

PHILCO TRANSITONE SERVICE BROADCAST

DECEMBER, 1933

HERE'S A TUBE PULLER

MANY servicemen have experienced a need for an inexpensive tube puller. Removing tubes from the Models 5 and 10 either in car or on the bench is not always easy.

Considerable work has been done to develop a good tube puller for servicemen, but the price has been too high on all the specially designed tools. The best, and at the same time the most economical tube puller, has been developed by the servicemen themselves. Just where the idea originated is hard to say; it seems to have just happened in



FIG. 1

a number of places about the same time. Figs. 1 and 2 show the tube-pulling equipment and how it is used.

The special stranded cable, Philco Part No. 3484, thirty-six inches long, is looped through the Philco padding wrench 7696. With the loop large enough to pass over the tube, the padding wrench is placed so that the end is about even with that part of the tube where the glass joins the base. The stranded cable is then pulled tight. The excess cable is then pulled doubled back over the end of the wrench and wrapped around it so that the cable can be held by the hand holding the wrench.

It is now only necessary to pull on the wrench.



FIG. 2

The index finger of the hand should be placed on the side of the tube opposite the wrench to aid in guiding the tube out. If this is not done there is a tendency to pull the tube out at an angle, causing it to bind.

This description may sound a bit complicated. Actually taking tubes out this way is easy. Convince yourself. A few minutes' practice on the bench and you will be able to take out any tube much more easily and quickly than in the past.

Some servicemen may want to try it another way. Instead of looping the cable through the wrench, just thread one end of the cable through the wrench and make a slip knot on the end of the cable. The rest of the operation is the same as that described above.

3484 Cable \$0.17 foot (list price)
7696 Wrench35 each (list price)

If the cable is ordered in 36-inch lengths, the ends will be solder dipped to prevent fraying. If you order the cable in bulk it will be necessary for you to solder dip the ends when preparing it in lengths for use.

STEERING COLUMN CONTROL HOUSINGS

THERE are 50 or more control assemblies for Philco automobile radio, many of which you probably will never be called upon to service. It is important, however, that you have a complete record of the controls—what they are used for and the important parts that enter into the construction of the various controls.

Since there is little wear to the parts that go to make up the control, your replacement parts stock for servicing controls can be limited chiefly to dials, knobs, keys, locks, pilot lamps and the hardware necessary for mounting a control on a steering column. A spare control unit for the current model Receivers should also be stocked for quick replacement.

There are two basic type controls. The type used the most has direct drive and is shown in Fig. 3. The control knobs fasten on to the control ends of the flexible shafts. The control shown in Fig. 4 uses a gear type drive for the volume control shaft. In this type control, the knobs fasten on to short shafts or stubs in the control head and the shafts are coupled to these stubs. The volume control is connected through a gear train, while the tuning control shaft is coupled direct.

The early controls of this type had smaller openings in the rear for coupling the shaft casings, since the casings were straight ended (without the usual swelled or bell end.) These holes were enlarged later on to take the large bell end casing, as shown in Fig. 4., but the same part number was retained for the control housing. When ordering a control housing of the gear type and the one with the small casing holes is required, be sure to note this on the order.

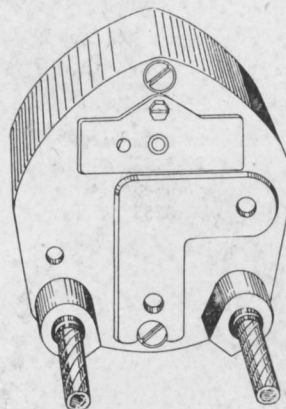


FIG. 3

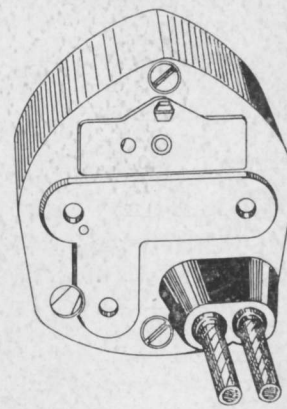


FIG. 4

DIRECT DRIVE CONTROLS—(See Fig. 3)

Control Assembly No. 42-5006

Consists of

Control Housing Only	6029	} Lock Retainer Assembly No. 42-5009
Lock Retainer	6031	
Lock Plate	6039	
Lock Spring (coil)	6111	
Washer	W-442	
Screw	W-145	
Screw (shaft end retaining)	6042	
Set Screw (shaft casing)	W-481	
Screw (lock assembly mounting)	W-523	

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This assembly has no shafts, lock, dial, pilot lamp, front plate, etc. It is the basic control assembly that can be used for Models 5, 6, 7, 8, 9, 10 and 12 controls and can be used with P, R, W, X and Y type shafts.

GEAR DRIVE CONTROLS—(See Fig. 4)

Control Housing Assembly No. 42-5027 Consists of

Control Housing Only	28-7011	} No. 42-5026
Shaft Retaining Screws	6042	
Set Screws	W-481	
Lock Retainer	29-7006	} No. 42-5024
Lock Plate	29-1442	
Lock Spring	28-1403	
Stud	28-6048	
Tuning Control Shaft (with set screw)	42-5016	
Volume Control Shaft Driven (with set screws)	42-5017	
Volume Control Shaft Driver	28-7009	
Intermediate Gear	28-7010	
Intermediate Gear Sleeve	28-6075	
Intermediate Gear Spring Washer	28-1456	
Intermediate Gear Mounting Screw...	W-849	
Lock Retaining Mounting Screw	W-833	

This assembly has no external shafts, lock, dial, pilot lamp, front plate, etc. It is the basic control assembly that is used for Models 5, 6, 9 and 12 gear type controls and can be used with T, U and V type shafts.

The pilot lamp bracket assembly 38-5091 is fastened to the above control assemblies with a W-745 mounting screw.

The standard cover plate, which is used alike on both the direct and gear drive controls, is part No. 6030. The screws for fastening the cover plate to the controls are W-611B.

Special cover plates used with the various car manufacturer special Receivers can only be purchased through the car manufacturer organizations.

The standard knobs are 03334 for the tuning control shaft and 06886 for the volume control shaft.

The dials used in the various steering column controls are:

Model	Part No.
7 and 8	6043
6 and 9	8255
B6 and B9	8257
5	27-5006
10	27-5022
12 (121)	6043
12 (122)	8255

The lock used in the direct drive control is 6036. The lock in the gear drive control is 28-8014. These are not interchangeable.

The dial which fits over the dial hub is firmly held in place by means of a spring spider, 6644. The same spider is used in both type controls.

The various types of flexible shafts are shown in the October issue of "Service Broadcast."

The controls for the various models are assembled by using the basic control and adding the following parts:

- Pilot Lamp Bracket and Mounting Screw
- Dial with Spider
- Lock
- Cover Plate with Screws
- Flexible Shafts
- Knobs

A partial list of the direct drive controls in common use is given below:

Receiver Model	Control Part No.	Flex. Shaft Part No.	Shaft Type	Special Note
7-8-12	04343	6128	Z	Also early 6-9.
		6129	Z	
B6-B9	06262	7739	Z	Early B6-B9.
		7740	Z	
B6-9	06918	7739	Z	
		7740	Z	
6-9	06941	6128	Z	
		6129	Z	
B6	42-5003	7739	Z	Without cover or knobs. These furnished by car manufacturer.
		7740	Z	
S6-S9	42-5004	6351	Z	With special 7887 cover plate.
		6352	Z	
5	42-5008	28-8006	R	
		28-8007	R	
P5	42-5010	28-8006	R	
		28-8007	R	
5 Chrysler	42-5011	28-8006	R	Without cover or knobs. These furnished by car manufacturer.
		28-8007	R	
B6	42-5052	28-8064	W	Without cover or knobs. These furnished by car manufacturer.
		28-8065	W	
5 Studebaker	42-5057	28-8113	Y	With special 7887 cover plate.
		28-8114	Y	
Auburn 5	42-5058	28-8113	Y	With special 28-7013 cover plate.
		28-8114	Y	
Nash 5	42-5059	28-8113	Y	With special 28-7015 cover plate.
		28-8114	Y	
Hupp 5	42-5060	28-8113	Y	With special 28-7014 cover plate.
		28-8114	Y	
6-9-12 Chrysler	42-5063	28-8099	X	Without cover or knobs. These furnished by car manufacturer.
		28-8102	X	
6-9-12 Studebaker	42-5064	28-8100	X	With special 7887 cover plate.
		28-8103	X	
6-9-12 Hupp	42-5065	28-8133	Y	With special 28-7014 cover plate.
		28-8134	Y	
6-9-12 Auburn	42-5066	28-8129	Y	With special 28-7013 cover plate.
		28-8130	Y	
6-9-12 Nash	42-5067	28-8129	Y	With special 28-7015 cover plate.
		28-8130	Y	
B6-9	42-5068	28-8098	Y	Without cover or knobs. These furnished by car manufacturer.
		28-8101	Y	
5 Chrysler	42-5069	28-8113	Y	Without cover or knobs. These furnished by car manufacturer.
		28-8114	Y	
5 Packard	42-5070	28-8137	Y	
		28-8138	Y	
9F Studebaker	42-5075	28-8129	Y	With special 7887 cover plate.
		28-8130	Y	
B6-B9	42-5076	28-8135	Y	Without cover or knobs. These furnished by car manufacturer.
		28-8136	Y	
10	42-5077	28-8139	P	
		28-8141	P	
6-9-12	42-5079	28-8099	X	
		28-8102	X	
B6	42-5080	28-8098	X	Furnished with couplings on end of shafts for connecting to Receiver volume and tuning control shafts.
		28-8101	X	
6-9	42-5081	28-8099	X	Furnished with couplings on end of shafts for connecting to Receiver volume and tuning control shafts.
		28-8102	X	
5 Hupp	42-5083	28-8155	Y	With special 28-7014 cover plate.
		28-8156	Y	
PAS-PBS	42-5084	28-8099	X	With special 7765 cover plate.
		28-8102	X	
5	42-5085	28-8113	Y	
		28-8114	Y	
6-9	42-5086	28-8129	Y	
		28-8130	Y	
SCS-SDS	42-5087	28-8139	P	With special 7887 cover plate.
		28-8141	P	
9 Studebaker	42-5089	28-8099	X	With special 7887 cover plate.
		28-8102	X	
CDS	42-5090	28-8139	P	Without cover or knobs. These furnished by car manufacturer.
		28-8141	P	
9 Hupp	42-5091	28-8109	X	With special 28-7014 cover plate.
		28-8110	X	
HDS	42-5094	28-8157	P	With special 28-7014 cover plate.
		28-5158	P	
NCS-NDS	42-5096	28-8139	P	With special 28-7015 cover plate.
		28-8141	P	
10X	42-5103	28-8186	P	No lock.
		28-8187	P	

Gear Drive Controls (using basic control 42-5027)

Receiver Model	Control Part No.	Special Note
5	42-5012	Without cover or knobs. These furnished by car manufacturer.
B6	42-5014	
6-9-12	42-5015	With special 7765 cover plate.
P5	42-5021	

NOTE—Shafts are shipped separately.

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