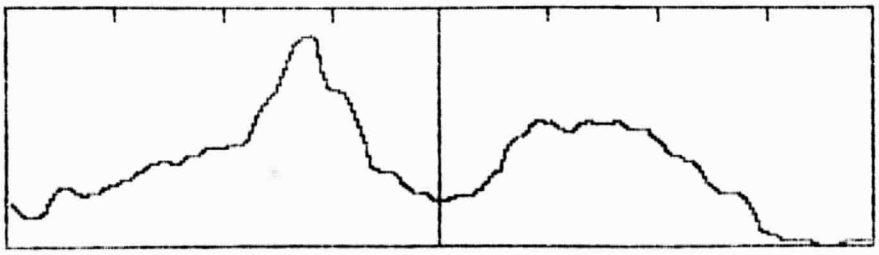


PASS NO 1C SPEED = 107 MPH

ALTITUDE = 15 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST.NO = 143-2 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = NA

----- NOZZLE -----

TYPE = SMITH FAIR SIZE = 6 ANGLE = NA DEG

ORIGINAL PAGE IS
OF POOR QUALITY

----------WING SPAN = 38.1 FEET----------

LEFT BOOM LENGTH = 31.3 FEET RIGHT

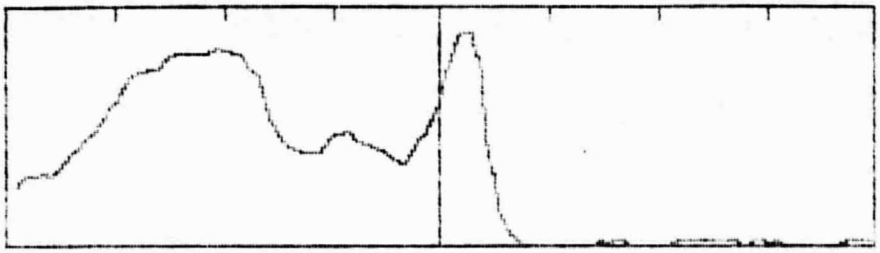
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = 100 MPH

ALTITUDE = 9 FT LATERAL DISPL = 2 FT LEFT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 227 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

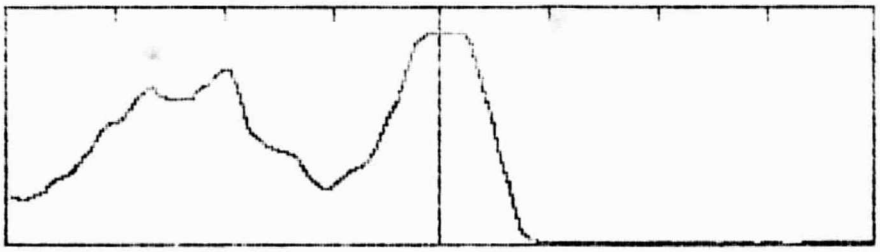


PASS NO 2B SPEED = 96 MPH

ALTITUDE = 7 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 207 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

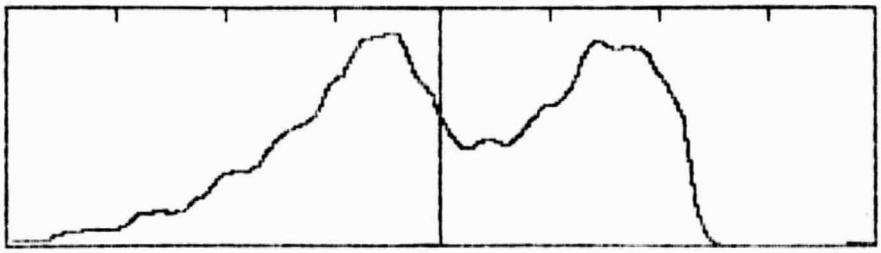


PASS NO 2C SPEED = 93 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 193 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
POOR QUALITY

TEST NO = 144 A/C MAKE/TYPE = T

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4" BEHIND; 9" BELOW

------ NOZZLE -----

TYPE = NA SIZE = 6-45 ANGLE = 90 DEG

----------WING SPAN = 44.6 FEET----------

LEFT BOOM LENGTH = 37.1 FEET RIGHT

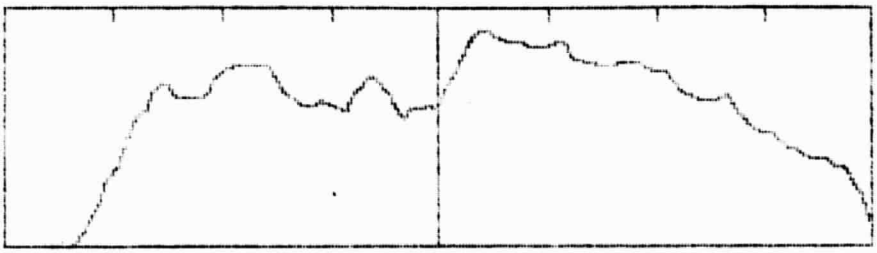
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 114 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 1 MPH WIND DIRECTION = 179 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

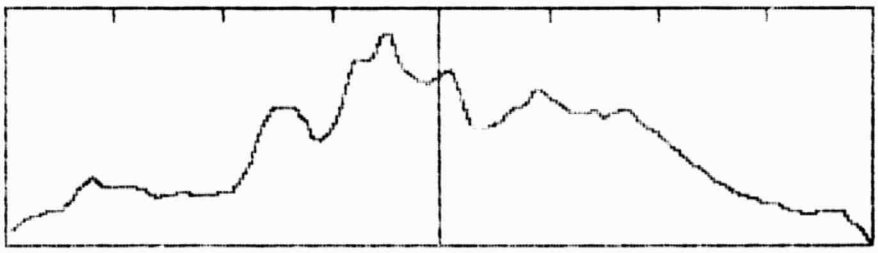


PASS NO 1B SPEED = 115 MPH

ALTITUDE = 12 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

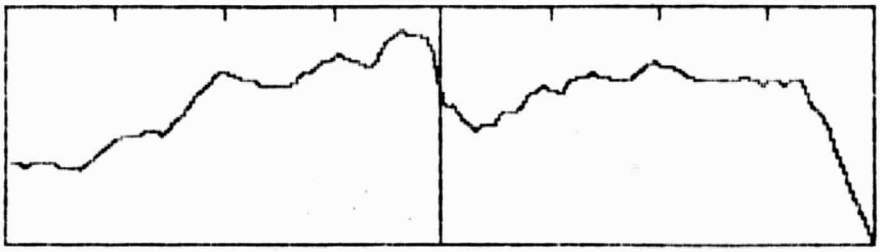


PASS NO 1C SPEED = 108 MPH

ALTITUDE = 13 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 145-1 A/C MAKE/TYPE = T

----- BOOM -----

SHAPE = AIRFOIL POSITION = 2" BEHIND; 8.5" BELOW

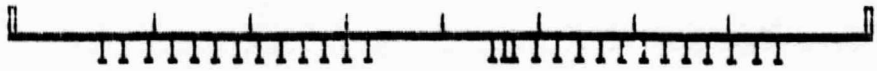
----- NOZZLE -----

TYPE = WHIRLJETS SIZE = #5 ANGLE = 180 DEG

----------WING SPAN = 44.1 FEET----------

LEFT BOOM LENGTH = 37.4 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP



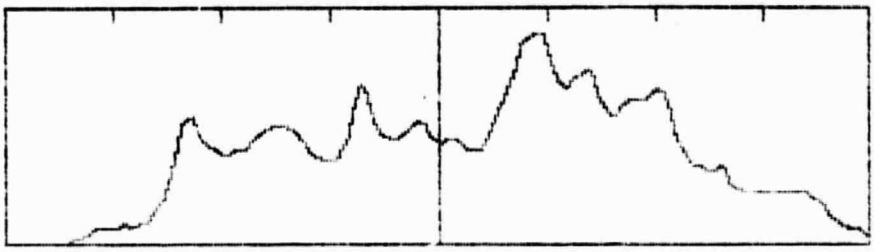
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = 116 MPH

ALTITUDE = 8 FT LATERAL DISPL = 5 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 160 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

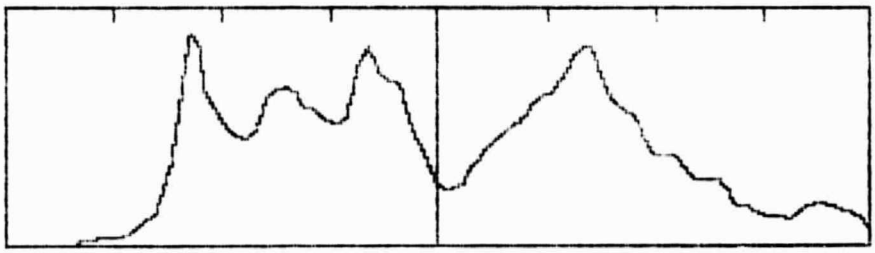


PASS NO 1B SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

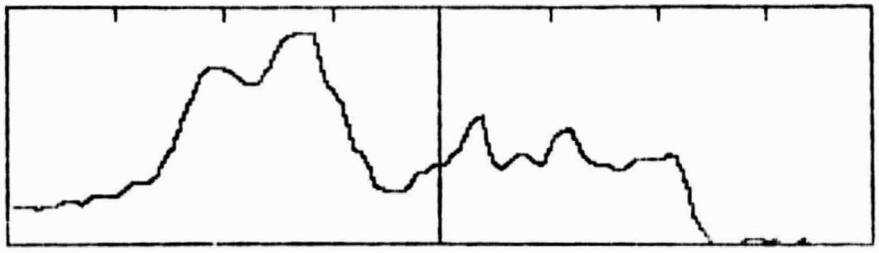


PASS NO 1C SPEED = 114 MPH

ALTITUDE = 7 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 231 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 145-2 A/C MAKE/TYPE = T

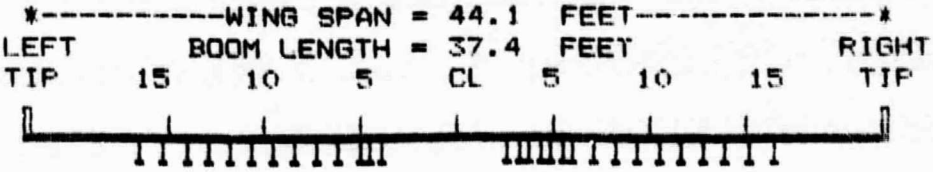
----- BOOM -----

SHAPE = AIRFOIL POSITION = 2" BEHIND; 8.5" BELOW

----- NOZZLE -----

TYPE = WHIRLJETS SIZE = #5 ANGLE = 180 DEG

GINAL PAGE IS
POOR QUALITY

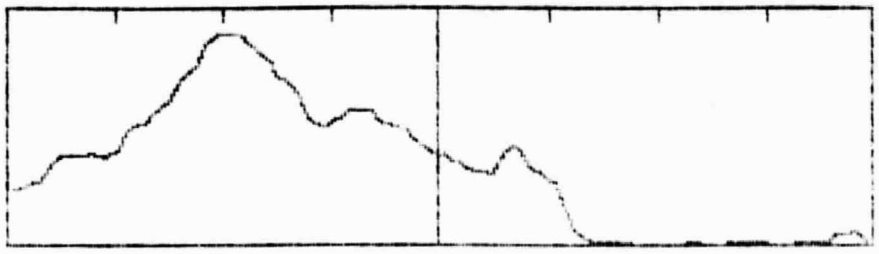


PASS NO 2A SPEED = 110 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 11 MPH WIND DIRECTION = 215 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

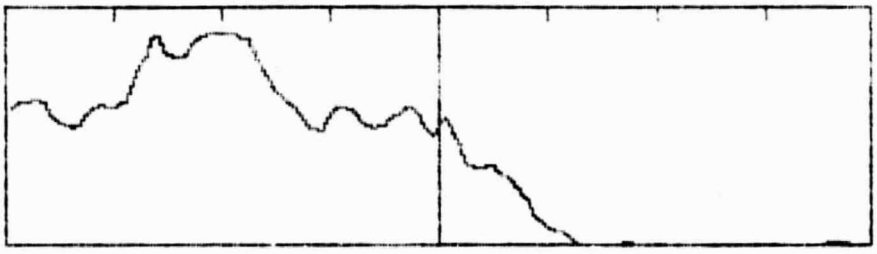


PASS NO 2B SPEED = 115 MPH

ALTITUDE = 9.5 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 224 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

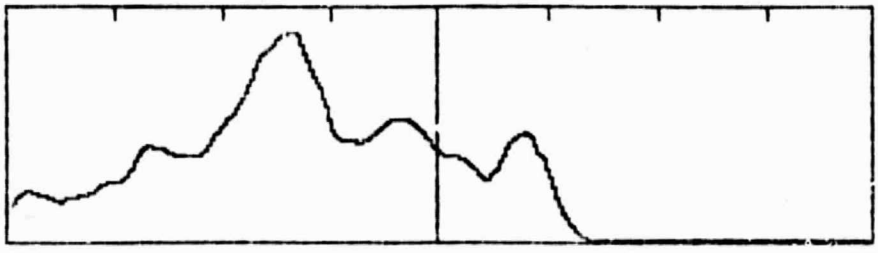


PASS NO 2C SPEED = 113 MPH

ALTITUDE = 9.5 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 198 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 146 A/C MAKE/TYPE = T

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4" BEHIND; 9.5" BELOW

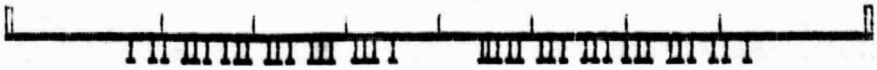
----- NOZZLE -----

TYPE = SMITH FAIR SIZE = NA ANGLE = 90 DEG

----------WING SPAN = 45.3 FEET----------

LEFT BOOM LENGTH = 32.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

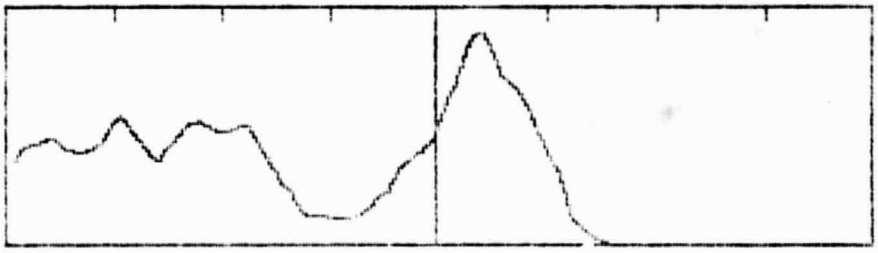


PASS NO 1A SPEED = 128 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 222 MPH WIND DIRECTION = 7 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

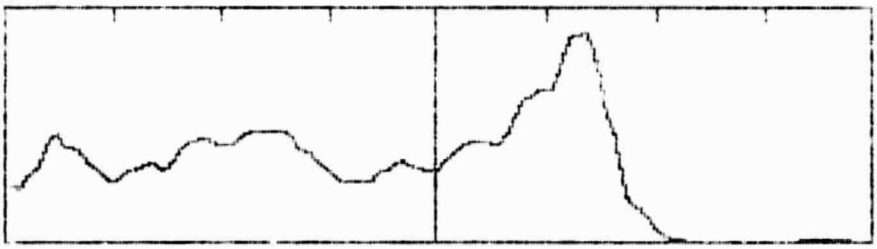


PASS NO 1B SPEED = 128 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 222 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

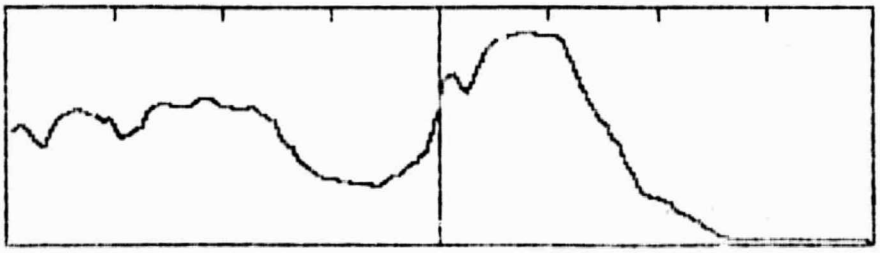


PASS NO 1C SPEED = 125 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 199 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 147 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4" BEHIND; 9.5" BELOW

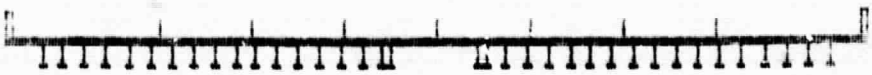
----- NOZZLE -----

TYPE = TEEJETS SIZE = NA ANGLE = 90 DEG

----------WING SPAN = 45.4 FEET----------

LEFT BOOM LENGTH = 41.5 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP



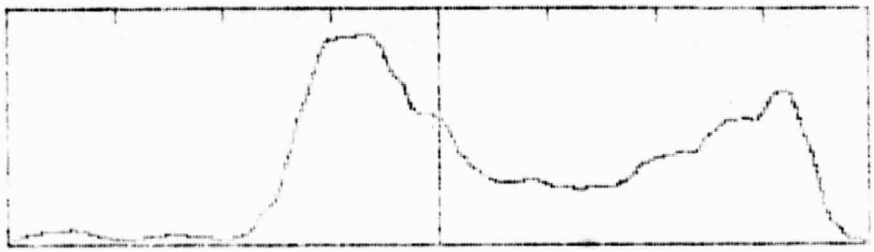
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = 125 MPH

ALTITUDE = 17 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 164 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

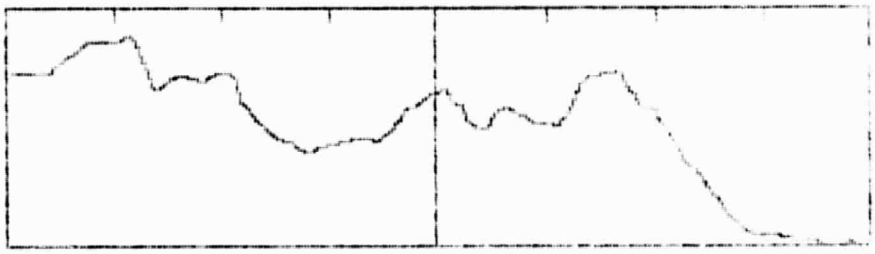


PASS NO 1B SPEED = 129 MPH

ALTITUDE = 13 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = [illegible] MPH WIND DIRECTION = 192 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

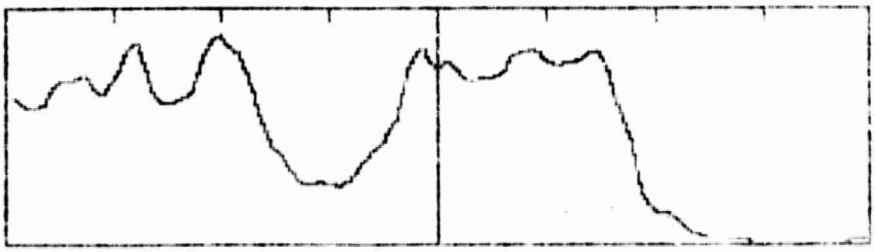


PASS NO 1C SPEED = 123 MPH

ALTITUDE = 14 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 205 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 148-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

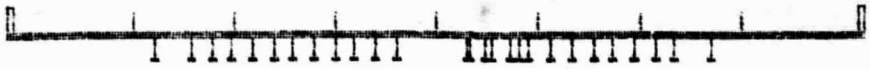
----- NOZZLE -----

TYPE = FLOODJETS SIZE = #10 ANGLE = NA DEG

----------WING SPAN = 41.8 FEET----------

LEFT ROOM LENGTH = 27 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

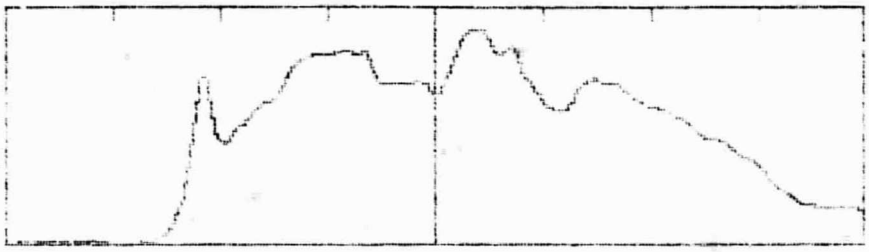


PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

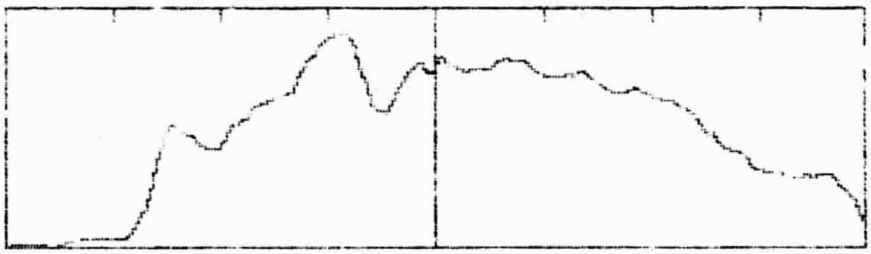


PASS NO 1B SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 176 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

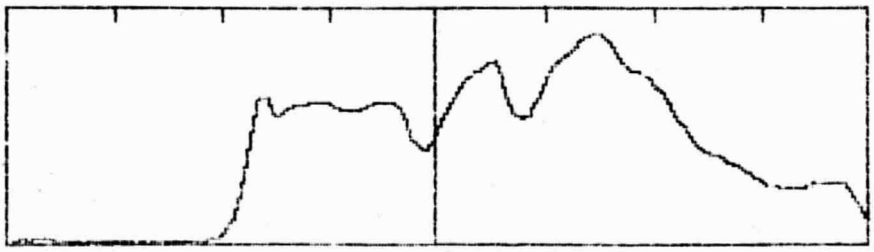


PASS NO 1C SPEED = NA MPH

ALTITUDE = 12 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 179 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



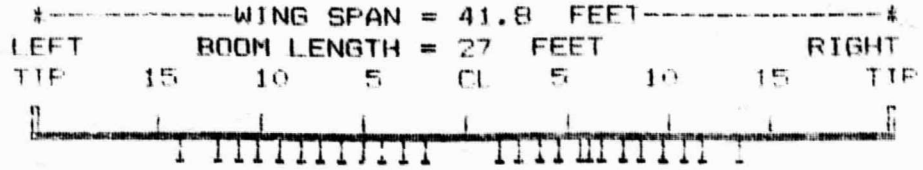
TEST NO = 148-2 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

----- NOZZLE -----

TYPE = FLOODJETS SIZE = #10 ANGLE = NA DEG



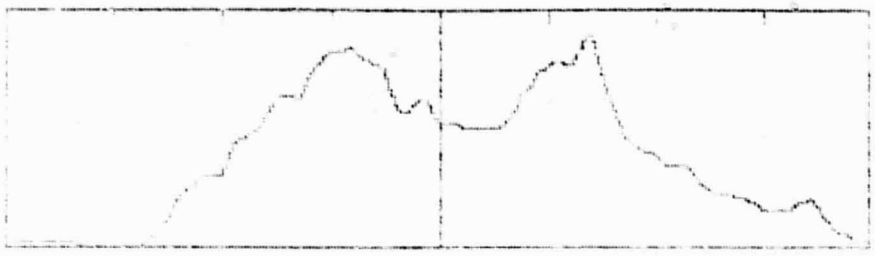
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 2A SPEED = 107 MPH

ALTITUDE = 9 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 174 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

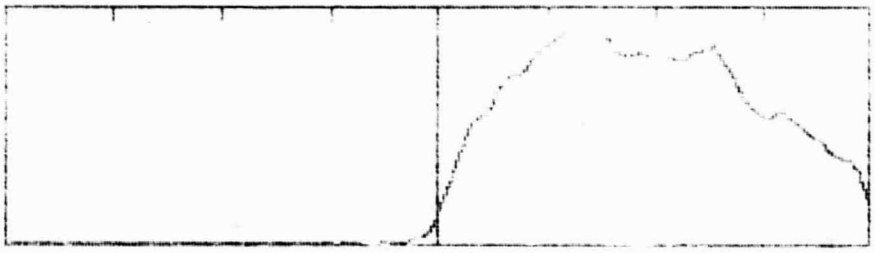


PASS NO 2B SPEED = 105 MPH

ALTITUDE = 10 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 158 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

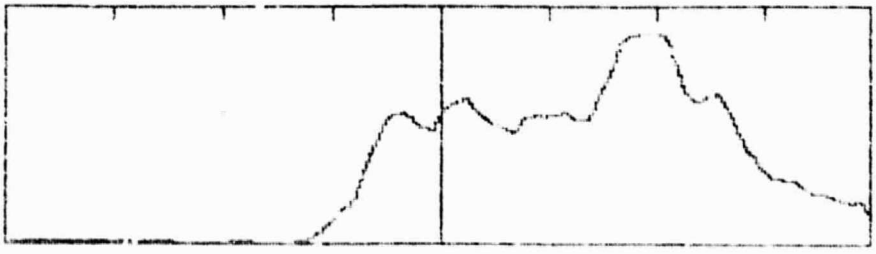


PASS NO 2C SPEED = 97 MPH

ALTITUDE = 9.5 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 167 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 14P-1 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

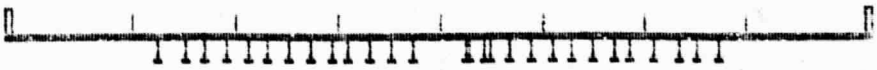
----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = NA DEG

----------WING SPAN = 41.8 FEET----------

LEFT BOOM LENGTH = 27.1 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP



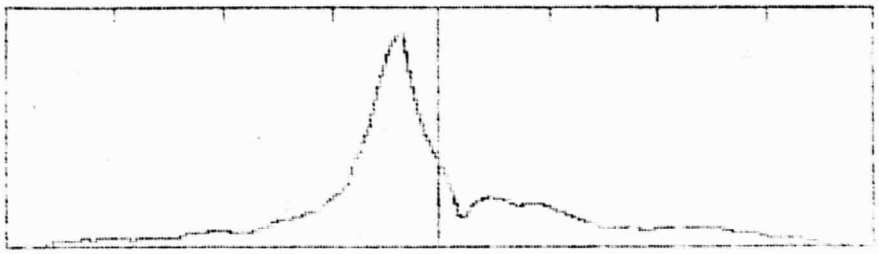
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 172 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

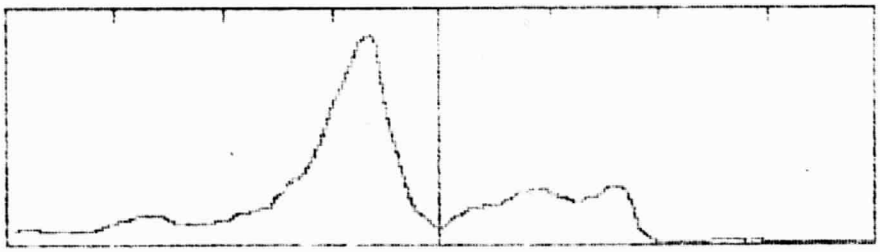


PASS NO 1B SPEED = NA MPH

ALTITUDE = 11 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 203 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

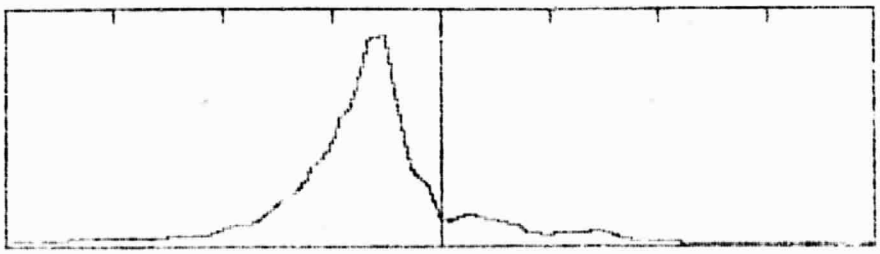


PASS NO 1C SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 188 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 149-2 A/C MAKE/TYPE = C5

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = NA DEG

----------WING SPAN = 41.8 FEET----------

LEFT BOOM LENGTH = 27.1 FEET RIGHT

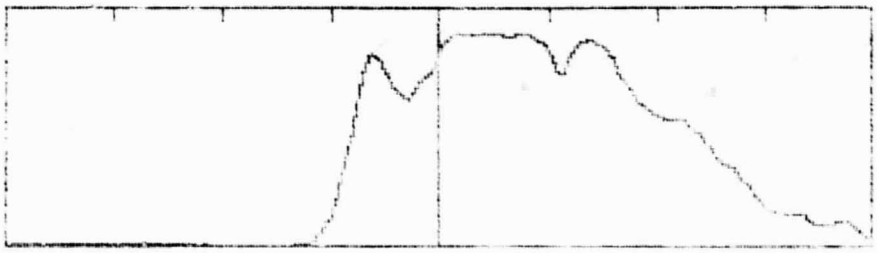
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 2A SPEED = 98 MPH

ALTITUDE = 11 FT LATERAL DISPL = 3 FT RIGHT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 166 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

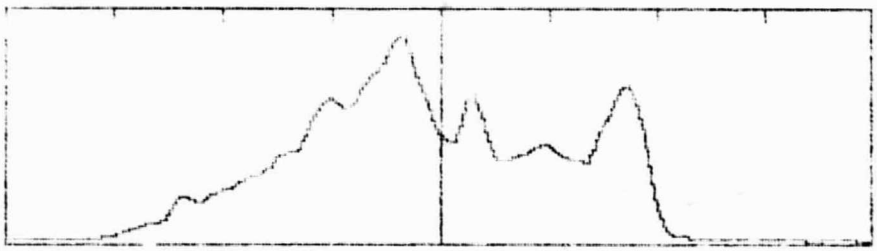


PASS NO 2B SPEED = 97 MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 10 MPH WIND DIRECTION = 166 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

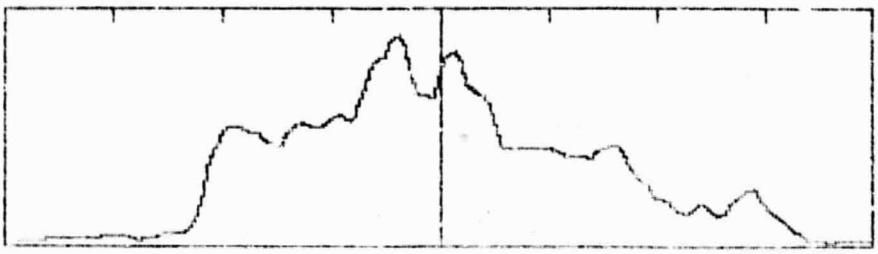


PASS NO 2C SPEED = 101 MPH

ALTITUDE = 11 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 149 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 149-3 A/C MAKE/TYPE = CS

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

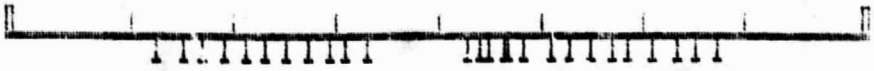
----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = NA DEG

----------WING SPAN = 41.8 FEET----------

LEFT BOOM LENGTH = 27.1 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

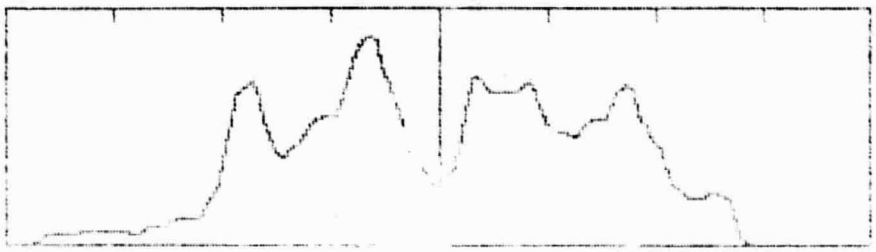


PASS NO 3A SPEED = 95 MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 172 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

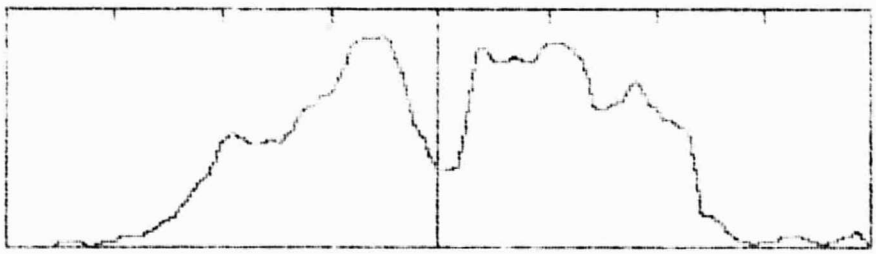


PASS NO 3B SPEED = 97 MPH

ALTITUDE = 9.5 FT LATERAL DISPL = 3 FT LEFT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 171 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

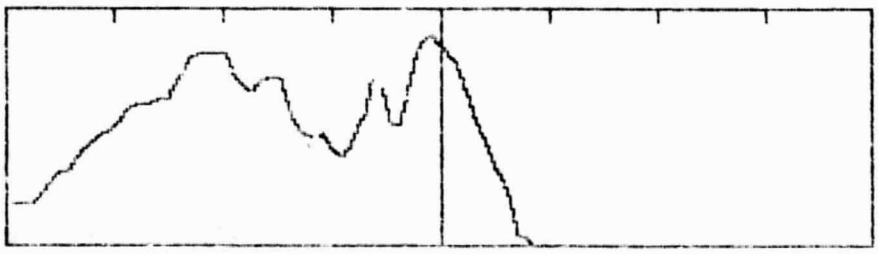


PASS NO 3C SPEED = 99 MPH

ALTITUDE = 12 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 215 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 150-1 A/C MAKE/TYPE = WX-T

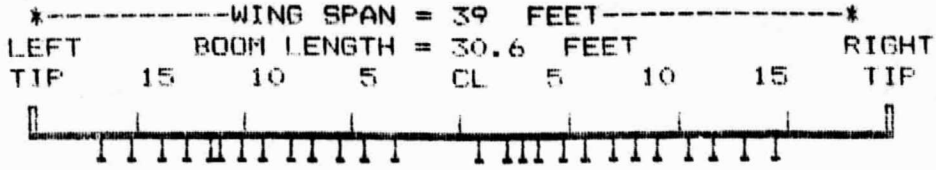
----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

----- NOZZLE -----

TYPE = FLOOD SIZE = TK-5 ANGLE = NA DEG

ORIGINAL PAGE IS
OF POOR QUALITY

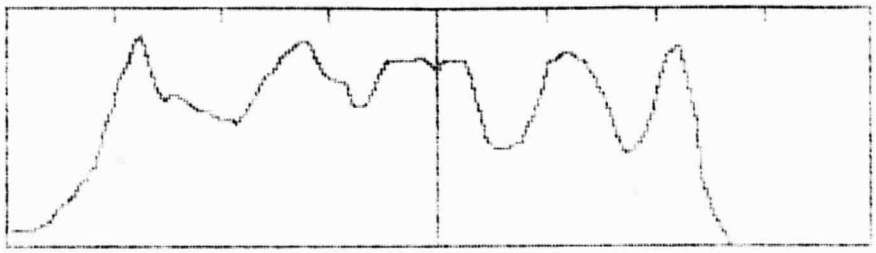


PASS NO 1A SPEED = 113 MPH

ALTITUDE = 8 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

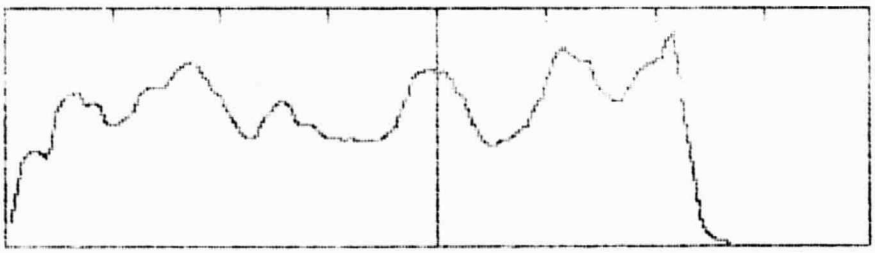


PASS NO 1B SPEED = 118 MPH

ALTITUDE = 11 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 3 MPH WIND DIRECTION = 176 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

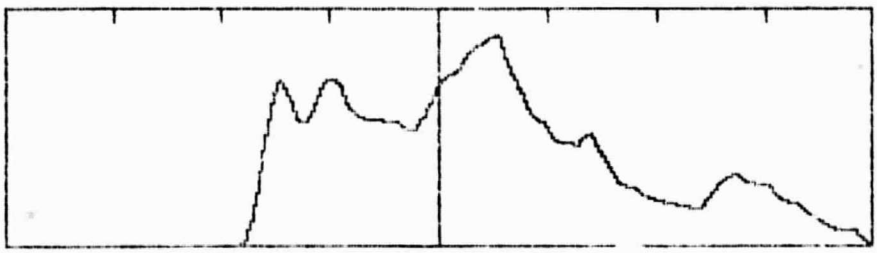


PASS NO 1C SPEED = 114 MPH

ALTITUDE = 9 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 166 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 150-3 A/C MAKE/TYPE = WX-T

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

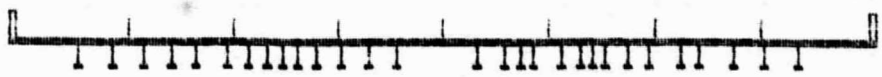
----- NOZZLE -----

TYPE = FLOOD SIZE = TK-5 ANGLE = NA DEG

----------WING SPAN = 40.4 FEET----------

LEFT BOOM LENGTH = 33.5 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP



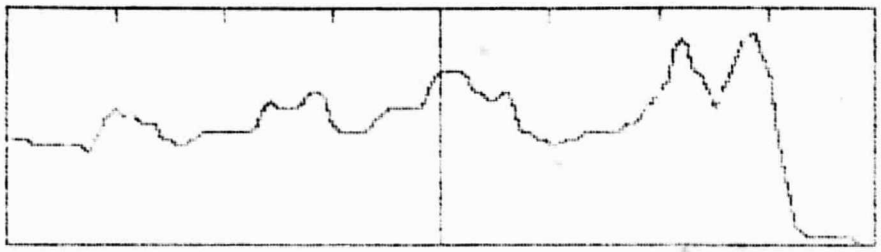
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 3A SPEED = 104 MPH

ALTITUDE = 11 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

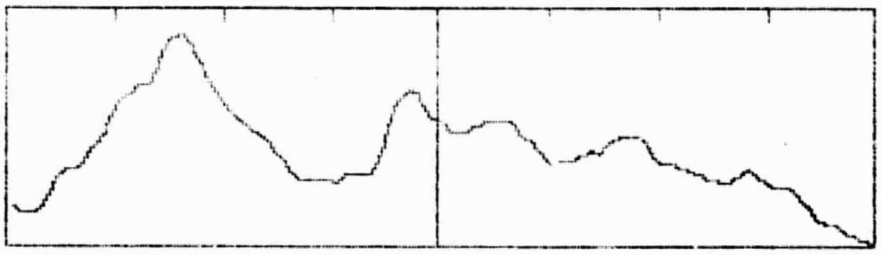


PASS NO 3B SPEED = 103 MPH

ALTITUDE = 11 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 181 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

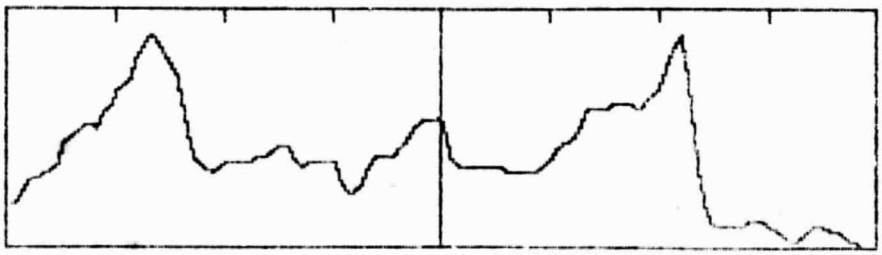


PASS NO 3C SPEED = 106 MPH

ALTITUDE = 11 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 182 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 151-1 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4" BEHIND; 10" BELOW

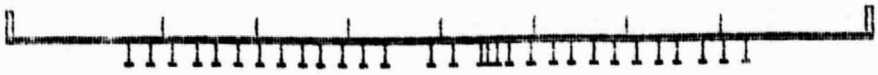
----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = 90 DEG

----------WING SPAN = 45.3 FEET----------

LEFT BOOM LENGTH = 35.9 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP



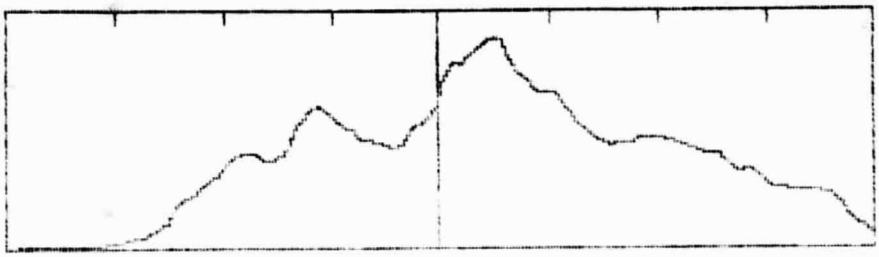
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 1A SPEED = 97 MPH

ALTITUDE = 9.5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 157 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

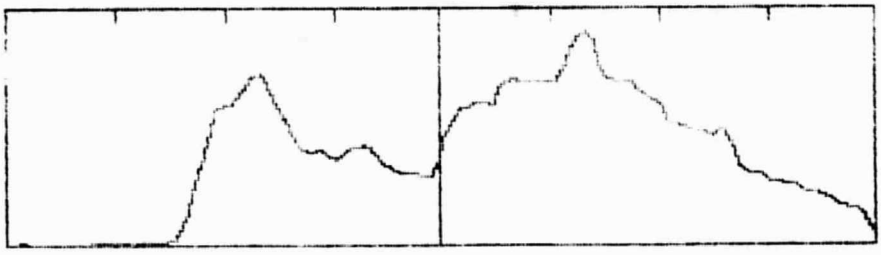


PASS NO 1B SPEED = 115 MPH

ALTITUDE = 8.5 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 146 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

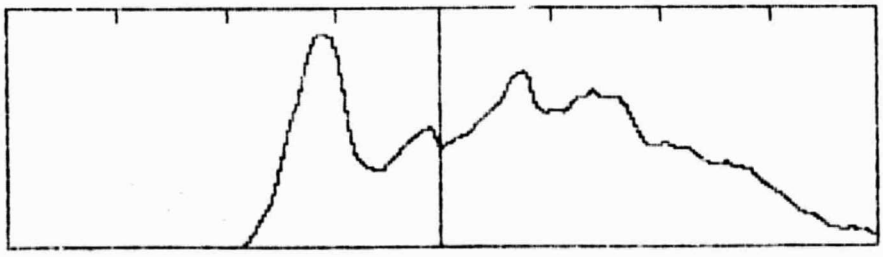


PASS NO 1C SPEED = 108 MPH

ALTITUDE = 9.5 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 154 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 151-2 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4" BEHIND; 10" BELOW

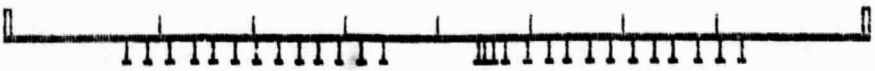
----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = 90 DEG

----------WING SPAN = 45.3 FEET----------

LEFT BOOM LENGTH = 35.9 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP



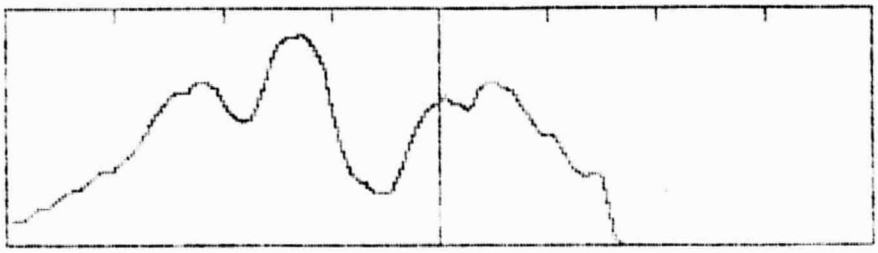
ORIGINAL PAGE IS
OF POOR QUALITY

PASS NO 2A SPEED = 108 MPH

ALTITUDE = 6 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 204 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

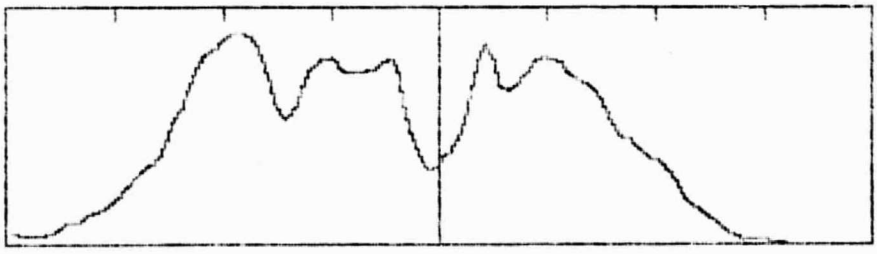


PASS NO 2B SPEED = 110 MPH

ALTITUDE = 6 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 9 MPH WIND DIRECTION = 194 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

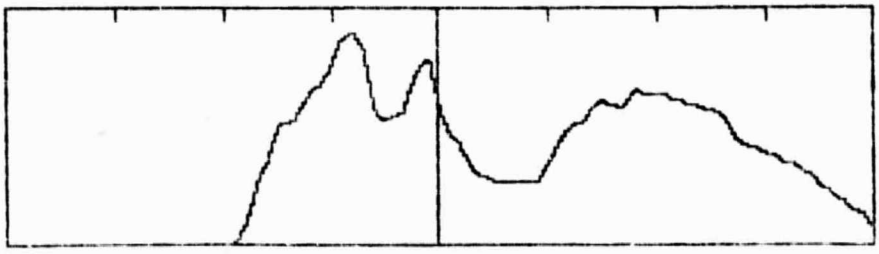


PASS NO 2C SPEED = 116 MPH

ALTITUDE = 8 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 11 MPH WIND DIRECTION = 154 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 151-3 A/C MAKE/TYPE = AT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 4" BEHIND; 10" BELOW

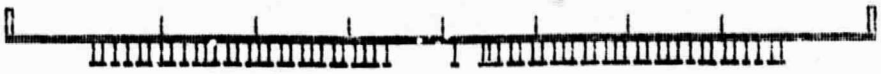
----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = 90 DEG

----------WING SPAN = 45.3 FEET----------

LEFT BOOM LENGTH = 35.9 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP



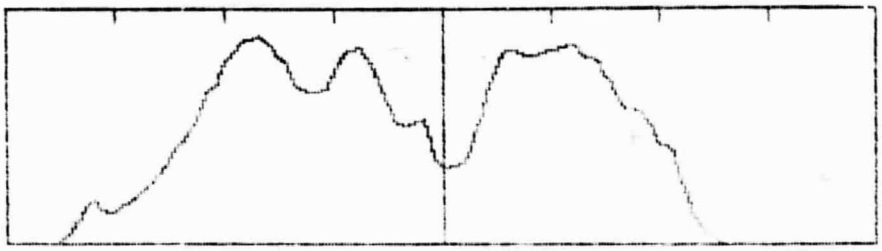
ORIGINAL PAGE IS OF POOR QUALITY

PASS NO 3A SPEED = 107 MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 181 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

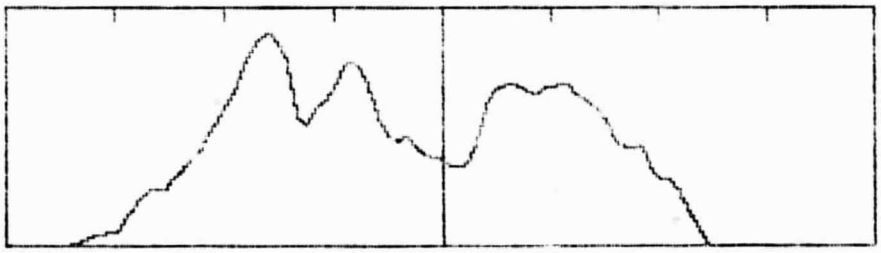


PASS NO 3B SPEED = 104 MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 180 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

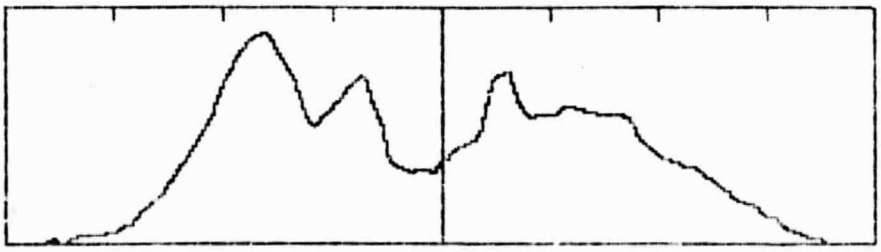


PASS NO 3C SPEED = 112 MPH

ALTITUDE = 11 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 184 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 152 A/C MAKE/TYPE = TT

----- BOOM -----

SHAPE = AIRFOIL POSITION = 2.5" BEHIND; 9" BELOW

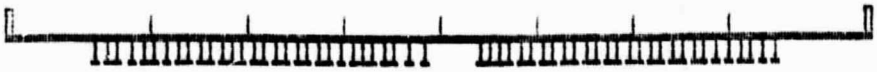
----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = 180 DEG

----------WING SPAN = 44.3 FEET----------

LEFT BOOM LENGTH = 39.7 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

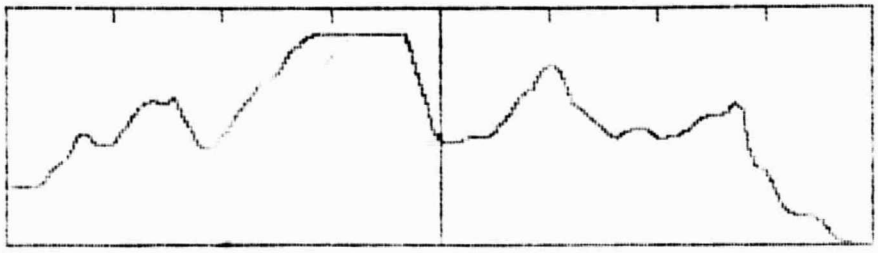


PASS NO 1A SPEED = 110 MPH

ALTITUDE = 8 FT LATERAL DISPL = 3 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 177 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

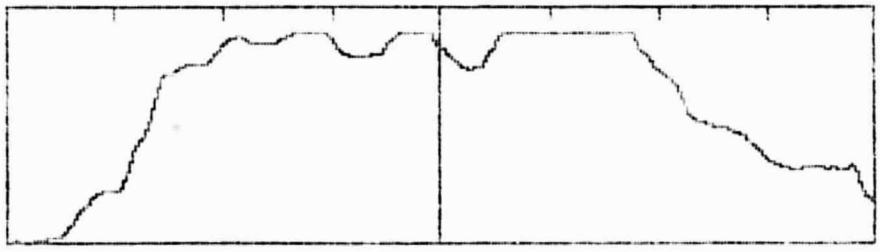


PASS NO 1B SPEED = 113 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 171 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

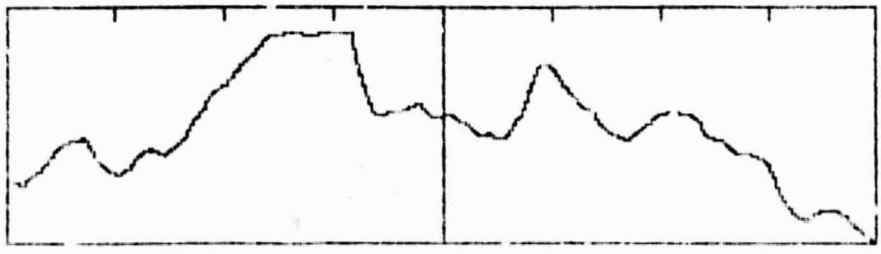


PASS NO 1C SPEED = 114 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 170 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 153-2 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 4" BEHIND; 1" ABOVE

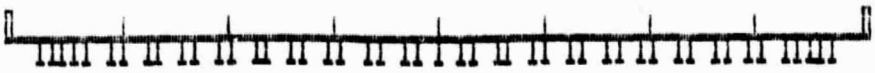
----- NOZZLE -----

TYPE = SMITH FAIR SIZE = D8 ANGLE = 135 DEG

----------WING SPAN = 40.7 FEET----------

LEFT BOOM LENGTH = 37.4 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

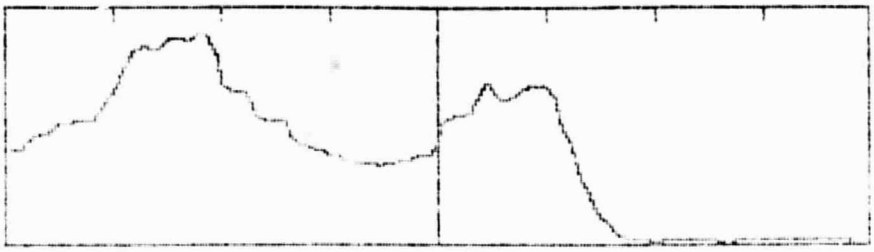


PASS NO 2A SPEED = 96 MPH

ALTITUDE = 11 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 212 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

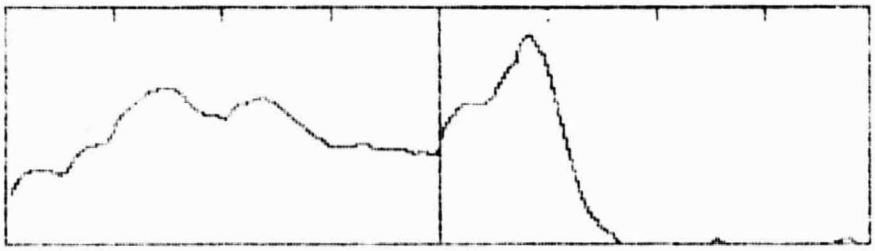


PASS NO 2B SPEED = 102 MPH

ALTITUDE = 13 FT LATERAL DISPL = 2 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 201 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

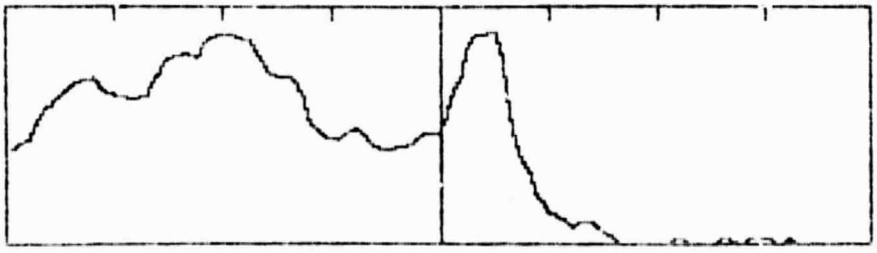


PASS NO 2C SPEED = 92 MPH

ALTITUDE = 13 FT LATERAL DISPL = 3 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 191 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 154-2 A/C MAKE/TYPE = S

----- BOOM -----

SHAPE = RD POSITION = 3" BEHIND; 3" BELOW

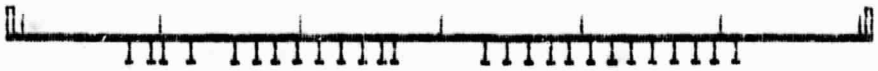
----- NOZZLE -----

TYPE = NA SIZE = 6-45 ANGLE = 135 DEG

----------WING SPAN = 31 FEET----------

LEFT BOOM LENGTH = 26.1 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

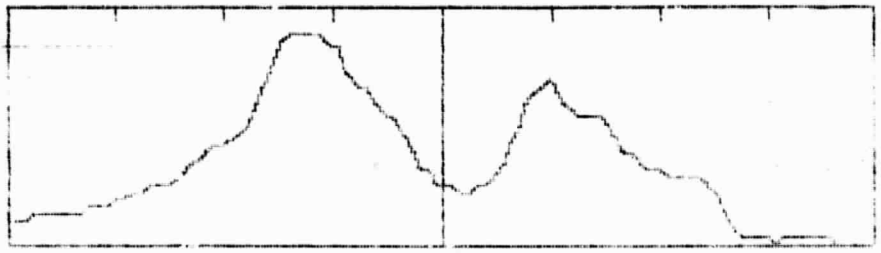


PASS NO 2A SPEED = 100 MPH

ALTITUDE = 12 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 176 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

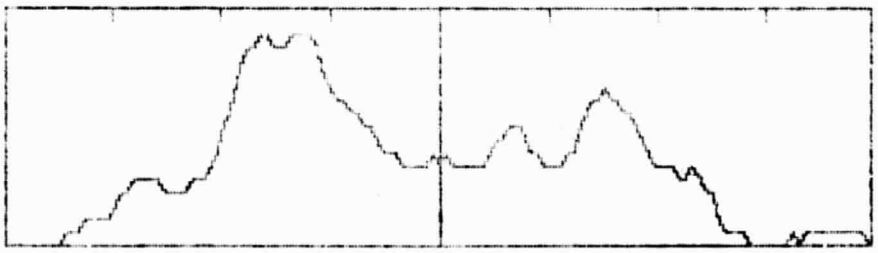


PASS NO 2B SPEED = 99 MPH

ALTITUDE = 11 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 135 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

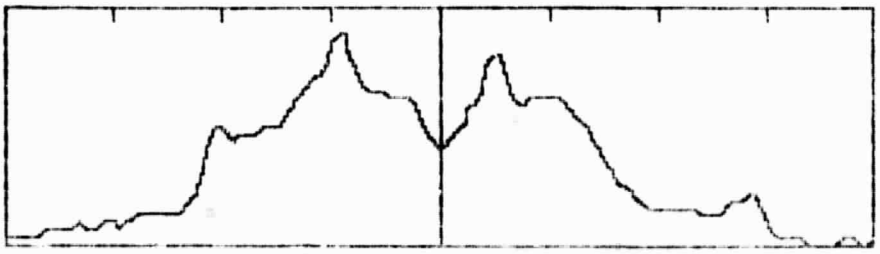


PASS NO 2C SPEED = 95 MPH

ALTITUDE = 11 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 178 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 155 A/C MAKE/TYPE = H

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

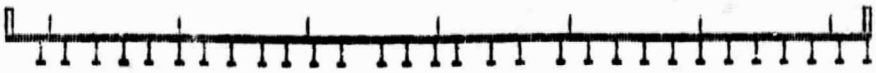
----- NOZZLE -----

TYPE = NA SIZE = NA ANGLE = NA DEG

----------WING SPAN = 33 FEET----------

LEFT BOOM LENGTH = 31.6 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

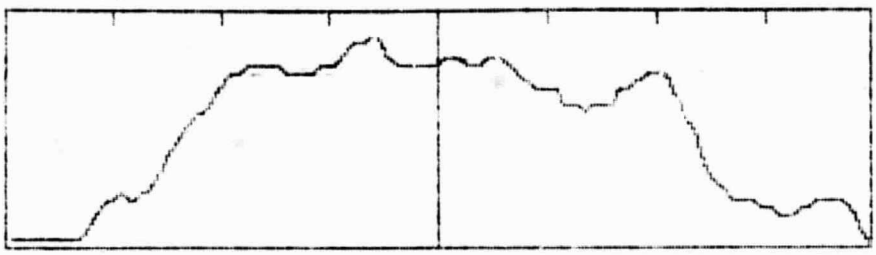


PASS NO 1A SPEED = NA MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 144 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

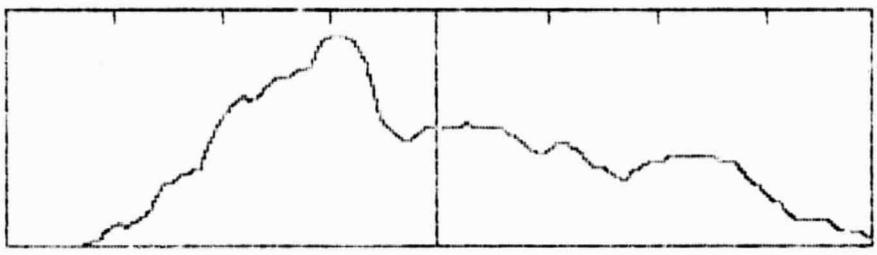


PASS NO 1B SPEED = NA MPH

ALTITUDE = 10 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 6 MPH WIND DIRECTION = 159 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

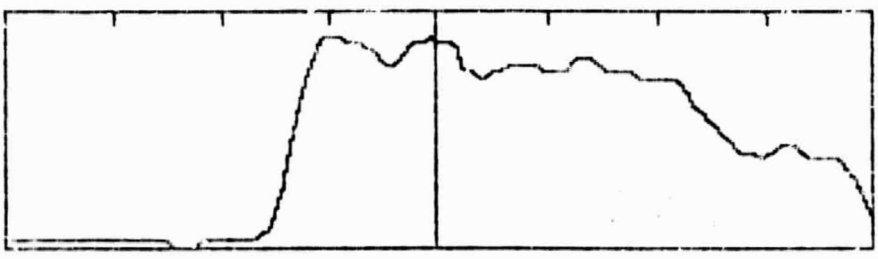


PASS NO 1C SPEED = NA MPH

ALTITUDE = 9 FT LATERAL DISPL = 1 FT LEFT OF CL

WIND SPEED = 5 MPH WIND DIRECTION = 164 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 156 A/C MAKE/TYPE = T

----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

----- NOZZLE -----

TYPE = ACUMIST SIZE = NA ANGLE = 180 DEG

----------WING SPAN = 44.5 FEET----------

LEFT BOOM LENGTH = 27.9 FEET RIGHT

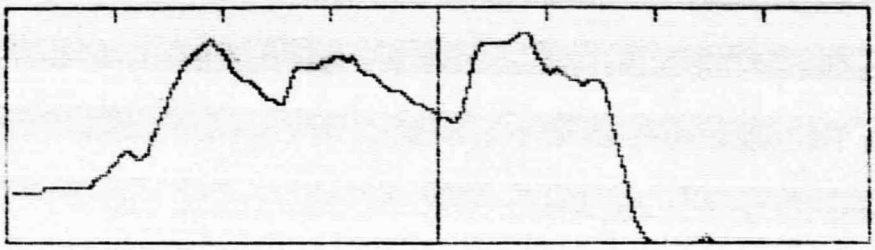
TIP 15 10 5 CL 5 10 15 TIP

PASS NO 1A SPEED = 121 MPH

ALTITUDE = 10 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 211 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

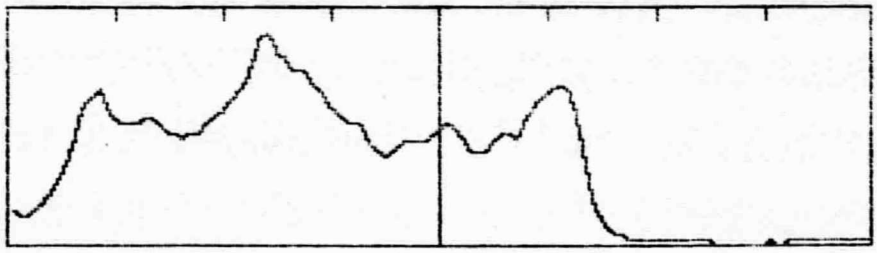


PASS NO 1B SPEED = 125 MPH

ALTITUDE = NA FT LATERAL DISPL = NA FT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 219 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

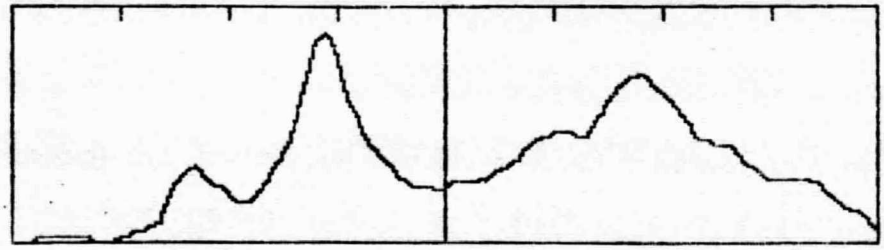


PASS NO 1C SPEED = 130 MPH

ALTITUDE = 11 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 7 MPH WIND DIRECTION = 175 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



TEST NO = 157 A/C MAKE/TYPE = CS

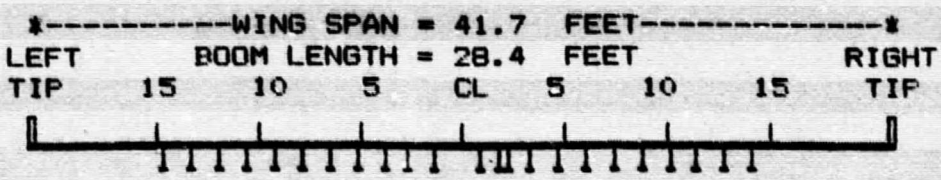
----- BOOM -----

SHAPE = AIRFOIL POSITION = NA

----- NOZZLE -----

TYPE = NA SIZE = D10 ANGLE = 180 DEG

ORIGINAL PAGE IS OF POOR QUALITY



PASS NO 1A SPEED = 123 MPH

ALTITUDE = 8 FT LATERAL DISPL = 1 FT RIGHT OF CL

WIND SPEED = 2 MPH WIND DIRECTION = 176 DEG

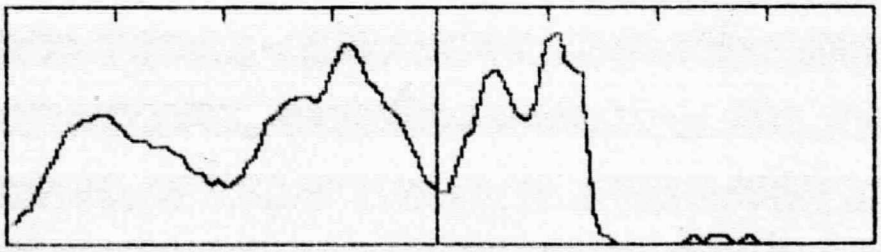
LEFT 30 20 10 0 10 20 30 RIGHT

PASS NO 1B SPEED = 123 MPH

ALTITUDE = 8 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 4 MPH WIND DIRECTION = 210 DEG

LEFT 30 20 10 0 10 20 30 RIGHT

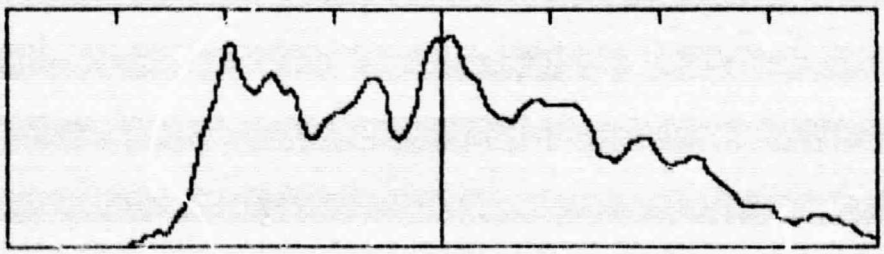


PASS NO 1C SPEED = 122 MPH

ALTITUDE = 8 FT LATERAL DISPL = 0 FT RIGHT OF CL

WIND SPEED = 8 MPH WIND DIRECTION = 174 DEG

LEFT 30 20 10 0 10 20 30 RIGHT



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NO = 158-2 A/C MAKE/TYPE = AC

----- BOOM -----

SHAPE = RD POSITION = 6" BEHIND

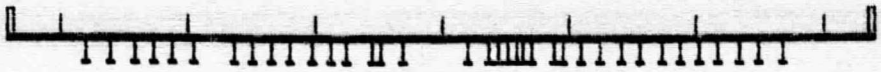
----- NOZZLE -----

TYPE = SMITH FAIR SIZE = D6 ANGLE = 135 DEG

----------WING SPAN = 34 FEET----------

LEFT BOOM LENGTH = 31.3 FEET RIGHT

TIP 15 10 5 CL 5 10 15 TIP

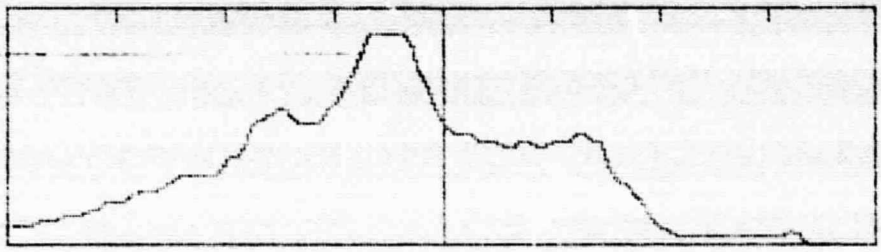


PASS NO 2A SPEED = NA MPH

ALTITUDE = 7 FT LATERAL DISPL = 3.5 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

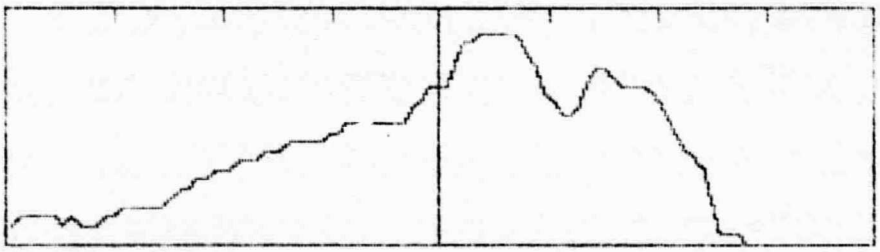


PASS NO 2B SPEED = NA MPH

ALTITUDE = 9 FT LATERAL DISPL = 3.5 FT RIGHT OF CL

WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

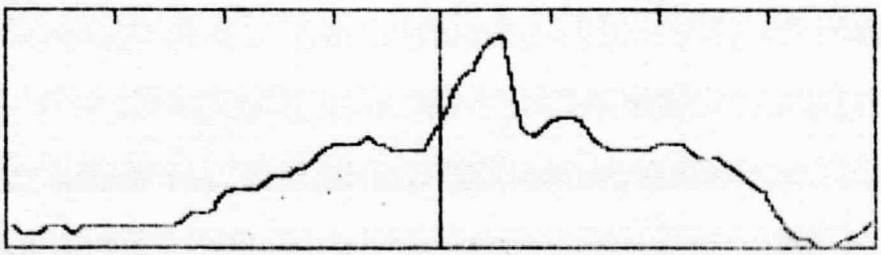


PASS NO 2C SPEED = NA MPH

ALTITUDE = 5 FT LATERAL DISPL = 2.5 FT RIGHT OF CL

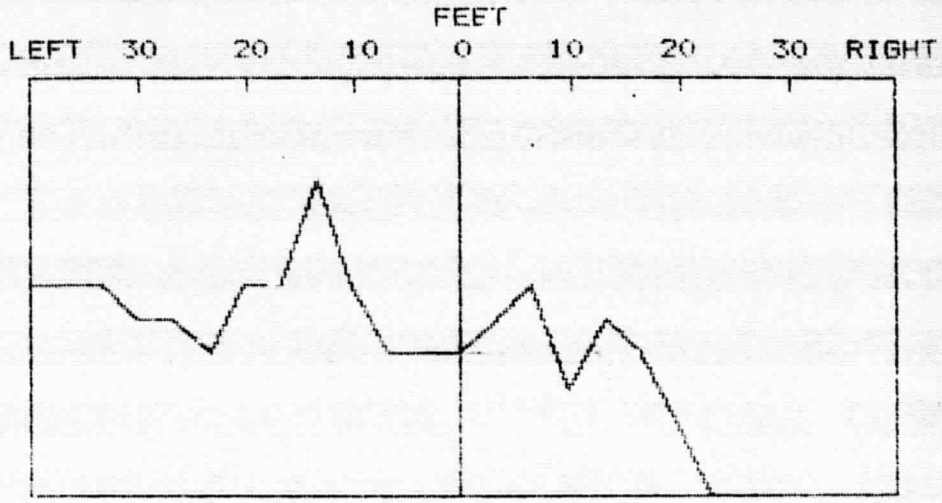
WIND SPEED = NA MPH WIND DIRECTION = NA DEG

LEFT 30 20 10 0 10 20 30 RIGHT

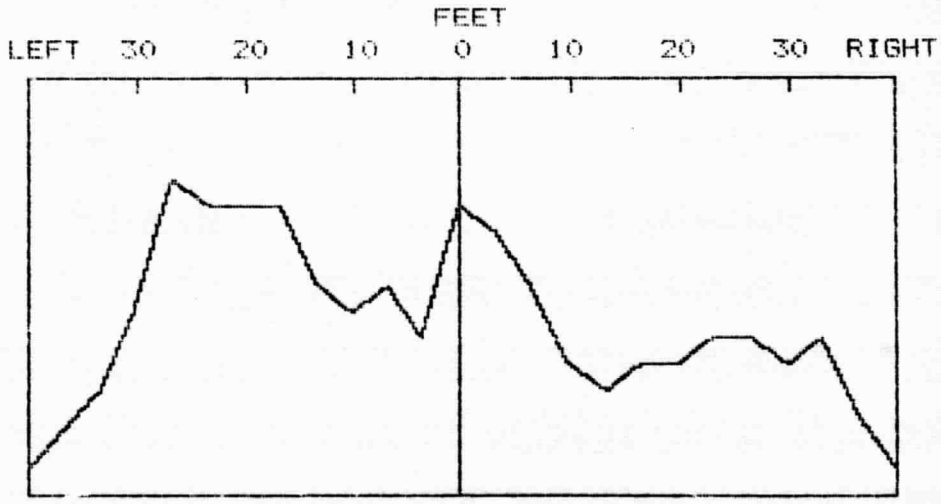


ORIGINAL PAGE IS
OF POOR QUALITY

TEST NUMBER = 1G-1
AIRCRAFT MAKE/TYPE = THRUSH
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = AMMONIUM NITRATE
AIRCRAFT ALTITUDE = 18 FEET
AIRCRAFT LATERAL DISPLACEMENT = 5.5 FEET TO LEFT

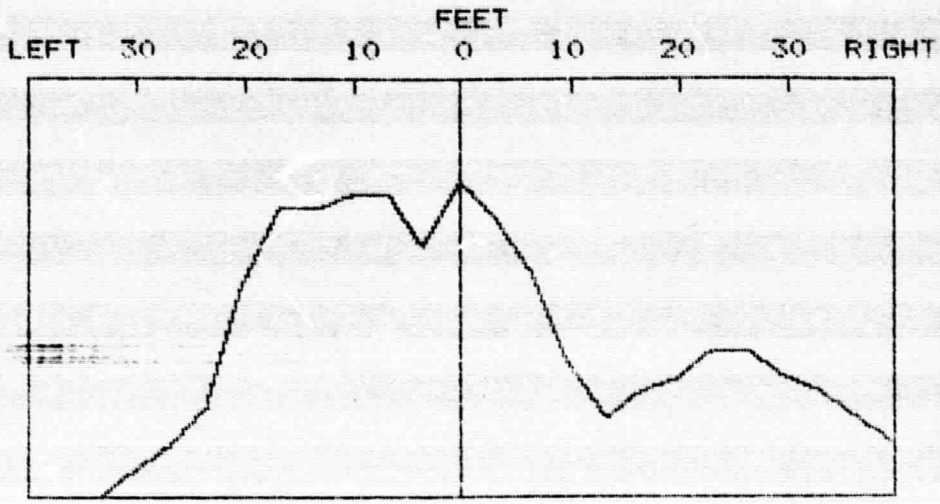


TEST NUMBER = 1G-2
AIRCRAFT MAKE/TYPE = THRUSH
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = AMMONIUM NITRATE
AIRCRAFT ALTITUDE = 16.5 FEET
AIRCRAFT LATERAL DISPLACEMENT = 1.5 FEET TO LEFT

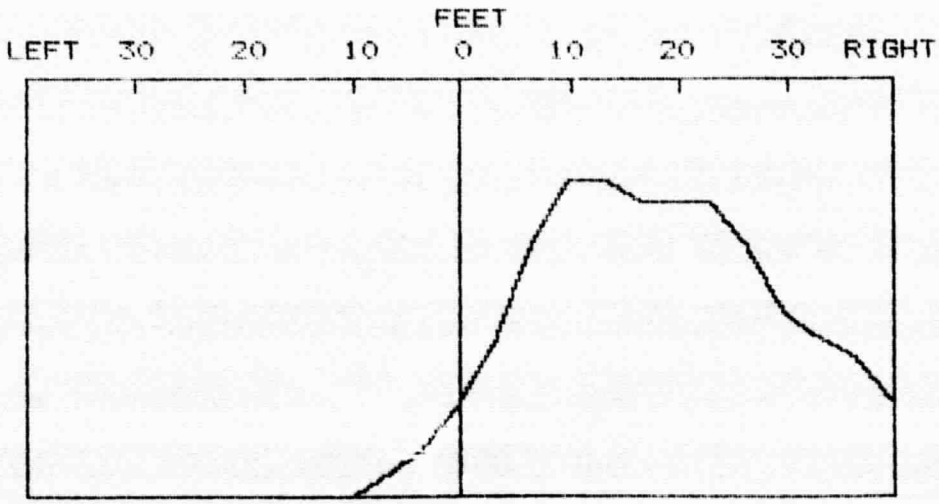


ORIGINAL PAGE IS
OF POOR QUALITY

TEST NUMBER = 1G-3
AIRCRAFT MAKE/TYPE = THRUSH
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = AMMONIUM NITRATE
AIRCRAFT ALTITUDE = 6.5 FEET
AIRCRAFT LATERAL DISPLACEMENT = 2.3 FEET TO RIGHT

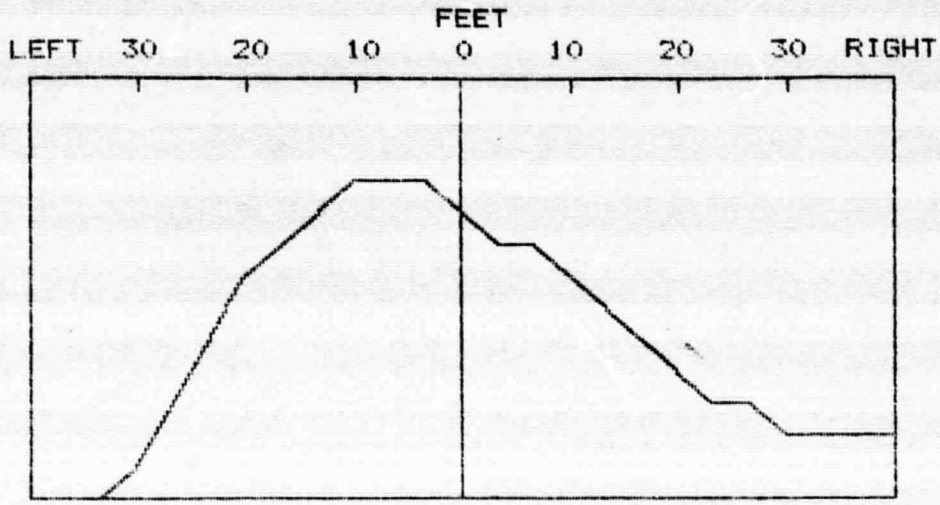


TEST NUMBER = 2G-1
AIRCRAFT MAKE/TYPE = PIPER PAWNEE
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = ARROWLEAF CLOVER
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA

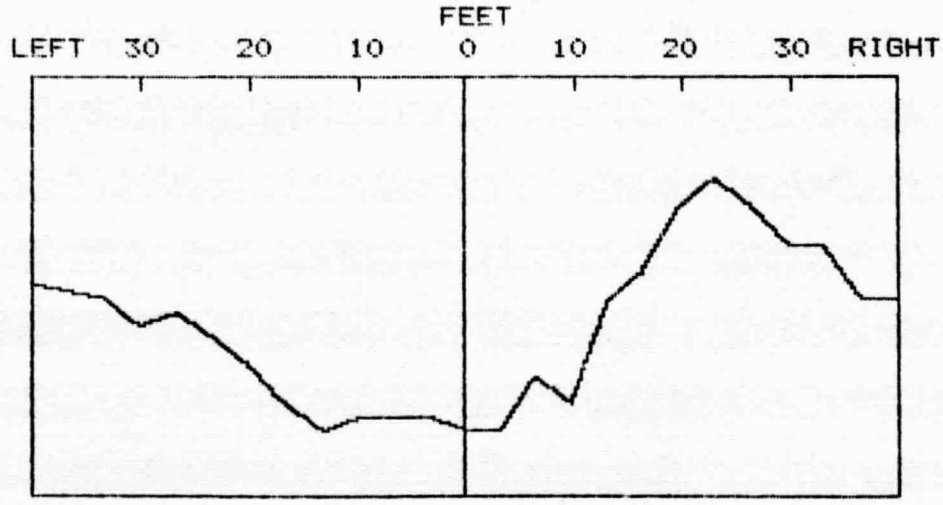


ORIGINAL PAGE IS OF POOR QUALITY

TEST NUMBER = 2G-5
AIRCRAFT MAKE/TYPE = PIPER PAWNEE
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = ARROWLEAF CLOVER WITH LIME
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = 36 FEET TO LEFT

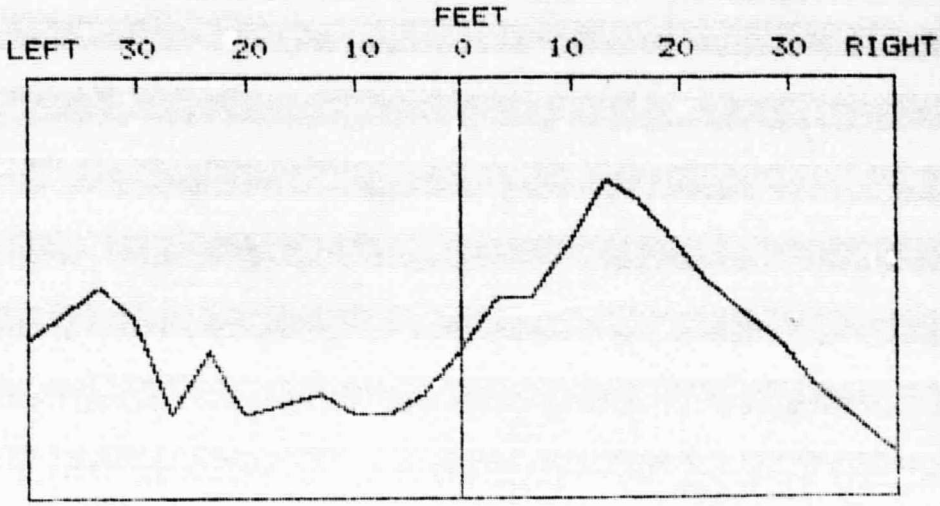


TEST NUMBER = 3G-1
AIRCRAFT MAKE/TYPE = PIPER PAWNEE
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = SPIKE
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = 0

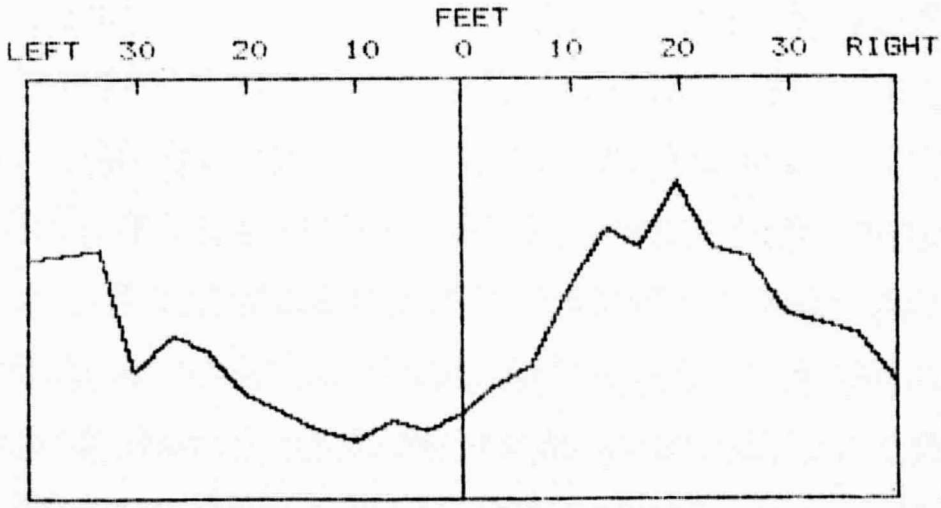


ORIGINAL PAGE IS
OF POOR QUALITY

TEST NUMBER = 3G-2
AIRCRAFT MAKE/TYPE = PIPER PAWNEE
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = SPIKE
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = 3 FEET TO RIGHT

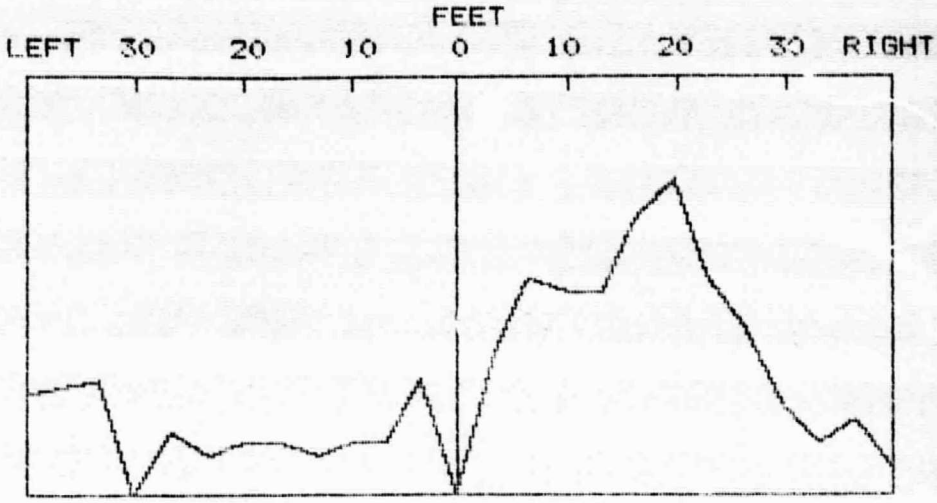


TEST NUMBER = 3G-3
AIRCRAFT MAKE/TYPE = PIPER PAWNEE
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = SPIKE
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = 6 FEET TO RIGHT

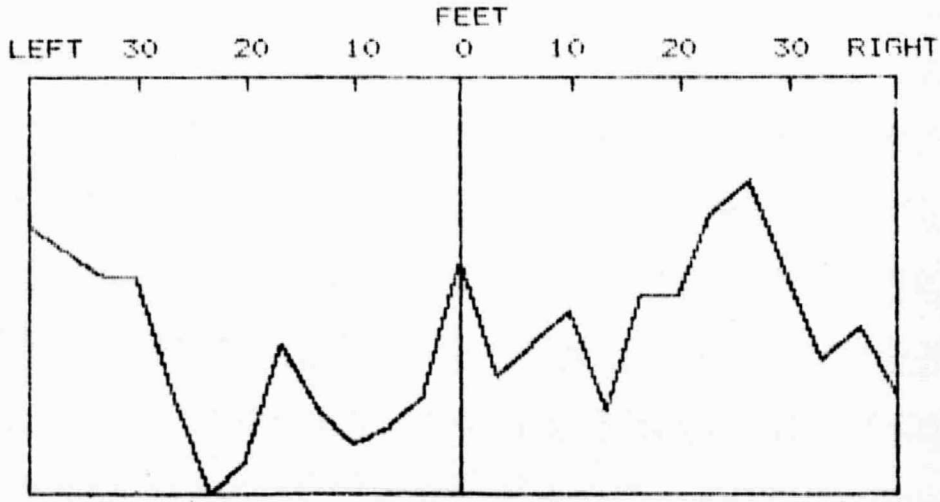


ORIGINAL PAGE IS
OF POOR QUALITY

TEST NUMBER = 3G-4
AIRCRAFT MAKE/TYPE = PIPER PAWNEE
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = SPIKE
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = 13 FEET TO RIGHT

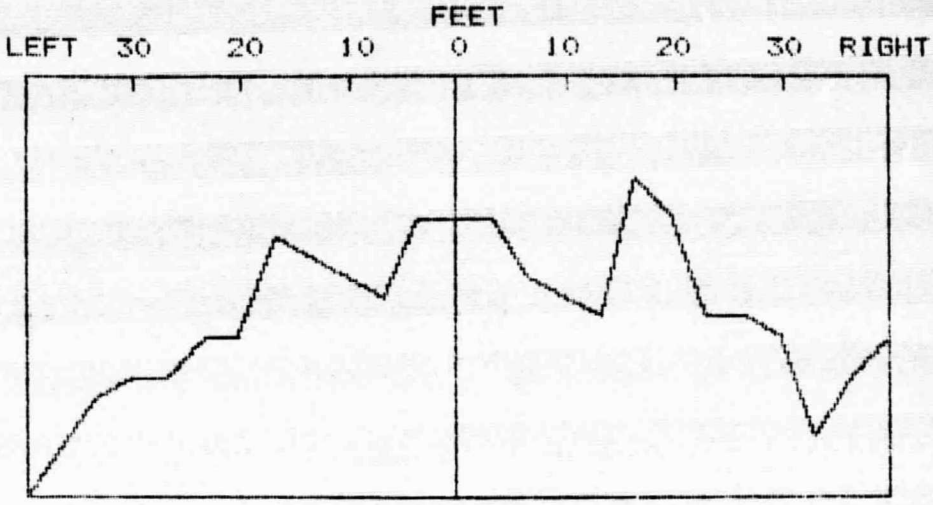


TEST NUMBER = 3G-5
AIRCRAFT MAKE/TYPE = PIPER PAWNEE
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = SPIKE
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = 10 FEET TO RIGHT

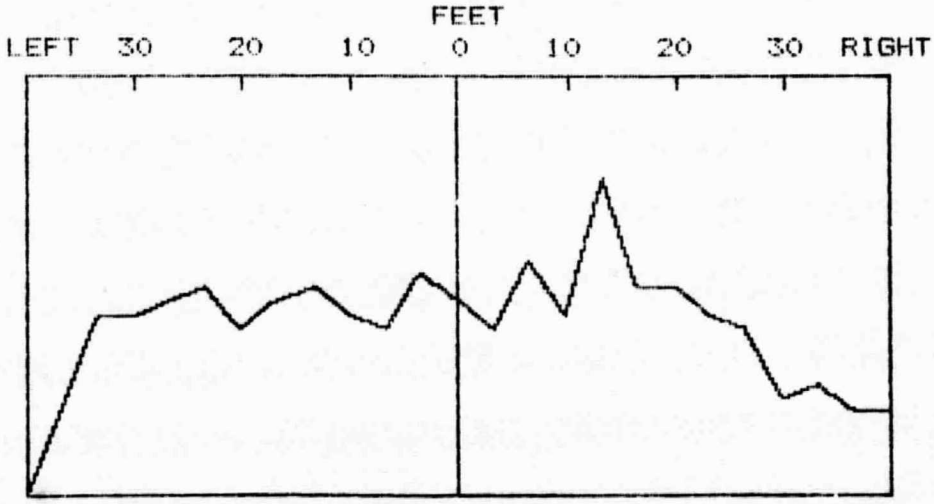


ORIGINAL PAGE IS
OF POOR QUALITY

TEST NUMBER = 4G-2
AIRCRAFT MAKE/TYPE = CESSNA
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = WHEAT
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA

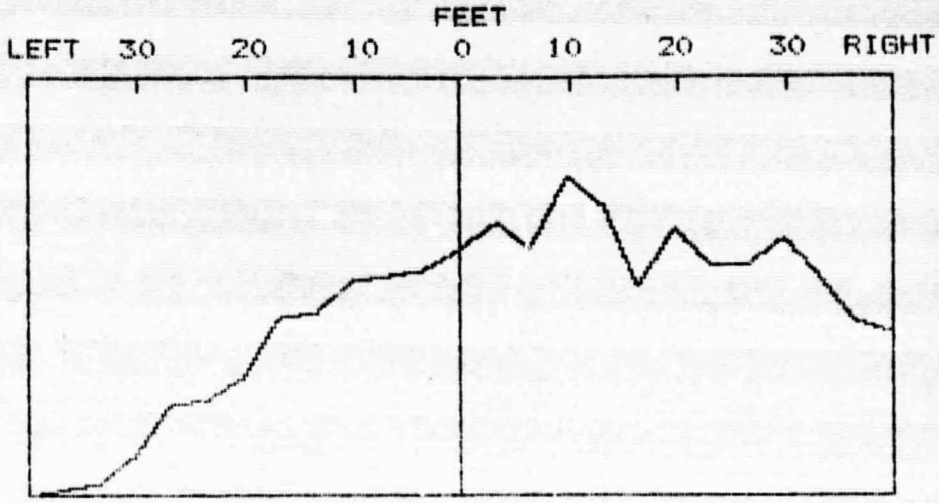


TEST NUMBER = 4G-3
AIRCRAFT MAKE/TYPE = CESSNA
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = WHEAT
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA

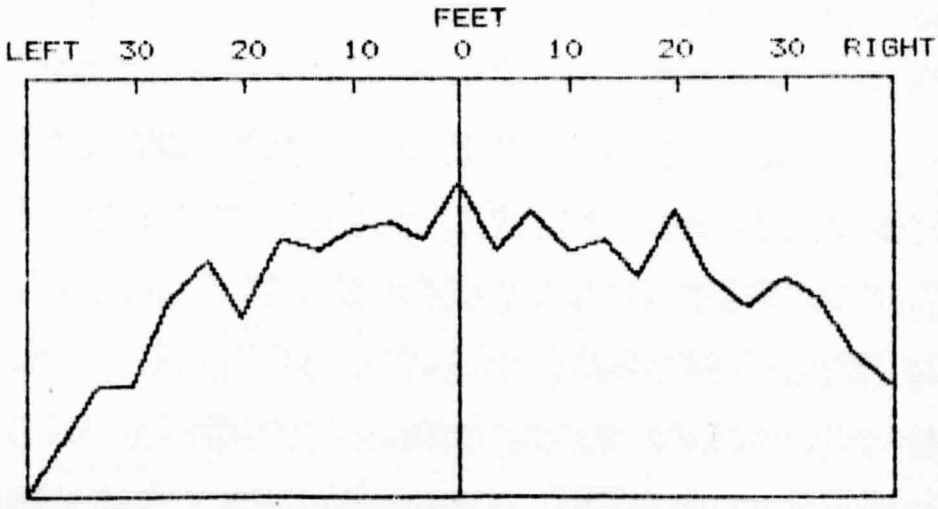


ORIGINAL PAGE IS
OF POOR QUALITY

TEST NUMBER = 4G-4
AIRCRAFT MAKE/TYPE = CESSNA
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = WHEAT
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA

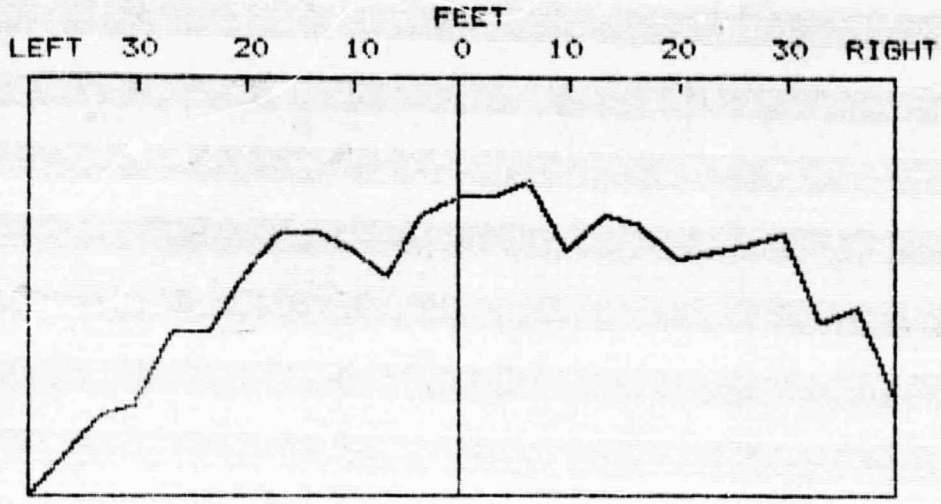


TEST NUMBER = 4G-5
AIRCRAFT MAKE/TYPE = CESSNA
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = WHEAT
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA

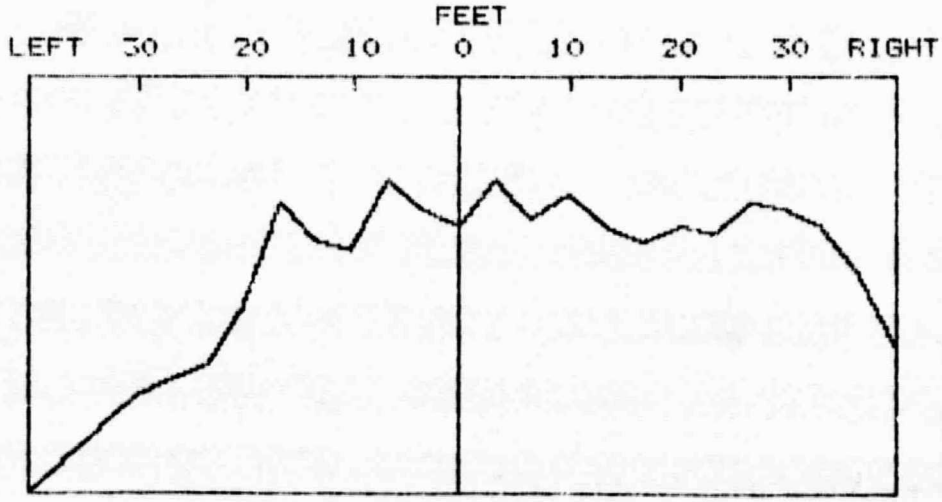


ORIGINAL PAGE IS
OF POOR QUALITY

TEST NUMBER = 4G-6
AIRCRAFT MAKE/TYPE = CESSNA
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = WHEAT
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA

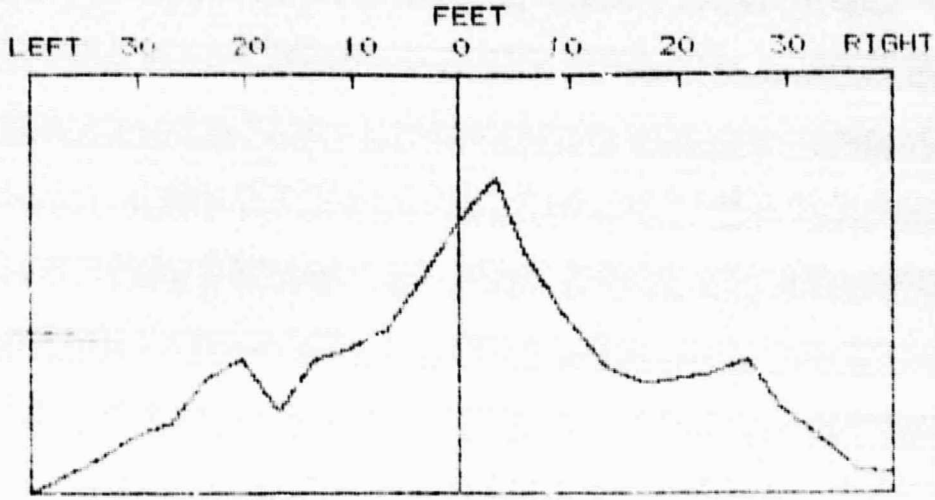


TEST NUMBER = 4G-7
AIRCRAFT MAKE/TYPE = CESSNA
SPREADER MAKE/TYPE = VANE
GRANULAR MATERIAL = WHEAT
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA

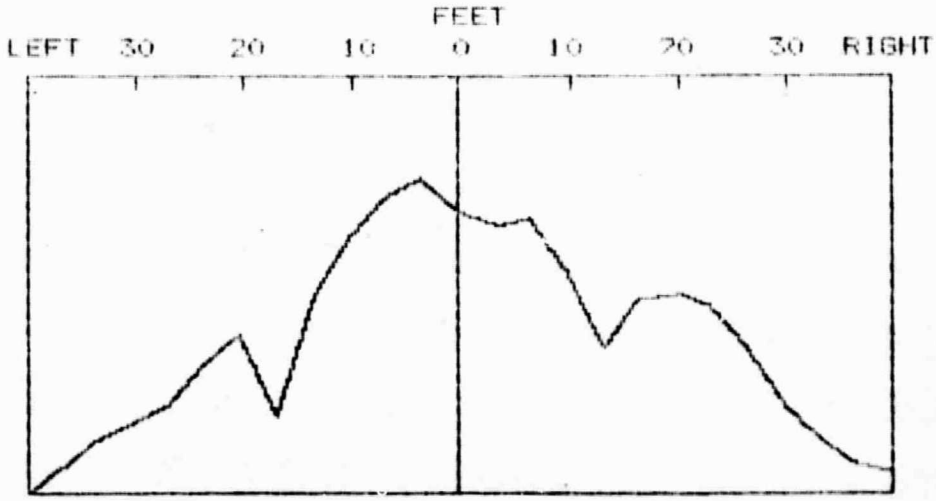


ORIGINAL PAGE IS
OF POOR QUALITY

TEST NUMBER = 5G-1
AIRCRAFT MAKE/TYPE = AGCAT
SPREADER MAKE/TYPE = NA
GRANULAR MATERIAL = NA
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA

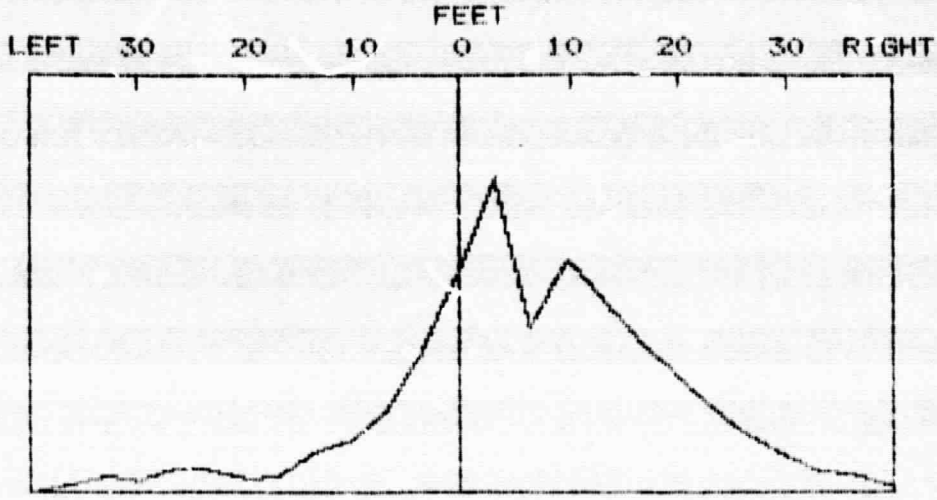


TEST NUMBER = 5G-2
AIRCRAFT MAKE/TYPE = AGCAT
SPREADER MAKE/TYPE = NA
GRANULAR MATERIAL = NA
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA

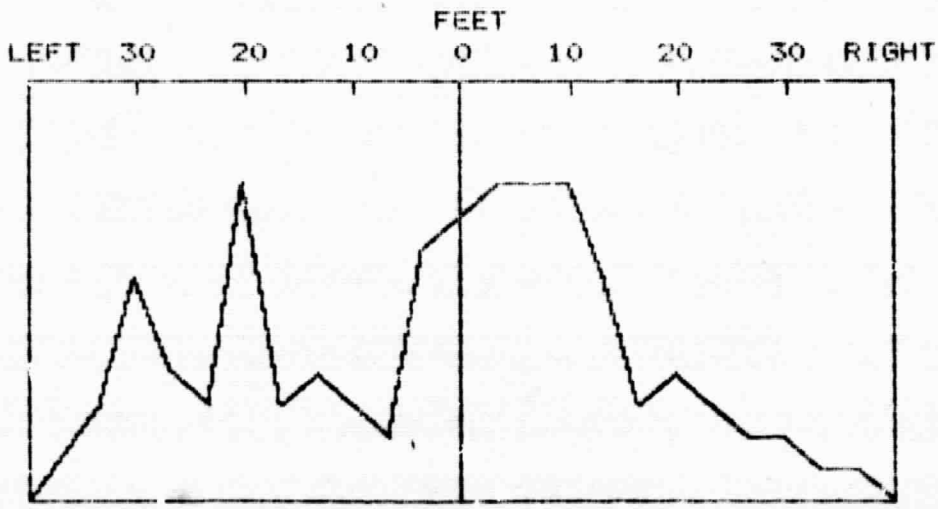


ORIGINAL PAGE IS
OF POOR QUALITY

TEST NUMBER = 6G-1
AIRCRAFT MAKE/TYPE = PIPER PAWNEE
SPREADER MAKE/TYPE = NA
GRANULAR MATERIAL = NA
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA

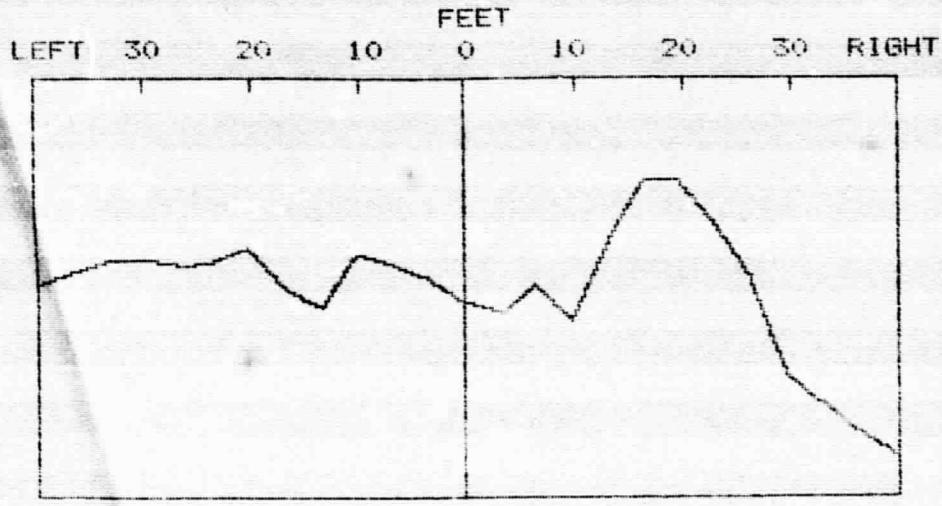


TEST NUMBER = 6G-2
AIRCRAFT MAKE/TYPE = PIPER PAWNEE
SPREADER MAKE/TYPE = NA
GRANULAR MATERIAL = NA
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA

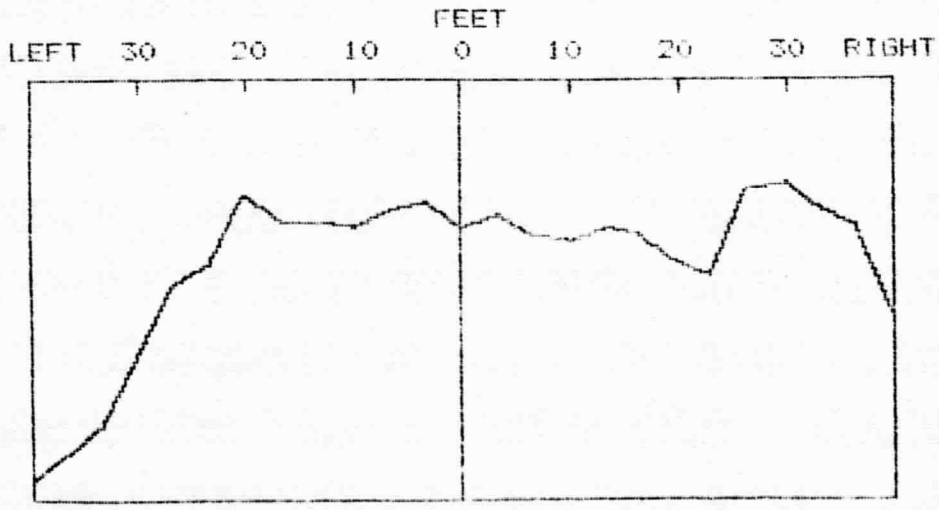


ORIGINAL PAGE IS
OF POOR QUALITY

TEST NUMBER = 8G-1
AIRCRAFT MAKE/TYPE = BELL
SPREADER MAKE/TYPE = NA
GRANULAR MATERIAL = NA
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA

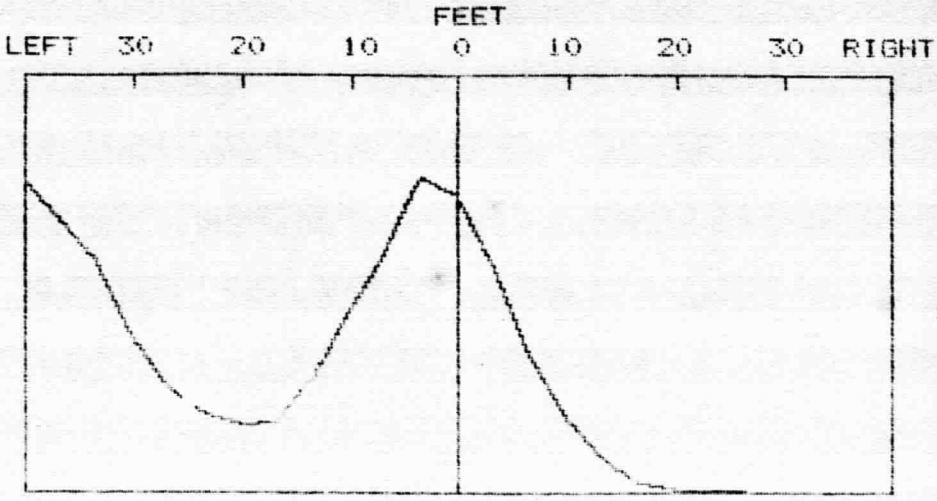
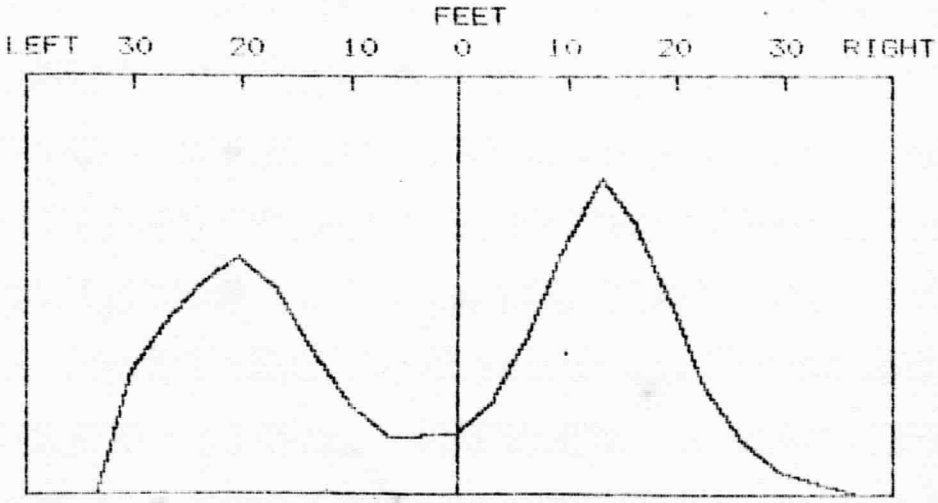


TEST NUMBER = 8G-2
AIRCRAFT MAKE/TYPE = BELL
SPREADER MAKE/TYPE = NA
GRANULAR MATERIAL = NA
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA



ORIGINAL PAGE IS
OF POOR QUALITY

TEST NUMBER = 9G-1
AIRCRAFT MAKE/TYPE = PIPER PAWNEE
SPREADER MAKE/TYPE = NA
GRANULAR MATERIAL = NA
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA



TEST NUMBER = 9G-2
AIRCRAFT MAKE/TYPE = PIPER PAWNEE
SPREADER MAKE/TYPE = NA
GRANULAR MATERIAL = NA
AIRCRAFT ALTITUDE = NA
AIRCRAFT LATERAL DISPLACEMENT = NA