FLEXI VAN®

INSPECTION PROCEDURES FOR CHASSIS AFFECTED BY SEVERE WEATHER

I. SCOPE

The scope of this procedure is to provide the guidelines to inspect and assess damage to FlexiVan owned chassis that are affected by a severe weather event. This process and document pertain only to FlexiVan equipment and personnel. It is not intended for use or distribution to any third party or persons without the expressed written permission of Flexi-Van Leasing, Inc. This process should in no way be deemed as an addition or alternative to any State or Federal inspection requirement such as FHWA, FMCSA, or other.

II. GENERAL

1. All chassis are required to be thoroughly inspected, with the exception of item #7 below.
2. A record of each chassis inspection should be maintained (see the attached checklist inspection form).
3. A mobile vehicle rigged with electrical tester, air compressor, and power washer may be necessary for those units unable to be moved to an inspection area or depot.
4. Always follow ALL standard FlexiVan safety regulations during inspections.
5. If a chassis is located in such a position or a location that appears unsafe, do not inspect.
6. If a chassis appears to be totally destroyed, indicate this on the inspection form and take a photograph for future reference.
7. Chassis in stacks should be given a visual inspection to the best of your ability without unstacking. If no signs of severe weather related damages are found it is not necessary to unstack each chassis. Unit numbers should be recorded for purpose of documentation. If visual damage is found, unstack and perform a full inspection.
8. Chassis which are carrying containers should be sidelined until the container can be removed and a safe inspection permits itself. If no sign of severe weather related damages are found, perform a full inspection to the best of your ability without removing the container.

III. INSPECTION

CAUTION: While handling units which have been submerged in flood water, caution should be taken to protect technicians and the environment. With these units exposed to flood waters of unknown chemical composition, it is recommended:

- **A.** ***Technicians wear personal protective equipment (i.e., face, hand, protective body equipment, etc.) while exposed to contaminated wheel ends.***
- **B.** ***All hazardous waste from affected wheel ends should be disposed of per EPA requirements.***

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1. Visual – Visually check for damage from debris including frame damage, damaged/flat tires, sludge in brake drum & wheels, damaged/dirt covered markings, damaged lamps/lights/reflectors, and missing/illegible license plates/ VIN plates and/or registrations. It may be possible to determine the level of flooding by water mark on the equipment. This may establish a useful pattern of damage(s) as inspections develop. Some chassis may require power washing. Decals which are illegible or missing, including conspicuity tape, should be replaced.

2. Electrical – The electrical system should be checked for short circuits, damaged 7-way receptacles, damaged lamps, damaged lenses, and damaged reflectors. A mobile electrical testing unit can be made from a tractor 7-way coiled cable plug, a circuit box with 6 circuits (stop, right, left, marker, ground, and ABS – center pole), and standard 12 DC automobile battery with a range of 9.5 – 14 volts.

3. Brake System ABS/Non ABS – If it is known that water level had risen above the gladhands and/or the ECU or the service valve then a new brake system is required including gladhands, synflex airlines, rubber air hoses, air tanks, air valves, and brake chambers. If it is known that the water level was below this point then the brake system should not be contaminated but should be relieved of moisture which may have accumulated by charging the air system and opening the air tank petcock (s). Test the brake system for leaks with a minimum of 105 psi of air pressure and ensure proper brake application and release. Open and close the petcock again. If the brake chambers were submerged, they will need to be replaced. **DO NOT DISASSEMBLE BRAKE CHAMBERS.**

   If water level was unknown, disconnect the synflex air lines from the compression fitting behind the gladhands and from the air valve and/or ECU valve and check for contamination. If questionable, cut the synflex at a low point in the line using a synflex cutter and re-check. If not contaminated re-attach the air lines with 2 union compression fittings 62-NTA-6 for 3/8" line or -8 for ½" line. When re-attaching the synflex to the gladhand and air valve a new compression insert MUST be used. Test the brake system for leaks with a minimum of 105 psi of air pressure and ensure proper bake application and release.

   For chassis with ABS systems visual inspections of the ECU, sensor cables, tone ring, wheel sensors, sensor block, sensor extension, and sensor clips are necessary. ABS units should be tested for standard operation through the blink code warning lamp or diagnostic tool (if available). If details of this test are required please contact FlexiVan's Technical Services Department.

4. Running Gear – Check for damage to the axles, suspension hangers, leaf springs, brake chambers, push rods, slack adjustors, yoke assemblies, presence of cotter pins and clevis pins, cam shafts, cam housings, and brake spiders. Grease as needed to cam bushing and slack adjustors as in a standard PM check. Apply standard PM procedures as needed during re-assembly.

5. Wheel Ends – Wheels should be checked for water infiltration in the cavity. If visual inspection reveals damaged hubcaps, gaskets, or leaking seals, then the hub is contaminated. Chassis which were known to be in severe flood zones should have all units checked by removing the hubcaps. Units that are contaminated should have the wheels pulled and removed all bearing lubrication and bearings. Thoroughly clean the bearings, hub cavity, and axle spindle. Inspect for rust, pitting, oxidation, etc. If no sign of permanent contamination (rust, pitting, oxidation, etc.) then reinstall the original bearings and hub caps with new gaskets and new wheel seals. If original bearings cannot be reused, then install new bearing with new cups.

As stated in part #1, all chassis brake drums and shoes should be inspected for sludge, rust, and damage. Power washing may be necessary. Light surface rust or oxidation inside the brake drum should be eliminated once the tire rotation generates sufficient friction between the brake shoes and drum. Drums with heavy build up should be removed and cleaned. If heavy rust or pitting is noticed, that does not eliminate with friction, replace the drum.

Current non-asbestos brake linings generally do not absorb moisture or water. Give that the water dilution or contamination level unknown, brake shoes should be checked during a hub inspection. If partial discoloration is noticed, replace the shoes. Shoes and linings should be checked for lining separation from the shoe.

6. Frame – Check for damage to twistlocks, lockpins, and keepers. Check for damage to all parts of the main frame, including bolsters, container guide, kingpin, and upper coupler assembly. Check operation of sliding suspensions and sliding main frames. Check for damage to stop blocks, linkage assemblies, and slider pads or rollers. Check all boxed sections for pooled water/sludge. Check for corrosion and/or pain damage.

7. No FlexiVan chassis with evidence of water submersion above the bottom of the hubcap should be allowed on the road until clearing these criteria.

For questions or additional information, please contact FlexiVan's Technical Service Department

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DAMAGE INSPECTION FORM

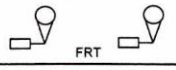
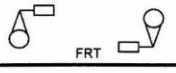
Severe Weather Event

No. _____

UNIT NUMBER	
CHASSIS TYPE	20' FB 20' SLD 40'GN Other_____
LICENSE PLATE	
VIN NUMBER	
CHASSIS MAKE / YEAR	
LOCATION	

DATE:		
REVISED DATE	A	
	B	
	C	
Casualty Loss:		yes no
Stacked Chassis:	yes no	# in Stack:_____

TIRES			PASS	FAIL
L/S	☐	FRONT OUTER :		
	☐	FRONT INNER :		
	☐	REAR OUTER :		
	☐	REAR INNER :		
R/S	☐	FRONT OUTER :		
	☐	FRONT INNER :		
	☐	REAR OUTER :		
	☐	REAR INNER :		
Type	☐	10 x 20 Tube		
	☐	11 x 22.5 Radial		
	☐	11 x 22.5 Tubeless		
	☐			

BRAKES and RUNNING GEAR			PASS	FAIL
Slack Adjuster	☐	Automatic :		
	☐	Manual :		
Brake Shoes	☐	Right Front : OK Clean Out		
	☐	Left Front : OK Clean Out		
	☐	Right Rear : OK Clean Out		
	☐	Left Rear : OK Clean Out		
Wheel Seal	☐	Oil : RF LF		
	☐	Grease : RR LR		
Bearing Lubrication	☐	Grease :		
	☐	Oil :		
Hub Cap	☐	Grease Type : RF LF		
	☐	Oil Type : RR LR		
Wheel & Drum	☐	5-Spoke :		
	☐	Disc :		
Rim	☐	Tube Type : RFO RFI LFO LFI		
	☐	Tubeless : RRO RRI LRO LRI		
Rim Spacer	☐	Channel Type : RF LF		
	☐	Corrugated Type : RR LR		
Valve Stem and Cap	☐	Need Steel ( ) Plastic ( )		
	☐	No Need		
Suspension Hangers	☐			
Leaf Springs	☐			
Bearings	☐			
Air Tanks	☐			
Air Valves	☐			
Slack Adjustors and Brake Chambers	☐	 FRT RR		
	☐	 FRT RR		
	☐	 FRT RR		

FRAME, TWISTLOCK, LOCK PIN, REGISTRATION			PASS	FAIL
Registration	Illegible	missing		
License Plate	Illegible	missing		
Front Lock Pins & Keeper	RH LH :			
Front Twist Locks & Keeper	RH LH :			
Rear Twist Locks & Keeper	RH LH :			
Locking Pin - Slider	RH LH :			
Linkage or Slider Frame				
King Pin Assy				
Main Rails and Crossmembe				
Front Bolster				
Rear Bolster				

ELECTRICAL			PASS	FAIL
ABS	☐	Yes :		
	☐	No :		
Wire Harness	☐	Main Harnes		
	☐	Rear Harness		
	☐	Outriggers		
7-Way Recepticle	☐	:		
	☐	:		
Grommets	☐	Marker light : Other:		
	☐	Tail light :		
	☐	Crossmember :		
Lights	☐	Front Marker : Operation / Lense		
	☐	Side Marker : Operation / Lense		
	☐	Rear Side Marker : Operation / Lense		
	☐	Stop / Tail : Operation / Lense		
	☐	Rear Marker : Operation / Lense		
	☐	License Plate : Operation / Lense		

LANDING GEAR			PASS	FAIL
Landing Gear	☐	Drive leg :		
	☐	Idle leg :		
Mount Bracket	☐	:		
Cross Channel	☑	:		
Shoe	☐	10" x 10" Low Profile Sand Shoe		
	☐	10" x 10" High Profile Sand Shoe		
	☐	10" Cushon Shoe		
	☐	Other:		
Axle	☐	Tube		
	☐	Solid		
Wheel / Sandshoe	☐	Need		
	☐	No Need		
Handle	☐			
	☐			
Support	☐	Skirt		
	☐	Pipe Brace		

INSPECTOR DATE

COMMENTS:

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