The Fisher
30 35A 50

SERVICE MANUAL SUPPLEMENT

FM/AM TUNER 2083-5

Use this supplement together with the 30, 35A, 50 Service Manual for maintenance and repair of units using FM/AM Tuner 2083-5.

identification of 2083-5 tuner

11. Remove motorboard and dress panel. Refer to REMOVING MOTORBOARD and REMOVING DRESS PANEL procedures.
12. Remove dial pointer from old dial cord.
13. Prop unit on its left side. Remove the right wood side panel by removing the two slotted screws near the feet.
14. Rotate tuning capacitor drum fully CCW. Loosen machine screws in drum and remove old dial cord.
15. Tie end of new cord to end of spring. Fasten spring to START screw. See illustration.
16. Cross the cord to inside of drum, then run cord through slot in rim and wrap 2 full turns CCW around drum. Guide cord around pulley "A", and wrap 2 full turns ICW viewed from back around tuning shaft.
17. Guide cord over pulley "B" and around pulleys "C" and "D". Rotate drum fully CW allowing cord to wind on drum.
18. Run cord under drum and around the other side into the rim slot. Wrap cord around FINISH screw.
19. Pull cord taut and tighten screw. Turn tuning shaft CW and CCW to distribute tensioning.
20. Repeat 18 until spring is tensioned.
21. Place pointer on rail and slip cord under tab. Turn tuning shaft fully CCW. Slide pointer to B mark and cement to cord.
22. Check dial calibration.
23. Reinstall dress panel, side panel, and motorboard.

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FM ALIGNMENT

1. Set SELECTOR switch to FM. Turn VOLUME control to minimum. Connect jumper between P3 and P4 to defeat AFC.
2. Connect 10.7MHz sweep generator to P2B. Connect scope through 220KΩ to P2B. Open wire loop at P24.
3. Detune top core of L9. Adjust top and bottom cores of L8, L7, and L6, and bottom core of L5 for maximum gain and symmetry.
5. Set sweep generator for CW output at 10.7MHz. Connect DC VTFM to P5. Reconnect top core of L9 for OVIDC. Disconnect sweep generator and DC VTFM and connect scope to RCDR OUT jack. Connect FM RF generator through 120Ω carbon composition resistors to FM ANT. terminals.
6. Set generator frequency and dial pointer accurately to 500kHz. Modulate generator with 400Hz, ±1kHz deviation. Adjust core of antenna coil L1 and bend oscillator coil L3 and RF coil L2 for maximum amplitude on scope.
7. Set generator frequency and dial pointer accurately to 100kHz. Adjust antenna trimmer TC1, oscillator trimmer TC3, and RF trimmer TC2 for maximum amplitude on scope.
8. Repeat (6) and (7) for maximum sensitivity and accurate dial calibration. Disconnect scope.
9. Reconnect sweep generator and DC VTFM to PS. Set generator level to 1mV. Tune receiver to generator frequency 11070kHz for OVIDC at P5.
10. Connect an AC VTFM to the RIGHT, RCDR OUT jack, and another AC VTFM to the LEFT RCDR OUT jack.
11. Connect MPX generator composite output to FM generator EXTERNAL MODULATION input. Modulate left and right channels with 40kHz (±1kHz carrier deviation), and 1kHz pilot (±1kHz deviation)70%.
12. Adjust top cores of L17 and L18 for maximum audio.
13. Modulate left channel only. Right channel AC VTFM should indicate at least 2000 below left channel output.
14. Modulate right channel only. Left channel AC VTFM should indicate at least 2000 below right channel output.
15. Disconnect MPX generator. Set RF generator output to 20mV, and modulate with 400kHz, ±1kHz deviation.
16. Detune generator frequency to 100VDC at P5. Disconnect jumper between P3 and P4 to turn AFC on. DC VTFM should indicate OVIDC ≥200mV.
17. Reconnect jumper between P3 and P4 and detune generator for −0.5VDC at P5. Remove jumper. Meter should indicate OVIDC ≥200mV. Disconnect test equipment.

AM ALIGNMENT

1. Set SELECTOR switch to AM. Turn VOLUME control to minimum.
2. Connect 45kHz sweep generator through 0.1uF to P19. Connect scope through 220KΩ to P6.
3. Adjust cores of L14, L13, L11, and L10 for maximum gain and symmetry.
5. Set generator frequency and dial pointer accurately to 800kHz. Modulate generator with 40kHz, 30% modulation. Connect a short jumper between P21 and chassis. Adjust oscillator coil L12 for maximum amplitude.
6. Set generator frequency and dial pointer accurately to 1400kHz. Adjust oscillator trimmer TC5 for maximum amplitude.
7. Repeat (6) and (7) for accurate dial calibration and maximum gain.
8. Disconnect jumper connection P21 and chassis. Disconnect AM signal generator to AM ANT. terminal. Open GND link. Tune receiver to generator frequency at 800kHz. Modulate generator with 40kHz, 30% modulation.
9. Melt the wax holding the coil to the ferrite antenna. Shift the coil for maximum audio indication. To secure coil in position, remelt wax.
10. Tune receiver to generator frequency at 1400kHz. Adjust antenna trimmer TC4 for maximum audio.