



## 1.0 General Information On Automatic Transmission Fluids

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## 1.0 General Information On Automatic Transmission Fluids

Automatic Transmission Fluid was developed especially for automatic transmissions. It requires additives which are carefully matched with each other, a high viscosity index and a solidification point below -40°F/-40°C.

Friction behavior of Automatic Transmission Fluid in plate-type clutches under very different operating conditions is extremely important. Other important factors are:

- Wear protection
- Oil film shear resistance
- Adhesive property
- Oxidation resistance
- Corrosion inhibition
- Sludge prevention
- Temperature-dependent viscosity changes
- Compatibility with sealing materials.

### 2.0 Oil Additives

Automatic transmissions are designed so that oil additives are not necessary. BMW disapproves the use of any oil additives and cannot accept the liability for any consequential damage which results from using oil additives.

### 3.0 Approved Automatic Transmission Fluids For Initial Fillings and Correcting Fluid Levels

#### 3.1 GM Transmissions

**USE OF ANY OTHER OIL WILL CAUSE A NON WARRANTABLE TRANSMISSION FAILURE**

**\*Transmission identification plate can be utilized to determine proper transmission fitted in vehicle**

#### **A4S 270R (THM-R1W)**

##### **E36**

318i/is/iC/ti from 1996 to 1999 production

323i/is/iC from 1998 to 1999 production

328i/is/iC from 1996 to 1998 production  
Z3 1.9 from 1996 to 1999 production  
Z3 2.3/2.8 from 1997 to 2000 production

All reputable brand name Automatic Transmission Fluids of the Dexron® III formulation.

**E39**

528i/iT from 1997-1999 production

All reputable brand name Automatic Transmission Fluids of the Dexron® III formulation.

**A4S 310R (THM-R1)**

**E34**

525i from 1990 to 1995 production

All reputable brand name Automatic Transmission Fluids of the Dexron® III formulation.

**E36**

318i/is/iC/ti from 1992 to 1995 production  
325i/is/iC from 1992 to 1995 production

All reputable brand name Automatic Transmission Fluids of the Dexron® III formulation.

**A5S 360R (GM5)**

**E46**

323i/Ci/Cic from 6/98 to 3/00 production  
323iT from 1//00 to 3/01 to production  
328i/Ci/Cic from 6/98 to 3/01 production

The transmission oil pan will be labeled with either Texaco ETL – 7045 or Dexron® III, please fill or top off with the proper fluid only. Do not mix Texaco ETL – 7045 and Dexron® III fluids.  
See S.I. Bulletin B 24 01 98.

**A5S 390R (GM 5)**

**E46**

330xi from 6/00 production to present  
325xiT from 9/00 production to present

**E53**

X5 3.0 from 8/03 production to present

**E83**

X3 2.5, 3.0 from 8/03 production to present

The transmission oil pan will be labeled with either Texaco ETL – 7045 or Dexron® III, please fill or top off with the proper fluid only. Do not mix Texaco ETL – 7045 and Dexron® III fluids.  
See S.I. Bulletin B 24 01 98.

**E85**

Z4 3.0 from 9/02 production to present  
Z4 2.5 from 9/02 production to present

No subsequent transmission fluid changes are necessary. Never mix any other oil with this transmission fluid when doing repairs or topping up.

ESSO LT 71141, BMW Part No. 83 22 9 407 807.

See S.I. Bulletin B 24 01 98.

## **GA6L45R (GM6)**

DEXRON-VI Automatic Transmission Fluid

### **E82**

128i from 12/07 production to present

### **E83**

X3 LCI from 9/06 production to present

### **E88**

128i from 12/07 production to present

### **E90**

328Xi from 9/06 production to present

### **E91**

328Xi from 9/06 production to present

The fluid can be sourced locally until a BMW PN is available. If the fluid cannot be sourced locally contact your Regional Technical Specialist via PuMA

## **3.2 ZF Transmissions**

**USE OF ANY OTHER OIL WILL CAUSE A NON WARRANTABLE TRANSMISSION FAILURE**

**\*Transmission identification plate can be utilized to determine proper transmission fitted in vehicle**

### **ZF 3HP22, 4HP22, 4HP24**

Utilizes Castrol TQ or Texaco Havoline Automatic Transmission Fluids of the Dexron® III formulation. Never mix any other oil with this transmission fluid when doing repairs or topping up.

### **A5S 310Z (5HP18)**

#### **E36**

M3 from 1995 to 1999 production

Utilizes a lifetime filling of synthetic transmission fluid, ESSO LT 71141, no subsequent transmission fluid changes are necessary. Never mix any other oil with this transmission fluid when doing repairs or topping up.

ESSO LT 71141, BMW Part No. 83 22 9 407 807.

See S.I. Bulletin B 24 01 98.

#### **E34**

530i/iT from 1993 through 1995 production

Utilizes Castrol TQ or Texaco Havoline Automatic Transmission Fluids of the Dexron® III formulation. Never mix any other oil with this transmission fluid when doing repairs or topping up.

### **A5S325Z (5HP19)**

#### **E46**

323i/Ci/Cic from 3/00 to 8/00 production

325iT from 4/01 production to present

330i/Ci/Cic from 6/00 production to present

325i/Ci/Cic from 9/00 production to present

No subsequent transmission fluid changes are necessary. Never mix any other oil with this transmission fluid when doing repairs or topping up.

ESSO LT 71141, BMW Part No. 83 22 9 407 807.  
See S.I. Bulletin B 24 01 98.

**E39**

525i/iT from 3/01 production to present  
530i from 3/01 production to present

No subsequent transmission fluid changes are necessary. Never mix any other oil with this transmission fluid when doing repairs or topping up.

ESSO LT 71141, BMW Part No. 83 22 9 407 807.  
See S.I. Bulletin B 24 01 98.

**A5S 440Z (5HP24)**

**E31**

840Ci from 9/96 to the present

No subsequent transmission fluid changes are necessary. Never mix any other oil with this transmission fluid when doing repairs or topping up.

ESSO LT 71141, BMW Part No. 83 22 9 407 807.  
See S.I. Bulletin B 24 01 98.

**E38**

740i/iL from 1/97 production to present

No subsequent transmission fluid changes are necessary. Never mix any other oil with this transmission fluid when doing repairs or topping up.

ESSO LT 71141, BMW Part No. 83 22 9 407 807.  
See S.I. Bulletin B 24 01 98.

**E39**

540i/iT from 1/97 production to present

No subsequent transmission fluid changes are necessary. Never mix any other oil with this transmission fluid when doing repairs or topping up.

ESSO LT 711 41, BMW Part No. 83 22 9 407 807.  
See S.I. Bulletin B 24 01 98.

**E53**

X5 4.4i from 9/99 production to present  
X5 4.6i from 9/01 production to present

No subsequent transmission fluid changes are necessary. Never mix any other oil with this transmission fluid when doing repairs or topping up.

ESSO LT 711 41, BMW Part No. 83 22 9 407 807.  
See S.I. Bulletin B 24 01 98.

**A5S 560Z (5HP30)**

**E31**

840Ci equipped with M60 engine

Utilizes a lifetime fill of transmission fluid, no subsequent oil changes are necessary on this transmission. If transmission fluid is required for repair purposes, use only the oil approved for this transmission. It is not permitted to mix this oil with other grades of transmission fluid.

Shell LA 2634, BMW Part No. 83 22 9 407 765.  
See S.I. Bulletin B 24 01 98.

**E31**

840Ci equipped with M62 engine  
850Ci equipped with M73 Engine

Utilizes lifetime fill of transmission fluid, no subsequent transmission fluid changes are necessary.

Never mix any other oil with this transmission fluid when doing repairs or topping up.  
ESSO LT 711 41, BMW Part No. 83 22 9 407 807.  
See S.I. Bulletin B 24 01 98.

### **E32**

740i/iL from 1993 through 1994 production

Utilizes a lifetime fill of transmission fluid, no subsequent oil changes are necessary on this transmission. If transmission fluid is required for repair purposes, use only the oil approved for this transmission. It is not permitted to mix this oil with other grades of transmission fluid.

Shell LA 2634, BMW Part No. 83 22 9 407 765.  
See S.I. Bulletin B 24 01 98.

### **E34**

540i/iT from 1993 through 1995 production

Utilizes a lifetime fill of transmission fluid, no subsequent oil changes are necessary on this transmission. If transmission fluid is required for repair purposes, use only the oil approved for this transmission. It is not permitted to mix this oil with other grades of transmission fluid.

Shell LA 2634, BMW Part No. 83 22 9 407 765.  
See S.I. Bulletin B 24 01 98.

### **Effective with model year 1995 and later:**

### **E31**

850Ci from 10/94 to 6/97 production  
840Ci from 12/95 to 8/96 production

Utilizes lifetime fill of transmission fluid, no subsequent transmission fluid changes are necessary.  
Never mix any other oil with this transmission fluid when doing repairs or topping up.

ESSO LT 711 41, BMW Part No. 83 22 9 407 807.  
See S.I. Bulletin B 24 01 98.

### **E38**

750iL from 1/95 production to present  
740i/iL from 7/94 to 12/96 production

Utilizes lifetime fill of transmission fluid, no subsequent transmission fluid changes are necessary.  
Never mix any other oil with this transmission fluid when doing repairs or topping up.

ESSO LT 711 41, BMW Part No. 83 22 9 407 807.  
See S.I. Bulletin B 24 01 98.

### **E39**

540i/iT from 3/96 to 12/96 production

Utilizes lifetime fill of transmission fluid, no subsequent transmission fluid changes are necessary.  
Never mix any other oil with this transmission fluid when doing repairs or topping up.

ESSO LT 711 41, BMW Part No. 83 22 9 407 807.  
See S.I. Bulletin B 24 01 98.

## **GA6HP19Z**

### **E82/E88**

135i All

The transmission fluid has a Condition Based Service interval of approximately 100,000 miles; please refer to S.I. B00 07 02 for further information. Never mix any other oil with this transmission fluid when doing repairs or topping up.

Shell M-1375.4, BMW Part No. 83 22 0 142 516.

### **E90/91/92**

325i, 328i, 330i, 335i, All

The transmission fluid has a Condition Based Service interval of approximately 100,000 miles; please refer to S.I. B00 07 02 for further information. Never mix any other oil with this transmission fluid when doing repairs or topping up.  
Shell M-1375.4, BMW Part No. 83 22 0 142 516.

#### **E60/61**

525i, 530i from 8/03 production to present

The transmission fluid has a Condition Based Service interval of approximately 100,000 miles; please refer to S.I. B00 07 02 for further information. Never mix any other oil with this transmission fluid when doing repairs or topping up.  
Shell M-1375.4, BMW Part No. 83 22 0 142 516.

#### **GA6HP19ZTU**

#### **E70**

3.0i from start production to present

The transmission fluid has a Condition Based Service interval of approximately 100,000 miles; please refer to S.I. B00 07 02 for further information. Never mix any other oil with this transmission fluid when doing repairs or topping up.  
Shell M-1375.4, BMW Part No. 83 22 0 142 516.

#### **E71**

X6 xDrive35i

The transmission fluid has a Condition Based Service interval of approximately 100,000 miles; please refer to S.I. B00 07 02 for further information. Never mix any other oil with this transmission fluid when doing repairs or topping up.  
Shell M-1375.4, BMW Part No. 83 22 0 142 516.

#### **GA6HP26Z**

#### **E60**

545i from 8/03 production to present  
550i All

The transmission fluid has a Condition Based Service interval of approximately 100,000 miles; please refer to S.I. B00 07 02 for further information. Never mix any other oil with this transmission fluid when doing repairs or topping up.  
Shell M-1375.4, BMW Part No. 83 22 0 142 516.

#### **E63, E64**

645Ci, 645CiC from start of production to present  
650Ci, 650CiC All

The transmission fluid has a Condition Based Service interval of approximately 100,000 miles; please refer to S.I. B00 07 02 for further information. Never mix any other oil with this transmission fluid when doing repairs or topping up.  
Shell M-1375.4, BMW Part No. 83 22 0 142 516.

#### **E65**

745i from 11/2001 production to present  
750i All

The transmission fluid has a Condition Based Service interval of approximately 100,000 miles; please refer to S.I. B00 07 02 for further information. Never mix any other oil with this transmission fluid when doing repairs or topping up.  
Shell M-1375.4, BMW Part No. 83 22 0 142 516.

#### **E66**

745Li from 3/2002 production to present  
750Li All  
760Li from 9/2002 production to present

The transmission fluid has a Condition Based Service interval of approximately 100,000 miles; please refer to S.I. Bulletin B 00 07 02 for further information. Never mix any other oil with this transmission fluid when doing repairs or topping up.  
Shell M-1375.4, BMW Part No. 83 22 0 142 516.

## **GA6HP26ZTU**

### **E70**

X5 4.8i from start production to present

The transmission fluid has a Condition Based Service interval of approximately 100,000 miles; please refer to S.I. Bulletin B 00 07 02 for further information. Never mix any other oil with this transmission fluid when doing repairs or topping up. Shell M-1375.4, BMW Part No. 83 22 0 142 516.

## **4.0 Checking Transmission Fluid Level**

Due to the substantial expansion of transmission fluid when heated it is only possible to measure the oil level correctly at specified oil temperatures (after driving a distance of about 12 mi./20 km). All transmissions should be checked between a

### **ZF 3HP and 4HP**

Due to the substantial expansion of transmission fluid when heated it is only possible to measure the oil level correctly at specified oil temperatures (after driving a distance of about 12 mi./20 km).

See S.I. Bulletins B 24 02 85 (1027) and B 24 01 98.

### **A5S 560Z, A5S440Z, GA6HP19Z, GA6HP26Z, GA6HP26Z, A5S325Z, A5S 310Z**

All 5 and 6 speed transmissions require the fluid to be checked when fluid temperature is between 30-50° Celsius using DIS Plus or GT1. Do not check fluid level after temperature has exceeded 50° Celsius.

See S.I. Bulletin B 24 01 98.

### **A4S 270R, A4S 310R and A5S 360R**

For vehicles with or without a dipstick see S.I. Bulletin B 24 01 98.

## **5.0 Transmission Fluid Change Intervals (If Applicable)**

Please refer to applicable Service and Maintenance Checklist for each vehicle.