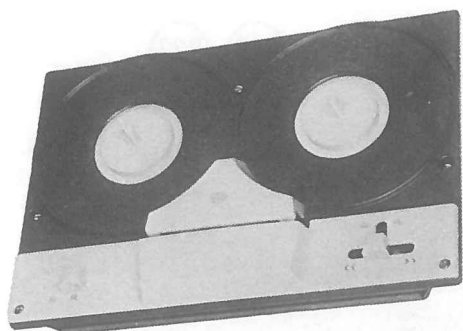


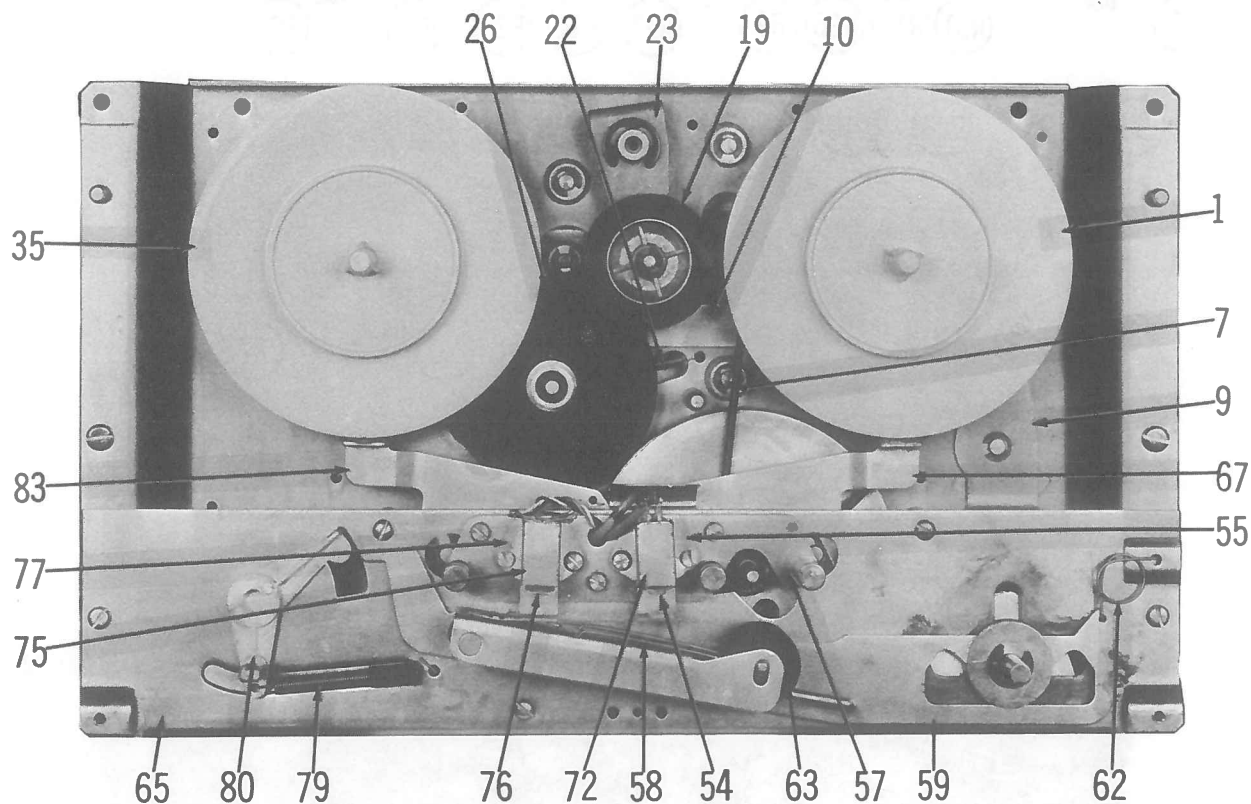


PHOTOFACT®



TRADE NAME : BSR Model TD2
 SUPPLIER : For Current Address, see Master Index
 TYPE SET : Single Speed, 2-Track Tape Deck
 POWER SUPPLY : 110 — 120 Volts AC, 60 Cycles

BSR MODEL TD2



HOWARD W. SAMs & CO., INC. Indianapolis 6, Indiana

FUNCTIONS OF CONTROLS

MAIN CONTROL

A sliding-type mechanism which starts the tape in motion. Moving control towards rear of recorder (Position 1) from the neutral position moves the tape forward at 3 3/4 ips speed. Moving the control to the left (Position 3) from neutral, rewinds the tape, and moving the control to the right (Position 2) from neutral advances the tape forward at a rapid rate. Returning the control to neutral from any position stops the tape.

Record Playback

Places the tape deck in the Record mode when pushed to the left at the same time the main control is in Position 1. This locks the control in the Record position. When the Main control is returned to neutral the Record-Playback control returns to the Playback position.

OPERATING INSTRUCTIONS

NOTE:

The following instructions apply to the operation of the tape deck, and do not include the setting and adjustment of controls associated with the amplifier to be used with the tape deck.

Threading the Tape

1. Place a reel of tape on the supply spindle (35).
2. Place an empty reel on the take-up spindle (1).
3. Unwind about two feet of tape. Hold a section taut and insert it in the tape slot. Insert the free end in one of the reel slots, turn the reel a few turns counterclockwise to secure the tape to the reel. Remove all slack between reels.

Recording

1. Thread the tape.
2. Push the Record-Playback control to the left and hold in position. Push the Main control toward rear of recorder (Position 1) until Record control locks into place. Tape will begin moving at correct speed.

Playback

1. Thread the tape.
2. Push Main control to Position 1. Tape will begin moving at correct speed and recording will play back.

Rewind

Move the Main control to the left (Position 3). Tape will rapidly rewind from take-up spindle (1) onto the supply spindle (35). Returning control to Neutral will stop the tape.

Quarter-Track Recording

If tape deck is equipped with a quarter-track play-record head, the amplifier used must be capable of switching from one pole piece to the other. Proceed as follows:

1. Select the correct track on the amplifier. Thread the tape and make a recording.
2. When recording is completed, remove empty reel from supply spindle (35).
3. Remove full reel from take-up spindle (1), turn reel over and place on supply spindle (35).
4. Place empty reel on take-up spindle (1). Re-thread tape and continue recording.
5. Change the track selector on amplifier and repeat Steps 1 through 4.

Dual-Track Recording

If tape deck is equipped with a dual-track record-playback head, proceed as follows:

1. Thread tape and make a recording.
2. When recording is completed, remove full reel from take-up spindle (1).
3. Remove empty reel from supply spindle (35) and place on take-up spindle (1).
4. Turn the full reel over and place it on the supply spindle (35).
5. Rethread the tape and continue the recording.

FAST FORWARD

Move Main control to the right (Position 2). Tape will move rapidly forward onto the take-up reel. Returning the control to neutral will stop the tape.

ADJUSTMENTS

Record-Playback Head

1. Thread a 5kc alignment tape onto the tape deck, and play back the tape.
2. Adjust screw (73A) for maximum output.

record level control on amplifier set at minimum.

3. Rewind tape and play back at half volume.
4. If tape is not clean, place the unit in record mode and adjust screw (73B) slightly.
5. Rewind tape and play back.
6. If tape is not clean, repeat above procedure until a clean erase is obtained.

Erase Head

1. Thread tape and make a recording.
2. Rewind tape and place unit in record mode with

CLEANING

The erase head (76), record-Playback head (54), tape guides, and pressure roller (63) accumulate tape

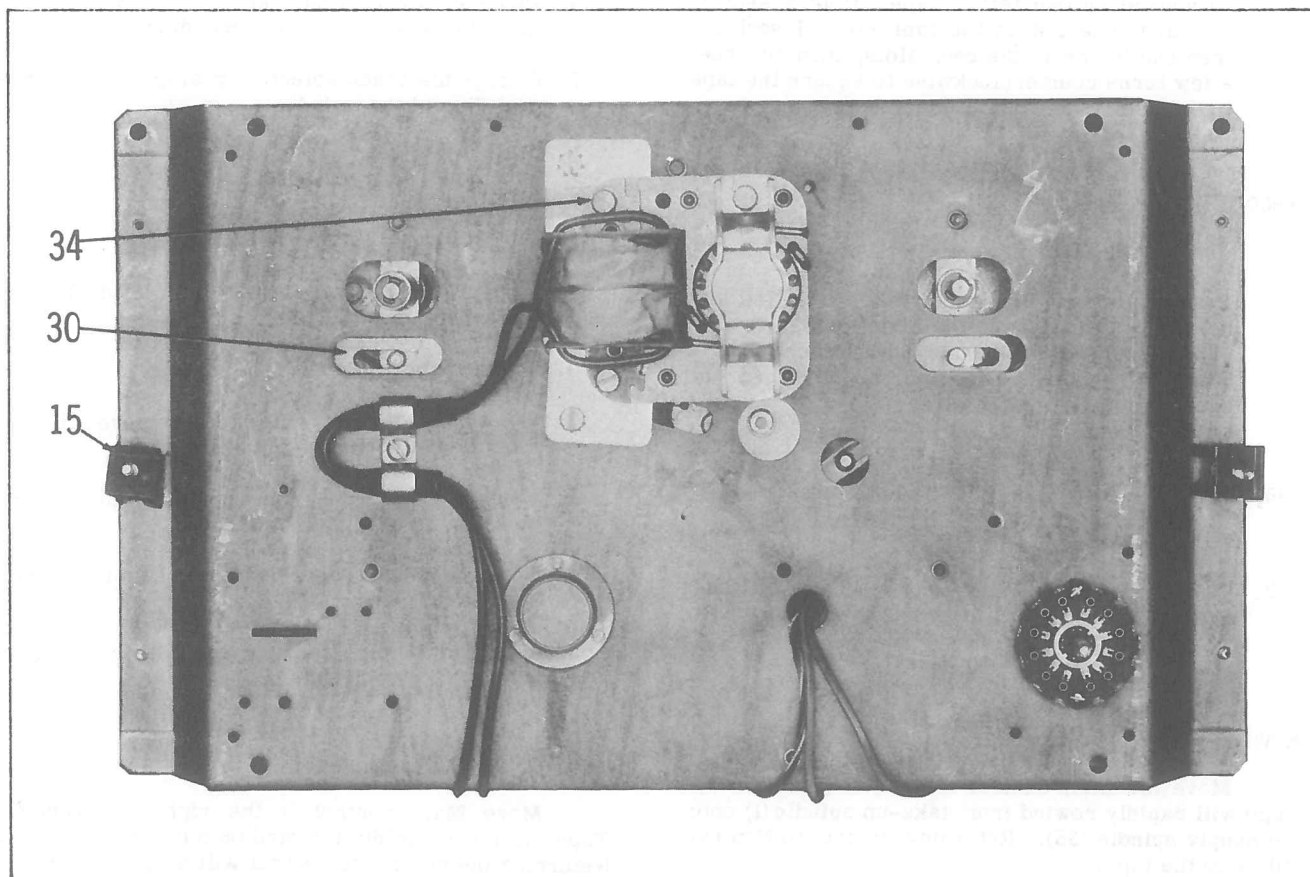
coating oxide as the tape passes them. Use a soft cloth and alcohol to remove the oxide.

LUBRICATION

The following parts should be lubricated with a good grade of light oil after prolonged use.

1. Top bearing of capstan (50).

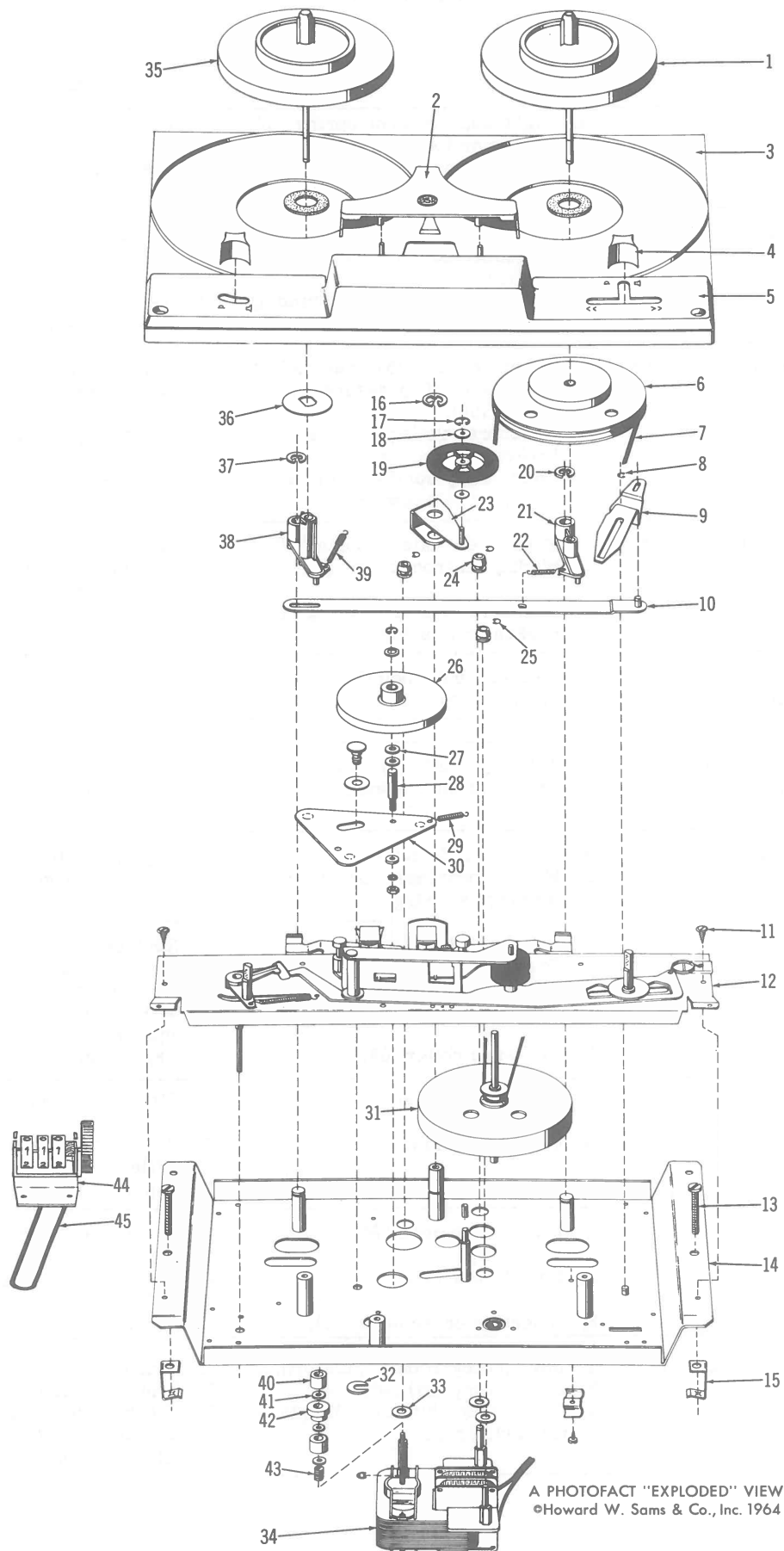
2. Idler Wheel bearings (19) and (26).
3. Pressure roller (63) bearing.
4. Motor (34) bearings.

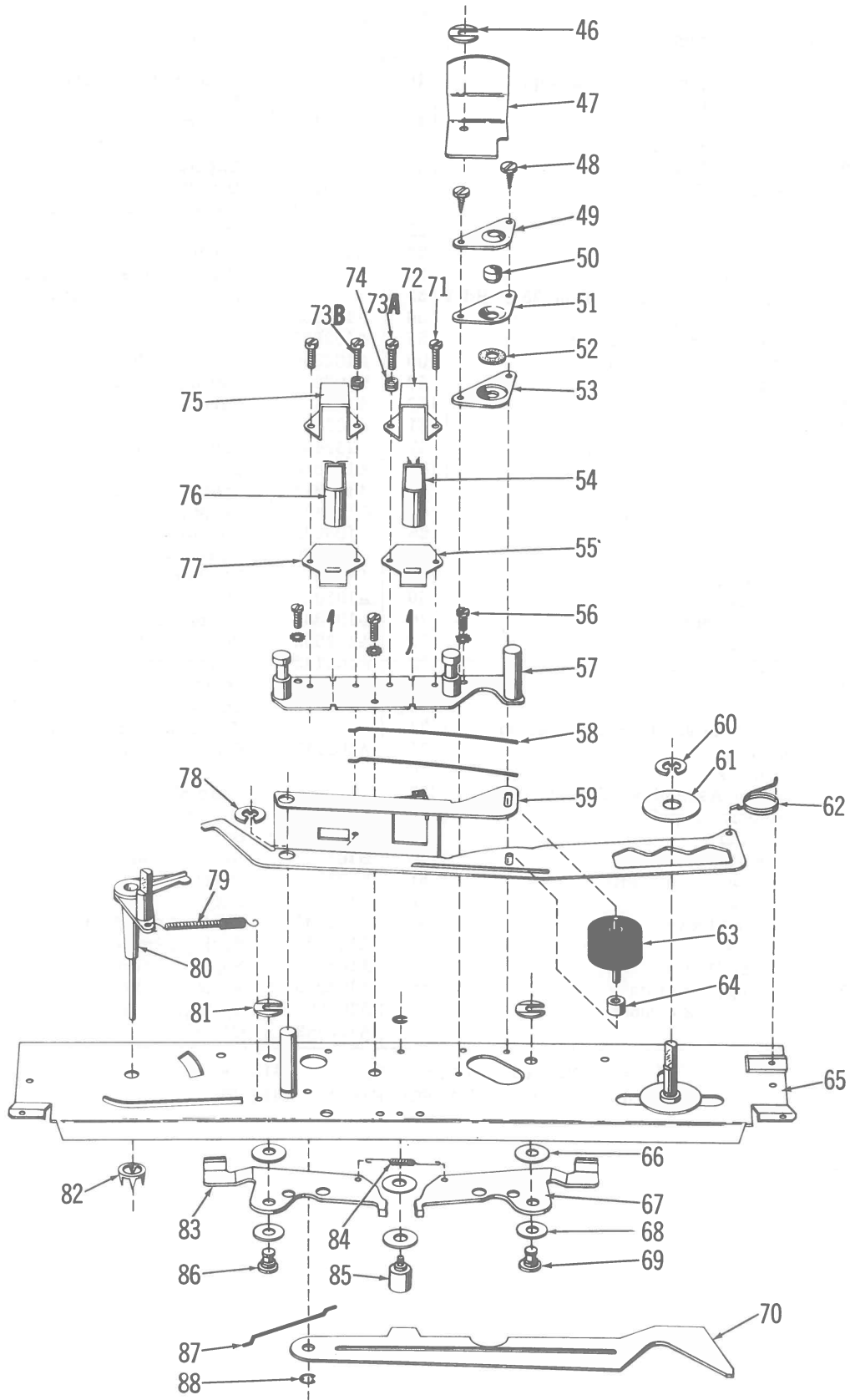


TROUBLE CHART

BSR MODEL TD2

Symptom	Cause	Remedy
No rewind.	<ol style="list-style-type: none"> 1. Right support arm spring (22) broken or lost its tension. 2. Left support arm (38) tight on its pivot. 	<ol style="list-style-type: none"> 1. Replace. 2. Clean pivot and lubricate.
No fast forward.	<ol style="list-style-type: none"> 1. Left support arm spring (39) disconnected or has lost its tension. 2. Right support arm (21) binding on its pivot. 	<ol style="list-style-type: none"> 1. Replace. 2. Remove right support arm (21) and clean and lubricate pivot.
No tape movement in record or playback position.	<ol style="list-style-type: none"> 1. Front cover (5) restricting movement of pressure roller spring (58). 2. Pressure roller spring (58) broken or missing. 3. Idler pulley spring (29) broken, weak, or missing. 	<ol style="list-style-type: none"> 1. Bend front cover (5) or bend up retaining screw tongue in support bracket. 2. Replace pressure roller spring (58). 3. Replace idler pulley spring (29).
Control knob hard to operate.	<ol style="list-style-type: none"> 1. Pressure roller spring (58) binding on front cover (5). 2. Pressure roller spring (58) broken or missing. 	<ol style="list-style-type: none"> 1. Make sure the tongues on the support bracket (65) are square and not bent down. 2. Replace.
Take-up spindle does not rotate in record or playback position.	<ol style="list-style-type: none"> 1. Take-up drive belt (7) stretched or off pulley. 	<ol style="list-style-type: none"> 1. Replace.
Take-up spindle rotates too slow in record or playback position.	<ol style="list-style-type: none"> 1. Take-up belt (7) not in the groove of the capstan. 	<ol style="list-style-type: none"> 1. Place take-up belt (7) in groove of capstan.
Unit does not operate in any position.	<ol style="list-style-type: none"> 1. Motor (34) defective. 2. Motor bearings or capstan bearings sticking. 	<ol style="list-style-type: none"> 1. Replace motor (34). 2. Clean bearings and lubricate.
Wow.	<ol style="list-style-type: none"> 1. Capstan spindle bent. 2. Pressure roller (63) does not contact the capstan spindle (31). 3. Pressure roller (63) worn. 	<ol style="list-style-type: none"> 1. Replace capstan assembly. 2. Check pressure roller spring (58) for binding. Front cover retaining screw tongues must be square to cover plate (3). 3. Replace pressure roller (63).
No record or playback.	<ol style="list-style-type: none"> 1. Dirty record-playback head (54). 2. Defective wiring. 3. Defective head (54). 	<ol style="list-style-type: none"> 1. Clean with a soft cloth and alcohol. 2. Check wiring from head to amplifier. 3. Replace.
Partial or no erase.	<ol style="list-style-type: none"> 1. Dirty erase head (76). 2. Defective wiring. 3. Defective erase head (76). 	<ol style="list-style-type: none"> 1. Clean with a soft cloth and alcohol. 2. Check wiring from head to amplifier. 3. Replace.
Noise during record and playback.	<ol style="list-style-type: none"> 1. Idler pulley slide (30) distorted. 2. Idler pulley (26) defective. 3. Cover assembly (3) or its plastic parts loose. 	<ol style="list-style-type: none"> 1. Replace idler pulley slide (30). 2. Replace idler pulley (26). 3. Check cover retaining screws, damping sleeves, and front cover (5) for tightness.





A PHOTOFACT "EXPLODED" VIEW
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MECHANICAL PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	B102407	Spindle Assembly (Take-up)	45		Counter Drive Belt
2	C102451	Cover, Head	46	A102128	Circlip
3	D102454	Cover, Deck	47	A103110	Shield, Lower
4	A102450	Knob, Function	48		Screw, (6-20 x 1/4" Tape 25B.Hd.)
5	C102452	Cover, Front	49	A103123	Capstan Bearing Plate
6	B102404	Pulley, Friction	50	A100617	Bearing
7*	A102442*	*Belt, Take-up	51	A103123	Capstan Bearing Plate
8	A100762	Circlip	52	A103579	Oil Pad
9	B102429	Lever, Control	53	A103578	Oil Pad Retainer
10	B103007	Link, Connecting	54		Quarter-Track Record-Playback Hd.
11		Screw (6-20 x 1/4" Type 25 B. Hd.)	55		Head Mounting Plate
12	C102433	Support Bracket	56	A102992	Screw, (6B. A. x 3/8" C.H. Hd.)
13		Screw (8 x 1" Type J. B. Hd.)	57	A102839	Mounting Plate Assembly
14	C102436	Mainplate Assembly	58	A102500	Pressure Roller Spring
15	A102633	Clamp	59	B102806	Lever, Pressure
16	A102823	Circlip	60	A102110	Circlip
17	A100762	Circlip	61	A102767	Washer
18	A101620	Washer, Idler Pulley	62	A102498	Spring, Toggle
19*	A102415*	*Pulley, Idler	63	A102810	Pressure Roller
20	A101526	Circlip	64	A102813	Spacer, Roller
21	B102406	Support Arm (Right)	65	C102433	Support Bracket
22	A102493	Spring	66	A103020	Washer
23	A102811	Idler Arm	67	B103429	Brake Arm (Right)
24	A102181	Grommet	68	A103021	Washer
25	A100762	Circlip	69	A103019	Pivot, Brake Arm
26	A103227	Pulley Idler, Large	70	B102833	Lever, Brake
27	A102595	Washer	71	A102992	Screw, (6 B. A. x 3/8" C.H. Hd.)
28	A103009	Pulley Spindle	72	A103112	Clamp, Head
29	A103011	Spring	73A	A103170	Screw
30	A103008	Slide	73B	A102992	Screw (6B. A. x 3/8" C.H. Hd.)
31	A103423	Flywheel and Capstan Assembly	74		Thackray Washer (6 B. A.)
32	A100762	Circlip	75	A103112	Clamp, Head
33	A101646	Washer	76		
34	B102985	Motor Assembly, T. P. 8/17	77		Head Mounting Plate
35	B102845	Spindle, Supply	78	A102110	Circlip
36	A102437	Washer	79	A102123	Spring, Switch Pawl
37	A101526	Circlip	80	B102805	Switch Pawl
38	B102405	Support Arm (Left)	81	A102108	Circlip
39	A103025	Spring	82	A102825	Clip
40	A102848	Drive Sleeve	83	B103430	Brake Arm (Left)
41	A101620	Washer	84	A103433	Spring (Brake Arm)
42	A103139	Motor Pulley	85	A103115	Support Rivet
43	A103103	Spring, Friction	86	A103019	Pivot, Brake Arm
44		Tape Index Counter	87	A103024	Spring, Damping
			88	A100762	Circlip

* Belt, Take-up — WALSCO Part No. 1410-54

* Pulley, Idler — WALSCO Part No. 1492-03