# Enhanced Safety Screening for High-Risk Motor Carriers



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UNIVERSITY OF KENTUCKY\* Kentucky Transportation Center

## **Kentucky Transportation Center**

- Located within the College of Engineering at the University of Kentucky
- Designated Research Arm of the Kentucky Transportation Cabinet
- An Integral Part of Kentucky's CVISN/ITD Team Since the Program's Inception (1996)
- What do we do?



## www.ktc.uky.edu







# **Kentucky Transportation Center**

- Plan Regular Team Meetings and Annual Strategic Planning Meeting
- Documentation of Performance Measures
- Preparation of Grant Applications
- Investigation and Evaluation of Technologies/Systems
- Monitor Data Quality and Work to Resolve Issues
- Training related to Screening Systems
- Implementation and Support of Various Commercial Vehicle-Related Technologies









## Who are Our Partners?









# Enhanced Safety Screening for High-Risk Motor Carriers

- Funded through the 2017 High Priority Grant (HP-ITD)
- Goal: to incorporate FMCSA's BASIC scores into screening systems so that carriers with potential safety problems are more easily identified for inspection



• Timeline: 9/15/2018 – 12/31/2019







# Enhanced Safety Screening for High-Risk Motor Carriers

- KTC's Role:
  - Facilitate the development of functional requirements with the Study Advisory Committee
  - Work with the programmer to implement the changes in CVIEW & KATS
  - Work with KSP-CVE to test these new features
  - Evaluate the benefits of the changes









# Kentucky's CVIEW

: CVIEW					
Carrier	USDOT Carrier Name State KYU # KIT # KYTC # Tax ID IFTA # IRP # Permit # Q SEARCH 4 🗗 🖬				
Vehicle					
Observations	BASICS Date 2018	3-09-28			
	BASIC	Assessment	On-Road Performance	Deficient	
	Unsafe Driving		40.00	<u>N - No deficiency</u>	
	HOS Compliance	DEFICIENT	92.00	P - Yes deficiency due to performance	
	Driver Fitness			<u>N - No deficiency</u>	
	Drugs/Alcohol			<u>N - No deficiency</u>	
	Vehicle Maint.	DEFICIENT	<mark>85.00</mark>	P - Yes deficiency due to performance	

v18.10.1, © 2018 CVO Solutions



# Kentucky Automated Truck Screening (KATS)

- Trucks are automatically identified using their license plate and USDOT number and then screened against Kentucky and national databases.
  - The goal is to be more efficient with available staffing and identify good candidates for inspection.
  - Improve safety and increase compliance.
  - Attempts to screen ALL vehicles.

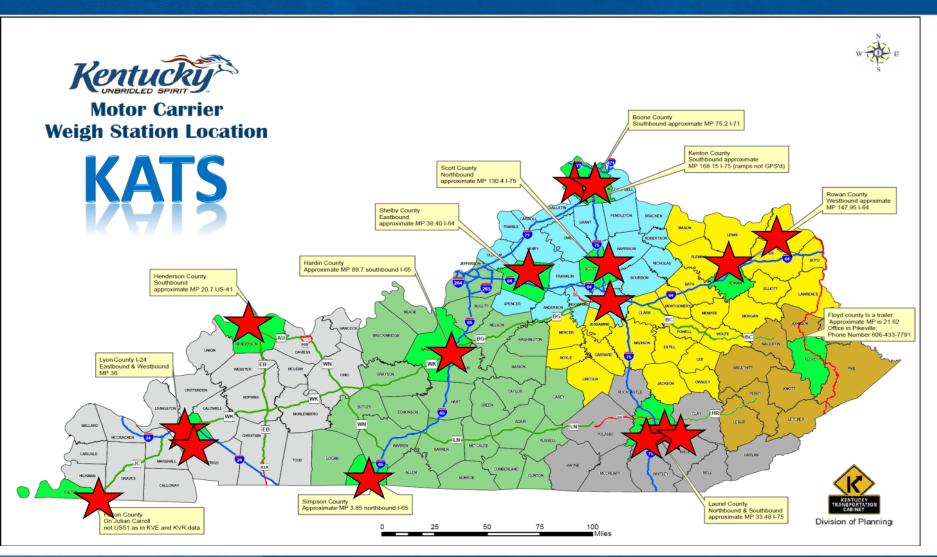
















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## **Screening Rules in KATS**

### Screening Level Adjustment

PULL-IN OVERRIDE: No Override Pull Over All Pull Over None Pull NO vehicles in. The system will ignore the following rules.

LOW PRIORITY ALERT: O Alarm Audio On 💿 Alarm Audio Off

Check	Description	Pull Over	High Priority
Credentials			
IFTA	Is there an active IFTA status, or has it been suspended or revoked?	💿 All 💿 None 💿 Percentage	🗹 🛛 Warning Whistle 👻
KIT	Has the KIT status been suspended or revoked?	All O None O Percentage	
KY HIRE	Does the DOT number have a KY HIRE status of inactive?	🛇 All 💿 None 🛇 Percentage	
KYU	Is there an active KYU status, or has it been suspended or revoked?	💿 All 🔘 None 🔘 Percentage	🔽 🛛 Warning Whistle 👻
Liability Insurance	Does this DOT number have a record of liability insurance?	All O None O Percentage	
UCR	Does this DOT number have an unpaid UCR?	All None Percentage	
		All On All Off	
Misc			
No Data Found	Unable to read plate, DOT, or KYU	🔿 All 🖲 None 🔿 Percentage	
	• • •	All On All Off	
Registration			
Expired Registration	Does this License Plate have an expired registration?	🛇 All 💿 None 🔿 Percentage	
Registered Weight	Is this truck over its registered weight?	○ All ● None ○ Percentage	
		All On All Off	—
Safety			
USDOT Status	Does this DOT number have an inactive status?	All O None O Percentage	🗹 Gong 👻
Driver OOS Percentage	Does this DOT number exceed the OOS Driver Percentage threshold?	All O None O Percentage	🗹 Alarm Beep 👻
Federal OOS	Does this DOT number have a MCSIP level which is Federal Out of Service?	All O None O Percentage	🗹 Gong 👻
Hazmat OOS Percentage	Does this DOT number exceed the OOS Hazmat Percentage threshold?	○ All ○ None ◎ Percentage 50	
Vehicle OOS Percentage	Does this DOT number exceed the OOS Vehicle Percentage threshold?	● All ○ None ○ Percentage	🗹 🖌 Air Raid 🗸 🗸
		All On All Off	
		All On All Oll	



## **Screening Related to Safety**

### Safety

USDOT Status Driver OOS Percentage Federal OOS Hazmat OOS Percentage Vehicle OOS Percentage Does this DOT number have an inactive status? Does this DOT number exceed the OOS Driver Percentage threshold? Does this DOT number have a MCSIP level which is Federal Out of Service? Does this DOT number exceed the OOS Hazmat Percentage threshold? Does this DOT number exceed the OOS Vehicle Percentage threshold?

Safety (BASICs)	
Crash Indicator	User threshold: 90 Default threshold: 🔲
Driver Fitness	User threshold: 90 🛛 Default threshold: 🔲
Drugs/Alcohol	User threshold: 90 Default threshold: 🔲
HM Compliance	User threshold: 90 Default threshold: 🔲
HOS Compliance	User threshold: 90 Default threshold: 🔲
Unsafe Driving	User threshold: 90 Default threshold: 🔲
Vehicle Maintenance	User threshold: 90 Default threshold: 🔲







## **New Screening on BASICs**

- Users may screen on default thresholds or user-established thresholds
- Default threshold checks for a BASIC alert on the carrier for an investigation or an on-road performance score than exceeds the default values
- User threshold checks for a BASIC score that is at or above the userestablished threshold











Data We Captured			
Lic. Plate	PAT0172	Minnesota	-
DOT:	0124813		
KYU#:	073160		
Weight:		Re-Screen / Verify	Queue for inspection

### Overview

Inspection: 2142056 Date: 1:42:55 PM 10/26/18 Status: Fail Last Updated: 1:47:01 PM 10/26/18

#### Data We Screened

KYUNUM: 073160 Registrant DOT: 124813 Safety DOT: 124813 Additional Data

Carrier Name: ADMIRAL MERCHANTS MOTOR FREIGHT INC DBA Name: ADMIRAL MERCHANTS ISS Score: 93 ISS S core:



#### Pass/Fail Results

🤣 BASIC: Vehicle MaintenanceDOT#124813 has an on-road performance score that meets or exceeds the user threshold (90.00) Unable to find plate PAT0172/MN in CVIEW 🜔 Database

Showlog

### FAIL for BASIC: Vehicle Maintenance







## BASIC Data in CVIEW

### BASICS Date 2018-09-28

BASIC	Assessment	On-Road Performance	Deficient
Unsafe Driving		34.00	<u>N - No deficiency</u>
HOS Compliance	DEFICIENT	72.00	P - Yes deficiency due to performance
Driver Fitness			<u>N - No deficiency</u>
Drugs/Alcohol		3.00	<u>N - No deficiency</u>
Vehicle Maint.	DEFICIENT	<mark>91.00</mark>	P - Yes deficiency due to performance
HM Compliance			<u>N - No deficiency</u>
Crash Indicator		18.00	<u>N - No deficiency</u>







Data We	C ap tured		
Lic. Plate:	P996566	Illinois	
DOT:	2439316		
KYU#:			
Weight:		Re-Screen / Verify	Queue f

### Overview

-

r inspection

Inspection: 2142113 Date: 1:59:58 PM 10/26/18 Status: Fail Last Updated: 2:05:51 PM 10/26/18

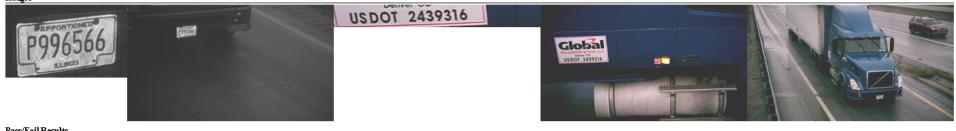
### Data We Screened

KYUNUM: P996566/IL Lic. Plate: Registrant DOT: 2439316 Safety DOT: 2439316

### Additional Data

Carrier Name: GLOBAL TRANSPORTATION LLC DBA Name: 463673743 ISS S core: 99

#### Images



### Pass/Fail Results

BASIC: HOS Compliance DOT# 2439316 has an on-road performance score that meets or exceeds the user threshold (90.00) BASIC: Unsafe Driving DOT#2439316 has an on-road performance score that meets or exceeds the user threshold (90.00)

😮 BASIC: Vehicle MaintenanceDOT#2439316 has an on-road performance score that meets or exceeds the user threshold (90.00)

Showlog

## FAIL for: **BASIC: HOS Compliance BASIC: Unsafe Driving BASIC: Vehicle Maintenance**





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## BASIC Data in CVIEW

### BASICS Date 2018-09-28

BASIC	Assessment	On-Road Performance	Deficient
Unsafe Driving	DEFICIENT	<mark>99.00</mark>	P - Yes deficiency due to performance
HOS Compliance	DEFICIENT	<mark>91.00</mark>	Y - Yes deficiency due to both investigation and bad performance
Driver Fitness	DEFICIENT	40.00	I - Yes deficiency due to investigation
Drugs/Alcohol			<u>N - No deficiency</u>
Vehicle Maint.	DEFICIENT	92.00	Y - Yes deficiency due to both investigation and bad performance
Crash Indicator	DEFICIENT	<mark>85.00</mark>	P - Yes deficiency due to performance



Data We Captured			Overview		
Lic. Plate:		•	Inspection 21 42 164 Status: Fail	Date: 2 Last Updated: 2	2:
DOT: 2303484 KYU#:			Data We Screened	Last optiatett 2	
Weight:	Re-Screen / Verify	Queue for inspection	KYUNUM: Lic. Plate: /		
			<ul> <li>Registrant DOT: 230.</li> </ul>	3484	

### Overview

Data We	Screened		
Status:	Fail	Last Update	d: 2:20:30 PM 10/26/18
Inspectio	n: 21 42 164	Date:	2:20:04 PM 10/26/18

KYUNUM: .ic. Plate: Registrant DOT: 2303484 Safety DOT: 2303484

#### Additional Data

Carrier Name: QUO VADIS LOGISTICS INC ISS Score: 96



### Pass/Fail Results

Showlog

🙆 BASIC: Driver Fitness DOT# 2303484 has an on-road performance score that meets or exceeds the user threshold (95.00)

🥴 BASIC: HOS Compliance DOT# 2303484 has an alert in HOS COMPLIANCE due to a high on-road performance score (89.00)

👸 BASIC: Unsafe Driving 🛛 DOT# 2303484 has an on-road performance score that meets or exceeds the user threshold (95.00)

🙆 KYU Unable to find active KYU record

## FAIL for: **BASIC: Driver Fitness BASIC: HOS Compliance BASIC: Unsafe Driving**







## BASIC Data in CVIEW

### BASICS Date 2018-09-28

BASIC	Assessment	On-Road Performance	Deficient
Unsafe Driving	DEFICIENT	99.00	P - Yes deficiency due to performance
HOS Compliance	DEFICIENT	89.00	P - Yes deficiency due to performance
Driver Fitness	DEFICIENT	<mark>95.00</mark>	P - Yes deficiency due to performance
Drugs/Alcohol			<u>N - No deficiency</u>
Vehicle Maint.		39.00	<u>N - No deficiency</u>
Crash Indicator	DEFICIENT	<mark>66.00</mark>	P - Yes deficiency due to performance



# **Next Steps**

- Convene the Study Advisory Committee
- Fine Tune the Screening Requirements
  - Alerts for Investigation?
  - Should Number of Power Units be Considered?
  - Are all BASICs appropriate at all KATS Sites?
- Test and Refine as Necessary
- Document Results/Benefits









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