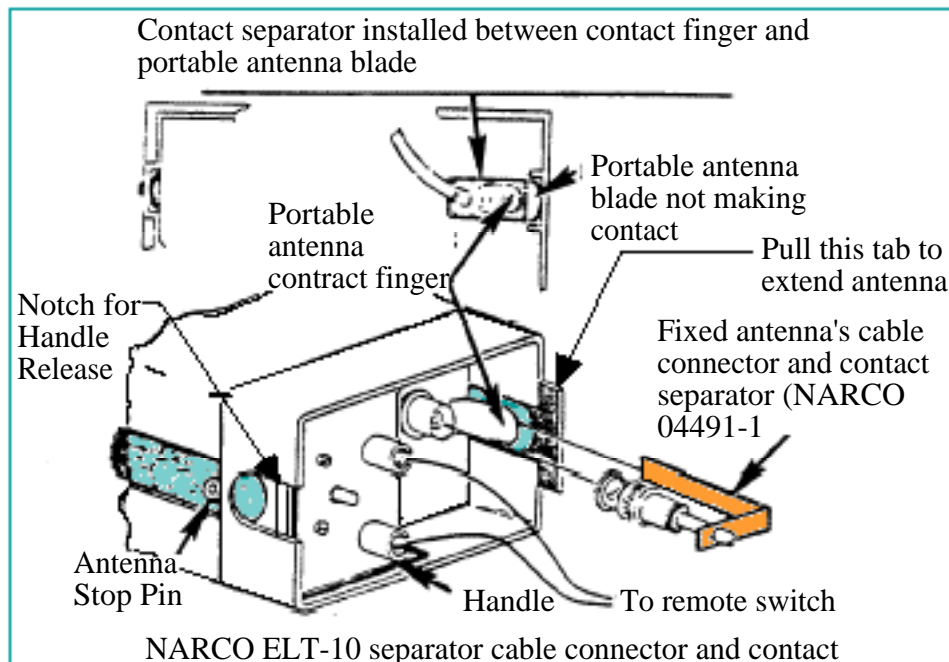


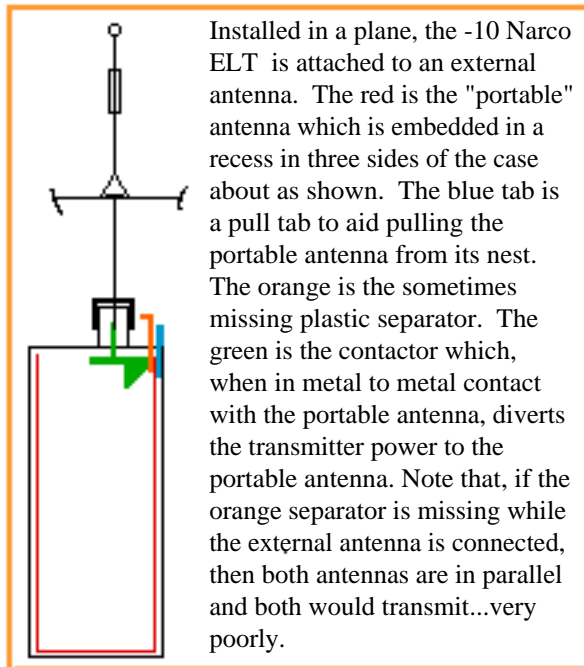
## Antenna Problem Plagues Narco ELTs

That was the headline which caught my attention and kept me reading. This input to the FAA via a Problem Report was forwarded to the various alphabet organizations and this appeared in one of their notes. Like so many, it appears once, disappears, and is nowhere in a central repository where it could be found again.

<b>TEXT</b> FOUND FIXED ANTENNA (REMOTE ANTENNA) INSTALLED WITHOUT USING PLASTIC SEPARATOR TO DISABLE PORTABLE UNIT ANTENNA. IF UNIT WERE ACTIVATED, SEVERE IMPEDANCE MISMATCH WOULD LIMIT RANGE TO LESS THAN A MILE.			
REPORTED TO DATE A TOTAL OF 4 NARCO ELT 10 UNITS WERE FOUND WITH THIS CONDITION. THE INSTRUCTION TAB FOR DEPLOYING PORTABLE ANTENNA MAY BE MISTAKEN FOR PLASTIC SEPARATOR.			
SPECIFIC PART CAUSING PROBLEM			
PART NAME ② SEPARATOR	MFG PART NUMBER ⑧ 044910001	PART CONDITION ① NOT UTILIZED	PART/DEFECT LOCATION ④ ELT
COMPONENT/APPLIANCE ABOVE PART INSTALLED ON			WARRANTY STATUS ⑤
COMP/APP. NAME EMER LOCAT. BEACON	MANUFACTURER ⑥ NARCO	MFG MODEL/NUMBER ③ ELT10	SERIAL NO. ⑦

Their figure which was part of the report is the next one and it shows some details I do not have in my sketches. I have highlighted the contact separator in orange. Note how it was attached to the coax cable and how, when the external antenna cable's BNC is disconnected, the contact separator comes with it and so the portable antenna is the only one connected, as it must be to work properly.



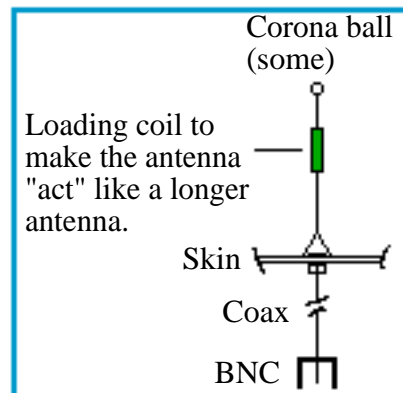


A service problem affecting potentially thousands of Narco ELT's has recently come to light. To correct the possible installation problem, the owner/user would do well to inspect it as soon as possible. Failure to do so could leave the ELT with a much reduced operating range.

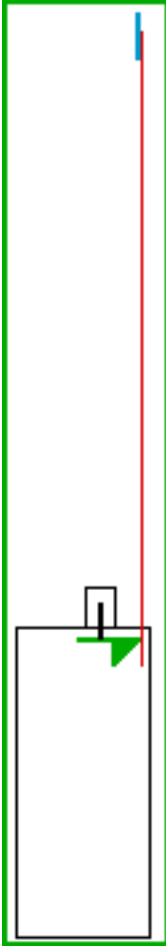
The problem involves the Transmitter's antennas. The FAA problem reporting form at the beginnings explains the fault that was found: "the reports indicate the absence of the ELT's fixed antenna's contact separator or its misposition". The contact separator should be between the portable antenna contact finger and the antenna blade. Note the blue separator in the figure.

If the separator is not in the correct place, then both antennas are connected to the output stage, and this causes an extreme degradation of the distance the ELT transmits.

Not mentioned in the warning articles is the fact that, if you verify operation the usual way, by tuning the panel receiver to 121.5 and then cause the ELT to transmit, all seems to be fine, because you hear the we-we sound coming through nice and strong. What we never do is find out whether the ELT can be heard beyond a few yards. Consequently, we can be complacently sure that the ELT will work "because we tested it". My ELT's separator was in the wrong place for more than 20 years, years when I thought I was doing good by replacing batteries and testing it several times a year.



When the coax cable's BNC connector is attached to the BNC of the ELT, this external antenna is the only one which can transmit...if the separator is in place.



To the left is an illustration which shows the plane's external antenna not connected, the portable antenna pulled to its full length and a good contact between the antenna and the tab which passes the output power to it.

How did it happen that my separator was not in the right place? The installer had mounted the antenna such that a short extender coax was needed. He apparently never read the instructions of the booklet nor did he note the statement ON THE SEPARATOR!! He left the separator attached to the coax near its original connector and that juncture of original coax and added coax was just behind the removable back wall of the baggage compartment and was never seen again...until the article that alerted some of us.

In the event your separator is long gone, make a plastic separator which will serve and stay there, and do it soon. If you can, make a note on the separator as to where it should be placed...for those who don't realize the purpose, a non marked separator might be removed by those not in the know "as a favor" to make it "look right".

Narco has been known for the previous years of being abominable as to service and availability but if you want to try, the correct part number of the separator is: 04491-1.

The author of the article which alerted me to the possible lack of the separator went on to mention that, if you want a quick and dirty separator, "simply pull the portable blade antenna out an inch and apply a piece of masking tape to the antenna where it normally touches the contact finger and then stow the blade. I have learned to hate masking tape because it sticks so well when you don't want it to and gums things when you don't want it to. Your choice. Something is better than nothing, and he is correct that when

you slide the portable antenna out to its full length, the metal of the antenna will properly touch the metal of the contact.

Filed as: Narco ELT-10 Correction Aug '05  
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I wish I could do a better job of attribution of the original submitter and finder and the source who created the article I quote and modify but by the time I got the sheet, all that information was long gone.

In July '05, we took a good look at the Piper owned by the transponder checker and noted that his Narco-10 lacked the separator noted here. He, electronics FAA certified and an A&X, had never heard of the problem, which proves that such "warnings" disappear and only AD's can be found.