```
NC33           Fuel supply line schematic        After Modification

R    R    R    <    R    R    from  R    R    R    >    R    R    R    R
|                             ENG                                      |
|                                                                      |
|    S_P  S_P  NV3  S_P  TEE  S_P  Val_P TEE  Val_S S_S  S_S  S_S  S_S  |
|    |              |              FIL_1                    |    |
|    |              NV5            |                        |    |
|    |         |    ^              to                       |
|    |         LEV  PMP            ENG                       |
|    |         IND  ^                                        |
|    |         |    RAC                                      |
|    |         NV4  |
     >    NV2  TEE  >    TEE  -    <    -    S_F  -    <    NV1  <
P_Tnk Port tank                                        Starboard Tank S_Tnk


        R    fuel return from engine                < or>   direction of flow
        S_P  fuel supply to engine from port tank      |        vertical line
        S_S  fuel supply to engine from starboard tank
        S_F  fuel supply to filter, crossover from both tank drain fittings
       FIL_1 primary filter, before engine filters
       Val_P Valve for control of fuel from port tank (original)
       Val_S Valve for control of fuel from starboard tank (original)
        NV1  New valve installed at starboard tank drain
        NV2  New valve installed at port tank drain
        NV3  New valve installed on S_P, control flow from filter
        NV4  New valve installed off tee from S_F, controls LEV IND
        NV5  New Valve installed in line with filter and pump; for pump control
        PMP  fuel pump, 12 volt, low head, low flow      (Walbro)
        RAC  Racor turbine / filter
       LEV IND       tank level indicator, transparent tube that extends above tank open to air
       ENG   engine


NC33           Fuel supply line schematic        Original installation before modification

R    R    R    <    R    R    from  R    R    R    >    R    R    R    R
|                             ENG                                      |
|                                                                      |
|    S_P  S_P  >    S_P  >    S_P  Val_P TEE  Val_S <    S_S  S_S  S_S  |
|    |                             FIL_1                    |    |
|    |                             |                        |    |
|    |                             to                       |
|    |                             ENG                       |
|    |                                                       |
|    |                                                       |
     |                                                       |
          Drain Tap                                      Drain Tap
P_Tnk Port tank                                        Starboard Tank S_Tnk
```

valve	Operating Modes										
	1	2	3	4	5	6	7	8	9	10	11
Val_P	x	o	x	x	o	x	x	x	x	o	o
NV2	x	x	o	x	o	o	x	x	x	x	o
Val_S	x	o	x	x	o	x	x	x	o	x	x
NV1	x	o	x	o	x	x	o	x	x	x	x
NV3	x	x	o	o	x	x	x	o	x	o	o
NV4	x	x	x	x	x	o	o	o	x	x	x
NV5	x	o	o	o	o	x	x	o	x	x	o
pump	off	on	on	on	on	off	off	on	off	off	on

x valve closed
o valve open

1 on the hard and filter change
2 recycle starboard tank
3 recycle port tank
4 transfer St to Port
5 transfer Port to St
6 measure level port
7 measure level starboard
8 empty tube and drain filter
9 run engine starboard tank with
   filter off
10 run engine port tank with
   filter off
11 recycle port tank   engine running

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