

<< File: 2011 thru 2014 Explorer Alleged Leak at Jounce Hose Comm Symp search from CDR on 07232014.xlsx >>

**Steve Matthews**  
Product Concern Analyst  
Automotive Safety Office



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**From:** [REDACTED]  
**Sent:** Thursday, April 12, 2012 6:37 PM  
**To:** [REDACTED]  
**Subject:** FW: Brake Hoses

[Pictures of the ZF tool.](#)

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**From:** [REDACTED]  
**Sent:** Tuesday, April 03, 2012 11:33 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** FW: Brake Hoses

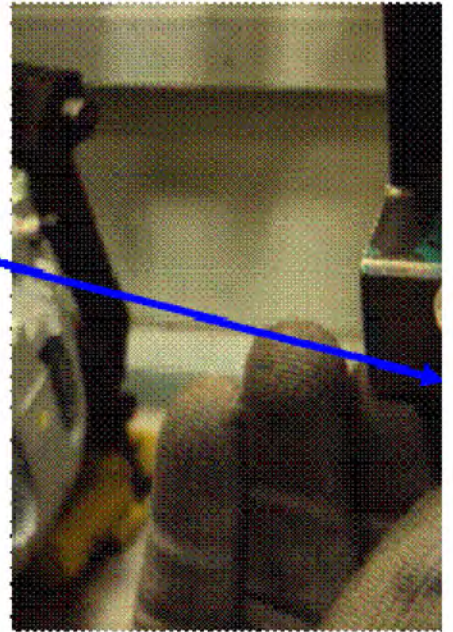
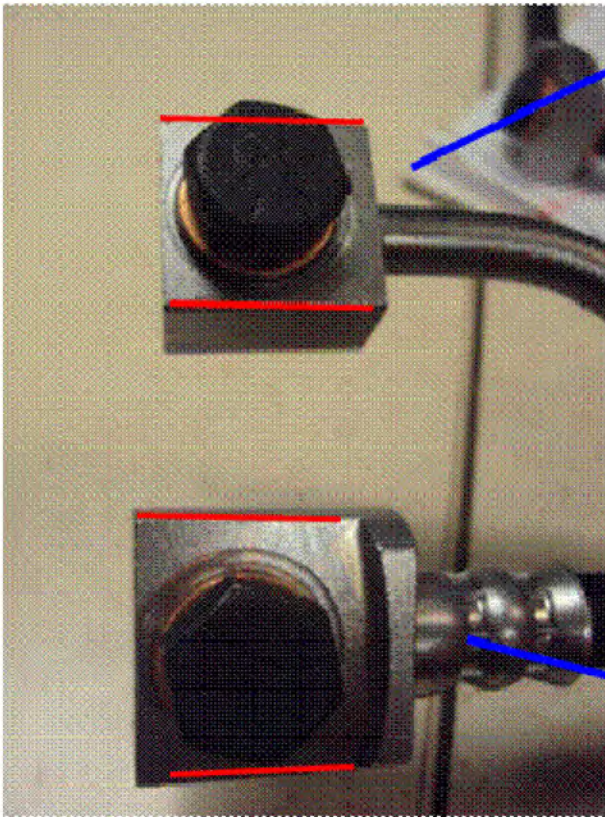
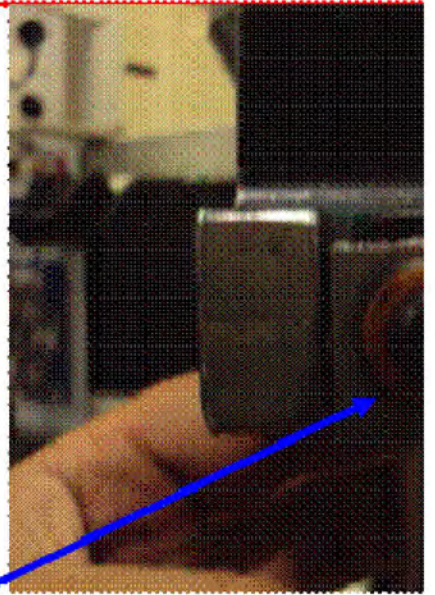
[REDACTED]  
See Sergio's explanation below.

[REDACTED]  
Senior Manufacturing Engineer  
ZF Lemforder  
Chicago, IL

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**From:** [REDACTED]  
**Sent:** Tuesday, April 03, 2012 11:06 AM  
**To:** [REDACTED]  
**Subject:** RE: Brake Hoses

[REDACTED]  
The picture below describes my issue. The top portion of the pictures shows the current production brake hose. The lower portion shows the bottom portion of the new brake hose.



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**From:** [REDACTED]

**Sent:** Tuesday, April 03, 2012 9:54 AM

**To:** [REDACTED]

**Subject:** Brake Hoses

[REDACTED]

Attached are the hose drawings for the ole & new versions. Per my earlier voicemail I checked the dimensions of the brackets and they all appear to be the same so what was the issue with the brackets not fitting the poke yoke check fixture?

Regards,

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Friday, May 08, 2015 2:42 PM  
**To:** [REDACTED]  
**Subject:** FW: Contact Information  
**Attachments:** 005.jpg; 006.jpg; 007.jpg

[REDACTED]

Photo of the latest incident from the Sacramento PD training fleet.

[REDACTED]

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Thursday, May 07, 2015 3:42 PM  
**To:** [REDACTED]  
**Subject:** RE: Contact Information

I'll get the information for those 2. We just had another failure on a 2015 UV. Pictures are attached with VIN.

Thank you,

[REDACTED]

*City of*  
**SACRAMENTO**  
Department of Public Works

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**From:** [REDACTED]  
**Sent:** Thursday, May 07, 2015 12:28 PM

**To:** [REDACTED]  
**Subject:** RE: Contact Information

Steve,

Here's another one (1FM5KAR6FG [REDACTED])

*Patrick M. Culkeen*



---

**From:** [REDACTED]  
**Sent:** Thursday, May 07, 2015 3:26 PM  
**To:** [REDACTED]  
**Subject:** RE: Contact Information

Steve,

Thank you very much for providing the VINs for all of the Explorer Police Interceptors in your fleet. One of the VINs, 1FM5KAR8FG [REDACTED] appears to be missing a digit (Ford uses a 17 digit VIN.) Any assistance you can provide is greatly appreciated.

*Patrick M. Culkeen*



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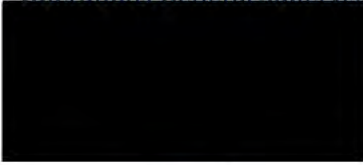
**From:** [REDACTED]  
**Sent:** Monday, April 27, 2015 1:26 PM  
**To:** [REDACTED]  
**Subject:** RE: Contact Information

Please see the attached list.

Thank you,

[REDACTED]  
City of Sacramento  
Fleet Management

Operations General Supervisor



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**From:** [Redacted]  
**Sent:** Monday, April 27, 2015 9:38 AM  
**To:** [Redacted]  
**Subject:** RE: Contact Information



First, I would like to thank you and the rest of your team for making our Thursday afternoon meeting so productive. The photographs and videos are very instructive and will assist in our analysis of this issue. We are working across several departments to facilitate swapping out front brake jounce hoses on the other test vehicles and will keep you abreast as information becomes available.

I have one favor to ask. Would you happen to have a list of all the VINs for your 2014 – 2015 Ford Explorer Police Interceptors. We would like to compare any trends we may find in our analysis versus production dates for your vehicles. Thank you very much for your assistance.

*Patrick M. Culkeen*

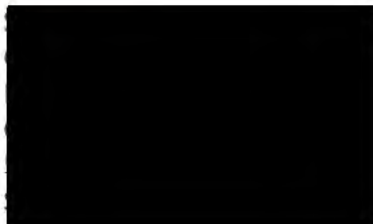


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**From:** [Redacted]  
**Sent:** Thursday, April 23, 2015 3:55 PM  
**To:** [Redacted]  
**Subject:** RE: Contact Information

Accident avoidance.

Thank you,



**From:** [REDACTED]  
**Sent:** Thursday, April 23, 2015 12:52 PM  
**To:** Steve Barker  
**Subject:** RE: Contact Information

[REDACTED]

Thank you very much. I can display these during our meeting.

*Patrick M. Culkeen*

**Ford Motor Company**

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Thursday, April 23, 2015 3:47 PM  
**To:** [REDACTED]  
**Subject:** RE: Contact Information

Pictures of one of the vehicles the brake line separated on.

Thank you,

---

**From:** [REDACTED]  
**Sent:** Tuesday, April 21, 2015 12:48 PM



**To:** [REDACTED]  
**Subject:** RE: Contact Information

[REDACTED]

Thanks much, I'll see what I can do to get the troops together.

*Patrick M. Culkeen*

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Tuesday, April 21, 2015 3:45 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Contact Information

Thursday, 11:30 or later will work.

Thank you,

[REDACTED]

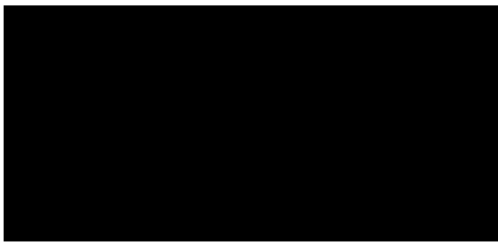
*City of*  
**SACRAMENTO**  
Department of General Services

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**From:** [REDACTED]  
**Sent:** Tuesday, April 21, 2015 9:36 AM  
**To:** [REDACTED]  
**Subject:** Contact Information

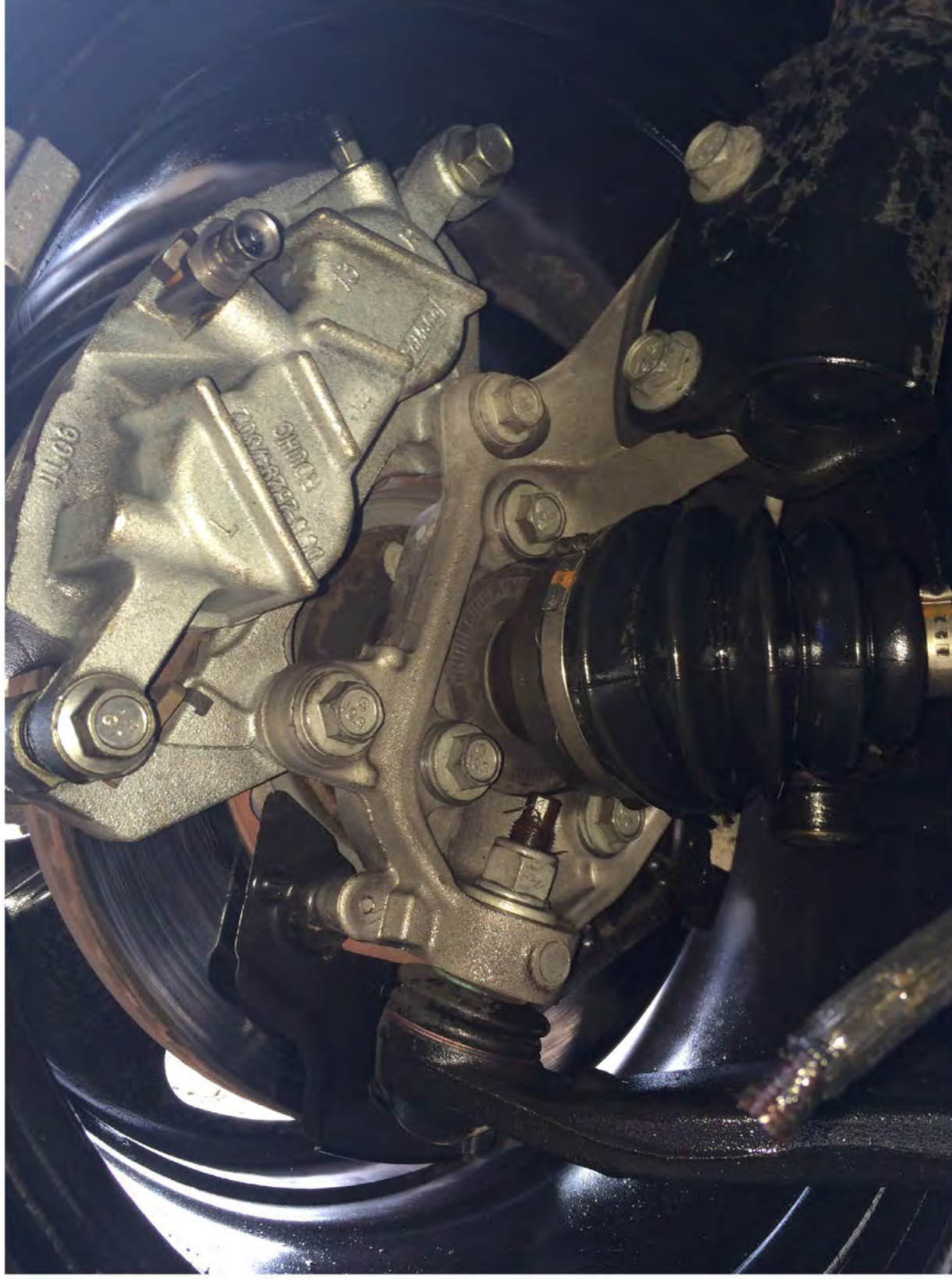
Steve,

I have enclosed my contact information to assist with scheduling our meeting.









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**From:** [REDACTED]  
**Sent:** Friday, April 24, 2015 12:04 PM  
**To:** [REDACTED]  
**Subject:** [REDACTED]  
**Attachments:** Photo 2.JPG; Photo 1.JPG



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**From:** [REDACTED]  
**Sent:** Thursday, April 23, 2015 3:47 PM  
**To:** [REDACTED]  
**Subject:** RE: Contact Information

Pictures of one of the vehicles the brake line separated on.

Thank you,



*City of*  
**SACRAMENTO**  
Department of General Services

---

**From:** [REDACTED]  
**Sent:** Tuesday, April 21, 2015 12:48 PM  
**To:** [REDACTED]  
**Subject:** RE: Contact Information

Steve,

Thanks much, I'll see what I can do to get the troops together.



---

**From:** [Redacted]  
**Sent:** Tuesday, April 21, 2015 3:45 PM  
**To:** [Redacted]  
**Cc:** [Redacted]  
**Subject:** RE: Contact Information

Thursday, 11:30 or later will work.

Thank you,



*City of*  
**SACRAMENTO**  
Department of General Services

---

**From:** [Redacted]  
**Sent:** Tuesday, April 21, 2015 9:36 AM  
**To:** [Redacted]  
**Subject:** Contact Information

Steve,

I have enclosed my contact information to assist with scheduling our meeting.











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**From:** [REDACTED]  
**Sent:** Wednesday, May 06, 2015 5:26 PM  
**To:** [REDACTED]  
**Subject:** [REDACTED]  
**Attachments:** Controlled Braking Exercise.pdf; Collision Avoidance Exercise.pdf; Pursuit Driving Exercise.pdf

Here are the written description of the training that is done.

[REDACTED]  
sor, V363, D258, D385, D47X, U502, Econoline, CD6

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**From:** [REDACTED]  
**Sent:** Wednesday, May 06, 2015 12:41 PM  
**To:** [REDACTED]  
**Subject:** FW: EVOC

[REDACTED]

Per this morning's discussion, I have received the evasive maneuver descriptions from the Sacramento PD. In the event we want to replicate their setups, these files provide full descriptions.

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Tuesday, May 05, 2015 6:02 PM  
**To:** [REDACTED]  
**Subject:** FW: EVOC

[REDACTED]

The EVOC images did not attach the first time. Here it is again.

Sgt. Don Crye

## Controlled Braking Exercise

**PRIOR TO OPERATION OF THIS TRAINING EXERCISE  
THE INSTRUCTOR STAFF SHOULD REVIEW THE  
POST SAFETY GUIDELINES FOR DRIVER TRAINING.**

### Materials Needed

- Law enforcement training vehicle(s).
- Thirty 18" traffic cones and sixteen 48" delineators.
- Cones.
- Delineators.
- Three (3) traffic signal lights (optional)
- Light control box (optional).
- Trip device (optional).

#### Instructor's Note:

*In lieu of the traffic lights,  
you may ride with the  
student and give voice  
commands or use a radio  
and call directions.*

### Goal

To teach the student to properly brake a vehicle in a turning maneuver and come to a complete stop within the imposed boundaries.

### Objectives

- To allow the student to experience the effect of the forces at work on a rapidly decelerating vehicle in a turning maneuver; especially excessive weight transfer.
- To demonstrate loss of steering ability (loss of rolling friction) should brake lock-up occur in a non-ABS equipped vehicle.
- To allow the student to gain proficiency in properly braking a vehicle under emergency conditions.

## **Introduction**

Drives of emergency vehicles will engage in emergency driving situations. These situations will include turning maneuvers as well as straight line driving and reaction to changing situations.

Proper vehicle control may require straight line braking prior to entering a turn.

Straight line braking may not always be possible based on circumstances confronting the driver.

This exercise is designed to present the student with this type of situation and develop those skills necessary for proper vehicle control.

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## **Course Description**

The course is on a level, paved area approximately 613' x 46'. It consists of:

A 488-foot starting and acceleration area.

Single approach lane that is 12 feet wide and 59 feet long.

A lane change zone that widens to 34 feet wide and 40 feet in length.

Two traffic lanes, each 12 feet wide and 26 feet in length, separated by a 10 foot wide lane that is blocked by cones.



## **Procedure to drive course;**

The student will drive the exercise at the following speeds:

40 mph

45 mph

50 mph

The student will accelerate up to the desired speed.

The speed will be maintained until reaching the light activation area.

The student will release the throttle, identify the location of the green light and steer the vehicle into the appropriate lane.

At the end of the approach lane the student will then steer the vehicle to the set of approach lanes. The student will bring the vehicle to a complete stop, utilizing threshold braking.

## Collision Avoidance Exercise

**PRIOR TO OPERATION OF THIS TRAINING EXERCISE  
THE INSTRUCTOR STAFF SHOULD REVIEW THE  
POST SAFETY GUIDELINES FOR DRIVER TRAINING.**

### Materials Needed

**Instructor's Note:**  
*In lieu of the traffic lights,  
you may ride with the  
student and give voice  
commands or use a radio  
and call directions.*

- Law enforcement training vehicle(s).
- Cones
- Delineators.
- Three traffic lights (optional)
- Light control box (optional)
- Trip device (optional)

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### Goal

The student is taught to control a vehicle smoothly, into an evasive maneuver, to avoid an obstacle rather than braking and skidding out of control.

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### Objectives

- To test driver's reaction and coordination of physical movements.
- To point out hazards of quick turning movements, and/or improper use of brakes.
- To demonstrate weight transfer of a vehicle and the affect of steering control and proper throttle application.
- To emphasize that reaction distances increase as the speed of the vehicle increases.



## **Objectives**

To emphasize to the student that more steering is required as the speed increases.

To train the student in a method of avoiding a traffic collision other than an emergency stop.

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## **Introduction**

Drivers of emergency vehicles are frequently required to execute quick turning movements or lane changes. It is imperative that they have knowledge of their personal reaction time at given speeds and know the vehicle's limitations. The collision avoidance exercise is designed to simulate an obstacle on a highway requiring the driver approaching the obstacle to quickly and carefully change lanes to avoid a collision.

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## **Course Description**

The course is on a level, paved area approximately 665' x 48'. It consists of:

A 310-foot starting and acceleration area.

Four approach lanes that are 12 feet wide and 30 feet long.

A second lane change zone that is 75 feet long and 48 feet wide.

A set of 2 recovery lanes that each 12 feet wide and 30 feet in length.

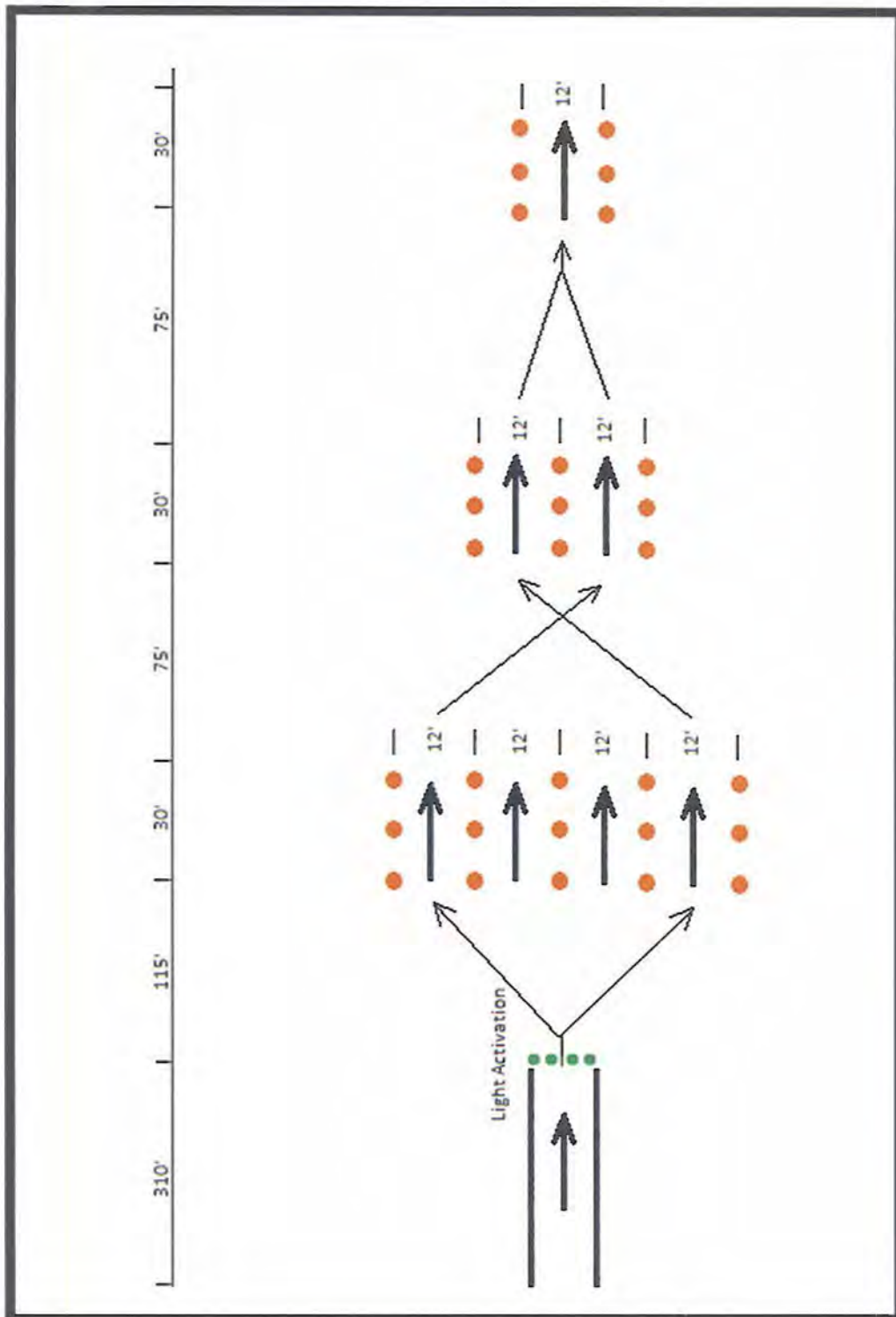
A third lane change zone that is 75 feet long and 24 feet wide.

A final single braking lane that is 12 feet wide and 30 feet in length.

The traffic lanes are lined with cones.

## **CHAPTER FOURTEEN 273**

# LANE CHANGE



## **Procedure to drive course;**

The student will drive the exercise at the following speeds:

40 mph

45 mph

50 mph

The student will accelerate up to the desired speed.

The speed will be maintained until reaching the light activation area.

The student will release the throttle, identify the location of the green light and steer the vehicle into the appropriate lane.

At the end of the four approach lanes the student will then steer the vehicle to the next set of approach lanes and enter the opposite lane.

The student will then enter the final lane of travel and bring the vehicle to a complete stop, utilizing threshold braking.

## City Street Hazard Complex Exercise (Pursuit Driving)

**PRIOR TO OPERATION OF THIS TRAINING EXERCISE  
THE INSTRUCTOR STAFF SHOULD REVIEW THE  
POST SAFETY GUIDELINES FOR DRIVER TRAINING.**

### Materials Needed

- One law enforcement training vehicle (with radio communication).
- Suspect vehicle (marked or unmarked law enforcement training vehicle).
- Two or more "citizen" vehicles (marked or unmarked law enforcement training vehicle).
- Cones and delineators.
- Safety helmets.

### Goal

- The student will experience the difficulty of pursuing a suspect while maintaining control of their vehicle, being alert to hazards and managing the affects of siren syndrome.
- The student will demonstrate the ability to drive and communicate over the radio when appropriate.

### Objectives

- The student will learn how to pursue a suspect while maintaining proper distance, throttle, braking and steering techniques, and be able to recognize hazards during the pursuit and react accordingly.

**Objectives  
(continued)**

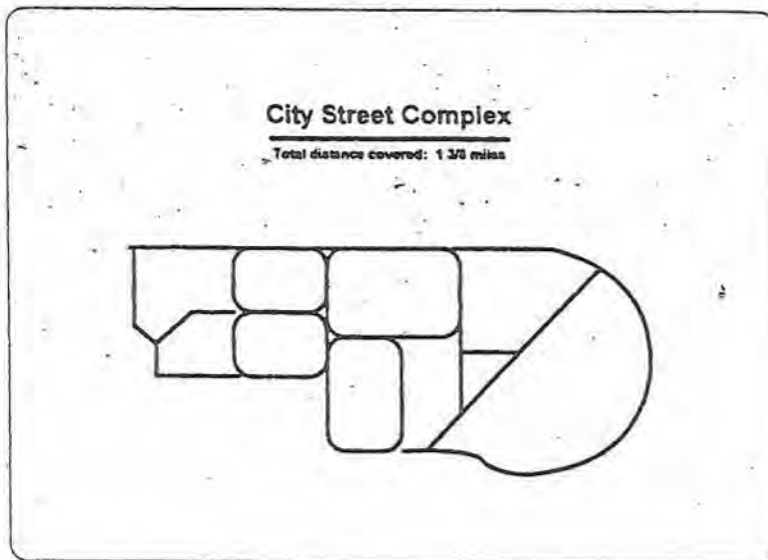
- The student will be introduced to the stresses involved in pursuit situations, and learn to safely control the vehicle.

**Introduction**

- This exercise is used to demonstrate the inherent difficulty and danger of a pursuit as well as to teach techniques which will improve the student's driving ability.
- The exercise relates to real job performance in that it is something that law enforcement officers may experience.

**Course  
Description**

- The pursuit course covers an area 1,200 feet long and 750 feet wide. The course consists of simulated streets which are marked by traffic cones and old automobile tires. Street widths vary from 20 to 40 feet. The course contains all types of curves and intersections. The course is paved with asphalt.



- The course is equipped with radio check points in the form of number signs mounted on delineators, strategically located about the area.

### **Procedure to Drive Course**

- Two law enforcement training vehicles are utilized, both having special safety equipment, including roll bars. Students and instructors will wear safety helmets and be secured by the use of safety belts and shoulder harnesses.
- One instructor plays the role of the "suspect" with a student as a passenger in one of the training vehicles. A second instructor will be the passenger in the other vehicle with a student as the driver.
- The student who is driving and is in pursuit of the "suspect" vehicle will be required to effectively operate the vehicle's emergency equipment and broadcast at radio check points.
- Should the student experience any difficulty, the passenger/instructor will have some control of the vehicle through the use of the auxiliary brake and ignition kill switch.

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### **Demonstration Phase**

The students will be given an on-site explanation of the course and procedures utilized to drive the exercise.

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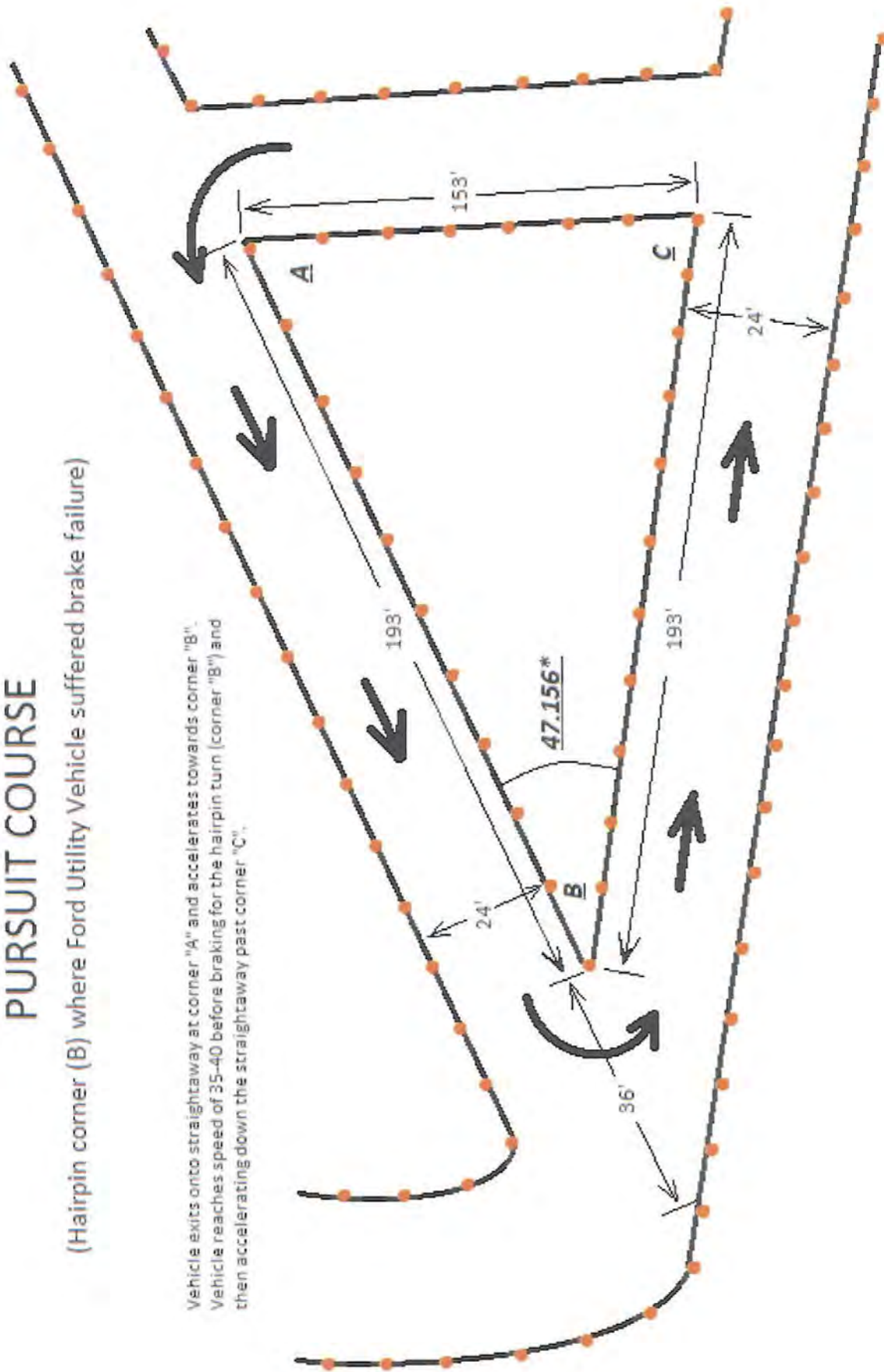
### **Practical Application Phase**

- The student will engage in both a practice and an evaluated pursuit.
  - The route used is preplanned and is the same for each student.
  - The student will pursue the instructor-driven vehicle utilizing the prescribed driving techniques.
  - During this exercise, the student will be required to make radio transmissions while driving the vehicle.
-

# PURSUIT COURSE

(Hairpin corner (B) where Ford Utility Vehicle suffered brake failure)

Vehicle exits onto straightaway at corner "A" and accelerates towards corner "B".  
Vehicle reaches speed of 35-40 before braking for the hairpin turn (corner "B") and then accelerating down the straightaway past corner "C".



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**From:** [REDACTED]  
**Sent:** Wednesday, April 22, 2015 12:35 PM  
**To:** [REDACTED]  
**Subject:** FW: Explorer PI Brakelines

[REDACTED] r, V363, D258, D385, D47X, U502, Econoline, CD6

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**From:** [REDACTED]  
**Sent:** Tuesday, April 21, 2015 8:17 AM  
**To:** [REDACTED]  
**Subject:** Explorer PI Brakelines

[REDACTED]  
This was sent over to me last night, so this is pretty much all I know. I did see a warranty claim on the first VIN listed. Apparently the fleet has been in contact with Randy Freiburger. Can you follow up to see what we can learn about these. Not sure it was included in the report, but apparently the failures have occurred at the training facility. I believe both vehicles listed are 2015 MY.



Summary for Ford  
2015-04-20.pd...



ODI 10705832 narrative: TL\* THE CONTACT OWNS A 2015 FORD EXPLORER. THE CONTACT STATED THAT THE BRAKE LINE ON THE FRONT PASSENGER AND FRONT DRIVER SIDE FRACTURED. THE VEHICLE WAS TOWED TO A DEALER WHO DIAGNOSED THAT THE FRONT BRAKE LINE NEEDED TO BE REPLACED. AN AUTHORIZED DEALER REPLACED THE FRONT DRIVER AND PASSENGER SIDE BRAKE LINES. THE VEHICLE WAS REPAIRED. THE MANUFACTURER WAS NOTIFIED OF THE FAILURE. THE FAILURE MILEAGE WAS NOT AVAILABLE. THE VIN WAS NOT AVAILABLE.

Telephone / email follow-up established that this and another vehicle are police interceptor utilities in the Sacramento City police fleet

1FM5K8AR5FG [REDACTED]

1FM5K8AR7FG [REDACTED]

A third vehicle belonging to Sacramento Regional Transit was also cited but no VIN provided.

Three failures were reported to us in which the rubber front brake line pulls out of its metal end fitting after a hard maneuver (full steer angle and full front suspension extension). The three failures have all been during full lock steering on closed training courses- the Accident Avoidance maneuver and a pursuit maneuver.

The complainant advised that the flexible line looks too short to accommodate full steer input and suspension travel in harsh maneuvers.

He also advised of having spoken to Ford (no details) and having learned that other police fleets were seeing this too. The Ford POC given is Randy Freiburger with Ford on 313-805-3709

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**From:** [REDACTED]  
**Sent:** Wednesday, May 06, 2015 3:53 PM  
**To:** [REDACTED]  
**Subject:** FW: Jounce Hose

*Sincerely,*

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Wednesday, May 06, 2015 11:52 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Jounce Hose

No. Tom Bliznick did not have enough time to complete anything. Tom Castaldi was over yesterday and measured the hose lengths and crimp diameter and arrived at the same numbers as Tom. Tom Castaldi is going to send us reports from the last issue to see if there are any similarities. We gave the hoses to him for your meeting today. We expect Hitachi to produce the report since many of the requirements are theirs – crimp diameter.

*Regards,*

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Wednesday, May 06, 2015 10:28 AM  
**To:** [REDACTED]  
**Subject:** Jounce Hose

[REDACTED]


Do we have an official report of the jounce hoses that you are going to be sending over?

[REDACTED]









In 2 packages are replacement jounce hoses for the City of Sacramento Police Utility training units. Jocelyn Dunning is going to be working with you to arrange the replacement. Once the parts are replaced can you send the old parts back to me at the address below? It would be helpful if the VIN of the unit was included.

Sincerely,





- FCSO Rep in Calif ~~SB~~ Dunning  
→ Sosynow ??

- CAPT Don Davis - TRAINING DIVISION
- POINT CONTACT STEVE BARKER
- 2015 MY EXPLORERS
- 2 HOSES COMING BACK
- 2 VEHICLES ARE 3.7L V6 GAS
- 3 TOTAL VEHICLES
- ACCIDENT AVOIDANCE MANOEUVRE
- PEDAL WENT TO FLOOR
- NO BRAKE WARNING LIGHT
- JAN 2015 THRESHOLD BRAKING (SOUTH)
  - SAME SYMPTOMS AS ABOVE
  - USE OF PB TO STOP VEHICLE
- MARCH 2015
  - CORONING EXERCISE
  - 35-45 mph to
  - BRAKE TO FLOOR
- ALL 3 CASES HOSE DETACH FROM CALIPER SIDE  
ALL LH SIDE (DRIVER SIDE)
- CLAIM IS HOSE WOULD NOT REACH WHEN ATTEMPTING TO  
RE INSERT HOSE INTO BLOCK WITH STEERING AT LOCK.
- ALL TEST DO NOT EXCEED 50 MPH
- VEHICLES ARE @ ROUNDED (3 IN SERVICE)  
25 MORE IN PROCESS.  
(27 TOTAL VEHICLES)



Sacramento questions:

1. What order are the various courses run?
2. Are there actual dimensions for the entire Pursuit course layout?
3. How many laps per driver (all courses)?
4. Estimate time needed to complete each course?
5. Driver rotation, how long does the car sit idle (soak) between sessions?
6. Estimated speeds at braking points on the pursuit course.
7. Is there more than the three described courses run on each vehicle?
8. Do the vehicles have any extra weight in them?
9. What modifications have been performed after receiving them from the dealer?
10. What condition do the brake rotors and pads insulators look like after these events?
11. Do the brakes appear to get very hot or experience any fade during these events? If so what events does this occur on and what is the frequency?

# 1) 2 day TRAINING

## 1st - ACC Avoidance

30 min { ACC  
braking  
placement

Instructor demo twice up to 45mph  
Student 3 times in SAME vehicle, then moves  
to braking exer. Vehicle placement, slow speeds Suph

## 2nd - Pursuit

Instructor goes thru course

Student 2 times thru course

3-5 min for course - vehicle goes to back  
of line 15 min down time before next up

MAX speed 45mph

2) Nothing specific - 1/2 mile round

3) Day - min of 45 min  
2 DRIVERS PER VEHICLE

8) Just Roll cage, NO added weight

9) NO mods to vehicle on training

10) TRAINING vehicle no bluing

vehicles have @ 500 miles on them as of 5/13/15

14) ~~Most~~ failures occur ~~to~~ during braking event

• vehicles have experienced multiple failures

• day training is about 10 miles per day

4/22/15

Nick Dravetsky - Shop Foreman - Harrold Ford

O: (916) 922-1535 ext 166/140

C: (916) 825-827

nick-dravetsky@harroldford.com

### Disc Ponds

- 1) Nick has talked with Dean and will ship the parts back to Dearborn for analysis. Ford will pay for shipping and will allow the claim to be paid without the part going to the warranty return center.
- 2) It looks like the rubber portion of the hose has pulled out of the crimp on the caliper side (barijo). As part of the repair, the techs have been adjusting the body side by cutting off the alignment tab and twisting it just enough for line extension for a full lock full down suspension condition.

WebEx w/Sacramento PD on '15 Explorer 4/23/15

## Agenda

### 1) Introductions

#### a) Ford

Pat Culkeen - ASO

Rebecca Shelby - ASO

Randy Freiburger - Special Veh Eng Police

Pete Williams - PD Brake Eng

Scott Cirtler - PD Brake Eng

#### b) Sacramento PD

Steve Barker - Fleet Mgr

Capt Davis - Training

Don Crye

Dawn Stolarow - Mgr Fleet

### 2) Background

a) Received a phone call from Greg Magno - NHTSA Early Warning regarding (3) 2015 MY Ford Police Interceptor Explorers had experienced an issue with the front brake junction hoses.

b) Last year, NHTSA had opened an investigation on Explorer Police Interceptors for leaking brake hoses.

- The majority of the reports involved vehicles from the Washington DC Metro Police Dept
- Almost all the vehicles were built in the first month of production for the 2013 MY (Month '12)
- Ford introduced a new brake hose in J '12.

### 3) General Discussion Topics

- Vehicle types/build months
- What is the usage of these vehicles
- What severe maneuvers are performed
- Frequency

(Over)

3) Continued

- What did drivers experience? loss of function, pedal drop, illuminated Red Brake light?
- How was the condition identified?
- Had the front brakes been serviced previously?

## Notes from Conf Call

4/23/15

This condition has been observed on 3 vehicles

- 1 - December 2014 - Outside Agency (Rapid Transit?)  
Accident Avoidance maneuver, two officers were in the car. The observed decreased brake function and brake pedal fade. No Red Brake light was illuminated
- 2 - January 2015 - Sacramento PD  
Threshold Braking maneuver ~ 50mph
- 3 - March 2015 - Sacramento PD  
Cornering Pursuit maneuver ~ 35-40mph  
Near steep hairpin turn

Officers observed the front brake hose detached from the bargo fitting (caliper end). All detachments occurred on the driver's side.

Sacramento PD uses 5 vehicles for training officers, who have to be evaluated regularly (annually?). There are 27 Explorer P.I.'s in their fleet.

The team reviewed the videos of each maneuver and discussed speeds. Sacramento PD mentioned that it appeared that the hose was not long enough in a static condition with the weight of the vehicle on all four wheels.

PD wants to acquire the parts. We need to coordinate with Harold Ford to service the vehicles quickly. Need to contact Jocelyn Dunning to assist w/ parts swap.

4/27/15

## Engineering Discussion Explorer Police Ft Brake Hoses

### 1) Attendees

Pat Culhan

Pete Williams

Randy Freiburger

Mark Tuneff

Scott Cutler

Jocelyn Dunning

### 2) Background

- CHP Right Rear Brake Hose experienced a rupture. They sent parts to Jocelyn
- Side height sensor wiring contacted the front hose. They also experienced pull outs on the twin turbo Interceptor that is available for the 2016 MY.
- What do we need:
  - i) (5) Sets of RH & LH hoses
  - ii) Coordinate the replacement of parts to minimize downtime

5/7/13

## Discussion w/ Sgt Crye

- i) Another brake hose just failed.
- Braking Exercise 50 mph Very Little Lt Turn but R/H hose let go at the caliper. Spontaneous failure instructor driving. Pedal all the way to the floor. He did go off the course.

## a) Operational Cycle for Training Vehicles

### Pursuit training

Rabbit Car → Same Car

Pursuit Car → 100K miles Rotated

2 Days Every Week

1st Day 3 Maneuvers

2nd Day Pursuit & Cornering Training

Civilian Training (City Employees)

Instructor Training - 2 Weeks, Twice A Year

- They only use 5 Explorers as trainers, they are not used for any of the other training
- They are regional tracks/courses
- State of California Standards
- 4-5 Hrs of operation/per vehicle/per day

### Avoidance & Braking

Backing/ ~~Braking~~ Placement

Pursuit Course 2 - Runs in Explorers, then pursuit

Brake pads changes are done

Flat, Asphalt Roads, well maintained

(3) Braking (3) Avoidance (3) lane change

Pursuit

2 Student/per



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**From:** [REDACTED]  
**Sent:** Tuesday, August 05, 2014 5:38 PM  
**To:** [REDACTED]  
**Subject:** Police Explorer jounce hose

Outcome of the CCRG meeting is that I need to go back in 3 weeks. I had 3 follow up items that were requested.

- 1) MKT hose same as Explorer?
- 2) Any prior brake repairs done on the police units?
- 3) Rubber analysis done at central labs?

Thank You

[REDACTED]  
Brake Supervisor, V363, B299, D258, D385, D47X, U502, Econoline, C489  
FN3 – HS015  
[REDACTED]

# Police Fleet VINS

VIN	Description of leak or source/cause	Total
✓ 1FM5K8AR0DG	jounce hose stretch	1
✓ 1FM5K8AR0DG	at jounce hose - 2 lines (1 aux, 16 coils) 16511/3350	1
✓ 1FM5K8AR1DG	at jounce hose - 2 lines (1 aux, 16 coils) 30823/30798	1
1FM5K8AR0DG	at jounce hose - NO AWD, COILS DOWN	1
1FM5K8ARXDG	hose split ← NO AWD 26 COILS	1
1FM5K8AR6DG	at jounce hose ← NO AWD	1
1FM5K8AR7DG	at jounce hose ← NO AWD	1
1FM5K8AR7DG	at jounce hose ← NO AWD	1
1FM5K8AR6DG	at jounce hose - NO AWD	1
1FM5K8AR5DG	at jounce hose - 2 lines (1 aux, 16 coils)	1
1FM5K8ARXDG	bulge in hose ←	1
		11
		11
		11

NO AWD CLAIM



EGREM005  
EGREM011

> SAME VIN

1FM5K8ARXDG [REDACTED]  
SAME REPORT DATE

- 2 Diff mileage

45430 005 ✓ 46525 011

- One had "hose split in it" 005  
other "bubble in hose" 011

EGREM007 - SAME  
EGREM008 / VIN  
1FM5K8AR7DG [REDACTED]

- 2 Diff mileage  
42802 (007)  
16511 (008)

- One report LF (007)  
other RF (008)

74 reports  
64 unique VINS

Sort Field One 1

Count of ECI	Record ID	Model Year	Source Code	Dealer Name	Source Claim Key
		2013	GCQIS Ford	FORD MOTOR CO. FPSDGO FLT SVC	EFQCB003
					EGREM002
					EGREM003
					EGREM004
					EGREM005
					EGREM006
					EGREM007
					EGREM008
					EGREM009
					EGREM010
					EGREM011
				FORD MOTOR CO. FPSDGO FLT SVC Total	
			<b>GCQIS Ford Total</b>		
		<b>2013 Total</b>			
		<b>Grand Total</b>			

EFQCB003

- ✓ hose split
- ✓ joune hose stretch
- ✓ @ banyo bolt
- ✓ bulge in hose
- ✓ at joune hose fitting
- ✓ at joune hose

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**From:** [REDACTED]  
**Sent:** Monday, May 11, 2015 5:14 PM  
**To:** [REDACTED]  
**Subject:** Questions

Here is a list of questions so far please feel free to add to it.



Sacramento  
questions.docx



*Foundation Brake Engineering:*  
*Explorer/Taurus Police Programs*  
*D/U Retail Programs*  
*D47X Limo Programs*  
*H-567 Programs*  
*Transit Programs*



Sacramento questions:

1. What order are the various courses run?
2. Are there actual dimensions for the entire Pursuit course layout?
3. How many laps per driver (all courses)?
4. Estimate time needed to complete each course?
5. Driver rotation, how long does the car sit idle (soak) between sessions?
6. Estimated speeds at braking points on the pursuit course.
7. Is there more than the three described courses run on each vehicle?
8. Do the vehicles have any extra weight in them?
9. What modifications have been performed after receiving them from the dealer?
10. What condition do the brake rotors and pads insulators look like after these events?
11. Do the brakes appear to get very hot or experience any fade during these events? If so what events does this occur on and what is the frequency?



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**From:** [REDACTED]  
**Sent:** Thursday, November 07, 2013 8:24 PM  
**To:** [REDACTED]  
**Subject:** RE: (No Subject)

No to all the only thing I can say is it had track time prior to this test, will bring the parts home for root cause analysis we will owe them an answer ASAP

[REDACTED]

-----Original Message-----

**From:** [REDACTED]  
**Sent:** Thursday, November 07, 2013 03:18 PM Eastern Standard Time  
**To:** [REDACTED]  
(W.R.)  
**Subject:** RE: (No Subject)

Were the temps high or a different failure mode? Are the hoses typically replaced prior to an event?

[REDACTED]  
Brake Supervisor, V363, B299, D258, D385, D47X, U502, Econoline, C489  
FN3 – HS015

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**From:** [REDACTED]  
**Sent:** Thursday, November 07, 2013 3:04 PM  
**To:** [REDACTED]  
**Subject:** FW: (No Subject)

We just failed a brake hose on the utility during the cert, we are scrambling to find one to finish the event nod good news or press Ecoboost explorer

[REDACTED]  
Chassis Foundation  
Brake Engineering

[Redacted]

-----Original Message-----

**From:** [Redacted]

**Sent:** Thursday, November 07, 2013 02:58 PM Eastern Standard Time

**To:** [Redacted]

**Subject:**



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**From:** [REDACTED]  
**Sent:** Saturday, January 14, 2012 8:35 PM  
**To:** [REDACTED]  
**Subject:** RE: 2013 U502 Jounce Results  
**Sensitivity:** Private  
**Follow Up Flag:** Follow up  
**Flag Status:** Flagged  
**Categories:** Yellow Category

We should perform CAD check on tire composite "paddle" that is used for jounce/rebound study for current and 2013 J2 18" brake for U502 to make sure our D-car paddle covers the extremes on all tire sizes.

[REDACTED]  
-----Original Appointment-----

**From:** [REDACTED]  
**Sent:** Friday, January 13, 2012 3:38 PM  
**Subject:** 2013 U502 Jounce Results  
**When:** Saturday, January 14, 2012 5:00 PM-6:00 PM (GMT-05:00) Eastern Time (US & Canada).  
**Where:** Telecon  
**Sensitivity:** Private

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Tuesday, April 21, 2015 3:40 PM  
**To:** [REDACTED]  
**Subject:** RE: 2015 Ford Explorer Police Interceptor



Interceptor UV

-----Original Appointment-----

**From:** [REDACTED]  
**Sent:** Tuesday, April 21, 2015 8:45 AM  
**To:** [REDACTED]  
**Subject:** 2015 Ford Explorer Police Interceptor  
**When:** Tuesday, April 21, 2015 11:30 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).  
**Where:** Webex

Sorry about the timing of this meeting. The purpose is to discuss contacts with the Sacramento Police Department on front brake hose performance. If this time does not work for you, please recommend an alternate.

Patrick Culkeen invites you to the following WebEx meeting:

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WebEx meeting information  
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Meeting Link: [REDACTED]  
Meeting Number: [REDACTED]  
Meeting Password: This meeting does not require a password.

This meeting may include the option for video. The recording of meetings is prohibited. For company policies on using video click here:  
<https://comm.sp.ford.com/sites/digitalworker/Pages/HowiWorkItem.aspx?UCTitle=to%20use%20Video&UCID=&Page=2&Section=2.001>

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Audio conference information  
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FordNet [REDACTED]  
US Toll F [REDACTED]

Having trouble dialing in? Try these backup numbers:

US Toll F [REDACTED]  
FordNet [REDACTED]

Global call-in numbers: <https://ford.webex.com/ford/globalcallin.php?serviceType=MC&ED=382947137&tollFree=1>  
Toll-free dialing restrictions: [http://www.webex.com/pdf/tollfree\\_restrictions.pdf](http://www.webex.com/pdf/tollfree_restrictions.pdf)