



Servicing your vehicles as they age, what
to look for and what to expect.

October 9th, 2018

Community Mobility

Local Programs

Minibus Support

Welcome

- Opening remarks/Introductions
- Workshop format
- Rules of engagement



Introductions

- Minibus Support
 - Lea Sheridan, Manager, 973-491-8043, ls Sheridan@njtransit.com
 - Christopher Uffer, Warranty Administrator, 973-491-7986, cuffer@njtransit.com
 - Lisa Veloz, Quality Assurance Specialist (Bergen, Essex, Hudson, Morris, Passaic, Somerset, Union), 973-491-8018, lveloz@njtransit.com
 - William Veniscofski, Quality Assurance Specialist (Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Middlesex, Monmouth, Ocean, Salem, Sussex, Warren), 973-491-7368, wveniscofski@njtransit.com



Introductions

- Your Name
- Your Agency
- What type of vehicles do you maintain?
- What do you expect to get out of this workshop?



Asset Management

- S-RIDES – Quarterly Maintenance
 - Actual Miles driven this quarter
 - Service Miles
 - Odometer
 - Days out of Service
 - PM Performed: Date, Miles at time of service, Vendor, Oil, Filters, Lube, Chassis and Suspension, Tires, Brake System, Alignment, Lift/Ramp, Lift Counter
 - Other Maintenance: Date, Miles at time of service, Vendor, Transmission, Cooling/Heating System, Exhaust, Tune-Up
 - Other Details: Date Miles at time of service, Vendor, Damage/Accidents, Warranty, Other PM
 - Attachments



Asset Management

- Maintenance
 - Preventative Maintenance Plans (PMPs) should conform to manufacturer's recommended guidelines
 - Recommend separate PMPs for each type of vehicle
 - Annual audit to verify that preventative maintenance is being performed as per your PMP; audit review includes pre-trip inspections



Asset Management

- Warranty

- Chris Uffer, Warranty Administrator

- (973) 491-7986

- CUFFER@NJTRANSIT.COM

- No modifications can be made to the vehicles that would void the warranty
 - For all warranty claims, send completed warranty form to Chris Uffer within 48 hours of issue



Asset Management

- Disposal
 - All grant awarded vehicles have federal interest until they have met their useful life either be years or miles, or their value is under \$5,000.
 - NJT identifies vehicles ready for retirement and processes the End of Lease Agreements and release the lien on the title
 - Minivans – 4 years or 100,000 miles
 - Minibuses – 5 years or 150,000 miles
 - Medium Duty – 7 years or 200,000 miles
 - Any vehicles taken out of service prior to the useful life requirement will require reimbursement to the grant



FTA PM Compliance

FTA allows recipients discretion in determining the appropriate intervals for preventative maintenance inspections to accommodate such things as specific manufacturer recommendations, vehicle/vessel age, unique site and operating conditions, etc. FTA expects recipients to follow their program for preventative maintenance but understands that circumstances may prevent inspections being completed exactly at the interval specified. To account for this, FTA allows a 10 percent deviation from the scheduled interval as being considered on time. Review the sample preventive maintenance history to determine if fewer than 80 percent of the inspections for any mode or operation occurred on time.

Maintenance Intervals

- Minivan – 5,000 Miles maximum
- Cutaway – 5,000 Miles maximum
- Medium Duty – 6,000 Miles maximum

Dodge Caravan - Braun

MAINTENANCE

30,000 miles or 3 year Intervals

Please check off interval below & fill out dealer log at each service interval.

Perform specified maintenance & service procedures (as applicable)



- Door Rollers (if applicable): Inspect & replace as necessary
- Kneel Chain (if applicable): Inspect & replace as necessary
- Foldout Ramp Chain (if applicable): Inspect & replace as necessary
- * Infloor Ramp Belt & Rollers (if applicable): Inspect & replace as necessary

- 5,000 or 6 month Intervals: Perform specified inspection, maintenance & lubrication procedures.

* Infloor ramp motor & drive components are accessible only by removing the top cover. Refer to applicable service manual.

5,000	1	10,000	2	15,000	3	20,000	4	25,000	5	30,000	6	35,000	7	40,000	8	45,000	9	50,000	10	55,000	11	60,000	12	65,000	13	70,000	14	75,000	80,000	85,000	90,000	95,000	100,000	105,000	110,000	115,000	120,000	125,000	130,000	135,000	140,000	145,000	150,000	15
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Ford E-Series Gas v10

Scheduled Maintenance

SPECIAL OPERATING CONDITIONS SCHEDULED MAINTENANCE

If you operate your vehicle **primarily** in any of the following conditions, you need to perform extra maintenance as indicated. If you operate your vehicle **occasionally** under any of these conditions, it is not necessary to perform the extra maintenance. For specific recommendations, see your dealership service advisor or technician.

Perform the services shown in the following tables when specified or within 3000 miles (4800 kilometers) of the message appearing in your information display prompting you to change your oil.

- **Example 1:** The message comes on at 28751 miles (46270 kilometers). Perform the 30000-mile (48000-kilometer) automatic transmission fluid replacement.
- **Example 2:** The message has **not** come on, but the odometer reads 30000 miles (48000 kilometers) (for example, the Intelligent Oil-Life Monitor was reset at 25000 miles [40000 kilometers]). Perform the engine air filter replacement.

Towing a trailer or using a car-top carrier	
As required	Change engine oil and filter as indicated by the information display and perform services listed in the Normal Scheduled Maintenance chart.
Inspect frequently, service as required	Inspect U-joints.
Every 22500 miles (36000 km)	Replace rear axle fluid. See axle and PTU maintenance items under Exceptions .
Every 30000 miles (48000 km)	Change automatic transmission fluid. Change PTU and rear axle fluid (AWD only). See axle and PTU maintenance items under Exceptions .
Every 60000 miles (96000 km)	Replace spark plugs.

Ford E-Series Gas v10

Other maintenance items	
Every 30000 miles (48000 km)	Replace engine air filter.
Every 60000 miles (96000 km)	Change automatic transmission fluid and filter (5-Speed Transmission only). Consult dealer for requirements.
	Replace front wheel bearing grease and grease seal if non-sealed bearings are used.
Every 97500 miles (156000 km)	Replace spark plugs.
	Replace rear axle fluid. See Special Operating Conditions Scheduled Maintenance (page 273).

Scheduled Maintenance

Other maintenance items	
Every 105000 miles (168000 km)	Change engine coolant.*
	Inspect accessory drive belt(s).**
Every 150000 miles (240000 km)	Change automatic transmission fluid.
	Change automatic transmission filter.***
	Replace accessory drive belt(s) if not replaced within the last 100000 miles (160000 km).
	Replace front wheel bearings and seals if non-sealed bearings are used.

* Initial replacement at six years or 105000 miles (168000 kilometers), then every three years or 45000 miles (72000 kilometers).

** If not replaced, inspect every 15000 miles (24000 kilometers).

*** 6-Speed Transmission only.

Freightliner Medium Duty

FREIGHTLINER S2C BUSINESS CLASS CHASSIS

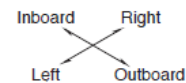
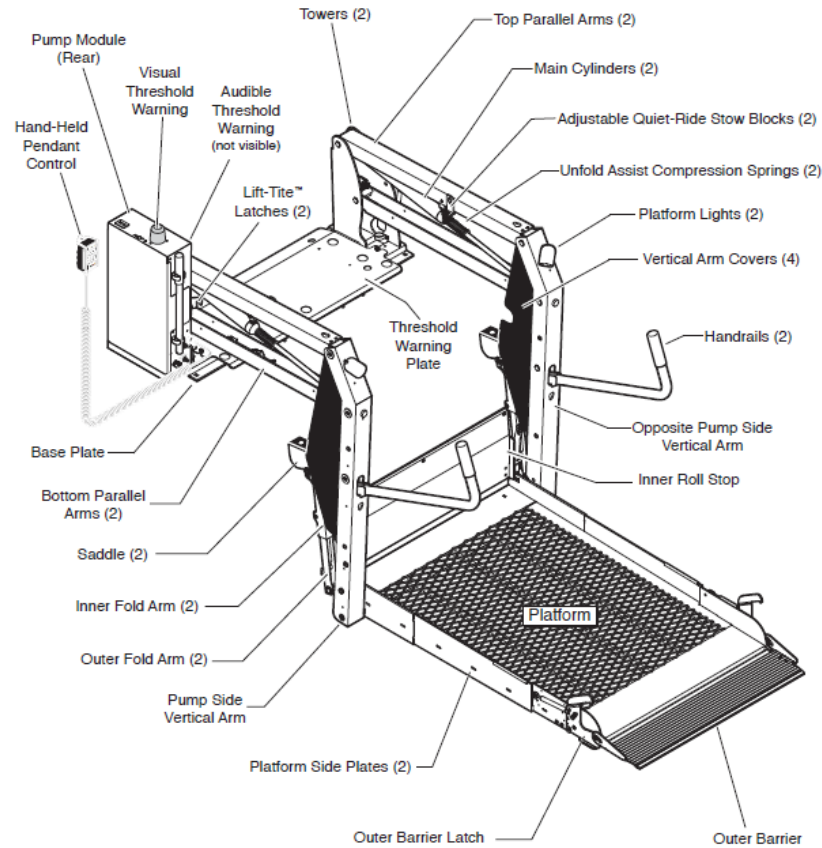
Table 3: Oil Drain Interval

Shuttle or Transit Bus	With 14.2 liter [15 qt] oil pan ¹				Kilometer
	Kilometers	Miles	Hours	Months	
4 to 6 mph average	4850	3000	500	12	6450
6 to 8 mph average	6450	4000	500	12	9000
8 to 10 mph average	9000	5500	500	12	11650
10 to 15 mph average	9650	6000	500	12	12,500



Braun Century 2 Lift

Lift Terminology





Tech: _____ Date: ____/____/____

Yr: _____ Make: _____ Model: _____ Mileage: _____

VIN: _____ Lift Model _____ Serial# _____ Cycles _____

Legend: = OK, passed at this time = Marginal, recommend in near future = Failed

P M F GENERAL INSPECTION:

- Lift Battery, Circuit Breaker & Cable _____
- Lift Ground & Secondary Ground _____
- Vehicle Interlock Power _____
- Veh. Interlock Prohibits Veh. Movement _____
- Lift Door Condition _____
- Hand Pendant Condition/Function _____
- Inspect Mounting Components _____

CYCLE CHECK:

- General Operation Through Complete Cycle _____
- Main, Handrail, OB & IB Bumper Adjustments _____
- Floor Level Adjustment _____
- Platform Angle Adjustment _____
- Outer Barrier Interlock _____
- Inner Barrier Interlock _____
- Threshold Warning Interlock _____
- 50 Pound Fold Interlock _____
- Platform Lights _____
- Anti-Skid _____
- Operation & Warning Decals _____
- Back-up Pump Handle Location _____
- Manual Override/Back-up System Function _____

MECHANICAL COMPONENTS:

- Base Plate, Tower, Arm & Platform Welds _____
- Outer Barrier Pins, Gas Springs & Fasteners _____
- Inner Barrier Pins, Gas Springs & Fasteners _____
- Pivot Pin Fasteners _____
- Pivot Pins & Bushing Condition _____
- Handrails _____
- Lift-Tile System _____

HYDRAULIC COMPONENT CHECKS:

- Leaks _____
- Hoses & Harness Routing/Condition (pump, parallel arms, vertical arms & platform) _____
- Remove Pump Cover & Check Fluid Level _____
- Fluid Condition _____
- Lift Pump Motor Cables/Connections _____
- Lift Pump Harnesses/Fuses/Electrical Components _____

Additional Comments:

Maintenance and Lubrication Schedule

Proper maintenance is necessary to ensure safe, troublefree operation. Inspecting the lift for any wear, damage or other abnormal conditions should be a part of the transit agency daily service program. Simple inspections can detect potential problems.

The maintenance and lubrication procedures specified in this schedule must be performed by a Braun authorized service representative at the scheduled intervals according to the number of cycles.

Braun dual parallel arm lifts are equipped with hardened pins and self-lubricating bushings to decrease wear, provide smooth operation and extend the service life of the lift.

When servicing the lift at the recommended intervals, inspection and lubrication procedures specified in the previous sections should be repeated. Clean components and the surrounding area before applying lubricants. LPS2 General Purpose Penetrating Oil is recommended where Light Oil is called out.

Use of improper lubricants can attract dirt or other contaminants which could result in wear or damage to the components. Platform components exposed to contaminants when lowered to the ground may require extra attention.

Lift components requiring grease are lubricated during assembly procedures. When these components are replaced, grease must be applied during installation procedures. Specified lubricants are available from The Braun Corporation (part numbers provided on previous page).

All listed inspection, lubrication and maintenance procedures should be repeated at 750 cycle intervals following the scheduled 4500 cycle maintenance procedures. These intervals are a general guideline for scheduling maintenance procedures and will vary according to lift use and conditions. Lifts exposed to severe conditions (weather, environment, contamination, heavy usage, etc.) may require inspection and maintenance procedures to be performed more often than specified.

Cycle Counter: NCL-2 Series lift models are equipped with a cycle counter located on the top of the pump module. This cycle counter allows the lift attendant/operator to easily track the number of cycles during daily inspections of the lift.

Discontinue lift use immediately if maintenance and lubrication procedures are not properly performed, or if there is any sign of wear, damage or improper operation. Contact your sales representative or call The Braun Corporation. One of our national Product Support representatives will direct you to an authorized service technician who will inspect your lift.

WARNING

Maintenance and lubrication procedures must be performed as specified by an authorized service technician. Failure to do so may result in serious bodily injury and/or property damage.

Seasonal Maintenance

- HVAC (Heater valves, condensers, drain tubes)
- Securement straps/belts
- Floor tracks
- Window & door seals
- Emergency exits including roof hatch

SAMPLE VEHICLE DAILY PRE-TRIP INSPECTION REPORT

Transit System: _____ Vehicle #: _____

Odometer Reading: _____ Date: _____ Time: _____ am pm

Signature of Driver: _____

All items must be inspected prior to departure each day. If an item is damaged or requires maintenance, please an "X" on the line next to the item and provide a brief description of the defect. If an item is not applicable to your vehicle, please "N/A" on the line.

ENGINE INSPECTION/UNDER HOOD

- _____ Oil Level
- _____ Coolant Level (cold)
- _____ Windshield Washer Fluid Level
- _____ Brake Fluid Level
- _____ Engine / Hoses / Belts
- _____ Battery Fluid / Connection

EXTERIOR INSPECTION

- _____ Leaks under Bus
- _____ Fresh Body Damage
- _____ Cleanliness
- _____ Doors
- _____ Headlights
- _____ Tail / Brake Lights
- _____ Turn Signal Lights
- _____ Hazard Flashers
- _____ Clearance Lights
- _____ Tires / Wheels / Suspension
- _____ Tail Pipe
- _____ Battery Box (closed)
- _____ Windshield
- _____ Windshield Wipers
- _____ Radio Antenna
- _____ Mirrors / Adjustment
- _____ Reflectors

SAFETY EQUIPMENT

- _____ Fire Extinguisher
- _____ First Aid Kit (complete)
- _____ Bio-Hazard / Bloodborne Pathogens / Spill Kit
- _____ Triangles
- _____ Back-up Alarm
- _____ Door Open Buzzer
- _____ Emergency Windows (latched)
- _____ Emergency Door
- _____ Roof Escape Hatch
- _____ Seat Belt Cutter
- _____ Extra Fuses
- _____ Two-way Radio
- _____ Spare Tire / Jack / Lug Wrench

INTERIOR

- _____ Mirrors / Adjustment
- _____ Lights
- _____ Service Door(s)
- _____ Stepwell(s)
- _____ Floor
- _____ Seats
- _____ Seat Belts
- _____ Brakes (Foot / Parking)
- _____ Steering
- _____ Transmission

INTERIOR (continued)

- _____ Gauges / Instrument Displays
- _____ Equipment Controls (Heater / AC / Fan / Lights / Defrosters / Wipers)
- _____ Radio
- _____ Radios Check with Base
- _____ Horn
- _____ Registration / Insurance
- _____ Transmission Selector
- _____ Signage / Decals
- _____ Cleanliness

ACCESSIBILITY EQUIPMENT

- Lift Cycle Count: _____
- _____ Lift Door
- _____ Lift Operation (perform one cycle)
- _____ Lift deploys only when parking brake set and/or transmission in park
- _____ Lift Smooth movement
- _____ Lift works at proper speed
- _____ Hydraulic Leaks
- _____ Lift Platform is level during entire operation
- _____ Lift smoothly clears door frame and opened door
- _____ Lift light operates
- _____ No physical damage to lift
- _____ Electric wires not cut, frayed, corroded or torn
- _____ Lift switches operate properly
- _____ Lift hand pump operates properly
- _____ Lift hoses / fittings secure
- _____ Lift cables / belts / chains
- _____ Lift Front / Rear Safety Guards
- _____ Lift Handrails
- _____ Lift Alarms
- _____ Securement Attachment Points
- _____ Securement Straps
- _____ Passenger Belts

REMARKS _____

Condition of above vehicle is: Satisfactory Unsatisfactory

<input type="checkbox"/> Above defects corrected <input type="checkbox"/> Above defects need to be corrected for safe operation of vehicle Mechanic's Signature: _____
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Intermotive Interlock



Pop quiz

- What percent deviation does FTA allow on maintenance?

Pop quiz

- At how many hours do freightliners require maintenance?

Pop quiz

- How many cycles initiate the first service on a Century 2 lift?

Ask the vendors

- Do you have any questions for the vendors about their products?