

# SERVICE BULLETIN



TSB-1039 INT.

February 15, 1994

## SIDECAR ADAPTER KITS

Harley-Davidson has received several requests concerning adapter kits for different year motorcycles combined with different year sidecars.

Use sidecar and motorcycle wiring schematics as an assembly aid.

### NOTE

Adapter kits are provided to adapt all TLE sidecars to all FLT model motorcycles from 1989 - 1994.

*Ultra models require both an audio and a lighting adapter.*

See Table below for correct adapter kits for your customer.

## FLT/TLE/TLE ULTRA SIDECAR ADAPTER KITS

ULTRA MOTORCYCLE MODEL YEAR	TLE-ULTRA SIDECAR MODEL YEAR	REQUIRED KITS		NOTES & EXCEPTIONS
1989-1990	1991	87166-83C	Connection Kit	1
		87550-92	Wiring Interface	2
1989-1990	1992-1993	87166-83C	Connection Kit	1
		87776-83	Brake Line Kit	3
		87550-92	Wiring Interface	2
		87559-94	Din Adapter	4
1989-1990	1994	87166-83C	Connection Kit	1
		87776-83	Brake Line Kit	3
		70058-94	Light Harness	5
		87554-94	Wiring Interface	6
		87555-94	Power Adapter	7
		87559-94	Din Adapter	4* (exception)
1991	1989-1990	87166-83C	Connection Kit	1
		87552-92	Wiring Interface	8
1991	1992-1993	87166-83C	Connection Kit	1
		87776-83	Brake Line Kit	3
		87553-92	Din Adapter	9
1991	1994	87166-83C	Connection Kit	1
		87776-83	Brake Line Kit	3
		70058-94	Light Harness	5
		87555-94	Power Adapter	7
		87556-94	Wiring Interface	10
		87559-94	Din Adapter	4** (exception)
1992	1989-1990	87776-92	Brake Line Kit	11
		87166-93	Connection Kit	12
		87552-92	Wiring Interface	8
		87553-92	Din Adapter	9

ROUTING	SERVICE MANAGER	SALES MANAGER	PARTS MANAGER	LEAD TECHNICIAN	TECHNICIAN NO. 1	TECHNICIAN NO. 2	TECHNICIAN NO. 3	TECHNICIAN NO. 4	RETURN THIS TO:
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## FLT/TLE/TLE ULTRA SIDECAR ADAPTER KITS (cont)

ULTRA MOTORCYCLE MODEL YEAR	TLE-ULTRA SIDECAR MODEL YEAR	REQUIRED KITS		NOTES & EXCEPTIONS
1992	1991	87776-92	Brake Line Kit	11
		87166-93	Connection Kit	12
		87553-92	Din Adapter	9
1992	1993	87776-92	Brake Line Kit	11
		87166-93	Connection Kit	12
1992	1994	87166-93	Connection Kit	12
		87776-92	Brake Line Kit	11
		70058-94	Light Harness	5
		87555-94	Power Adapter	7
		87556-94	Wiring Interface	10*** (exception)
1993	1989-1990	87166-93	Connection Kit	12
		87776-92	Brake Line Kit	11
		87552-92	Wiring Interface	8
		87553-92	DIN Adapter	9
1993	1991	87166-93	Connection Kit	12
		87776-92	Brake Line Kit	11
		87553-92	DIN Adapter	9
1993	1992	87166-93	Connection Kit	12
		87776-92	Brake Line Kit	11
1993	1994	87166-93	Connection Kit	12
		87776-92	Brake Line Kit	11
		70058-94	Light Harness	5† (exception)
		87556-94	Wiring Interface	10†† (exception)
1994	1989-1990	87166-93	Connection Kit	12
		87776-92	Brake Line Kit	11
		70028-94	Light Harness	14
		70058-94	Light Harness	15
		87557-94	Wiring Interface	13
		87558-94	Power Adapter	16
1994	1991	87166-93	Connection Kit	12
		87776-92	Brake Line Kit	11
		70028-94	Light Harness	14
		70058-94	Light Harness	15
		87553-92	Din Adapter	17
		87556-94	Wiring Interface	18
		87558-94	Power Adapter	16
1994	1992-1993	87166-93	Connection Kit	12
		87776-92	Brake Line Kit	11
		70028-94	Light Harness	14
		70058-94	Light Harness	15
		87556-94	Wiring Interface	18
1993-1994 (Japan)	1994	87560-94	Power Adapter	

## FLT/TLE/TLE ULTRA SIDECAR ADAPTER KITS (cont)

ULTRA MOTORCYCLE MODEL YEAR	TLE-ULTRA SIDECAR MODEL YEAR	REQUIRED KITS		NOTES & EXCEPTIONS
NON-ULTRA SIDECAR/MOTORCYCLE COMBINATIONS				
1994 FLTC, FLHTC	Pre-1994 sidecar	87776-92	Brake Line Kit	11
		87166-93	Connection Kit	12
		70054-94	Lighting Harness	††† (exception)
Pre-1994 FLTC, FLHTC	1994 sidecar	87776-92	Brake Line Kit	11
		87166-93	Connection Kit	12
		70058-94	Lighting Harness	5

See NOTES, following table.

See EXCEPTIONS, following NOTES.

### NOTES

NOTE 1. **Connection Kit** - This kit contains the mechanical components needed to connect the sidecar to the vehicle and its own instruction sheet. That sheet also covers how to hook up the sidecar's basic lighting wiring harness.

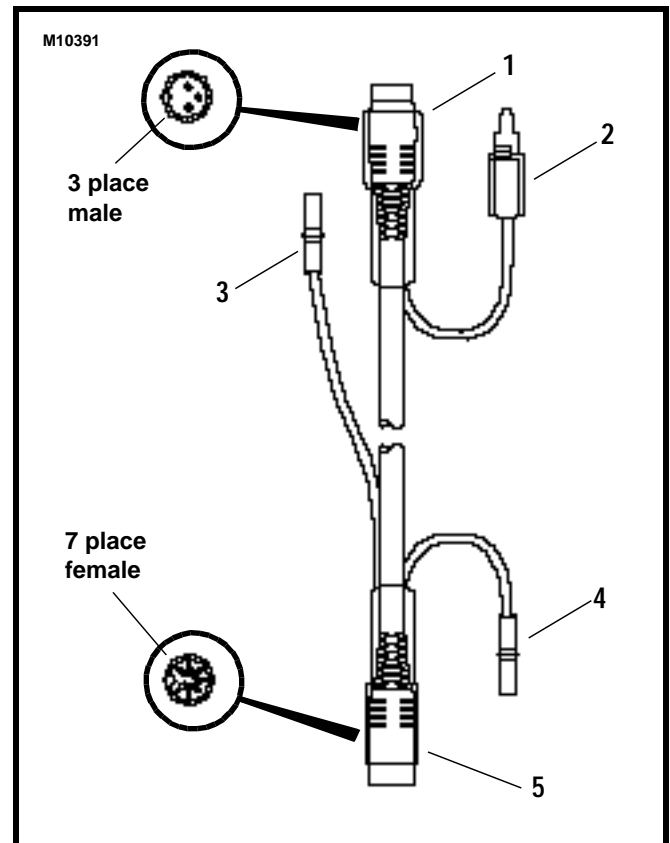
#### NOTE

*That sheet does not detail the harness changes for 1994.*

NOTE 2. **Wiring Interface** - This harness has 3 Amp connectors, 2 each of 10 places and 1 each of 8 places. Both 10 place connectors are inserted into the vehicle's harness at connectors 15A/B located under the seat. The remaining 8 place connector is coupled with SC-15B on the sidecar's harness. Connector SC-15A is left unused and its exposed pins should be packed with electrical contact grease and protected from damage.

NOTE 3. **Brake Line Kit** - This kit consists of an early style brake line designed to connect the sidecar's brake cylinder to the vehicle's rear master cylinder. The sidecar in this combination came originally equipped with a late style brake line. You will need to remove that late line and replace it with the early line to mate these two units.

NOTE 4. **Din Adapter** - This adapter cable allows you to plug the vehicle's 3 place DIN audio cable into the sidecar's 7 place DIN audio cable. It is connected as follows:



**Adapter Cable Part No. 87559-94**

2. Connect the **pod DIN** to connector SC49B on the sidecar.

#### NOTE

*You will be putting a 3 pin male connector into a 7 place female. See NOTE 4, above.*

#### NOTE

*SC49B in the 1993-1994 wiring diagrams is incorrectly labeled. It is labeled as SC49A accompanied by a normal arrow. This is wrong. It should appear as SC49B with an inverted arrow head.*

### INSTALLATION - Din Adapter, Part No. 87559-94

Refer to Illustration, the vehicle's wiring diagram, and the sidecar's wiring diagram for the call-outs.

1. Locate and separate the vehicle's 3 place DIN extension cable connector under the seat. You will be holding the **pod DIN** (a 3 pin male) and the **extension DIN** (a 3 socket female).

3. See Illustration. Connect the **extension DIN** to the adaptor end (1).
4. Connect adapter end (5) to connector SC49A on the sidecar.
5. Connect adapter end (3) to **pod DIN** jumper wire (single pin Amp connector coming out of pod DIN cable) on vehicle.
6. Connect adapter end (2) to **extension DIN** jumper wire.
7. Connect adapter end (4) to the single pin Amp connector attached to the blue/yellow wire on wiring interface 87550-92 described in NOTE 2.

NOTE 5. **Light Harness** - This harness converts the Deutsch style connector found on the 1994 sidecar to Amp style found on the earlier bikes. It handles the brake, tailight, and turn signal functions. Install it as follows:

1. Locate connector SC74A (4 pin male) on the sidecar. It may be connected to SC74B and therefore to sidecar harness 70028-94, or it may be hanging free, depending on how the sidecar came originally equipped.
2. Connect SC74A to the 4 socket Deutsch connector end of the light adapter harness.
3. Locate and separate connectors 22A&B on vehicle. They are found behind the left side cover, or to the rear of the seat.
4. Install the 2 eight place Amp connectors in the light adapter harness into their respective ends of 22A&B. This will leave a single place Amp connector on an orange wire left over. This connector is not used for stock applications.

NOTE 6. **Wiring Interface** - This interface harness has two 10 place Amp connectors, one eight place Deutsch connector and two loose (one on a white wire, the other on a blue/yellow wire) Amp style single place connectors. Find and separate connector 21A&B on the motorcycle. It is the first connector out of the passenger sound control panel on the right side of the seat. Insert the two 10 place connectors of the interface harness there. Find connector SC52A (8 pin Deutsch) coming from the sidecar and install the remaining Deutsch end of the interface harness into it. SC52B from the sidecar will be unused. Find connector 15A&B on the motorcycle (under the seat). Connector 15B, place #4 will be vacant, and should line up with a white wire in connector 15A. Install the loose wire from the interface harness into the vacant cavity. The remaining loose blue/yellow wire on the interface harness will be installed into place 4 of adapter cable 87559-94 pictured in Illustration.

NOTE 7. **Power Adapter** - This adapter will have a 2 pin Amp connector at one end, and two single place Amp connectors at the other, one black wire, the other orange. Connect the 2 pin connector to connector SC68B coming out of the sidecar. Connect the single orange pin of the power adapter to the remaining single orange socket coming from light harness 70058-94. Connect the single black socket of the power adapter to a chassis ground point from the motorcycle.

NOTE 8. **Wiring Interface** - This interface harness has two 8 place Amp connectors at one end and one 10 place Amp connector at the other. Find and separate connector 15A&B on the motorcycle (under the seat). Insert the two 8 place connectors of the interface harness there. Locate connector SC21A on the sidecar and connect the remaining 10 place end of the interface harness to it. Connector SC21B on the sidecar will not be used.

NOTE 9. **DIN adapter** - This adapter will have two 7 place DIN connectors, two 3 place DIN connectors and 2 loose black Amp connectors, one male, the other female. Locate and separate the 3 place DIN connector and its ground jumper on the motorcycle (under the seat). Insert the 2 three place DIN connectors and the two loose Amp connectors of the DIN adapter there. Locate the 2 seven place DIN connectors coming from the sidecar. Install the remaining 2 seven place DIN connectors of the DIN adapter to those from the sidecar.

NOTE 10. **Wiring Interface** - This interface harness will have two 8 place Amp connectors and two 8 place Deutsch connectors. It will also have one loose Amp pin on a blue/yellow wire. Locate and separate connector 15A&B on the motorcycle (under the seat). Insert the 2 Amp connectors in the wiring interface there. Locate Deutsch connectors SC52A and SC52B coming from the sidecar, and install the two remaining Deutsch connectors in the wiring interface to them. Connect the loose blue/yellow wire from the wiring interface to place 4 of the DIN adapter 87559-94, shown in Illustration.

NOTE 11. **Brake Line Kit** - This kit consists of a late style brake line designed to connect the sidecar's brake cylinder to the vehicle's rear master cylinder. The sidecar in this combination came originally equipped with a early style brake line. You will need to remove that early line and replace it with the late style line to mate these two units.

NOTE 12. **Connection Kit** - This kit contains the mechanical components needed to physically connect the car to the vehicle and its own instruction sheet. That sheet also covers how to hook up the sidecar's basic lighting wiring harness.

#### NOTE

*That sheet does not detail the harness changes for 1994*

NOTE 13. **Wiring Interface** - This interface harness will have a 10 place Amp connector at one end and two eight place Deutsch connectors with a single Amp connector on a white wire at the other. Connect the 10 place Amp connector of the wiring interface to connector SC21A from the sidecar. Connector SC21B from the sidecar will not be used. Find and separate connector 52A&B on the motorcycle, under the seat (item 5, Figure 44 in 1993-1994 Electrical Troubleshooting Guide). Insert the two eight place Deutsch connectors of the interface harness into 52A&B. Install the white loose single Amp connector on the interface

harness to the white loose single Amp connector coming from the sidecar.

NOTE 14. **Light Harness** - This harness will have two 8 place Deutsch connectors at one end and a 4 place Deutsch connector at the other. Find and separate connector 7A&B on the motorcycle under the left side cover (item 2, Figure 62, 1993-1994 Electrical Troubleshooting Guide). Insert the two 8 place Deutsch connectors on the sidecar adapter harness into 7A&B. Install the remaining 4 place Deutsch connector of the sidecar adaptor harness into Light Harness 70058-94.

NOTE 15. **Light Harness** - This harness will have one 4 place Deutsch connector at one end and two 8 place Amp connectors at the other, with a single loose Amp connector on an orange wire. Connect the 4 place Deutsch connector on the light harness to SC74B of sidecar adapter harness 70028-94. Connect the two 8 place Amp connectors on the light harness to the two 8 place Amp connectors coming from the sidecar as part of OE connection harness 70028-85A.

NOTE 16. **Power Adapter** - This adapter will have a 2 place connector at one end, and two separate single Amp connectors at the other, one on a black wire, the other on an orange. Plug the 2 place connector into the connector 68A on the motorcycle's fuse filter board under the left side cover. Plug the single orange Amp connector of the power adapter into the single orange Amp connector of light harness 70058-94. Plug the single black Amp connector of the power adapter into the single black Amp connector coming from the sidecar (that leads back to the sidecar's amplifier).

NOTE 17. **DIN adapter** - This adapter will have two 7 place DIN connectors, two 3 place DIN connectors and 2 loose black Amp connectors, one male, the other female. Locate the two 3 place DIN connectors and their ground jumpers on the sidecar. Insert the 2 three place DIN connectors and the two loose Amp connectors of the DIN adapter there. Locate and separate the seven place DIN connector on the motorcycle (under the seat). Install the remaining 2 seven place DIN connectors of the DIN adapter to those of the motorcycle.

NOTE 18. **Wiring Interface** - This interface harness will

have two 8 place Amp connectors and two 8 place Deutsch connectors. It will also have one loose Amp pin on a blue/yellow wire. Locate and separate connector SC15A&B on the sidecar. Insert the 2 Amp connectors in the wiring interface there. Locate Deutsch connectors 52A and 52B on the motorcycle under the seat (item 5, Figure 60, page 152, in the 1993-1994 Electrical Troubleshooting Guide), and install the two remaining Deutsch connectors in the wiring interface to them. The loose blue/yellow wire will be unused.

## EXCEPTIONS

\* See NOTE 4 - with the exception that step 7 should be:

7. Connect adapter end (4) to the single pin Amp connector attached to the blue/yellow wire on wiring interface 87554-94 mentioned above.

\*\* See NOTE 4 - with the exception that step 7 should be:

7. Connect adapter end (4) to the single pin Amp connector attached to the blue/yellow wire on wiring interface 87559-94 mentioned above.

\*\*\* See NOTE 10 - with the exception that the single loose blue/yellow wire will be unused.

† See NOTE 5 - with the exception that the loose orange Amp wire will not be used.

†† See NOTE 10 - with the exception that the single loose blue/yellow wire will be unused.

††† **Lighting Harness** - This harness will have two 8 place Deutsch connectors at one end and a 4 place Canon type receptacle at the other. Find and separate connector 7A from 7B on the motorcycle, under the left sidecover (item 2, Figure 62, page 154, 1993-1994 Electrical Troubleshooting Guide). Insert the two 8 place Deutsch connectors of the lighting harness there. Connect the 4 place Canon type connector of the lighting harness into the mating Canon connector found on the sidecar. You will have to unplug sidecar connector harness 70028-85A if present, because it will not be used in this application.