

# **APPENDIX A**

## **Data Sheets**

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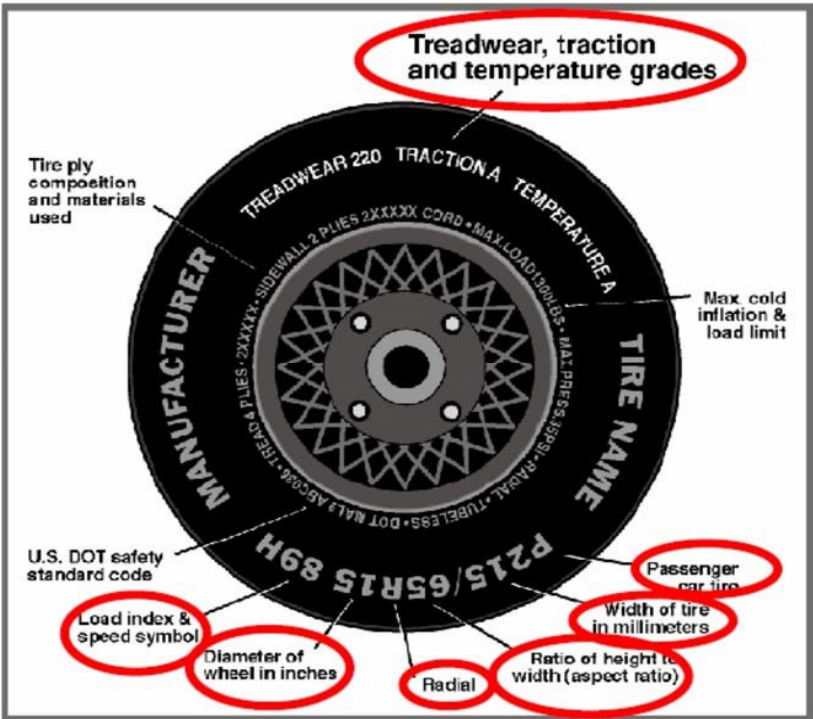
**DATA SHEET No.1**  
Test Vehicle Specifications

MY/Make/Model				
VIN				
Build Date				
Initial Odometer Reading (miles)				
GVWR				
<b>Suspensions</b>				
Front				
Rear				
<b>Dimensional Data</b>				
Overall Length				
Overall Width				
Overall Height				
Wheel Base				
<b>Engine Data</b>				
Mfr;				
Type				
Rated Power (HP)				
Capacity				
Max. Torque Rating				
<b>Transmission Data</b>				
Mfr.				
Manual/Automatic				
Speeds				
<b>Axle</b>	<b>Steer</b>	<b>Drive 1</b>	<b>Drive 2</b>	<b>Lift axle</b>
Mfr				
GAWR				
<b>Brakes</b>				
Make				
Type				
Size				
Lining Edge Code				
<b>Brake Chambers</b>				
Mfr				
Type				
<b>Auto Slack Adjuster</b>				
Mfr				
Cam Rotation				

<b>Tires</b>				
Size				
Make				
Model				
SLR (@ GVWR)				

**DATA SHEET NO. 1.....Continued**  
 Test Vehicle Specifications

**Test Vehicle:**  
 (MY/Make/Model) \_\_\_\_\_ NHTSA No: \_\_\_\_\_



Tire Placard	Steer	Drive 1	Drive 2	Lift Axle
Recommended Cold Pressure (kPa)				
Recommended Tire Size				
<b>Tire Sidewall</b>				
Maximum Tire Pressure (kPa)				
Tire Size on Vehicle				
Tire Manufacturer Model				
Tire Name				
Tire Type				
Tire Width				
Aspect Ratio				
Radial				
Wheel Diameter				
Load Index/Speed Symbol				
Treadwear				
Traction Grade				
Temperature Grade				

**DATA SHEET No. 2**  
Achieve Test Weight (Truck Tractor)

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_ **NHTSA No:** \_\_\_\_\_

**Target Test Weight Range (0.95\*GVWR – GVWR)** ( \_\_\_\_\_ - \_\_\_\_\_ ) kg

**Rollover Safety Equipment:**

Weight of roll bar \_\_\_\_\_ kg  
Weight of outriggers \_\_\_\_\_ kg

**Ballast:**

Total ballast weight placed on the Control Trailer above the tractor’s king pin \_\_\_\_\_ kg

The height of the center of gravity of the ballast on the control trailer above the top of the tractor’s fifth-wheel hitch is \_\_\_\_\_ in. (< 610 mm (24 in.))

**Test Vehicle:**

	As Delivered	Burnish	Actual Test Weight
<b>Axle:</b>			
Steer	_____	_____	_____
Drive 1	_____	_____	_____
Drive 2	_____	_____	_____
Auxiliary Axle	_____	_____	_____
Auxiliary Axle	_____	_____	_____
Total:	_____	_____	_____
Control Trailer:		_____	_____
Total: (Truck tractor and control trailer)		_____	_____

Actual Test Weight is within the Target test Weight Range (Yes/No) \_\_\_\_

Note: If the Actual Test Weight does not fall within the Target Test Weight Range or GAWRs are exceeded, make adjustments to the load by adjusting the fifth wheel of the truck tractor or make other weight adjustments as appropriate. If the Actual Test Weight remains out of range or GAWRs are exceeded, consult with the COR prior to conducting the tests.

**DATA SHEET No. 2.....Continued**  
Achieve Test Weight (Bus)

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_ **NHTSA No:** \_\_\_\_\_

**Target Test Weight Range (0.95\*GVWR – GVWR)** ( \_\_\_\_\_ - \_\_\_\_\_ ) kg

**Rollover Safety Equipment:**

Weight of outriggers \_\_\_\_\_ kg

**Ballast:**

Number of Designated Seated Positions (DSP) stated on the cert. label \_\_\_\_\_

Number of DSPs ballasted \_\_\_\_\_

Average weight of ballast placed at each DSP \_\_\_\_\_ kg

Total ballast weight placed in the cargo area \_\_\_\_\_ kg

Additional ballast weight \_\_\_\_\_ kg

**Test Vehicle:**

	<b>As Delivered</b>	<b>Burnish</b>	<b>Actual Test Weight</b>
<b>Axle:</b>			
Steer	_____	_____	_____
Drive 1	_____	_____	_____
Drive 2	_____	_____	_____
Auxiliary Axle	_____	_____	_____
Total:	_____	_____	_____

Actual Test Weight is within the Target test Weight Range (Yes/No) \_\_\_\_

Note: If the Actual Test Weight does not fall within the Target Test Weight Range or GAWRs are exceeded, make adjustments to the load by adjusting the fifth wheel of the truck tractor or make other weight adjustments as appropriate. If the Actual Test Weight remains out of range or GAWRs are exceeded, consult with the COR prior to conducting the tests.

**DATA SHEET No. 3**  
 ESC Malfunction Telltale (S5.4 & S7.8)

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_ **NHTSA No:** \_\_\_\_\_

1. Test vehicle is equipped with malfunction telltale? \_\_\_\_\_ Yes (Pass) \_\_\_\_\_ No (Fail)

2. Describe the Location of the Telltale: \_\_\_\_\_  
 \_\_\_\_\_

3. Telltale is mounted inside the occupant compartment in front of and in clear view of the driver? \_\_\_\_\_ Yes (Pass) \_\_\_\_\_ No (Fail) If "No", explain \_\_\_\_\_  
 \_\_\_\_\_

4. Malfunction Telltale symbols or abbreviation required by FMVSS No. 101.



\_\_\_\_\_ Vehicle uses this symbol



\_\_\_\_\_ Vehicle uses this symbol



\_\_\_\_\_ Vehicle uses this symbol

**ESC**

\_\_\_\_\_ Vehicle uses this abbrev.

Note any additional symbols, words or messages used. \_\_\_\_\_

5. Is ESC malfunction telltale also used to indicate activation of the ESC system? \_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, explain telltale operation during ESC activation: \_\_\_\_\_  
 \_\_\_\_\_

**6. CHECK-LAMP FUNCTION**

Position of starting system when the ESC malfunction telltale illuminates: \_\_\_\_\_

Is telltale yellow in color? \_\_\_\_\_ Yes \_\_\_\_\_ No (Fail)

7. **Starter Interlock:** Does the vehicle have any starter, transmission or other interlocks that affect operation of the telltale lamp check function? \_\_\_\_\_ Yes \_\_\_\_\_ No

If "Yes", describe the interlock feature: \_\_\_\_\_



**DATA SHEET No. 4**

ESC Malfunction Detection Test Results (S5.4 & S7.8)

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_ **NHTSA No:** \_\_\_\_\_

**1. METHOD OF MALFUNCTION SIMULATION:**

Describe method of malfunction simulation:

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**2. MALFUNCTION TELLTALE ILLUMINATION:**

a. Telltale illuminated when engine was started, no driving required.  Yes (Pass)  No

b. Driving was required to illuminate telltale.  Yes  No

c. Telltale illuminated before the test vehicle reached a speed of 48± 8 km/h (30± 5mph).

NA  Yes (Pass)  No

d. If driving required, approximate driving time below vehicle speed of 48± 8 km/h

(30± 5mph) to activate telltale.  Seconds

e. Driving above a vehicle speed of 48± 8 km/h (30± 5mph) was required to illuminate telltale.

N/A  Yes  No

f. If driving required, time for telltale to illuminate after starting system is activated and vehicle speed of 48± 8 km/h (30± 5mph) is reached.

Seconds (must be within 2 minutes)  Pass  Fail

g. Did other telltales and/or warning messages activate?:  Yes  No

If "Yes", describe the other telltales or warning messages: \_\_\_\_\_

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h. Did the malfunction telltale re-illuminate after the starting system was shut off for five minutes and then turned back on with the engine running?  Yes (Pass)  No (Fail)

**DATA SHEET No. 4.....Continued**  
 ESC Malfunction Detection Test Results (S5.4 & S7.8)

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_ **NHTSA No:** \_\_\_\_\_

**3. ESC SYSTEM RESTORATION:**

Describe method used to restore system to normal operation:

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**4 .TELLTALE EXTINGUISHMENT:**

- a. Telltale extinguished when engine was started, no driving required.  
\_\_\_ Yes (Pass) \_\_\_ No
- b. Driving was required to extinguish telltale. \_\_\_ Yes \_\_\_ No
- c. When driving was required telltale extinguished before vehicle speed of  $48 \pm 8$  km/h  
 ( $30 \pm 5$ mph) was reached. \_\_\_ NA \_\_\_ Yes (Pass) \_\_\_ No
- d. If driving required, approximate driving time below vehicle speed of  $48 \pm 8$  km/h  
 ( $30 \pm 5$ mph) to extinguish telltale. \_\_\_ Seconds
- e. Driving above a vehicle speed of  $48 \pm 8$  km/h ( $30 \pm 5$ mph) was required to extinguish  
 telltale. \_\_\_ NA \_\_\_ Yes \_\_\_ No
- f. If driving required, time for telltale to extinguish after starting system is activated and  
 vehicle speed of  $48 \pm 8$  km/h ( $30 \pm 5$ mph) is reached.  
\_\_\_ seconds required to extinguish
- g. After ESC system was restored to normal operation, according to manufacturer  
 guidelines, telltale is extinguished indicating that the ESC system is no longer  
 malfunctioning.  
\_\_\_ Yes (Pass) \_\_\_ No (Fail)

**DATA SHEET No. 5**  
Burnish Data (S7.4.1.1)

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_ **NHTSA No:** \_\_\_\_\_

Start Odometer Reading: \_\_\_\_\_ miles

End Odometer Reading: \_\_\_\_\_ miles

Date	Snub #	Amb. Temp	Wind Speed	Initial Speed (mph)	Avg. Control Pressure (psi)	Avg. Decel (g's)	Initial Brake Temperatures (°F)					
							1L	1R	2L	2R	3L	3R
	1											
	25											
	50											
	75											
	100											
	125											
	150											
	175											
	200											
	225											
	250											
	275											
	300											
	325											
	350											
	375											
	400											
	425											
	450											
	475											
	500											

Driver's Comments:

**DATA SHEET No. 6**

Preliminary Reference Speed Determination Data – Counter clockwise Direction (S7.7.1.1)

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_ **NHTSA No:** \_\_\_\_\_

Crit.1	Crit.2
Wheels of the test vehicle remain within the lane between the start and end gates	The ESC system applies service brake pressure at any wheel.

**J-Turn Maneuver Test Runs – Counter clockwise Direction (Test Date; \_\_\_\_\_)**

Test Run #	Amb. Temp (°F)	Wind Speed	Initial Brake Temperatures (°F)						Actual Test Speed (km/h)	Target Test Speed (km/h)	Crit. 1 met (Y,N)
			1L	1R	2L	2R	3L	3R			

Test Run #	Brake Chamber Pressure (kPa) @ (time)*						Crit. 2 met (Y,N)
	1L	1R	2L	2R	3L	3R	

\*- Maximum air pressure during a continuous 0.5 sec

Start Odometer Reading: \_\_\_\_\_ kilometers

End Odometer Reading: \_\_\_\_\_ kilometers

Did test vehicle meet Criteria 1 and 2 as required? \_\_\_ Yes (Pass) \_\_\_ No (Fail)

Calculated Preliminary Reference Speed- Counter clockwise Direction: \_\_\_\_\_ km/h

Driver's Comments:

**DATA SHEET No. 7**

Preliminary Reference Speed Determination Data – Clockwise Direction (S7.7.1.1)

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_ **NHTSA No:** \_\_\_\_\_

Crit.1	Crit.2
Wheels of the test vehicle remain within the lane between the start and end gates	The ESC system applies service brake pressure at any wheel.

**J-Turn Maneuver Test Runs – Clockwise Direction (Test Date; \_\_\_\_\_)**

Test Run #	Amb. Temp (°F)	Wind Speed	Initial Brake Temperatures (°F)						Actual Test Speed (km/h)	Target Test Speed (km/h)	Crit. 1 met (Y,N)
			1L	1R	2L	2R	3L	3R			

Test Run #	Brake Chamber Pressure (kPa) @ (time)*						Crit. 2 met (Y,N)
	1L	1R	2L	2R	3L	3R	

\*- Maximum air pressure during a continuous 0.5 sec

Start Odometer Reading: \_\_\_\_\_ kilometers  
 End Odometer Reading: \_\_\_\_\_ kilometers

Did test vehicle meet Criteria 1 and 2 as required? \_\_\_ Yes (Pass) \_\_\_ No (Fail)  
 Calculated Preliminary Reference Speed- Clockwise Direction: \_\_\_\_\_ km/h

Driver's Comments:

**DATA SHEET No. 8**

Reference Speed Determination Data – Counter clockwise Direction (S7.7.1)

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_ **NHTSA No:** \_\_\_\_\_

Crit.1	Crit.2
Wheels of the test vehicle remain within the lane between the start and end gates	The ESC system applies service brake pressure at any wheel.

**J-Turn Maneuver Test Runs – Counter clockwise Direction (Test Date: \_\_\_\_\_)**

Test Run #	Amb. Temp (°F)	Wind Speed	Initial Brake Temperatures (°F)						Actual Test Speed (km/h)	Target Test Speed (km/h)	Crit. 1 met (Y,N)
			1L	1R	2L	2R	3L	3R			

Test Run #	Brake Chamber Pressure (kPa) @ (time)*						Crit. 2 met (Y,N)
	1L	1R	2L	2R	3L	3R	

\*- Maximum air pressure during a continuous 0.5 sec

Start Odometer Reading: \_\_\_\_\_ kilometers

End Odometer Reading: \_\_\_\_\_ kilometers

**Did test vehicle meet Criteria 1 and 2 during at least two of four test runs? \_ Yes (Pass) \_No (Fail)**

**Calculated Reference Speed:** \_\_\_\_\_ km/h

Driver's Comments:

**DATA SHEET No. 9**

Reference Speed Determination Data – Clockwise Direction (S7.7.1)

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_ **NHTSA No:** \_\_\_\_\_

Crit.1	Crit.2
Wheels of the test vehicle remain within the lane between the start and end gates	The ESC system applies service brake pressure at any wheel.

**J-Turn Maneuver Test Runs –Clockwise Direction (Test Date: \_\_\_\_\_)**

Test Run #	Amb. Temp (°F)	Wind Speed	Initial Brake Temperatures (°F)						Actual Test Speed (km/h)	Target Test Speed (km/h)	Crit. 1 met (Y,N)
			1L	1R	2L	2R	3L	3R			

Test Run #	Brake Chamber Pressure (kPa) @ (time)*						Crit. 2 met (Y,N)
	1L	1R	2L	2R	3L	3R	

\*- Maximum air pressure during a continuous 0.5 sec

Start Odometer Reading: \_\_\_\_\_ kilometers

End Odometer Reading: \_\_\_\_\_ kilometers

**Did test vehicle meet Criteria 1 and 2 during at least two of four consecutive test runs?**  
 \_ Yes (Pass) \_ No (Fail)

**Calculated Reference Speed:** \_\_\_\_\_ km/h

Driver's Comments:

**DATA SHEET No. 10**  
 Engine Torque Reduction Test Data (S7.7.2)

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_ **NHTSA No:** \_\_\_\_\_

Crit.1	Crit.2
Wheels of the test vehicle remain within the lane between the start and end gates	The ESC system must reduce the driver requested engine torque by at least 10%

**J-Turn Maneuver Test Runs – Counter clockwise Direction (Test Date: \_\_\_\_\_)**

Test Run #	Amb. Temp (°F)	Wind Speed	Initial Brake Temperatures (°F)						Test Speed (km/h)	Crit. 1 met (Y,N)	Crit. 2 met (Y,N)	Torque Reduced (%)
			1L	1R	2L	2R	3L	3R				

Start Odometer Reading: \_\_\_\_\_ kilometers

End Odometer Reading: \_\_\_\_\_ kilometers

**Criteria 1 and 2 were met for at least 2 of the 4 consecutive test runs \_\_\_\_\_ (PASS, FAIL) Calculated %Engine Torque Reduction: \_\_\_\_\_ (PASS, FAIL)**

**J-Turn Maneuver Test Runs – Clockwise Direction (Test Date: \_\_\_\_\_)**

Test Run #	Amb. Temp (°F)	Wind Speed	Initial Brake Temperatures (°F)						Test Speed (km/h)	Crit. 1 met (Y,N)	Crit. 2 met (Y,N)	Torque Reduced (%)
			1L	1R	2R	2L	3L	3R				

Start Odometer Reading: \_\_\_\_\_ kilometers

End Odometer Reading: \_\_\_\_\_ kilometers

**Criteria 1 and 2 were met for at least 2 of the 4 consecutive test runs \_\_\_\_\_ (PASS, FAIL) Calculated %Engine Torque Reduction: \_\_\_\_\_ (PASS, FAIL)**

Driver's Comments:



**DATA SHEET No. 11**

**Roll Stability Control Test Data – Counter clockwise Direction (S7.7.3)**

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_

**NHTSA No:** \_\_\_\_\_

Crit.1	Crit.2	Crit.3	Crit.4
Wheels of the test vehicle remain within the lane between the start and end gates	The vehicle speed measured at 3.0 seconds after the vehicle crosses the start gate must not exceed 29 mph.	The vehicle speed measured at 4.0 seconds after the vehicle crosses the start gate must not exceed 28 mph.	The ESC system applies service brake pressure at any wheel.

Reference Speed: \_\_\_\_\_ km/h                      Maximum Test Speed: \_\_\_\_\_ km/h

Interval Test Speeds below maximum test speed: \_\_\_\_\_ km/h

**J-Turn Maneuver Test Runs – Counter clockwise Direction (Test Date; \_\_\_\_\_)**

Test Run #	Amb. Temp (°F)	Wind Speed (km/h)	Initial Brake Temperatures (°F)						Ent Speed (km/h)	Speed (km/h)		Crit. 1 met (Y,N)	Crit. 2 met (Y,N)	Crit. 3 met (Y,N)
			1L	1R	2L	2R	3L	3R		@ 3.0 s	@ 4.0 s			

Test Run #	Brake Chamber Pressure (kPa) @ (time)*						Crit. 4 met (Y,N)
	1L	1R	2L	2R	3L	3R	

\*- Maximum air pressure during a continuous 0.5 sec

Start Odometer Reading: \_\_\_\_\_ kilometers

End Odometer Reading: \_\_\_\_\_ kilometers

**At interval test speeds below max test speed, Criteria 1-4 were met as required?**  
\_\_\_\_N/A\_\_\_\_ Yes (PASS)\_\_\_\_No (FAIL)

**At max test speed, Criteria 1-4 were met for at least 6 of 8 consecutive test runs?**  
\_\_\_\_N/A\_\_\_\_ Yes (PASS)\_\_\_\_No (FAIL)

Driver's Comments:

**DATA SHEET No. 12**  
 Roll Stability Control Test Data – Clockwise Direction (S7.7.3)

**Test Vehicle:** (MY/Make/Model) \_\_\_\_\_ **NHTSA No.:** \_\_\_\_\_

Crit.1	Crit.2	Crit.3	Crit.4
Wheels of the test vehicle remain within the lane between the start and end gates	The vehicle speed measured at 3.0 seconds after the vehicle crosses the start gate must not exceed 29 mph.	The vehicle speed measured at 4.0 seconds after the vehicle crosses the start gate must not exceed 28 mph.	The ESC system applies service brake pressure at any wheel.

Reference Speed: \_\_\_\_\_ km/h                      Maximum Test Speed: \_\_\_\_\_ km/h

Interval Test Speeds below maximum test speed: \_\_\_\_\_ km/h

**J-Turn Maneuver Test Runs – Clockwise Direction (Test Date; \_\_\_\_\_)**

Test Run #	Amb. Temp (°F)	Wind Speed (km/h)	Initial Brake Temperatures (°F)						Ent Speed (km/h)	Speed (km/h)		Crit. 1 met (Y,N)	Crit. 2 met (Y,N)	Crit. 3 met (Y,N)
			1L	1R	2L	2R	3L	3R		@ 3.0 s	@ 4.0 s			

Test Run #	Brake Chamber Pressure (kPa) @ (time)*						Crit. 4 met (Y,N)
	1L	1R	2L	2R	3L	3R	

\*- Maximum air pressure during a continuous 0.5 sec

Start Odometer Reading: \_\_\_\_\_ kilometers

End Odometer Reading: \_\_\_\_\_ kilometers

**At interval test speeds below max test speed, Criteria 1-4 were met as required?**

N/A  Yes (PASS)  No (FAIL)

**At max test speed, Criteria 1-4 were met for at least 6 of 8 consecutive test runs?**

N/A  Yes (PASS)  No (FAIL)

Driver's Comments:-