

Tiffin PowerGlide Chassis Customer Support

256-356-0261

**Monday-Friday
5 Days a week
7am-4:30pm CST**

If you should require chassis service, *you should first contact your nearest Tiffin Powerglide Chassis service center.* If for some reason this is not possible or if you would like to call the manufacturers direct, you can contact them at the following telephone numbers:

TIFFIN POWERGLIDE CHASSIS

256-356-0261

(Please have your VIN# ready)

COACH-NET

(Nights and weekends)

1-866-590-5937

CUMMINS ENGINE COMPANY

1-800-DIESELS (800-343-7357)

CATERPILLAR RV ENGINE SUPPORT

1-877-777-3126

ALLISON TRANSMISSIONS

1-800-524-2303

MICHELIN TIRE

800-TIRE-HELP (800-847-3435)

Visit our web site at www.tiffinmotorhomes.com

TIRE CARE

- What is the most important component of tire care?

- ✓ TIRE PRESSURE

- Why?
 - ✓ Improved Ride
 - ✓ Improved Tire Wear
 - ✓ Improved Road Handling
 - ✓ Improved Braking



TIRE CARE

Maintaining the proper tire inflation pressure is the most important thing you can do to maximize the life of your tires. An under inflated tire will build up excessive heat that may go beyond the prescribed limits of endurance of the rubber and the radial cords. Over inflation will reduce the tire's foot print on the road, reducing the traction, braking capacity, and handling of your vehicle. An over inflated tire will also cause a harsh ride, uneven tire wear, and will be more susceptible to impact damage.

Keep in mind that the pressure rating on the side wall of your tire is the *maximum* pressure for that tire. This is not necessarily the *correct* pressure for the tires when installed on *your* vehicle. Maintaining the correct tire pressure for *your vehicle's loaded weight* is extremely important and must be a part of regular vehicle maintenance.

Correct Tire Pressure

- How to determine the correct pressure
 - ✓ Weigh each wheel position
 - ✓ Set tire pressure according to chart



*** This Chart Shows Cold Inflation Pressures**

295/80 R22.5 LRH Energy XZA2

Load per Wheel-end

		PSI=>	70	75	80	85	90	95	100	105	110	Max Load per Tire
		KPA=>	480	520	550	590	620	660	690	720	760	
Single	LBS		5,085	5,375	5,660	5,940	6,220	6,495	6,770	7,040	7,300	7,830
Dual	LBS		9,020	9,530	10,030	10,530	11,030	11,510	12,000	12,470	12,950	6,940
Single	KG		2,290	2,440	2,550	2,700	2,810	2,960	3,060	3,170	3,310	3,550
Dual	KG		4,060	4,340	4,540	4,800	4,980	5,240	5,440	5,620	5,880	3,150

To determine the correct air pressure for your tires, load your motor home as you would normally travel, including water and fuel. Go to a truck scale as found at most major truck stops and weigh **each wheel position** independently, with driver and passenger(s) in the vehicle as described in the *Michelin Recreational Vehicle Tire Guide* (MWL43146 Rev. 6/07) to determine the correct air pressure for the weight on each wheel position. Then use the charts in the guide and adjust the pressure accordingly when the tires are cool or have not been driven for more than one mile. You may call 1-800-847-3435 for a copy of the *Michelin Recreational Vehicle Tire Guide*.

NOTE: Never reduce the air pressure in a hot tire.

REMEMBER: For control of your RV, it is critical that the tire pressure be the same on both sides of the axle.

Allison Transmission Operation

- **Normal driving—best fuel economy**
 - Select “D” and “Mode On”
- **Performance**
 - “Mode Off”
 - For mountain driving select lower gears to maintain 2000+ engine RPM
- **Hill climbing on hot days**
 - Keep RPMs high to cool engine

Driving Tips with the Allison MD3060 3000MH Transmission:

The points at which shifts occur depend upon predetermined speeds and other operating conditions. A transmission “shift calibration” includes several sets of shift points which may be used according to current or anticipated operating conditions, such as engine or transmission fluid temperature. Shift schedules may be changed using the MODE button.

The transmission control module (TCM) includes the capacity for two separate and distinct shift calibrations, one for use in “Primary Mode” of operation and one in “Secondary Mode.”

Primary – This shift schedule is typically used for all normal vehicle operations.

Secondary – This is an alternate shift schedule that the TCM uses upon request. This is operator-controlled using the MODE button.

When you are driving under normal road conditions, the DRIVE mode is recommended for the best performance and fuel economy. The MODE switch should be set to ON for economy mode, but MODE off should be used when climbing hills and when extra performance is required.

The display screen on the shift control pad will indicate the highest selected gear for the transmission. When mountainous or up and down terrain conditions are encountered, you should manually select a lower gear, preferably lower than 5th gear, and turn OFF the mode switch. This can be done at any road speed by pressing the down arrow repeatedly until the desired gear is indicated in the window of the shifter pad and then pressing the MODE button. When your road speed decreases to a safe point, the transmission will downshift at a higher RPM than normal. This will decrease the use of overdrive while pulling hills, which can result in excessive heat build-up in the transmission, and it keeps the engine operating at peak horse power and performance.

When ascending a grade, maintain engine speed to within 400-500 RPM of governed engine speed. Governed speed will be 2000-2200 RPM depending on your engine model. Road speed may decrease, but the engine will be at its peak in the power curve.

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It is especially pertinent to monitor your water temperature gauge when climbing hills. Keep in mind; it is not uncommon for the temperature to rise, especially in hot weather. If the gauge reaches the end zone or if the temperature warning light on the gauge panel should come on, reduce your road speed and shift to the next lower gear and keep your tachometer within 500 RPM of engine governed speed. In many cases this will stabilize the water temperature. If the temperature gauge continues to rise, pull over to the side of the road and shift the transmission into neutral. Bring the engine RPM to 1,700—2,000 RPM until the temperature drops down into the normal range. This should occur in a relatively short period of time. If the temperature gauge does not begin to drop and stays in the red zone or continues to rise, shut down the engine and allow it to cool. After the engine is allowed to cool, check the fluid level in the reservoir and add a 50/50 coolant and water mixture if needed.

A good “rule of thumb” for descending grades is to never use a higher gear than was used to climb the same or similar grade. Try to keep the engine within 500 RPM of governed speed. This will give the best engine braking and reduce the need to use the service brakes. Select a gear that will keep you at a safe speed with minimal brake application. Never ride your brakes when descending a grade since excessive brake heat will build up and your brakes could fade leaving you with little or no braking power.

If your vehicle is equipped with an exhaust brake, this will also assist in slowing your vehicle on a downhill grade. With the exhaust brake switch in the ON position, when your foot is released from the accelerator, the transmission select number changes to “2.” The exhaust brake will engage and the transmission will begin to down shift as soon as road and engine speed will safely allow. This will produce a slowing effect and will remain engaged until either the exhaust brake switch is turned off, the accelerator is depressed, or the transmission shifts to second gear. If your initial speed is high, you may have to step on the brake to slow the vehicle before the transmission will down-shift from 6th gear to 5th gear. This is normal.

Always select (N) neutral on the transmission shift pad prior to turning off the vehicle engine.

Allison Transmission Fluid Level Check



- Be sure transmission is at operating temperature (140° to 220° F)
- Vehicle is parked on level ground
- Transmission in neutral and engine at idle
- Wait until vehicle has been stationary for two minutes
- Simultaneously press the up and down arrow keys
- Display indicates – OL
 - “OL followed by “OK” indicates good oil level
 - “OL followed by “HI” followed by number indicates quarts over-filled
 - “OL followed by “LO” followed by number indicates quarts under-filled
 - “OL followed by “--” proper conditions have not been met

Brake System



Rear Brakes



Automatic Slack Adjuster

- Front brakes are 17" air applied disc
- Rear brakes double as parking brake
 - Park brakes are spring applied
 - Two large 16.5 x 7" drum brakes
 - Park brake remains applied even if air pressure is lost
- If air pressure is lost
 - A buzzer and warning lamp will alert you
- Chassis is equipped with automatic slack adjusters
 - No brake adjustment required

The rear brakes on the PowerGlide chassis are also used as the parking brakes. This provides you the holding power of two large drum brakes to prevent your coach from rolling even when fully loaded on a 20% grade.

A decrease in air pressure will not cause an immediate loss of brakes. If a leak develops in the air system while driving (at approximately 60 to 65 PSI) you will be alerted via a light on the instrument panel and an audible alarm. As you apply the brakes, the air supply holding the park brakes in the released position will gradually be depleted. When fully depleted (approximately 40 PSI to 45 PSI) the rear brakes will set. This allows you sufficient time to pull over to the side of the road.

NOTE: (The rear brakes have dual chambers—one for the service brakes and one for the park brake. The service brakes are air applied and spring released. The park brake is spring applied and air released).

The brake system is equipped with automatic slack adjusters that avoid the need to manually adjust your brakes. Each time you step on the brake pedal, if adjustment is needed, the adjusters will take up the slack.

Compressed Air System



Tank Drains

The compressed air system is comprised of two air storage tanks. The primary tank stores and supplies air for the rear brakes, the secondary tank stores and supplies air for the front brakes.

When air is compressed it becomes hot. As it cools condensed moisture forms in the system. The air system is equipped with an air dryer to remove most of this moisture. The dryer has an automatic moisture ejector that releases the trapped moisture back into the atmosphere. However some moisture will form in the system beyond the dryer, and make its way into the storage tanks. As moisture collects in the primary and secondary tanks it displaces the area needed for air storage, thus requiring that the tanks be drained periodically.

The air system is equipped with two air tank drains conveniently located in the left rear storage compartment. One drain for the primary tank and one for the secondary tank. These drains should be opened daily for a few seconds to remove any moisture trapped in the tanks.

Air Dryer



The Tiffin PowerGlide chassis air brake system features a Haldex Purest air dryer which removes the condensed moisture from compressed air. The air dryer is equipped with a desiccant cartridge that needs to be changed every 36 months. The dryer is located on the left hand frame rail (behind the rear axle).

WARNING: Air tanks should be bled of all pressure any time you perform work on the air system.

Engine Compression Brake



Provides:

- Improved braking power
- Reduces the chance of overheating brakes on steep grades
- Works in conjunction with Allison electronic transmissions
- Compression brake allows for 3 or 6 cylinder use

All brakes will build up heat when being used due to friction—this is normal. However, excessive use of the brakes when descending a grade can result in excessive heat and can cause “brake fade” or a loss of braking power, even with disc brakes. The proper way to use your brakes is to go slowly enough that a fairly light occasional use of the brakes will keep your speed from increasing.

NOTE: DO NOT maintain continual brake pedal pressure when descending a hill with any type of brake system.

Rather, down shift the transmission to slow the vehicle and make light, intermittent brake applications to control downhill speeds. By utilizing the transmission gears and Compression Brake, continual use of the brakes will not be necessary. When using the transmission's lower gears to slow the vehicle on hills, be careful not to exceed the governed speed of your engine. If engine-governed speed is exceeded, the transmission will shift up to the next range, rapidly increasing the speed of your vehicle. If you find that you are continually using the brakes to maintain a safe speed and to keep the RPM within this range, slow the vehicle down even further and shift the transmission to a lower gear.

CAUTION: DO NOT USE the Compression Brake on wet roads, hazardous, or slippery conditions. As with any motorized vehicle, practice safety when on the road.

Scheduled Maintenance

SERVICE INTERVAL (Miles x 1,000)	Daily	5	10	15	20	Required Fluids, Lubricants, and Procedures
Air System:						
Air Dryer		X				Inspect for leaks and blockage of purge valve
Air Intake	X					Inspect for blockage
Air Filter			X			Check restriction indicator - replace filter as needed (7)
Primary Air Tank Reservoir	X					Drain condensation daily
Secondary Air Tank Reservoir	X					Drain condensation daily
Brake Systems:						
ABS Sensors					X	Clean sensors & adjust into hub rings. (1)
Brake Pads, Rotors, Shoes & Drums					X	Inspect pads, shoes, rotors & drums for wear and cracks. (1)
Slack Adjusters					X	Inspect slack adjuster for proper adjustment & grease.
Brake Hoses/Whips, Front & Rear			X			Inspect for leaks, & cracking.
Cooling Systems:						
A/C Condenser Fins			X			Inspect for blockage and wash clean every 10k or as needed
Charge Air Cooler Fins			X			Inspect for blockage and wash clean every 10k or as needed
Fan & Fan Shroud			X			Inspect for blockage and cracks.
Radiator Fins/Grill			X			Inspect for blockage and wash clean every 10k or as needed
Radiator Hoses & Pipes			X			Inspect for kinks, chaffing wear and leaks.
Surge Tank Cap	X					Inspect for leaks daily
Surge Tank Vent Lines	X					Inspect for kinks and leaks daily
Fan Clutch		X				Inspect for correct alignment
Fan Drive Belt			X			Replace fan belt.
Fan Drive Shaft U-Joints			X			Lubricate w/NGLI #2 grease
Fan Gear Box			X			Change fluid and inspect for leaks. (6)
Electrical Systems:						
Rear Electrical Compartment		X				Check for loose fuses and cables
Front Electrical Compartment		X				Check for loose fuses and cables
Generator Cables		X				Check for loose red & black cables connected to generator
Alternator Belt			X			Check for correct tension and wear
Batteries		X				Check for loose lugs / remove any corrosion

Scheduled Maintenance

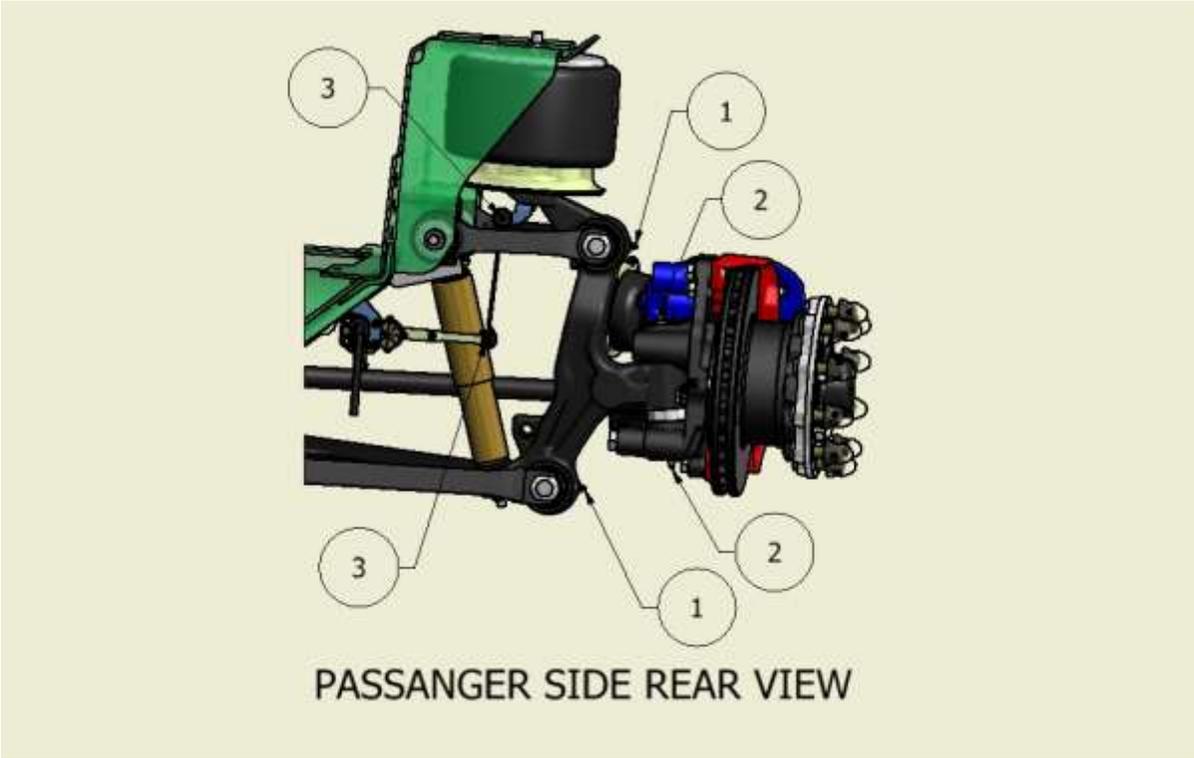
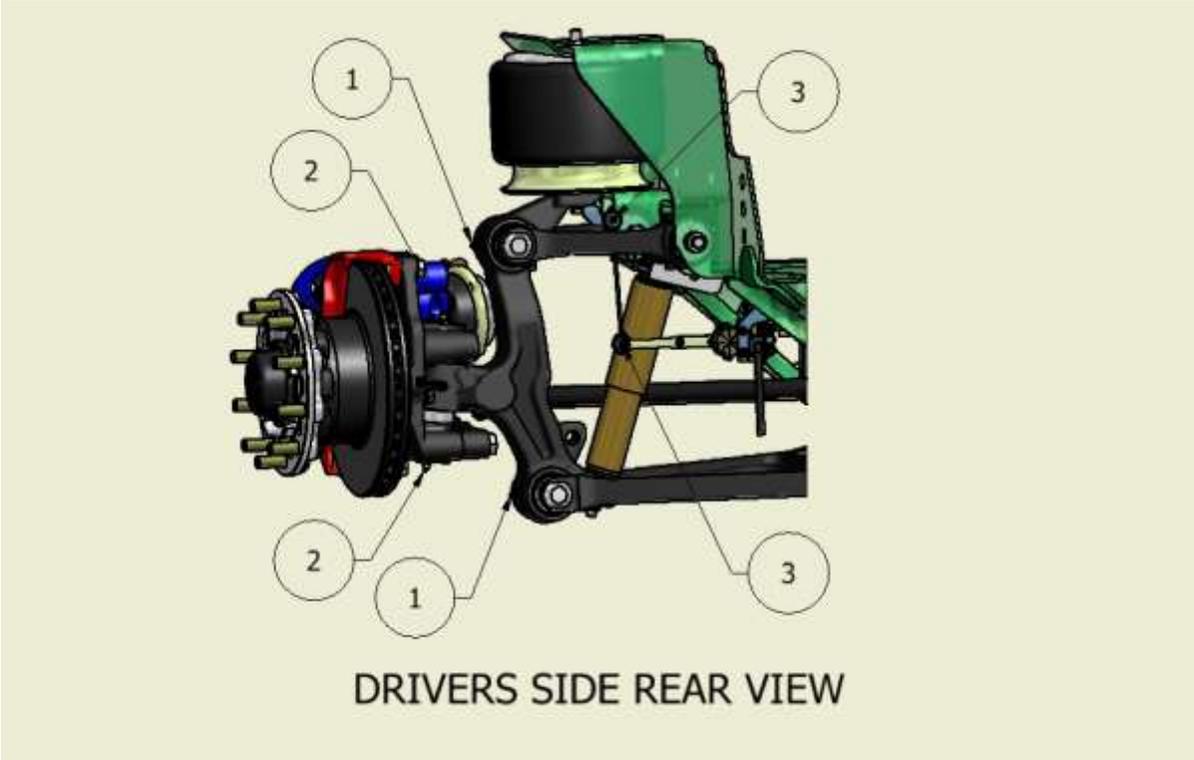
SERVICE INTERVAL (Miles x 1,000)	Daily	5	10	15	20	Required Fluids, Lubricants, and Procedures
Engine Systems:						
Engine Drive Belt Tension			X			Inspect belt & tension.
Engine Oil Filter					X	Replace engine oil filter per engine manual (1)
Engine Oil					X	Change engine oil per engine manual (1)
Exhaust Muffler & Piping			X			Inspect for pinholes, rust and leaks.
Diesel Fuel						Always use ultra low sulfur fuel only
Fuel Tank Vent Lines					X	Inspect for "P" traps that may cause air locks and slow filling
Fuel Tank & Lines			X			Inspect for leaks around fuel inlet nipples and hoses.
Engine Coolant						Change engine coolant per engine manual
Primary Fuel Filter					X	Replace fuel filter per engine manual (1)
Secondary Fuel Filter					X	Replace fuel filter per engine manual (1)
Steering Systems:						
Drag Link			X			Inspect castle nuts for looseness & lube rod ends w/NGLI #2 grease
Steering Gear Arm			X			Inspect for looseness.
Steering Gear			X			Inspect mount bolts for looseness & hydraulic hoses for leaks.
Steering Gear Pump			X			Inspect for hydraulic hose leaks at fittings.
Steering Shaft U-Joints			X			Inspect for loose fasteners & lube bearings w/NGLI #2.
Steering Shaft Boot			X			Inspect for clearance between boot & shaft, lubricate w/ NGLI #2 grease.
Suspension & Axles:						
Coach Alignment				X		Align coach as needed (4)
Front Ride Height Adjust			X			Adjust to 9" side to side from bottom of air bag to top of air bag mount place
Rear Ride Height Adjust			X			Adjust to 7" side to side from bottom of rail to centerline of axle
Ride Height Valve Linkages			X			Grease linkage grommets w/D.A. Stewart Aqualube.
Air Suspension Bags			X			Inspect for leaks at fittings and inspect bags for leaks or cracks
Front Axle Bearings		X				Check fluid level through sight window, if low, repair leaks as necessary (1)
Front Axle Tie Rods - Inspect					X	Inspect for looseness
Front Axle Tie Rods Lubricate					X	Lubricate W/NGLI # 2 grease
Front Axle King Pins					X	Lubricate W/NGLI #2 grease
Front & Rear Shocks			X			Inspect for leaks on shock tube, replace as needed
Rear Axle Lube					X	Inspect for leaks & check fluid level. Use synthetic oil only 75W90 (3)
Wheel Lug Torque			X			Re-torque all wheels nuts - Torque 450-500 lbs (2)

Scheduled Maintenance

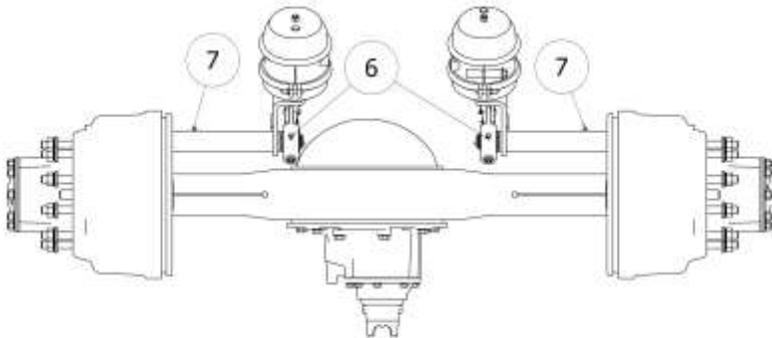
SERVICE INTERVAL (Miles x 1,000)	Daily	5	10	15	20	Required Fluids, Lubricants, and Procedures
Suspension & Axles:						
Automatic Slack Adjusters					X	Lubricate W/NGLI #2 grease
Slack Adjuster Cam Shafts					X	Lubricate W/NGLI #2 grease
Slack Adjuster Clevis Pins					X	Inspect for wear in clevis pin and cotter pins. Replace as necessary
Transmission & Driveline:						
Drive Shaft				X		Inspect u-joints & safety strap for loose bolts & wear, lubricate w/NGLI #2 grease
Transmission Fluid						Replace fluid at 150,000 miles or 48 months whichever occurs first. (5)
Transmission Filters						Replace filters at 75,000 miles or 36 months whichever occurs first. (5)

- (1) Replace / inspect at stated mileage interval or every 12 months whichever occurs first
- (2) Re-torque all wheel nuts after the first 100 miles, then every 10K miles thereafter.
- (3) Factory filled with synthetic oil. Do not mix with mineral oils.
- (4) For best tire life and handling, alignment of front axle is recommended every 15K miles.
- (5) Factory filled with TranSynd. To maintain these service intervals, fluid must not be mixed with Dexron or other fluids.
- (6) Total fluid capacity is 24oz. Use only synthetic 75W90 oil.
- (7) Replace filter when indicator shows 25 inches or every two years whichever occurs first.

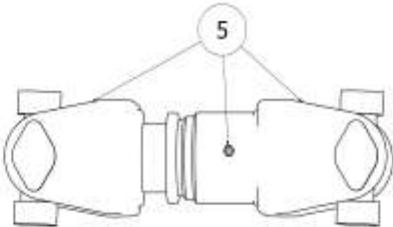
Lubrication Points



Lubrication Points

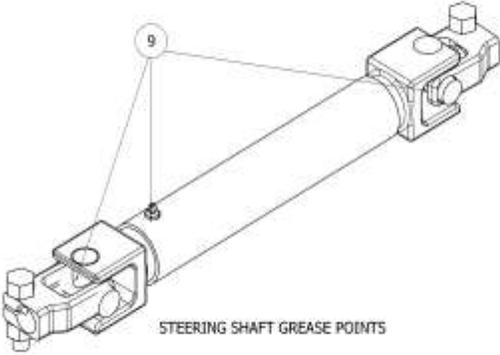
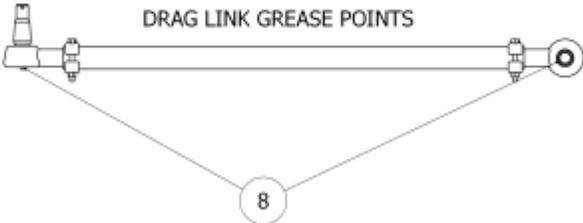


REAR AXLE GREASE POINTS

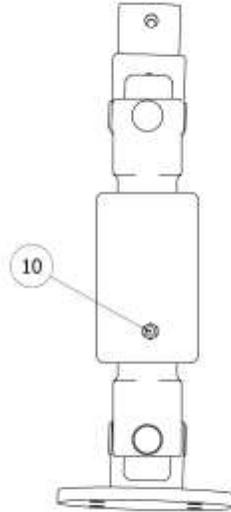


MAIN DRIVESHAFT

Lubrication Points



Lubrication Points



FAN DRIVESHAFT GREASE POINTS

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Lubrication Points

NO.	Components	Remarks	Total
1	ZF Independent Front Suspension Knuckle Post	Two grease fittings; One on top & bottom of knuckle post, lubricate both sides of suspension	4
2	Knuckle Pins	Two grease fittings; one on top and one on bottom of knuckle pin. Lubricate both sides of suspension.	4
3	Height Control Linkage Pins	Two grease pins per Linkage Front and RearSuspension	8
4	Main Driveshaft	Two grease fittings; lubricate both universal joints.	3
5	Automatic Slack Adjusters	One grease fitting on each slack adjuster. One adjuster on each side of the rear axle.	2
6	Rear Brake Camshaft Bracket	One grease fitting on each bracket; Pump in grease until it appears at the slack adjuster end of the bracket. Lubricate both sides of the rear axle.	2
8	Fan Driveshaft	One grease fitting on slip joint.	1

Maintenance Parts

Primary Fuel Filter / Water Sep W/ WIF sensor

Fleetguard part # FS1003

Tiffin part # 31647

Secondary Fuel Filter

Fleetguard part # FF5636

Engine Oil Filter

Fleetguard part # LF9009

Engine Air Filter

Parker / Racor # 094973007

Tiffin part # 30596

Alternator / AC Belt

Gates part # K080755

Tiffin part # 5000139

Fan Drive Belt

Carlisle part # RSVX-750-2

Tiffin part # 32306

**For assistance with your
Tiffin PowerGlide Chassis...**

Please contact one of the following
Chassis Specialists at Tiffin Motorhomes, Inc.

256-356-8661

Plant Manager
Gary Harris, extension 2288

Parts
Bobby Luther, extension 2382

Mechanical Engineer
Brad Warner, extension 2267

Electrical Engineer
Dennis Baldwin, extension 2363

Please have your Chassis VIN # ready
when you call

Pre-Trip Inspection

- Check fluid levels & add as necessary
- Check tire inflation pressure
- Look for fluid leaks

Before starting your motor home daily, a few things must be checked. By doing so, you ensure that a safe trip is in order and lessen your chances of experiencing difficulties while on the road.

- Check the tires for proper inflation pressure and any damage. Also check the inner duals. Refer to the air pressure charts in this manual for proper inflation pressures.
- Look for fluid leaks under the motor home. This can prevent any serious problems from occurring later.
- Check the coolant level in the reservoir and add a 50/50 mix of coolant and water if necessary. This reservoir can be found on the rear of your vehicle.
- Check SCA (supplemental coolant additive) and freeze point every 6 months or 25,000 miles. Recharge as required.

CAUTION: IF THE WATER TEMP IN YOUR ENGINE IS GREATER THAN 120 DEGREES, DO NOT REMOVE THE RADIATOR CAP! YOU COULD BE SEVERELY BURNED!

- Approximate COOLING SYSTEM CAPACITIES—does not include the heater core or other auxiliary systems added by coach manufacturer:
 - Cummins ISL - Side Radiator 56 Qt. or 14 Gallons.
 - Check transmission fluid level
 - Check engine oil level
 - Check for small animals in engine compartment like squirrels, and cats
 - Check the power steering fluid reservoir

Pre-Trip Inspection

Check fuel/water separator

ISC / ISL

- Check fuel/water separator and drain any water or contamination that may be present.

After you have completed your inspection, you may now start your engine. Turn the key to the run position and wait for the wait to start light (in some cases it may read "Inlet heater") to turn off. You may now start the engine. ***Never use ether or any other starting fluids to start the electronic engine. The inlet heater can ignite the fumes and cause an explosion in the air inlet system.*** Once you have started the engine, monitor your gauges carefully. Make sure that the oil pressure rises within 15 seconds. If it does not, shut down the engine and call a repair facility to determine the cause.

Pre-Trip Inspection



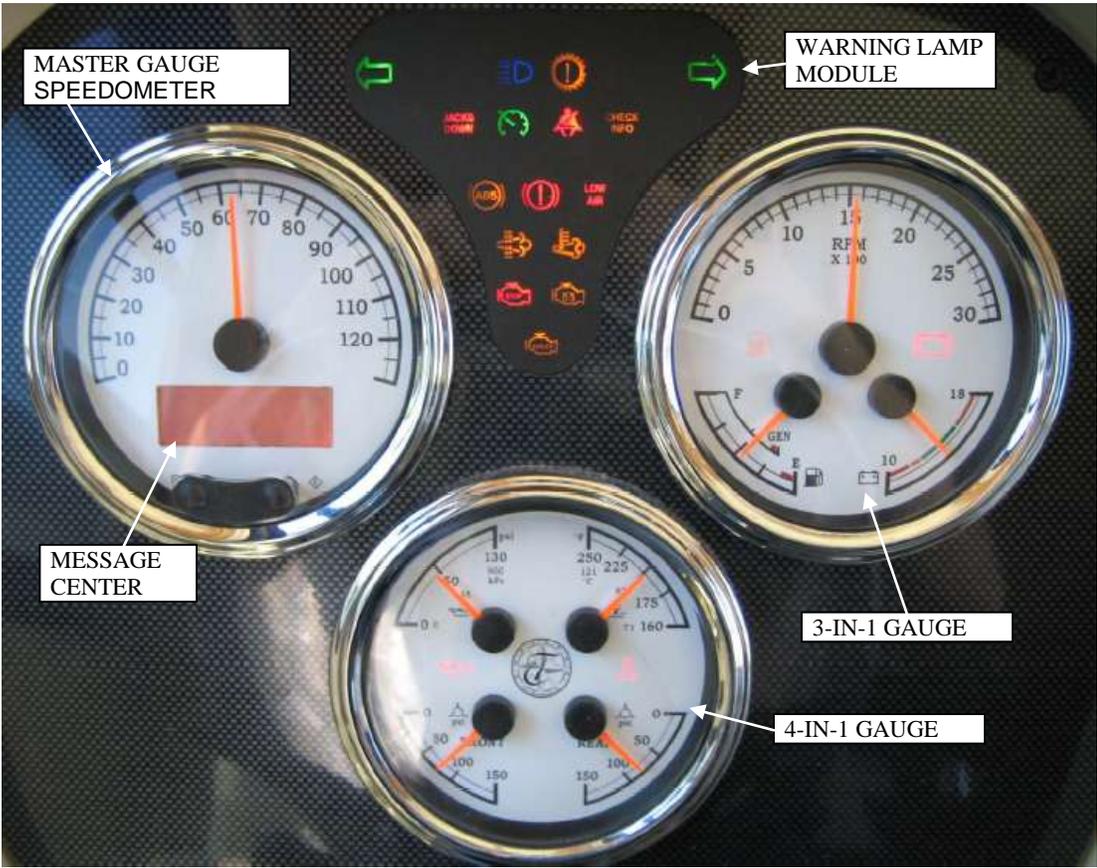
Filter Restriction Indicator

- Check air filter restriction indicator

Brand New Air Cleaner
10" to 12" of Vacuum

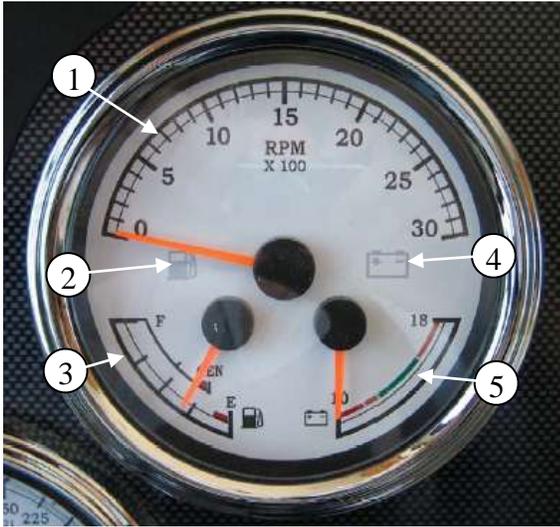
- Engine Air Cleaner Element should be changed when the air inlet restriction indicator reaches 25 inches of vacuum **or** every two years whichever occurs first.

Instruments & Controls

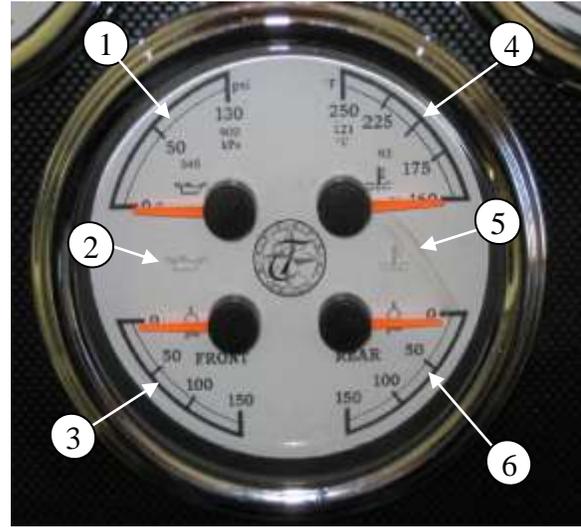


Gauge and Warning Lamp Layout

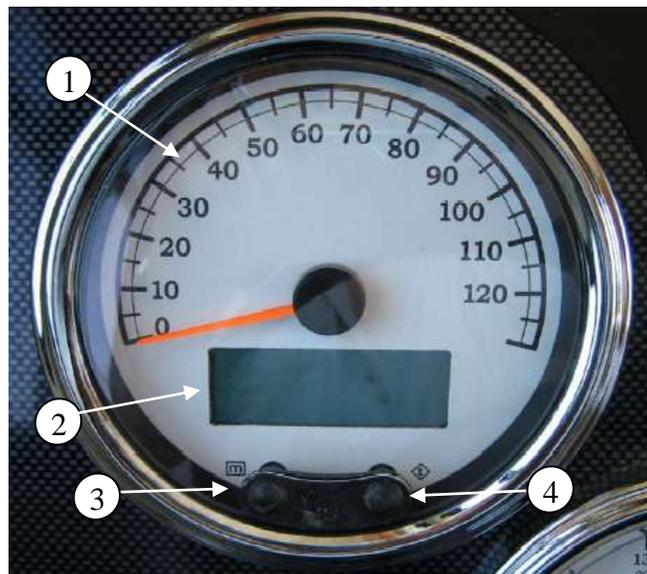
Instruments & Controls



1. Tachometer
2. Low Fuel Warning Lamp
3. Fuel Gauge
4. Low Battery Warning Lamp
5. Voltmeter

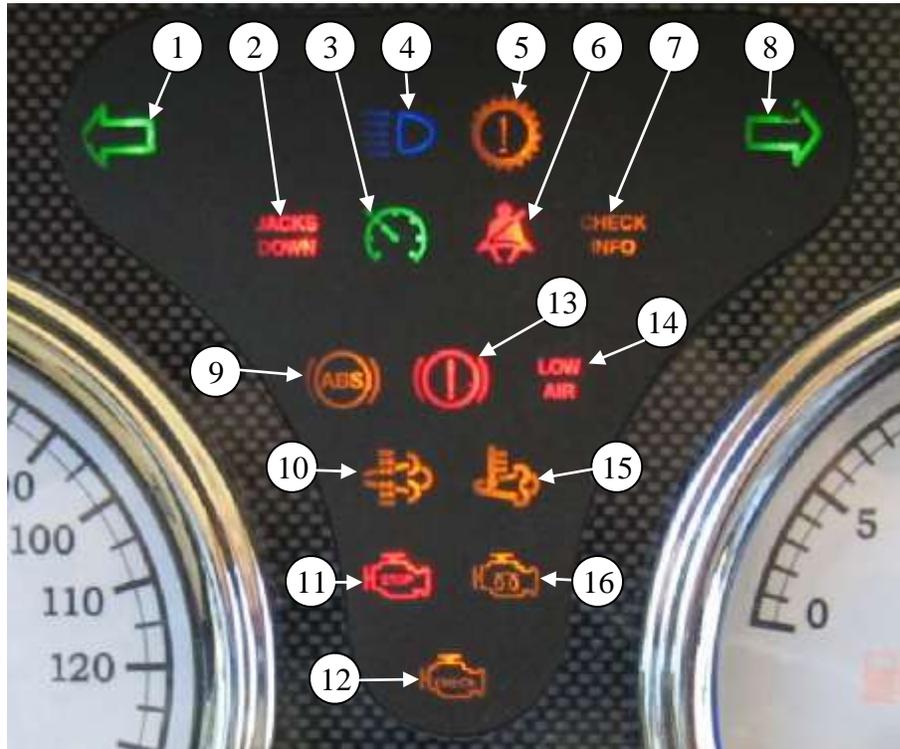


1. Oil Pressure Gauge
2. Oil Pressure Low Warning Lamp
3. Front (Secondary) Air Press. Gauge
4. Coolant Temperature Gauge
5. High Temperature Warning Light
6. Rear (Primary) Air Press. Gauge



1. Speedometer
2. Message Center
3. Message Center "m" Control
4. Message Center "t" Control

Instruments & Controls



Warning Lamp Module

1. Left Turn Indicator
2. Jacks Down Warning
3. Cruise Switch Status
4. Headlamp High Beam Indicator
5. Check Transmission Warning
6. Seat Belt Warning
7. Check Message Center
8. Right Turn Indicator
9. Check ABS Warning Light
10. Diesel Particulate Filter Indicator Lamp
11. Stop Engine Warning Lamp
12. Check Engine Warning Lamp
13. Park Brake Indicator
14. Low Air Warning Indicator
15. High Exhaust Temp Warning Lamp
16. Wait To Start Lamp

Instruments & Controls

Message Center

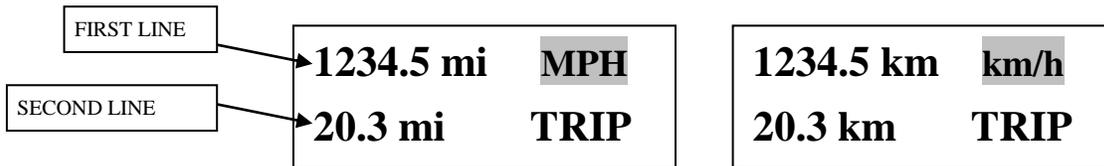
During normal operation the LCD displays the odometer value on the top line and a selected parameter on the second line.

DRIVE MODE - Display First Line

First line display parameters are odometer and measurement unit selection. Speedometer can be set to read MPH or km/h by changing this selection. See section on settings and diagnostics.

Speedometer Setup - Units

Speedometer can be set to read MPH or km/h by changing this selection. See section on settings and diagnostics.



Odometer

The odometer function is always shown with key ON. It can be displayed on the LCD in miles or kilometers. The odometer reading can be displayed when the ignition switch is OFF by activating the gauge backlight.

DRIVE MODE - Display Second line

Second line display parameters are selected by pressing the **m** button for less than 5 seconds. Pressing the **m** or **t** buttons displays a different parameter from the list.



The selected parameter is highlighted with reverse video (**sample**). The selected parameter is retained automatically after 5 seconds of inactivity; no further button presses are required. When the parameter is retained, the reverse video disappears.

Instruments & Controls

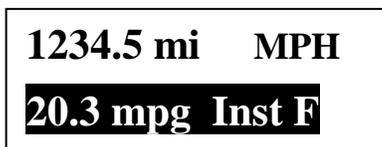
Trip Odometer

** Metric version reads in km*



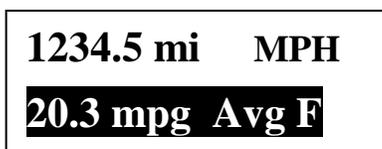
Instantaneous Fuel Economy

** Metric version reads in L/100km*

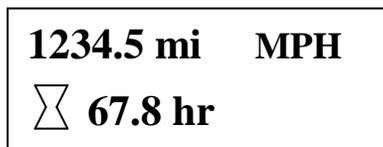


Average Fuel Economy

** Metric version reads in L/100km*



Hourmeter



Instruments & Controls

Idle Speed Adjustment

When vehicle speed is 0, the cruise on/off switch is in the off position and the cruise control Set or Resume switch is pressed, the Idle Speed Adjust screen will display on the message center.



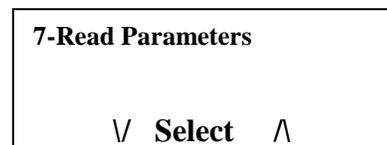
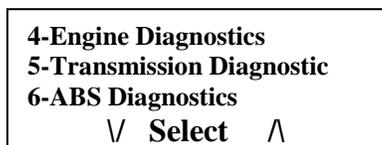
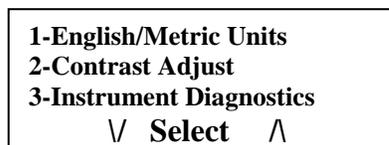
Idle speed is adjusted by using the Set & Resume or by using the message center control switches. The actual engine speed will be displayed as the adjustment is made. Once the Set or Resume switch has been released, there will be a 10 second delay in removing the Idle Speed Adjust screen from the LCD. The new idle speed will be retained in the engine control module as the default setting.

Settings and Diagnostic Screens

The Settings and Diagnostic screens can only be accessed when the vehicle speed is equal to 0 mph and the display is in its normal operating (Drive Mode) screen. Pressing and holding the **m** button for longer than 5 seconds enables the Settings and Diagnostics menu.

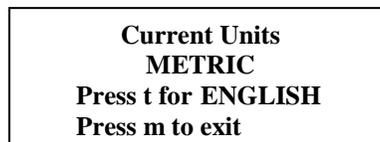
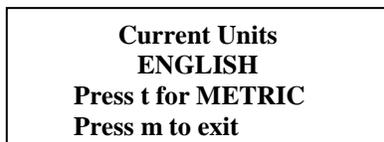


Once in the Settings and Diagnostics menu, pressing the **m** or **t** buttons separately moves the reverse video highlight (**example**) up or down through the list, as indicated by the arrows. The highlighted item is selected when both **m** and **t** buttons are pressed at the same time. If no button is pressed for 5 seconds, the LCD will go back to the standard Drive Screen. The items available in the menu are:



Set Units

Enables the screen used to select if values are to be displayed in English or Metric units



Instruments & Controls

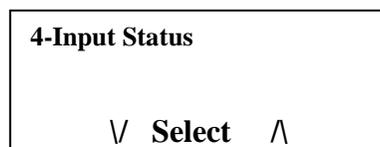
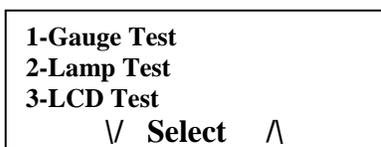
Contrast

Enables the screen used to set the LCD contrast. Pressing the **m (+)** button will increase contrast while pressing the **t (-)** button will decrease contrast. After 5 seconds of inactivity, the screen reverts back to the Drive Mode screen. The new contrast setting is written to memory upon returning to the Drive Mode screen.



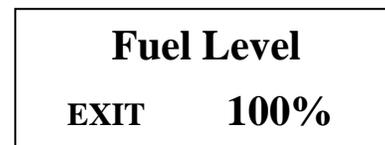
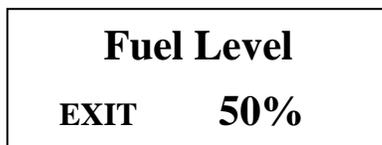
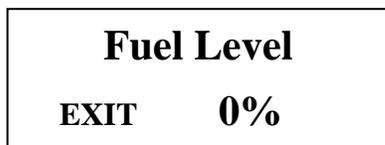
Instrument Diagnostics

Enables the screens used to perform diagnostic testing of the instrument system. Navigation through these menus is the same format as the main menu.



Gauge Test

Each gauge pointer will be driven through three positions, pausing at each position for ½ second. The LCD shows the position of the pointer as a percentage of full scale. At the end of the test, the gauges revert back to their original pointer position and the program returns to the Instrument Diagnostics menu. When available, the warning light internal to the gauge will illuminate steady for the gauge being tested. Pressing the **m** button (Exit) will end the test and return to the Instrument Diagnostics menu. Sample LCD screens:



Instruments & Controls

Lamp Test

Each warning bank light in the instrument panel that is controlled by the gauge network will be tested. This test does not test the actual light on the vehicle (vehicle load). Warning lights in the secondary gauges are not tested with this feature. They are tested during the Gauge Test diagnostic. At the start of the test, all warning bank lights are turned off. Each light is then toggled to the "on" state, and then "off". The LCD displays the name of the light being tested and its status. At the end of the test, the lights revert back to their original state (on or off) and the program returns to the Instrument Diagnostics menu. Pressing the *m* button (Exit) will end the test and return to the menu. Sample LCD screens:

<p>High Beam</p> <p>EXIT ON</p>

<p>High Beam</p> <p>EXIT OFF</p>
--

LCD Test

Displays the ACTIA logo in normal and reverse video three times and then returns to the Instrument Diagnostics menu.

Inputs

The module, pin number, and status of each input defined in the system are displayed for this test. Pressing the *m* button exits the test and returns to the menu. Pressing the *t* button scrolls the display to the next 4 inputs. For binary inputs, the value of "high" and "low" refer to the voltage level at the connector pin. This information is continuously updated to assist in troubleshooting

<p>Press <i>t</i> to Scroll</p> <p>Press <i>m</i> to Exit</p>

M-1 Fuel Level	85 Ω
M-4 Dimmer	8.4V
M-5 Service Brake	High
M-6 Park brake	High

WB-1 Cruise Enable	High
WB-2 Cruise Set	High
WB-3 Cruise Resume	High
WB-4 Cruise Cancel	High

M-11 Ignition	High
M-12 Left Turn	Low
M-13 Right Turn	Low
M-14 Alarm in	Low

WB-5 Chassis ID1	High
WB-8 Jacks Down	High

Instruments & Controls

Engine Diagnostics

Enables the screen used to display active Engine fault codes.

SPN 100	FMI 1
SPN 110	FMI 0
End of list	
∨	Exit ∧

Transmission Diagnostics

Enables the screen used to display active Trans fault codes. Screen format is the same as the Engine Diagnostics Screen.

ABS Diagnostics

Enables the screen used to display active Trans fault codes. Screen format is the same as the Engine Diagnostics Screen.

Read Parameters

Enables the screen used to display various parameters received by the master gauge. The main use for these screens is in troubleshooting the system.

Eng RPM	775 RPM
Air Front	124 PSI
Air Rear	124 PSI
∨	EXIT ∧

Fuel Level	100%
Coolant T	160°F
Oil Press	54 PSI
∨	EXIT ∧

Battery	13 V
Trans Temp	160°F
Dimmer %	0%
∨	EXIT ∧

Engine Load	50 %
Current Gear	N
Barometric Pres	14 PSI
∨	EXIT ∧

Engine Hours	73.2
∨	EXIT ∧

Instruments & Controls

Setup Menu

Pressing **m** and **t** while turning the ignition on enters the setup menu. Once in the Setup menu, pressing the **m** or **t** buttons separately moves the reverse video highlight (**example**) up or down through the list, as indicated by the arrows. The highlighted item is selected when both **m** and **t** buttons are pressed at the same time. If no button is pressed for 5 seconds, the LCD will go back to the standard Drive Screen.

Self Test

When YES is selected, the start up self test will zero the pointers, sound three tones from the speaker, sweep the gauge pointers through 50%, 100%, then back to zero, and turn all warning lights on for 5 seconds. When NO is selected the pointers will zero and all warning lights will be turned on for 5 seconds. Pressing **t** toggles between YES and NO, and pressing **m** exits back to the Setup Menu screen. The default setting for this is YES.

Self-Test Enabled?
YES
Press **t** to toggle
Press **m** to exit

Self-Test Enabled?
NO
Press **t** to toggle
Press **m** to exit

Cruise Switch Type

This selection changes how the master gauge interprets the three cruise control switch inputs. Upon entering this screen the present selection will be highlighted in **reverse video**. The operator is allowed to select the other method by pressing the **t** button. Selecting VIP will not be allowed if the binary input selecting the Rostra Stalk is hardwired low.

Cruise Switch Type
ROSTRA STALK
Press **t** to toggle
Press **m** to exit

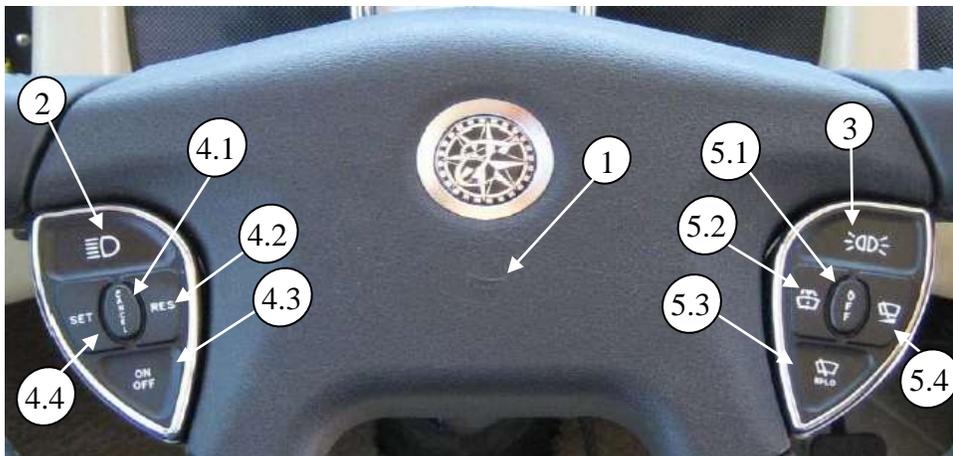
Self-Test Enabled?
VIP SMART WHEEL
Press **t** to toggle
Press **m** to exit

Instruments & Controls

SMARTWHEEL

GENERAL DESCRIPTION

The SmartWheel Steering Wheel offers control of the horn, headlamp and marker lamp flash, cruise control, and wiper functions from switches mounted on the steering wheel. The system consists of electronic switch pods attached to the wheel and the Control Module mounted in the Front Junction Box. Communication between the steering wheel and the Control Module is accomplished via four wires which utilize a clock-spring in the steering column as a connecting path to allow for wheel rotation. As each switch is closed, the Switch Pod generates a unique signal which is transmitted to the Control Module. The Control Module decodes that signal to determine which switch is closed and operates the corresponding outputs for that function. The same four wires provide power for back-lighting the steering wheel switches.



1. HORN

Press horn pad on the steering wheel will send the appropriate signal to the Control Module to cause the HORN output to be activated while the switch is pressed.

2. HEADLAMP FLASH

If the headlamps are turned on, pressing the switch will cause them to go off while the switch is pressed. In like manner, if the headlamps are turned off, pressing the switch will cause them to go on while the switch is pressed.

3. MARKER LAMP FLASH

If the marker lamps are turned on, pressing the switch will cause them to go off while the switch is pressed. In like manner, if the marker lamps are turned off, pressing the switch will cause them to go on while the switch is pressed.

4. CRUISE FUNCTIONS:

4.1 CRUISE CANCEL

Operation of this switch signals the cruise system to disengage without losing the current speed setting.

4.2 CRUISE RESUME

Operation of this switch actuates the Cruise Resume function of the engine controller.

4.3 CRUISE ON/OFF

Operation of this switch cycles the Cruise system from On to Off and back again. When the switch is in the on position the green cruise indicator lamp will illuminate.

4.4 CRUISE SET

Operation of this switch actuates the Cruise Set function of the engine controller.

5. WIPER FUNCTIONS:

The wiper control functions are implemented through control circuit to VIP module.

5.1 WIPER OFF

Operation of this switch causes all operation of the wipers to be canceled. This mode is also entered any time that the ignition is turned off.

Activation of any wiper function generates a "Headlamp On" signal from the Master which will only be reset by turning off the ignition, or by activating, then deactivating the dashboard headlamp switch.

5.2 WIPER WASH

Operation of this switch activates the wash pump relay while the switch is pressed. In addition, if none of the latching wiper functions (Wiper Lo/Hi or Variable) had been previously selected, the Low Speed Wiper will be activated for a period of approximately 3 wiper cycles after the switch is released. If any of the latching wiper functions (Wiper Lo/Hi or Variable) had been previously selected, the wipers will continue to run in the selected mode after the wash switch is released.

5.3 WIPER LO/HI

Operation of this switch initially causes the Low Speed Wiper function to activate. If the switch is pressed again the High Speed Wiper function will be activated. Subsequent presses of this switch will cause alternate operation of the wipers in the low or high speed mode.

5.4 WIPER VARIABLE

Operation of this switch initially causes the Low Speed Wiper function to activate for one wipe. If the switch is pressed again within approximately 30 seconds, the Low Speed Wiper function will be activated again and will repeat at an interval determined by the time between the last two operations of the switch. Additional switch operations will shorten the cycle. Activation of any other wiper mode cancels the variable mode. For example, in light rain or mist conditions the driver presses the switch once when the windshield first needs clearing. When the windshield again requires clearing the driver presses the button again - setting the time period between subsequent wipes to that required by current conditions.

Air Supply



Front Cust. Air Supply



Rear Customer Air Supply

- Manifold provided for auxiliary air source
 - Up to 120 psi
 - Quick connect fittings already installed at rear
- Can be used for:
 - Air horn supply
 - Fill tires
 - etc.

The manifold is located in the left front electrical box. The customer quick connect fittings are located in the left rear of the coach in the compartment labeled “Phone Jacks / TV Cables.”

CAUTION: Air Tanks should be bled of all pressure before any work is done on the air system!

Warranty

- Engine
 - Cummins ISL 5 Years 100,000 mi

- Transmission
 - Allison 3000 MH Series 5 Years 200,000 mi

- Chassis 3 Years 50,000 mi

- Drive Train 3 Years 50,000 mi

- Suspension 3 Years 50,000 mi

***All are completely transferable**

Allegro Owner's Club



The Allegro Owner's Club is an organization for Allegro motor home owners that provide access to rallies and more. Several rallies are organized throughout the year. The rallies are normally a package deal which includes your campground fees, entertainment, several meals, transportation to and from planned activities, suppliers exhibits, plenty of door prizes, and much more. Service technicians from Tiffin Motorhomes, Inc. are also available to do minor repairs to rally participants motor homes as well as sales representatives who can answer questions about your motor home and other issues. Of course, free time is scheduled into each rally for your personal leisure and interests.

If you purchase a new unit, Tiffin Motorhomes pays for your first year of membership. Club members are also eligible to purchase insurances at discounted rates as well as other companies that provide discounts to our Club members.

Local chapters are also set up throughout the country. These local chapters generally have monthly campouts which allow you to meet new friends and share information.

The Allegro Club also publishes a quarterly newsletter, *Side Roads*, which keeps members informed about rallies, caravans, chapter news, safety information, factory news, and much more. *Side Roads* is published in March, June, September, and December.

Allegro Club merchandise is also available at the Allegro Store in Red Bay, AL. You can purchase shirts, caps, jackets, and other accessories emblazoned with the Tiffin name brands.

For more information on the Allegro Club or to join, please contact membership coordination at 256-356-8522 or visit our web site: www.tiffinmotorhomes.com.

