

# FLUID AND FILTER

## CHANGE RECOMMENDATIONS

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## FLUID AND FILTER CHANGE RECOMMENDATIONS

The type of fluid and the frequency with which the fluid is changed can noticeably influence the performance and reliability of Allison automatic transmissions. Allison Transmission and General Motors have designed extensive specification and testing programs to verify the quality of fluids. And, as a result, have specific fluid and filter change interval recommendations, which closely match today's operating environments.

Local conditions, severity of operation or duty cycle may require more or less frequent fluid change intervals that differ from the information contained in the following charts. Allison Transmission recommends that customers use fluid analysis as the primary method for determining fluid change intervals. In the absence of a fluid analysis program, the fluid change intervals listed in the following charts should be used.

If you have questions regarding fluid or filter change intervals, or models not listed in this booklet, contact the Allison Technical Assistance Center at 1-800-252-5283.

## HIGH CAPACITY FILTERS

High Capacity Filters for Allison 3000/4000 Product Families transmissions were released into Allison production July, 2006, beginning with the following Transmission Serial Numbers:

6510670912 (3000 Series) 6610205144 (4000 Series)

High Capacity Filters allow extended filter change intervals when used with TranSynd™/TES 295 approved fluid.

High Capacity Filters can be identified by P/N 29545777 or P/N 29545780 stamped into the filter end cap. Prior filters (non-High Capacity) for Allison 3000/4000 Products Families Transmissions can be identified by P/N 29538231 or P/N 29538232 stamped into the filter end cap.

	Former Gold Series Filter Kit	Current High Capacity Filter Kit
3000/4000 Product Families	2 Inch Filter Kit P/N 29540493	2 Inch Filter Kit P/N 29545776
	4 Inch Filter Kit P/N 29540494	4 Inch Filter Kit P/N 29545779

Beginning with S/N 6510670912 and S/N 6610205144, transmissions equipped with Allison High Capacity Filters do not require an initial Main Filter change at 5000 miles/8000 km/200 hours.

Extended fluid and filter change intervals are only allowed with TranSynd™/TES 295 fluid and Allison High Capacity Filters. *Filters must be changed at or before recommended intervals.*

When replacing Gold Series Filters with High Capacity Filters in transmissions containing 100% TranSynd™/TES 295 fluid, High Capacity fluid and filter change intervals may be followed.

1000/2000 SERIES Fluid and Filter Change Interval Recommendations				
		DUTY CYCLE	TRANSYND™ OR TES 295	TES 389 OR DEXRON® VI* OR MIXTURE**
FLUID		General***	150,000 Miles (240,000 km) or 4,000 Hours or 48 Months	50,000 Miles (80,000 km) or 2,000 Hours or 24 Months
		Severe****	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months
FILTERS	Spin-On Control Main Filter	General***	50,000 Miles (80,000 km) or 2,000 Hours or 24 Months	50,000 Miles (80,000 km) or 2,000 Hours or 24 Months
		Severe****	50,000 Miles (80,000 km) or 2,000 Hours or 24 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months
	Internal Filter	All	Overhaul	Overhaul
	Lube/ Auxiliary Filter	General***	50,000 Miles (80,000 km) or 2,000 Hours or 24 Months	50,000 Miles (80,000 km) or 2,000 Hours or 24 Months
Severe****		50,000 Miles (80,000 km) or 2,000 Hours or 24 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months	

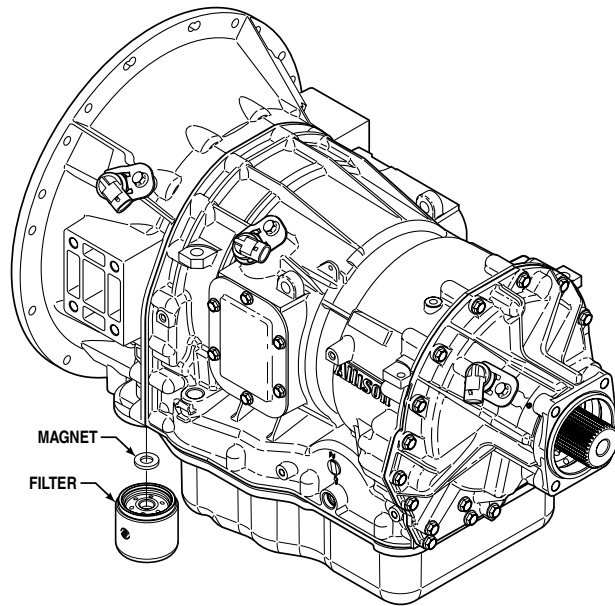
\*DEXTRON® VI may only be used in units beginning with S/N 6310670488 and 6320784373.  
 \*\*Less than 100% concentration of TranSynd™ or TES 295 approved fluid is considered a mixture and should utilize non-TES 295 filter change intervals.  
 \*\*\*General Vocation: All vocations not classified as Severe.  
 \*\*\*\*Severe Vocation: 2000 MH, On/Off Highway, Refuse, City Transit, Shuttle Transit.

1000/2000 Series Filters with Parts Numbers	
Filter	Parts Number
Control Main	P/N 29539579
Shallow Pan Suction (Overhaul Only)	P/N 29537965
Deep Pan Suction (Overhaul Only)	P/N 29537966

1000/2000 Series Fluid Capacities (Approximate)				
Sump	Initial Fill		Refill	
	Liters	Quarts	Liters	Quarts
Standard	14	14.8	10	10.6
Shallow	12	12.7	7	7.4

NOTE: Approximate quantities do not include external lines and cooler hose. Fluid fill capacity is dependent on vehicle configuration. Final fluid capacity must be determined by dipstick level (see Mechanic's Tips MT3004EN Section 1 or your Operator's Manual under "Care and Maintenance").

## REPLACING CONTROL MAIN FILTER



1. Remove the Control Main Filter by rotating it in the counterclockwise direction. Use a standard strap-type filter wrench.
2. Remove the magnet from the filter attachment tube or from the top of the filter element.
3. Clean any metal debris from the magnet. Report any metal pieces larger than dust to your service management.
4. Reinstall the magnet onto the filter attachment tube.
5. Lubricate the gasket on the Control Main Filter with transmission fluid.
6. Install, by hand, the Control Main Filter until the gasket on the Control Main Filter touches the converter housing or cooler manifold.

**CAUTION: Turning the Control Main Filter more than ONE FULL TURN after gasket contact will damage the filter.**

7. Turn the filter ONE FULL TURN ONLY after gasket contact.
8. Reinstall the drain plug and sealing washer. Tighten the drain plug to 30-40 N·m (22-30 lb ft).
9. Refill transmission. Refer to tables for fluid refill quantities.

**NOTE: Change fluid and filters at or before the recommended mileage, months or hours have elapsed, whichever comes first.**

3000 SERIES Gold Series Filters Fluid and Filter Change Interval Recommendations				
		DUTY CYCLE	TRANSYND™ OR TES 295	TES 389 OR DEXRON® VI* OR MIXTURE**
FLUID		General***	150,000 Miles (240,000 km) or 4,000 Hours or 48 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months
		Severe****	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months
FILTERS	Main Filter Initial change at 5,000 Miles (8,000 km) or 200 Hours	General***	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months
		Severe****	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months
	Internal Filter	All	Overhaul	Overhaul
	Lube/ Auxiliary Filter	General***	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months
Severe****		75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months	

\*DEXTRON® VI may only be used in units beginning with S/N 6510717075.  
 \*\*Less than 100% concentration of TranSynd™ or TES 295 approved fluid is considered a mixture and should utilize non-TES 295 filter change intervals.  
 \*\*\*General Vocation: All vocations not classified as Severe and Intercity Coach with duty cycle of less than or equal to one stop per mile.  
 \*\*\*\*Severe Vocation: All Retarders, On/Off Highway, Refuse, Transit, and Intercity Coach with duty cycle greater than one stop per mile.

Gold Series Filter and Gasket Kits			
Initial 5,000 Mile (8,000 km) Filter Kit		Filter Kit	
2 Inch Filter Kit	P/N 29540495	2 Inch Filter Kit	P/N 29540493
4 Inch Filter Kit	P/N 29540496	4 Inch Filter Kit	P/N 29540494

High Capacity Filter and Gasket Kits	
Filter Kit	Part Number
2 Inch Filter Kit	P/N 29545776
4 Inch Filter Kit	P/N 29545779

3000 SERIES High Capacity Filters Fluid and Filter Change Interval Recommendations				
		DUTY CYCLE	TRANSYND™ OR TES 295	TES 389 OR DEXRON® VI* OR MIXTURE**
FLUID		General***	300,000 Miles (480,000 km) or 6,000 Hours or 48 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months
		Severe****	150,000 Miles (240,000 km) or 6,000 Hours or 48 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months
FILTERS	Main Filter	General***	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months
		Severe****	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months
	Internal Filter	All	Overhaul	Overhaul
	Lube/ Auxiliary Filter	General***	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months
Severe****		75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months	

3000 SERIES Fluid Capacities (Approximate)				
Sump	Initial Fill		Refill	
	Liters	Quarts	Liters	Quarts
4 Inch	27	29	18	19
2 Inch	25	26	16	17

NOTE: Approximate quantities do not include external lines and cooler hose. Fluid fill capacity is dependent on vehicle configuration. Final fluid capacity must be determined by dipstick level (see Mechanic's Tips MT3004EN Section 1 or your Operator's Manual under "Care and Maintenance").

**NOTE: Change fluid and filters at or before the recommended mileage, months or hours have elapsed, whichever comes first.**

4000 SERIES Gold Series Filters Fluid and Filter Change Interval Recommendations						
	TRANSMISSION MODEL	DUTY CYCLE	TRANSYND™ OR TES 295	TES 389 OR DEXRON® VI* OR MIXTURE**		
FLUID	4000 w/ 2" and 4" Sump	General***	150,000 Miles (240,000 km) or 4,000 Hours or 48 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months		
	4000 w/2" Sump	Severe****	50,000 Miles (80,000 km) or 2,000 Hours or 24 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months		
	4000 w/4" Sump	Severe****	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months		
FILTERS	Main Filter Initial change at 5,000 Miles (8,000 km) or 200 Hours	4000 w/2" Sump	General***	50,000 Miles (80,000 km) or 2,000 Hours or 24 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months	
			Severe****	50,000 Miles (80,000 km) or 2,000 Hours or 24 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months	
		4000 w/4" Sump	General***	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months	
			Severe****	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months	
		Internal Filter	4000 w/ 2" and 4" Sump	All	Overhaul	Overhaul
			Lube/Auxiliary Filter	4000 w/2" Sump	General***	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months
	Severe****	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months			12,000 Miles (20,000 km) or 500 Hours or 6 Months	
	4000 w/4" Sump	General***		50,000 Miles (80,000 km) or 2,000 Hours or 24 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months	
		Severe****		50,000 Miles (80,000 km) or 2,000 Hours or 24 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months	
	Lube/Auxiliary Filter	4000 w/4" Sump	General***	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months	
			Severe****	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months	

4000 SERIES High Capacity Filters Fluid and Filter Change Interval Recommendations					
	TRANSMISSION MODEL	DUTY CYCLE	TRANSYND™ OR TES 295	TES 389 OR DEXRON® VI* OR MIXTURE**	
FLUID	4000 w/ 2" and 4" Sump	General***	300,000 Miles (480,000 km) or 6,000 Hours or 48 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months	
		Severe****	150,000 Miles (240,000 km) or 6,000 Hours or 48 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months	
FILTERS	Main Filter	4000 w/ 2" and 4" Sump	General***	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	25,000 Miles (40,000 km) or 1,000 Hours or 12 Months
			Severe****	75,000 Miles (120,000 km) or 3,000 Hours or 36 Months	12,000 Miles (20,000 km) or 500 Hours or 6 Months
	Internal Filter	4000 w/ 2" and 4" Sump	All	Overhaul	Overhaul
			Lube/Auxiliary Filter	4000 w/ 2" and 4" Sump	General***
	Lube/Auxiliary Filter	4000 w/ 2" and 4" Sump			Severe****

\*DEXTRON® VI may only be used in units beginning with S/N 6610220990.  
 \*\*Less than 100% concentration of TranSynd™ or TES 295 approved fluid is considered a mixture and should utilize non-TES 295 filter change intervals.  
 \*\*\*General Vocation: All vocations not classified as Severe and Intercity Coach with duty cycle of less than or equal to one stop per mile.  
 \*\*\*\*Severe Vocation: All Retarders, On/Off Highway, Refuse, Transit, and Intercity Coach with duty cycle greater than one stop per mile.

Gold Series Filter and Gasket Kits			
Initial 5,000 Mile (8,000 km) Filter Kit		Filter Kit	
2 Inch Filter Kit	P/N 29540495	2 Inch Filter Kit	P/N 29540493
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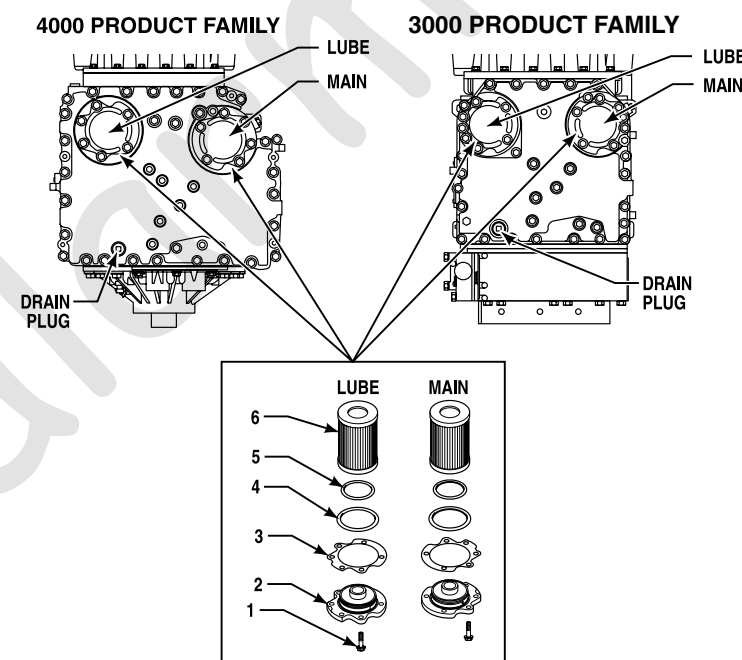
NOTE: Approximate quantities do not include external lines and cooler hose. Fluid fill capacity is dependent on vehicle configuration. Final fluid capacity must be determined by dipstick level (see Mechanic's Tips MT3004EN Section 1 or your Operator's Manual under "Care and Maintenance").

4000 SERIES Fluid Capacities (Approximate)				
	Initial Fill		Refill	
Sump	Liters	Quarts	Liters	Quarts
4 Inch^	45	48	37	39
2 Inch^	38	40	30	31

^Add 2.8 liters (3 quarts) for transmission with PTO.

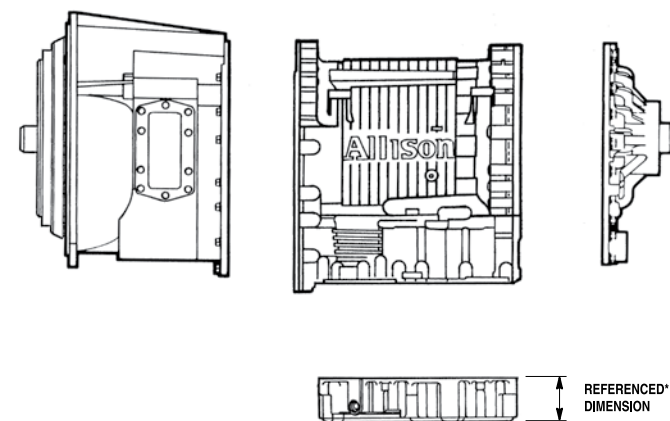
NOTE: Approximate quantities do not include external lines and cooler hose. Fluid fill capacity is dependent on vehicle configuration. Final fluid capacity must be determined by dipstick level (see Mechanic's Tips MT3004EN Section 1 or your Operator's Manual under "Care and Maintenance").

### 3000/4000 PRODUCT FAMILIES FILTER LOCATION



NOTE: Torque all filter cover retaining bolts to 51-61 N-m (38-45 lb ft)

NOTE: Main and Lube Filter designations cast into bottom of control module



\* 4" control module measures approximately 3.5"

2" control module measures approximately 1.75"

### FLUIDS

Allison Transmission recommends that customers use TranSynd™ or TES 295 equivalent fluids to extend drain intervals and to enhance transmission performance and durability in all operating environments. Customers may continue to choose from a wide variety of Allison-approved fluids.

Effective January 1, 2007, General Motors no longer licenses DEXRON®-III fluids. DEXRON®-VI fluids may be used in the 1000 and 2000 Product Families transmissions beginning with S/N 6310670488 and 6320784373; and in the 3000 and 4000 Product Families transmissions beginning with S/N 6510717075 and 6610220990. DEXRON®-VI shall not be used in Allison 500, 600 or 700 Series transmissions (AT, MT, HT, HT/V/CLT products).

Schedule 1 TES 389 and DEXRON®-VI fluids will have the same fluid change intervals as the current Allison-approved Non-TES 295 fluid intervals.

The use of Allison Engineering-approved C4 only fluids is limited to specific Allison Transmission models. A complete list of approved fluids can be found at [www.allisontransmission.com](http://www.allisontransmission.com).

### FLUID LOSS WITH FILTER CHANGE ONLY

When performing initial Main Filter change or changing Main and Lube Filters at recommended intervals, approximate fluid loss for each filter is as follows:

- 1000 and 2000 Product Families Transmissions  
Control Main Filter = 1 pint (0.47 liters)
- 3000 and 4000 Product Families Transmissions  
Main Filter = 2 quarts (1.9 liters)  
Lube Filter = 8 quarts (7.6 liters)