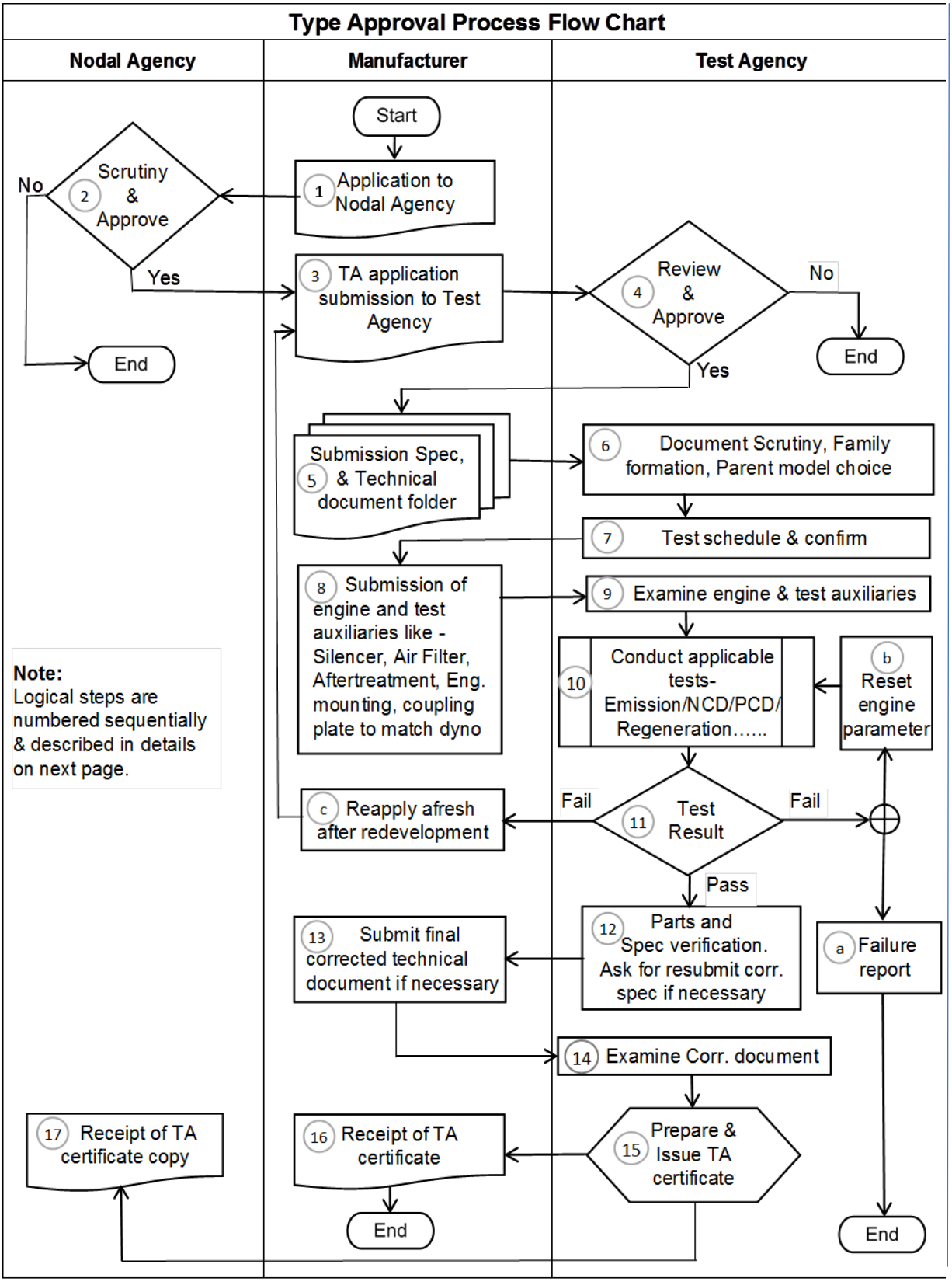
Type Approval Process Flow Chart



Following are the logical steps for the type approval process flow chart described in brief stepwise –

1. Application to nodal agency (CPCB) in the form of affidavit seeking permission for type approval of Genset engine family through submission provided as draft specimen in Appendix 1.
2. Upon written approval of nodal agency to manufacturer and chosen technical agency; (*This could be decision making node with "Yes" / "No" loop)*
3. Submit type approval certification application to chosen test agency. Based on provisions such application can be written or online through their secured portal;
4. Obtain technical agency approval (*This could be decision making node with "Yes" / "No" loop with NO means, provide additional data*)
5. Upon agencies application scrutiny and negotiations, submit detailed technical documentation as per requirements described in Annexure 1;
6. Obtain documentation approval from technical agency, family formation, choice of parent engine, provide additional data
7. Obtain test plan / schedule from technical agency
8. Upon approval from technical agency plan for providing engine test auxiliaries like -Silencer, air filter, aftertreatment systems, engine mounting, coupling plate to match dyno, components for NCD/PCD demonstration etc.
9. Upon receipt of engine along with auxiliary technical agency examine the adaptability in test cell, make necessary modification in exhaust line, mounts, etc, if required.
10. Conduct applicable tests-

    10.2. Conduct emissions test to qualify *(This could be decision making node with "Pass" / "Fail" loop. "Fail" means, a) current TA application is closed out with failure report b) adjust. reset engine parameter for retest or c) further manufacturer may re-apply afresh after redevelopment)*

    10.2. Conduct NCD and PCD demonstration tests to comply (This could be decision making node with "Pass" / "Fail" loop. "Fail" means, a) current TA application is closed out with failure report b) adjust. reset engine parameter for retest or c) further manufacturer may re-apply afresh after redevelopment)

    10.3. Demonstrate results related to infrequent regeneration, control condition if applicable;
11. Review of all test results with manufactures and decision about compliance, in case of failure manufacture have three options to proceed a, b, & c, act accordingly.
12. Technical agency carries out part verification of critical engine components and injection timing verification in compliance with document submission, take final review of technical document and ask manufacture to resubmit if necessary
13. Manufacture submit the corrected technical document if found necessary
14. Examine corrected document submitted in line with the requirement
15. Technical agency prepares technical report based on tests;
16. Technical agency issues type approval certificate to manufacturer;
17. Technical agency forwards a copy of type approval certificate to nodal agency

End