```
df-traversal-nil  THM

⊢  For any graph
|  df-traversal(the_graph;nil)
| by (Unfold ‘df-traversal‘ 0) THEN (All (Unfold ‘traversal‘))
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| 1. the_graph : Graph
| 2. i : Vertices(the_graph)
| 3. s1 : (Vertices(the_graph)+Vertices(the_graph)) List
| 4. s2 : (Vertices(the_graph)+Vertices(the_graph)) List
| 5. nil = (s1 @ [inr(i)] @ s2)
| 6. j : Vertices(the_graph)
| 7. (inr(j) ∈ s2)
| 8. ¬(inl(j) ∈ s2)
| ⊢  j-the_graph->*i  by Obvious
|
.\
. 1. the_graph : Graph
. 2. i : Vertices(the_graph)
. 3. s1 : (Vertices(the_graph)+Vertices(the_graph)) List
. 4. s2 : (Vertices(the_graph)+Vertices(the_graph)) List
. 5. ∀j:Vertices(the_graph).
.    i-the_graph->*j ⇒ ¬non-trivial-loop(the_graph;j)
. 6. nil = (s1 @ [inl(i)] @ s2)
. 7. j : Vertices(the_graph)
. 8. i-the_graph->*j
. ⊢  (inr(j) ∈ s2)  by Obvious
END
```