The Corporation of the Town of Cobourg

Transit Operations Contract

Contract No. CO-24-05 TRN RFP

Addendum No. 2

This Addendum issued March 15, 2024 forms part of the Contract Documents for the above-noted Contract and shall be read in conjunction therewith. This addendum shall take precedence over all requirements of the Request For Proposal (RFP) documents issued previously. The Bidder must acknowledge receipt of this Addendum on Appendix B – Acknowledgements of the Form of Proposal.

No. of Addendum Pages: 3
Attachments: Service manual preventative maintenance cut sheets (25 pages)

Clarifications:

1. Section 2.3.6: Daily and vehicle checks should align with the vehicle service manuals provided here within (Attached).

Questions and Answers:

Q1: Can the Town provide ridership data specifically in regards to the daily breakdown between accessible and non-accessible passengers by vehicle?

A1: *A six (6) month average has been provided for daily breakdown between accessible and non-accessible passengers. Average daily accessible passengers is 12 and non-accessible is 42.*

Q2: Will Cobourg be responding to the questions raised at the mandatory meeting held last Wed. Mar. 6th?

A2: *All questions received at the mandatory site meeting were addressed in Addendum No. 1 issued on March 7, 2024. If questions were missed, Proponents had opportunity to inquire further by the question deadline of March 12.*

Q3: Can Cobourg provide ridership statistics for the prior year?

A3: *2023 Total Ridership: 48,337; 2023 Conventional Ridership: 48,337*

Q4: Can Cobourg please provide accessible stats for last year?

A4: *2023 Wheels Ridership: 8,808; Wheels active members: 412*

Q5: Will the Town consider the Accessible ProMaster which provides for 1-2 Wheelchair positions, and 6-8 ambulatory seating positions, as an acceptable fill-in/substitute vehicle?

A5: *See Addendum No. 1*

Q6: Can the town consider the proponent vehicles be greater than 4 yrs in age, provided they are MTO certified every six months? This is in line with other Municipalities such as Toronto Transit Commission, which allow ProMasters for use up to 10 yrs of age.

A6: *See Addendum No. 1*

Q7: It had been discussed at the mandatory meeting, Cobourg may be open to provide gas for Proponent Vehicles. Can you please confirm the above?

A7: *See Addendum No. 1*

Q8: Is Internet access available at the garage location, at 390 King St. W.?

A8: *As per the 'triple absolute net basis' of the facility lease agreement, the Proponent is responsible for all operating costs associated with facility including but not limited to communication requirements, heat, hydro, water, etc.*

Q9: Will Proponent have access to garage facility 24/7? This allows to after hours support, maintenance, etc.

A9: *Yes, the Proponent will have 24/7 access to the facility at 390 King Street West.*

Q10: Would the Town consider waiving the bid bond requirement for this RFP? Typically, such a requirement is not standard for service-oriented solicitations, as opposed to construction projects. Eliminating the bid bond could reduce overall costs, as it is an expense that would ultimately be reflected in the financial proposals submitted by each proponent.

A10: *It is standard procurement practice for the Town of Cobourg to collect a bid/tender deposit for services to ensure that the proponent will enter into a contract upon award. The Proponent can provide a certified cheque rather than a bid bond.*

The Bidder shall sign this Addendum in the space provided below and shall submit this Addendum in the same envelope as the tender.

Except as and to the extent that they are amended by the foregoing, all terms and conditions of the tender documents remain in full force and effect.

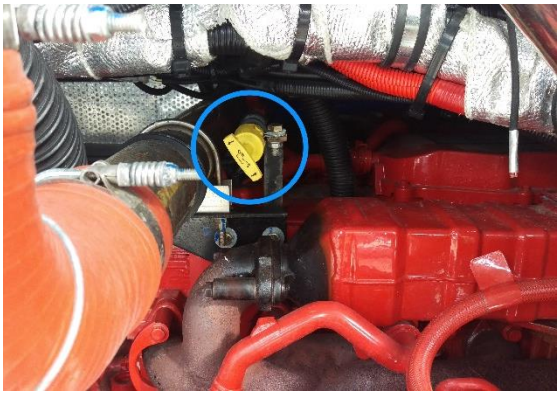
Company Name	Signature of Bidder

CHAPTER 2 MAINTENANCE

DAILY MAINTENANCE CHECKS

CHECKING ENGINE OIL LEVEL

The yellow engine oil dipstick can be accessed from the rear engine compartment.

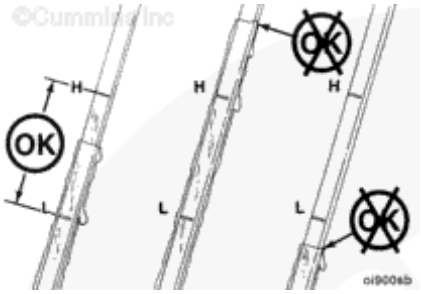


In order to check the oil level:

1. Shut off the engine for an accurate reading.
2. Wait at least 15 minutes after shutting off the engine to check the oil level. This allows time for the oil to drain into the oil pan.

Use oil grade API CG-4/SL ACEA E5 15W/40
CES 20077.

CAUTION: Never operate the engine if the oil level is below the low (L) mark or above the high (H) mark as this can result in engine damage or poor engine performance.



CHECKING COOLANT LEVEL

⚠ WARNING

Do not remove a pressure cap from a hot engine. Wait until the coolant temperature is below 50°C (120°F) before removing the pressure cap.

The coolant level is displayed on the expansion tank, which can be accessed within the rear engine door.

CAUTION: Never use a sealing additive to stop leaks in the cooling system. This can result in cooling system plugging and inadequate coolant flow, causing the engine to overheat.

Cummins Inc. recommends the use of fully formulated antifreeze/coolant meeting Cummins Engineering Standards (C.E.S.) 14603.

CHECKING TRANSMISSION OIL LEVEL

Refer to **Chapter 5: Transmission** for information on checking and fill the oil.

CHECKING POWER STEERING FLUID

The power steering fluid reservoir is located in the engine compartment and can be accessed from the rear engine door.

The fluid level should be checked with the engine at idle and maintained at the max level indicator.
Recommended fluid: Automatic Transmission Fluid Dexron III.

AIR FILTER MINDER

The air filter minder is located in the pipe below the air cleaner, and is accessible from the rear engine door.

When the yellow band turns red, as shown in the picture, the air filter needs to be replaced. The minder can be removed by pressing the rubber diaphragm on the end of the unit.

FUEL FILTER AND WATER TRAP

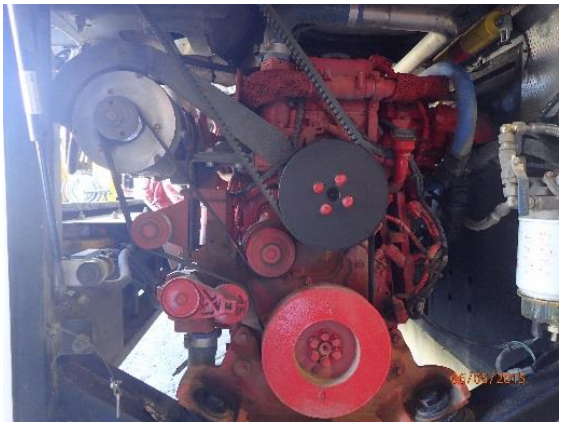
The primary fuel filter is a combination of filter and sediment/water trap. This unit can be accessed from the rear curb side engine door.

To drain water and sediment from the filter, a hose of suitable diameter can be attached to the spigot of the fuel filter. The drain valve can then be loosened to allow the collected water and sediment to drain into a suitable container for disposal.

CAUTION: After allowing fluid to enter storm or catchment basins, dispose of it in accordance with local and federal bylaws and statutes.

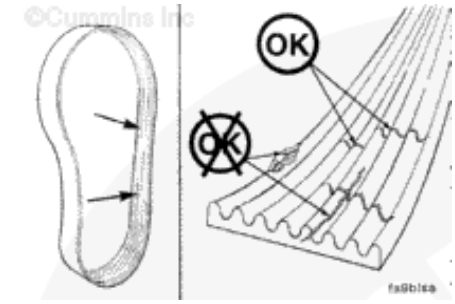
A/C COMPRESSOR DRIVE BELTS

The A/C compressor 2V15 drive belts can be accessed from the rear curb side engine access door.

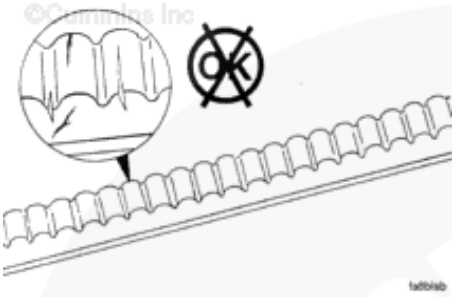


CAUTION: Ensure that the master switch and the rear start switch are secure to prevent engine start.

Inspect the belts daily, checking for intersecting cracks. Small cracks and transverse (across the belt width) cracks are acceptable. Longitudinal (direction of belt length) cracks that intersect with transverse cracks are not acceptable.



Belts must be replaced if they have intersecting cracks, are frayed, or have chunks of material missing.



BELT TENSION TESTING

Improperly tensioned belts can cause slippage, squealing, heat build-up and premature failure.

Belt tension can be easily tested using a belt tension tester gauge similar to the one shown below.

Gates 91132 Belt Tension Tester Gauge

To use the belt tension tester gauge:

1. Insert finger under rubber strap and onto pressure pad.

2. Place gauge on back of the belt (not the ribbed side), centering it across the width of the belt and as close as possible to the middle of the belt's span.

CAUTION: It is critical that the widened area on the bottom of the gauge lay flat on the back of the belt and parallel with the belt edge when performing the tension measurement.

3. Slowly depress the pressure pad, pushing the gauge perpendicular to the back of the belt.

4. Remove the gauge and read the belt tension by looking at the number where the top side of the pivoting arm crosses the numbered scale on the body.

Belt tension specifications should lie within the following range:

- **Initial installation tension:** 1180 ± 10% N
- **Stabilized tension:** 700 ± 10% N
- **Minimum tension:** 580 ± 10% N

Note: After a new belt has been installed, run the engine for 3 to 5 minutes to seat the belt.

A/C COMPRESSOR

After checking the drive belts, inspect the A/C compressor mounts for damage and correct mounting.

ALTERNATOR

CAUTION: Keep the alternator clean and ensure that the ventilation slots or air spaces are clear and free from obstruction at all times.

The alternator should be checked every day to ensure that it is charging at the correct voltage. Perform a daily visual inspection of the condition of the alternator drive belt, ensuring that it is set to the correct tension without slippage.

TOWING AND LIFTING

TOWING

All models of the Vicinity bus should be moved on a tilt-deck trailer only, as depicted in Figure 2.1. This method presents the least likelihood of damage to the bus during loading and towing.

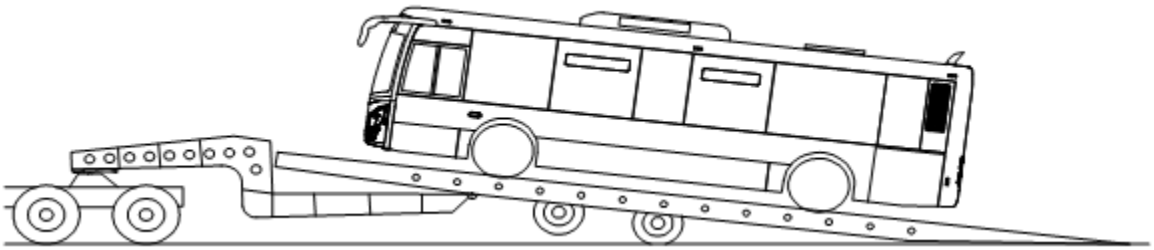


Figure 2.1

TOWING – EMERGENCY ONLY

In the event of an emergency, and a tilt-deck trailer is not available, it is possible to use other towing methods. However, there is an extreme risk of damage to the bus, so the towing company must accept all responsibility for the towed bus.

The following warnings apply to all towing methods:

⚠ WARNING

The driveshaft or both rear axle shafts must be removed when towing with the rear wheels on the ground.

⚠ WARNING

Axle blanking plates must be installed if the rear axles are removed for towing.

⚠ WARNING

When towing with a wheel-lift truck, the road clearances are greatly reduced. The tow-truck operator must use extreme caution to avoid contacting the road with the rear end of the bus.

FRONT TOWING WITH WHEEL LIFT

The Vicinity bus can be towed from the front, as depicted in Figure 2.2. However, the bus must be properly prepared for towing, and particular care must be taken during the tow.

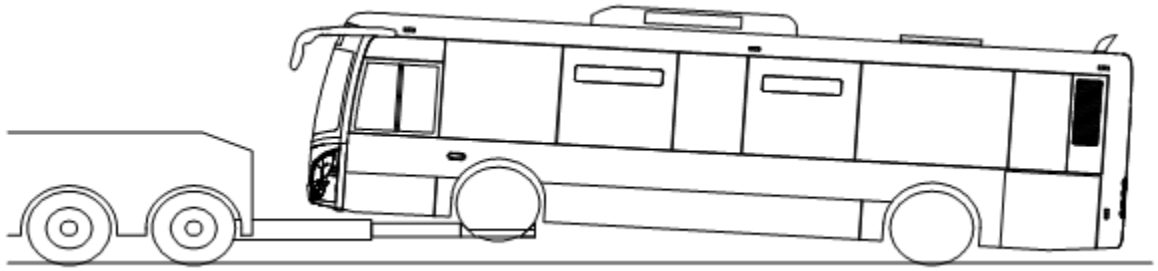


Figure 2.2

Drive Shaft / Axles: Either the drive shaft or both rear axle shafts must be removed for towing. This is necessary regardless of distance or speed to be travelled. Regardless of the make of the transmission, damage to the transmission is likely to occur if the driveshaft or axles are not first removed.

Axle blanking plates must be installed if the rear axles are removed for towing. This will prevent the loss of rear-axle lubricating oil.

Suspension: Prior to towing with a wheel-lift truck the bus suspension should be set to the “Level II” height. Once the bus is at the “Level II” height, the power should be removed from the ECAS ECU. That can be accomplished by turning off the main battery switch. The bus will then remain at the level II height during the tow.

Level II will provide extra road clearance. However, extreme caution should be taken during the tow, as there is still a high likelihood of impact with the road, which even at slow speeds can cause severe damage to the transmission pan, among other components.

Spring Brakes: When towing with a wheel-lift truck the spring brakes will need to be released. Before releasing the spring brakes, make sure the bus cannot roll. Either the wheels should be blocked, or the tow vehicle should be coupled to the bus before the spring brakes are released.

Air can be supplied to the bus through an auxiliary air coupling, located behind the left front bumper panel. Once the bus has an air supply the spring brake valve will release the spring brakes in a normal fashion.

The spring brakes can also be released manually. On each spring brake chamber, the caging bolts must be screwed out. This compresses the spring in the actuator and releases the brakes.

The spring brake caging bolts can be accessed as follows:

- **Single rear wheels:** Through round floor panels located inside the bus over the rear axle.
- **Dual rear wheels:** From underneath the bus.

Doors: Care must be taken to ensure the doors will not open during towing operations. This may occur if there is loss of air during the tow. The doors can be held closed with straps or bungee cords attached to stanchions in the bus.

REAR TOWING WITH WHEEL LIFT

The Vicinity bus can be towed from the rear, as depicted in Figure 2.3. However, the bus must be properly prepared for towing, and particular care must be taken during the tow.

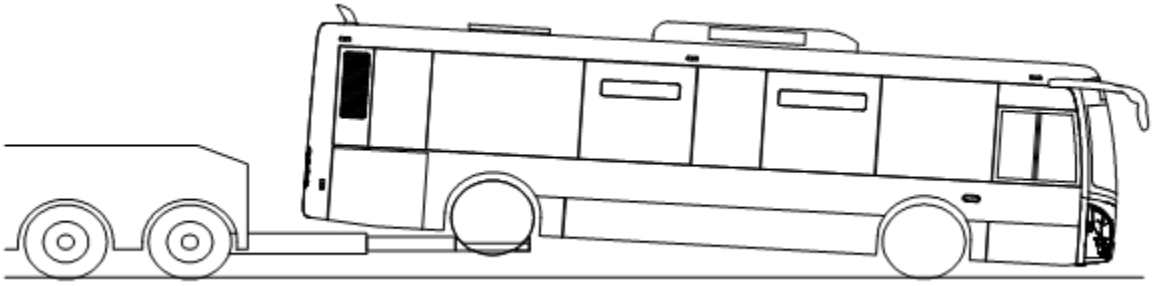


Figure 2.3

Suspension: Prior to towing with a wheel-lift truck the bus suspension should be set to the “Level II” height. Once the bus is at the “level II” height, the power should be removed from the ECAS ECU. That can be accomplished by turning off the main battery switch. The bus will then remain at the level II height during the tow.

Level II will provide extra road clearance. However, extreme caution should be taken during the tow, as there is still a high likelihood of impact with the road, which even at slow speeds can cause severe damage to the transmission pan, among other things.

Doors: Care must be taken to ensure the doors will not open during towing operations. This may occur if there is loss of air during the tow. The doors can be held closed with straps or bungee cords attached to stanchions in the bus.

Steering: When towing from the rear, it is necessary to tie the steering wheel.

TOWBAR TOWING

The Vicinity bus can be towed from the front using a tow bar with both the front and rear wheels on the ground, as depicted in Figure 2.4. Again, the bus must be properly prepared for towing, and particular care must be taken during the tow. A tow bar is available as a special order from Grande West.

Prior to towing, prepare the bus using the procedures described in the section “Towing from the Front with a Wheel Lift”, above.

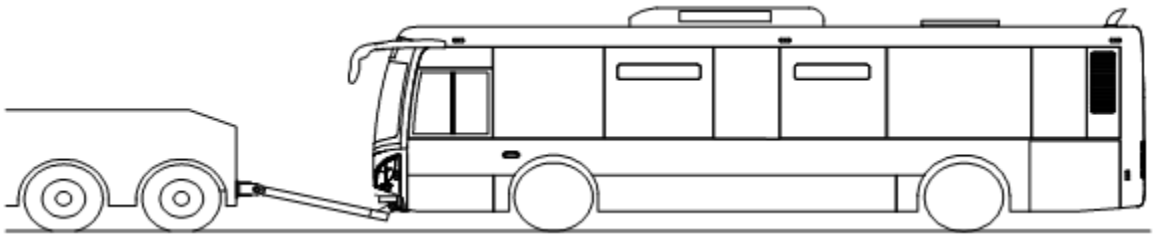


Figure 2.4

Note: When towing with all wheels on the ground, the steering wheel is not locked in place, which allows the front wheels to caster behind the towing vehicle.

If a tow truck with a wheel lift adapter is used for tow bar towing, it will be necessary to construct an adapter to match the wheel lift swivel to the towing eyes on the bus.

LIFTING

⚠ WARNING

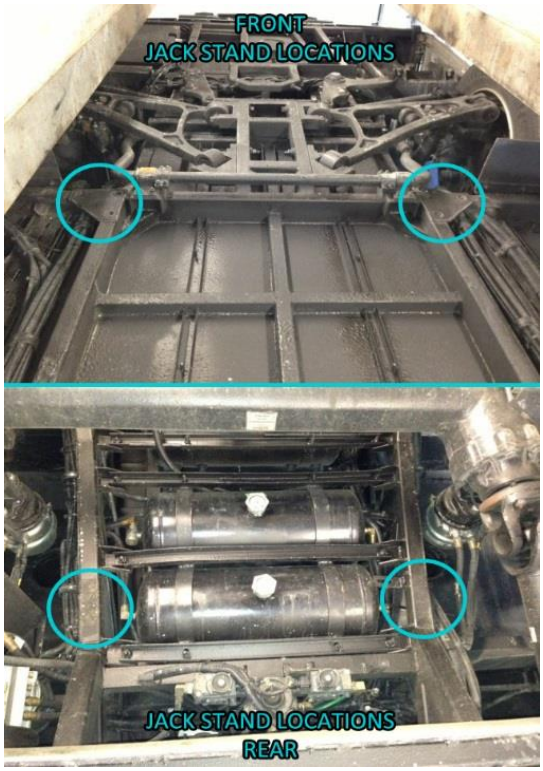
Do not walk under a vehicle being lifted until the lifts are stopped and in a “locked” position and/or jack stands are positioned under the chassis.

⚠ WARNING

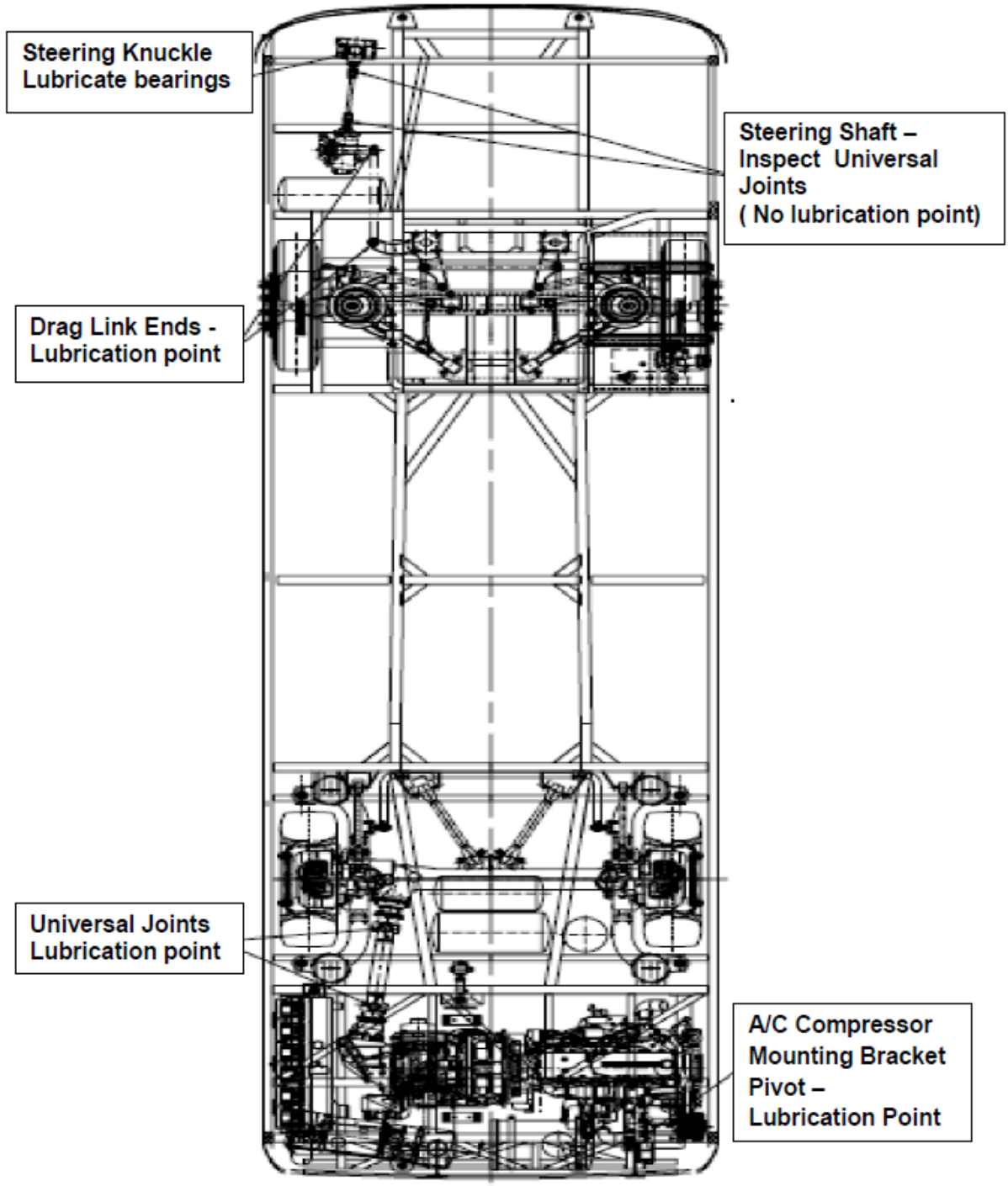
The axles must not hang unsupported on the shock absorbers as this could result in serious injury or death. Always follow the proper lifting procedures provided by the Hoist or Lift manufacturer’s operating instructions.

When lifting the vehicle for maintenance, always hoist at the front wheel and drive wheel or designated chassis locations. Chassis distortion and/or body damage can occur if lifting is attempted at points not designated. We strongly recommend that wheel lifts are used and remain in place for support.
After hoisting the bus to working height, place additional jack stands under the axles for support.

Position lift equipment and jack stands on a firm and level surface. Do not lift with passengers and/or cargo onboard.



LUBRICATION POINTS



LIST OF LUBRICANTS

Vehicle Component	Volume	General Specification
Cummins B6.7 250 EPA2017	16.7 (new) / 4.4 gal 14.2 litres / 3.75 gal	15W-40
Engine cooling system	70 litres / 18.5 gal	Cummins Standard 14603
HVAC coolant system	60 litres / 15.85 gal	Cummins Standard 14603
Transmission – Voith DIWA.6 oil change		Refer to Voith’s list of lubricants “H55.6335..” and “H55.6336..”
Graziano rear differential	20 litres / 5.3 gal	SAE 85W 140 - SAE 80W 140 (see page 10)
Power steering fluid	10 litres / 2.64 gal	ATF Dexron III
Grease: Steering drag link, Steering relay shaft	As required	Lithium-based
Grease: Propeller shaft	As required	Lithium-based
Exhaust aftertreatment system	20 litres / 5.3 gal	DEF meeting ISO 22241-1
Windshield washer fluid	8.7 litres / 2.3 gal	Pre-mixed fluid with a recommended -40° rating

CHAPTER 3 SERVICE SCHEDULES

This vehicle's service schedule is cumulative. Perform maintenance at the interval that occurs first.
At each scheduled maintenance interval, perform all previous maintenance checks that are due for scheduled maintenance.

ENGINE SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Coolant level - check	X				
Fuel-water separator - drain	X				
Primary fuel filter - change		X			
Lubricating oil level - check	X				
Check diesel exhaust fluid (DEF) level	X				
Air cleaner restriction - check		X			
Check charge air piping for leaks, cracks, and loose connection		X			
Charge-air cooler - check		X			
Fuel filter (secondary) - change			X		
Lubricating oil and filters - change		X			
Engine coolant antifreeze - check		X			
Battery Cables and Connections - check		X			
Radiator pressure cap - check			X		
Drive belt, cooling fan - check			X	X	
Belt tensioner - inspect for reuse				X	
Air compressor discharge lines - check				X	
Cooling system - flush					X
Engine steam cleaning - clean					X
Radiator hoses - check		X			X
Crankcase ventilation filter - change	120,000 kilometres or 2,500 hours				
Overhead set - adjust	240,000 kilometres or 5,000 Hours or 4 years				
Diesel particulate filter - clean	321,500 kilometres or 6,500 hours				
Diesel exhaust fluid dosing unit filter - change	321,500 kilometres or 6,500 hours				

TRANSMISSION SCHEDULE – VOITH DIWA.6

Refer to the **Voith service schedule** for a complete schedule of maintenance tasks.

DRIVE SHAFT SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Check tightness of all fasteners		X			
Check universal and sliding joints for wear		X			
Grease universal and sliding joints		X			

REAR AXLE SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Check oil level		X			
Replace oil					X*
Check for vent breather clogging			X		

*Replace oil at 120,000 km or 2 years, whichever occurs first.

The oil used for the rear axle must correspond to the specifications MIL-L-2105 D and API GL5 with the following viscosity: SAE 85W 140 – SAE 80W 140.

FRONT AXLE & SUSPENSION SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Visual inspection of the joints connecting the suspension to the chassis		X			
Visual inspection of the T-joint seals status		X			
Visual inspection of all suspension components		X			

PNEUMATIC/BRAKE SYSTEM SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Check compressor operating pressures cut in/cut out	X				
Check low air pressure alarm/light are operating correctly	X				
Check the operation of parking brake	X				
Check all air line connections and mountings for leakage and security		X			
Check function and cleanliness of air dryer		X			
Replace air dryer cartridge				X	
Check brake pad thickness		X			
Check brake rotor for defects		X			
Check brake pad running clearance				X	
Drain air reservoirs		X			

Since no two vehicles operate under identical conditions, maintenance intervals will vary. Experience is a valuable guide in determining the best maintenance interval for any one particular vehicle.

The tests outlined in the brake service section check both leakage and device function. Performing these tests on a quarterly basis and recording the results of the tests in the vehicle maintenance records will provide a valuable basis for performance comparisons/trends and assist in deciding maintenance intervals.

ENGINE COOLING SYSTEM SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Check cooling system level	X				
Check hoses for leaks and signs of deterioration		X			
Check pressure cap spring and seal				X	
Drain and flush out. Refill with the correct engine coolant					X
Check strength of anti-freeze			X		
Check radiator and charge air cooler core - clear all debris				X	
Check electric cooling fans for faults and operation			X		
Check condition of the radiator surround and cassette assembly and seals		X			
Inspect cooling fan main power cables for wear or frayed insulation and nylon bushings				X*	
Ensure cooling fan connections are tightened to proper torque rating				X*	
Inspect main harness and fan connectors, ensuring all wires and pin connections are intact				X*	
Inspect cooling fan support structure for any damage or loose hardware				X*	

*These inspections should also be conducted after any service to the cooling fan unit.

ELECTRICAL SYSTEM SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Check operation of all lights, switches, warning lights, direction indicators, stop lights, horns	X				
Check that instruments are working correctly	X				
Check alignment of headlights				X	
Remove batteries, clean and test. Clean and repaint the carrier if required				X	
Check that alternator is charging correctly		X			
Check all connections throughout the system for cleanliness, security and installation		X			

AFTERTREATMENT/EXHAUST SYSTEM SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Check diesel exhaust fluid (DEF) level	X				
Check exhaust wrap for damage or oil contamination		X			
Check security of all pipe clamps		X			
Check the rubber mounts for sign of damage or separation		X			
Check all pipe joints to ensure no exhaust leaks		X			
Check for security and condition of exhaust system insulation material		X			
Ensure that the doser unit air vent and air regulator are free from debris and are not restricted in any way		X			
Change aftertreatment diesel particulate filter every 321,500 km or 6,500 hrs					

HVAC SCHEDULE

	Daily	5,000 km	10,000 km	20,000 km	Yearly
Change internal air filters					X
Check A/C drive belts for tension and cracks	X				
Check general condition of equipment	X				
Check A/C compressor mounts for damage			X		
Clean A/C compressor oil filter and empty oil reservoir at shaft seal		X			
Check A/C compressor oil level, tightness, running noise, pressures, temperatures, and function of auxiliary devices (e.g. capacity control)					X
Check fuses and relays at the relay board			X		
Clean return air filter			X		
Check cable tightness at the relay board			X		
Check for oil on hose connections (i.e. gas leakage)			X		

Note: HVAC system service must be carried out by a certified expert or an authorized service station.

STEERING/HYDRAULIC SYSTEM SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Check power steering fluid level		X			
Check all pipework/hoses and connections for leaks/security and integrity		X			
Change hydraulic oil annually or every 160,000 km					
Change reservoir filter annually or every 160,000 km					
Check all components for security		X			
Check the steering and angle gear for leaks		X			
Check all ball joints and linkages for play		X			
Lubricate steering relay shaft		X			
Check for play in steering column		X			
Check hydraulic steering limiter		X			

AIR SUSPENSION SYSTEM SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Check suspension component mountings. Tighten if necessary		X			
Check shock absorber and mountings		X			
Check the ride height		X			
Remove all road dirt and oil/grease build up from air springs and supports		X			
Check suspension air system for leaks		X			
Inspect clean/change air suspension line filter				X	

TIRE & WHEEL SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Visually check all wheel nuts	X				
Check tires are free from damage, cuts, and debris	X				
Ensure that tire pressures are correct, including spare if fitted		X			
Check tread depth is within legal limit		X			

Note: The above listed annual checks should be performed after the first 4,800 km of service use, and then conducted annually.

BODY SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Powerwash underside of vehicle				X	
Reapply undercoat and sealant				X	
Remove, powerwash, and spray lower skirt panels with a rust inhibitor				X	
Lubricate all access door latches and hinges			X		

Note: Failure to abide by the maintenance procedures detailed in this section could void the 10-year structural warranty of this vehicle.

DOOR SYSTEM SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Check steel cables for correct tension				X	
Fill bearing housings with lubricant				X	
Check emergency switch functionality	X				
Check sensitive edge functionality	X				
Measure door height				X	
Measure distance between door panel profiles				X	

Note: The annual checks listed above should be performed after the first 4,800 km of service use, and then conducted annually.

RAMP SERVICE SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Ensure that ramp switches operate correctly	X				
Ensure that ramp area is free of debris	X				
Ensure that surface is clean and free of sticky or slippery substances	X				
Ensure that loose edges do not pose a tripping hazard	X				
Check all electrical cables and fittings; tighten or replace as necessary		X			
Check chain spring assembly for wear or missing parts		X			
Check all threaded fasteners for looseness and retighten as necessary		X			
Inspect non-slip surface for damage and loose or missing non-slip material		X			
Inspect ramp interior for dirt and debris		X			
Inspect decals and replace if damaged or illegible		X			
Inspect wiring harness insulation for heavy abrasions and connectors for looseness			X		
Check and tighten any loose threaded fasteners			X		
Check non-slip surface for excessive wear or damage and replace as necessary			X		

Note: The annual checks listed above should be performed after the first 4,800 km of service use, and then conducted annually. A complete list of service schedule items for the ramp system can be found in the "Maintenance" chapter of the Braun manual.

INTERIOR FURNISHING SCHEDULE

	Daily	10,000 km	20,000 km	Yearly	2 Years
Check flooring seal joints for damage/water ingress			X		

GLASS SCHEDULE

	Daily	10,000 km	20,000 km	35,000 km	Yearly
Clean and lubricate passenger emergency exit window release				X	

EQUIPMENT AND ACCESSORIES SCHEDULE

	Daily	10,000 km	20,000 km	35,000 km	Yearly
Inspect fire extinguisher for safe working order		X			

Conversion Chart (1 km = 0.62 mi)	
10,000 km	6,000 mi
20,000 km	12,500 mi
35,000 km	21,750 mi
160,000 km	100,000 mi
321,500 km	200,000 mi

GM Preventative Maintenance Guide

The GM service manual should be reviewed in conjunction with this guide for location, proper operation, and service of these features. Reference to the GM Service Manual is REQUIRED for specific information on safety practices, cautions, and important information such as torque specifications.

Owner Checks and Services

- At each Fuel Stop, Check the engine oil level
- Monthly
    - Check the tire inflation pressures
    - Inspect the tires for wear
    - Check the windshield washer fluid

Engine Oil Change

When the CHANGE ENGINE OIL SOON message displays, have the engine oil and filter changed within the next 1 000 km/600 mi. The engine oil and filter must be changed at least once a year and the oil life system must be reset. If the engine oil life system is reset accidentally, service the vehicle within 5 000 km/3,000 mi since the last service. Reset the oil life system when the oil is changed.

Power Take Off (PTO) and Extended Idle Use

When the vehicle is used with the PTO equipment or used in a way that requires extended idle time, one hour of use shall be deemed the same as 53 km (33 mi).

Air Conditioning Desiccant (Replace Every Seven Years)

The air conditioning system requires maintenance every seven years. This service requires replacement of the desiccant to help the longevity and efficient operation of the air conditioning system.

Tire Rotation and Required Services (Every 7,500 mi/12,000 km)

Rotate the tires, if recommended for the vehicle, and perform the following services.

- Check engine oil level and oil life percentage. If needed, change engine oil and filter, and reset oil life system.
- Check engine coolant level.
- Check windshield washer fluid level.
- Check tire inflation pressures, including the spare.
- Inspect tire wear.
- Visually check for fluid leaks.
- Inspect engine air cleaner filter.
- Inspect brake system.
- Visually inspect steering, suspension, and chassis components for damage, including cracks or tears in the rubber boots, loose or missing parts, or signs of wear at least once a year.
- Inspect power steering for proper attachment, connections, binding, leaks, cracks, chafing,
- Visually inspect halfshafts and drive shafts for excessive wear, lubricant leaks, and/or damage including: tube dents or cracks, constant velocity joint or universal joint looseness, cracked or missing boots, loose or missing boot clamps, center bearing excessive looseness, loose or missing fasteners, and axle seal leaks.
- Check restraint system components.
- Visually inspect fuel system for damage or leaks.
- Visually inspect exhaust system and nearby heat shields for loose or damaged parts.
- Lubricate body components.
- Check starter switch.
- Check automatic transmission shift lock control function.
- Check ignition transmission lock.
- Check parking brake and automatic transmission park mechanism.
- Check accelerator pedal for damage, high effort, or binding. Replace if needed.
- Visually inspect gas strut for signs of wear, cracks, or other damage. Check the hold open ability of the strut. If the hold open is low, service the gas strut.
- Lubricate the steering linkage (greaseable joints). See Normal and Severe Maintenance Schedules.

Exterior Check

- Wheels are undamaged and studs and nuts are secure.
- Tires correctly inflated.
- Vehicle is level.
- Exterior panels are undamaged.
- No fluid leaks exist under vehicle.
- No fluid leaks exist at axles.
- Power steering reservoir level is correct.
- Engine oil level is correct.
- Transmission fluid level is correct.
- Fuel tanks are full.

Operational Check

Start the vehicle and check the following for correct condition and operation:

- Instrument panel indicators.
- Turn signals.
- Mirror condition and adjustment.
- Window and windshield visibility.
- Windshield wipers and washer.
- Destination signs.
- Front and rear doors.
- Exit door sensitive edge.
- Wheelchair ramp.
- Interior and exterior lights.
- Steering column.
- Headlights.
- Instrument panel gauges
- Brake pedal.
- Parking brake.
- Accelerator.
- Transmission shift selector.

Wheelchair Ramp

Inspect the wheelchair ramp area for cleanliness on a regular basis depending on operating conditions. Exposure to salt, sand, or slush during the winter months may require inspection daily. Likewise, operating in gritty, dusty conditions during the summer months will require more frequent inspections. Clean any dirt or foreign matter from the ramp, hinge, and operating shaft areas. Inspect the recessed area between the floor and ramp for any accumulation of debris. Manually deploy and stow the ramp to check for smooth operation. Inspect hinge for binding or distortion. Repair or replace hinge as necessary.

1. Put Battery Disconnect Switch in the ‘ON’ position.
2. Enter the bus and start the engine.
3. Open entry door to a fully open position which will cause the interior lights to illuminate.
4. Engage the parking brake.
5. Deploy the ramp.
6. Stow the ramp.
7. Once the ramp is stowed, close the door(s).

Stop Request

1. Put Battery Disconnect Switch in the 'ON' position.
2. Enter the bus.
3. Start the bus.
    a. For systems with the pull string stop request, pull down on each section of the string (between the eyelets), listen for the chime and look for the flashing sign, if installed. After each test, rest the system by fully opening and closing the main entry door to ensure proper operation of the stop request system
    b. For systems with the push button stop request, push each button, listen for the chime and look for the flashing sign, if installed. The push button system will reset automatically. For the handicap stop request, these push buttons are located under the folding seats
4. Once the stop request test is completed, return the bus to normal operation.

Wheelchair Tie-Down & Occupant Restraints

- Check the retractors by pulling out the webbing to ensure they are locking properly
- Check to ensure webbing is not cut, frayed, damaged or contaminated by polishes, oils or chemicals
- Check that metal parts are not worn, broken or cracked
- Check pin connector bushings to ensure they are not cracked, broken or missing
- Check that all mounting hardware, such as bolt, nuts, etc. are secure
- Check floor anchorages to ensure cleanliness and securement
- Check shoulder belt anchorages for proper securement and operation
- Check lap and shoulder belt webbing to ensure it is not cut, frayed, damaged or contaminated with polishes, oils or chemicals
- Check buckles for damage and ensure proper operation
- Check male buckle pin connector bushing to ensure it is not cracked, broken or missing
- Check any other parts of the securement system and accessories that may not be specifically indicated in this checklist, but are pertinent to a safe operational system

Floor Covering

Inspect the interior flooring for cleanliness on a regular basis depending on operating conditions. Exposure to salt, sand, or slush during the winter months may require inspection daily.

CAUTION

DO NOT clean the vehicle interior with pressure washing equipment. This type of cleaning causes excessive soaking of the floor covering and can result in separation of the rubber floor covering from the floor substrate, warping or deterioration of the floor substrate, and possible damage to floor mounted equipment such as floor heaters.

- Vacuum or sweep the floor area daily to remove surface soil before it becomes embedded in the rubber floor covering.
- Wash the floor using a mild detergent and a minimum amount of water to avoid soaking seams and edge areas.
- Visually inspect rubber flooring for gouges, cracks, seam separation, lifting, or any other damage.

Air Tanks

It is recommended that all air tanks be drained daily. Performing these inspections on a regular basis will establish trend monitoring to assess the performance of the compressor (excessive oil passing) and air dyer (saturated desiccant cartridge). The following factors can influence that amount of water collected and should be taken into consideration before making an assessment:

- An outside air source was used to charge the system and did not pass through the air dryer.
- Exceptionally high air usage, exceeding 25% compressor duty cycle due to either heavy accessory demand or system leakage.
- Daily temperature range exceeds 30°F (17°C) resulting in condensation. Under these conditions the presence of small amounts of moisture is normal and should not be considered as an indication that the air dryer is not functioning properly.

HVAC Systems Test

Perform a visual inspection of the HVAC system every month or 6,000 miles (9,600 km), whichever occurs first. Operate all systems periodically, especially during the off season. By operating the system weekly for short intervals (5 to 10 minutes) year-round, the internal parts of the compressor will remain lubricated. Off- season operation also helps reduce compressor shaft seal leakage and allows early detection of refrigerant loss.

CAUTION

Prior to operating the compressor during winter months, you must warm up the vehicle interior to normal operating temperature of 60 to 76° F (5 to 21° C). Unless this precaution is taken, liquid refrigerant might be forced into the compressor, causing severe damage.

Fire Extinguisher

Inspect the fire extinguisher every month as follows:

- Ensure the fire extinguisher is securely mounted in its proper location.
- Check that the safety pin lock is installed.
- Ensure that the hose is in good condition and the nozzle is not obstructed.
- Confirm that the cylinder pressure indicated on the gauge is within the green operating range.