NHTSA to ensure that the fuel economy imputed to EVs pursuant to 49 U.S.C. 32904 is not set at a level that undermines the overarching statutory goals of energy and fuel conservation. To be sure, Petitioners believe that producing significant and increasing numbers of EVs should be an available means for automakers to comply with increasingly stringent CAFE standards. But the relative energy efficiency of EVs compared to ICEVs, coupled with the ongoing shift to increasingly efficient electricity generation from renewable sources, should ensure that baseline EV CAFE values will compare favorably to leading ICEVs. The statute further provides DOE additional discretion—through consideration of factors ''subject to less precise quantification'' [69] such as ''the need of the United States to conserve all forms of energy,'' and ''the relative scarcity and value to the Nation of all fuel used to generate electricity'' [70]—to adjust that baseline value to a level that will optimize the overall real-world reduction in fuel consumption and achieve the core purpose of EPCA's fuel-economy chapter.

Conclusion

For the above reasons, Petitioners ask that DOE grant this petition and initiate a rulemaking process to revise and update the regulations at 10 CFR part 474 for calculating equivalent petroleum-based fuel economy values for EVs. Petitioners thank DOE for its consideration.

Respectfully submitted,

Pete Huffman

Natural Resources Defense Council.

Joshua Berman,

Vera P. Pardee,

Law Office of Vera Pardee, Counsel for Sierra Club.

[FR Doc. 2021–27624 Filed 12–28–21; 8:45 am]

BILLING CODE 6450–01–P

[69] 59 FR at 5337.

[70] 49 U.S.C. 32904(a)(2)(B)(iii).

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2021–1167; Project Identifier AD–2021–00823–E]

RIN 2120–AA64

Airworthiness Directives; General Electric Company Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2019–22–05, which applies to all General Electric Company (GE) CF34–8C model turbofan engines. AD 2019–22–05 requires initial and repetitive inspections of the operability bleed valve (OBV) fuel tubes, OBV bleed air manifold link rod assemblies, and the OBV fuel fittings. AD 2019–22–05 also requires replacement of OBVs or related OBV hardware that fail inspection. Since the FAA issued AD 2019–22–05, the manufacturer has redesigned the OBV, which terminates the need for the repetitive inspections. This proposed AD would require initial and repetitive inspections of the OBV fuel tubes, OBV bleed air manifold link rod assemblies, and the OBV fuel fittings. This proposed AD would also require replacement of OBVs or related OBV hardware that fail inspection. As a terminating action to the repetitive inspections, this proposed AD would require replacement of certain OBVs installed on GE CF34–8C and CF34–8E model turbofan engines. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by February 14, 2022.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to *https://www.regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* (202) 493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact General Electric Company, 1 Neumann Way, Cincinnati, OH 45215; phone: (513) 552–3272; email: *aviation.fleetsupport@ge.com;* website: *https://www.ge.com.* You may view this service information at the Airworthiness Products Section, Operational Safety Branch, FAA, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222–5110.

Examining the AD Docket

You may examine the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2021–1167; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Scott Stevenson, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238–7132; fax: (781) 238–7199; email: *Scott.M.Stevenson@faa.gov.*

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under **ADDRESSES**. Include ''Docket No. FAA–2021–1167; Project Identifier AD–2021–00823–E'' at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to *https://www.regulations.gov,* including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as ''PROPIN.'' The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this

NPRM. Submissions containing CBI should be sent to Scott Stevenson, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA issued AD 2019–22–05, Amendment 39–19784 (84 FR 63569, November 18, 2019), (AD 2019–22–05), for all GE CF34–8C1, CF34–8C5, CF34–8C5A1, CF34–8C5B1, CF34–8C5A2, and CF34–8C5A3 model turbofan engines. AD 2019–22–05 was prompted by multiple reports of fuel leaks, some leading to engine fires, that have occurred as a result of malfunctions related to the OBV. AD 2019–22–05 requires initial and repetitive inspections of the OBV fuel tubes, OBV bleed air manifold link rod assemblies, and the OBV fuel fittings. AD 2019–22–05 also requires replacement of OBVs or related OBV hardware that fail inspection. The agency issued AD 2019–22–05 to prevent failure of the OBV.

Actions Since AD 2019–22–05 Was Issued

Since the FAA issued AD 2019–22–05, the manufacturer redesigned the OBV to eliminate the need for the repetitive inspections of the OBV fuel tubes, OBV bleed air manifold link rod assemblies, and the OBV fuel fittings. The manufacturer has issued service information specifying procedures to replace certain OBVs installed on CF34–8C1, CF34–8C5, CF34–8C5A1, CF34–8C5B1, CF34–8C5A2, CF34–8C5A3 (CF34–8C), and GE CF34–8E2, CF34–8E2A1, CF34–8E5, CF34–8E5A1, CF34–8E5A2, CF34–8E6, and CF34–8E6A1 (CF34–8E) model turbofan engines. Additionally, the FAA determined that the CF34–8E model turbofan engines are susceptible to the same unsafe condition as the CF34–8C model turbofan engines, and therefore, added the CF34–8E model turbofan engines to the applicability of this proposed AD. The FAA is proposing to require installation of the newly-designed OBV as a terminating action to the repetitive inspections required for CF34–8C model turbofan engines. The FAA is also proposing to require replacement of certain OBVs installed on CF34–8E model turbofan engines.

FAA's Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information Under 1 CFR Part 51

The FAA reviewed GE CF34–8C Service Bulletin (SB) 75–0020 R04, dated May 10, 2019 (GE SB 75–0020). The SB specifies procedures for inspecting the bleed air manifold link rod assemblies; the supply, return, and drain fuel fittings; and the fuel tubes on the OBV. The SB also specifies procedures for performing corrective actions and replacing any OBVs or related OBV hardware that fail the inspection criteria. The Director of the Federal Register approved the incorporation by reference of GE SB 75–0020 as of December 23, 2019 (84 FR 63569, November 18, 2019).

The FAA reviewed GE CF34–8C SB 75–0025 R01, dated August 1, 2019. This SB describes procedures for replacing and upgrading the suspect population of OBVs VIN 5000728–104 (part number (P/N) 4123T71P02), VIN 5000728–106 (P/N 4123T71P03), and VIN 5080046–101 (P/N 4123T71P04).

The FAA reviewed GE CF34–8E SB 75–0019 R01, dated August 1, 2019. This SB describes procedures for replacing and upgrading the suspect population of OBVs VIN 5000728–104 (P/N 4123T71P02), VIN 5000728–106 (P/N 4123T71P03), and VIN 5080046–101 (P/N 4123T71P04).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in **ADDRESSES**.

Other Related Service Information

The FAA reviewed GE CF34–8C SB 75–0026 R00, dated February 21, 2020. This SB introduces OBV VIN 5080046–103 (P/N 4123T71P06).

The FAA also reviewed GE CF34–8E SB 75–0021 R00, dated February 21, 2020. This SB introduces OBV VIN 5080046–103 (P/N 4123T71P06).

Proposed AD Requirements in This NPRM

This proposed AD would retain certain requirements of AD 2019–22–05. This proposed AD would require initial and repetitive inspections of the OBV fuel tubes, OBV bleed air manifold link rod assemblies, and the OBV fuel fittings and replacement of OBVs or related OBV hardware that fail inspection. As a terminating action to the repetitive inspections of the OBV fuel tubes, OBV bleed air manifold link rod assemblies, and the OBV fuel fittings, this proposed AD would require replacement of certain OBVs installed on GE CF34–8C model turbofan engines. This proposed AD would also require replacement of certain OBVs installed on CF34–8E model turbofan engines.

Differences Between This Proposed AD and the Service Information

GE SB 75–0020 specifies that the results of the inspections must be documented in an inspection chart form and sent to GE Product Support Engineering. This proposed AD would not mandate sending information to GE Product Support Engineering.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 1,172 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replace OBV	2 work-hours × $85 per hour = $170	$17,230	$17,400	$20,392,800
Inspect OBV fuel tubes, assemblies, and fittings.	1 work-hour × 85 per hour = 85	0	85	99,620

The FAA estimates the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. The agency has no way of determining the number of aircraft that might need this replacement.

ON-CONDITION COSTS

Action	Labor cost	Parts cost	Cost per product
Replace OBV tubes, clamps, support hardware	2.25 work-hours × $85 per hour = $191.25	$3,786.25	$3,977.50

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§39.13 [Amended]

■ 2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 2019–22–05, Amendment 39–19784 (84 FR 63569, November 18, 2019); and

b. Adding the following new airworthiness directive:

General Electric Company: Docket No. FAA–2021–1167; Project Identifier AD–2021–00823–E.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) action by February 14, 2022.

(b) Affected ADs

This AD replaces AD 2019–22–05, Amendment 39–19784 (84 FR 63569, November 18, 2019).

(c) Applicability

This AD applies to General Electric Company (GE) CF34–8C1, CF34–8C5, CF34–8C5A1, CF34–8C5B1, CF34–8C5A2, CF34–8C5A3, CF34–8E2, CF34–8E2A1, CF34–8E5, CF34–8E5A1, CF34–8E5A2, CF34–8E6, and CF34–8E6A1 model turbofan engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7532, Compressor Bleed Valve.

(e) Unsafe Condition

This AD was prompted by multiple reports of fuel leaks, some leading to engine fires, that have occurred as a result of malfunctions related to the operability bleed valve (OBV). The FAA is issuing this AD to prevent failure of the OBV. The unsafe condition, if not addressed, could result in an engine fire and damage to the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) For CF34–8C1, CF34–8C5, CF34–8C5A1, and CF34–8C5B1 model turbofan engines with serial numbers (S/Ns): 965101 through 965670 inclusive; 194101 through 194999 inclusive; and 195101 through 195653 inclusive:

(i) Within 880 flight hours (FHs) since the previous inspection, 500 FHs after December 23, 2019 (the effective date of AD 2019–22–05), or 6,880 FHs since new, whichever occurs later, inspect the OBV bleed air manifold link rod assemblies, the OBV fuel fittings, and the OBV fuel tubes.

(ii) Thereafter, within every 880 FHs since the previous inspection, perform additional repeat inspections of the OBV bleed air manifold link rod assemblies, the OBV fuel fittings, and the OBV fuel tubes.

(iii) Use the Accomplishment Instructions, paragraph 3.B., of GE CF34–8C Service Bulletin (SB) 75–0020 R04, dated May 10, 2019 (GE SB 75–0020), to perform inspections required by paragraphs (g)(1)(i) and (ii) of this AD and, per the inspection criteria in paragraph 3.B., of GE SB 75–0020 (the inspection criteria), do the following:

(A) Before further flight, if fuel leakage is observed at the OBV fittings or the OBV fittings are loose, replace the OBV with a part eligible for installation.

(B) Before further flight, if any OBV fuel tube clamp is found to be outside the inspection criteria, re-torque the OBV fuel tube clamp or replace the OBV fuel tube clamp.

(C) Within 50 flight cycles (FCs) after the inspections required by paragraphs (g)(1)(i) and (ii) of this AD, replace any link rod hardware found to be outside the inspection criteria. Until the worn link rod hardware is replaced, the OBV fittings must be inspected before the first flight of each day for leakage and looseness in accordance with the inspection criteria. If the OBV fittings fail to meet the inspection criteria, before further flight, replace the OBV and worn link rod hardware.

(2) For CF34–8C5B1 model turbofan engines with S/Ns not listed in paragraph (g)(1) of this AD and for all CF34–8C5A2 and CF34–8C5A3 model turbofan engines, perform the following:

(i) Within 880 FHs after the effective date of this AD or prior to accumulating 6,880 FHs since new, whichever occurs later, perform an initial inspection of the OBV bleed air manifold link rod assemblies, OBV fuel fittings, and OBV fuel tubes.

(ii) Thereafter, within every 880 FHs since the last inspection, repeat the inspection of the OBV bleed air manifold link rod assemblies, OBV fuel fittings, and OBV fuel tubes.

(iii) Use the Accomplishment Instructions, paragraph 3.B., of GE SB 75–0020, to perform the inspections in paragraph (g)(2)(i) or (ii) of this AD and, per the inspection criteria in paragraph 3.B., of GE SB 75–0020, do the following:

(A) Before further flight, if fuel leakage is observed at the OBV fittings or the OBV fittings are loose, replace the OBV with a part eligible for installation.

(B) Before further flight, if any OBV fuel tube clamp is found to be outside the inspection criteria, re-torque the OBV fuel tube clamp or replace the OBV fuel tube clamp.

(C) Within 50 FCs after the inspections required by paragraphs (g)(2)(i) and (ii) of this AD, replace any link rod hardware found to be outside the inspection criteria. Until the worn link rod hardware is replaced, the OBV fittings must be inspected before the first flight of each day for leakage and looseness in accordance with the inspection criteria. If the OBV fittings fail to meet the inspection criteria, before further flight, replace the OBV and worn link rod hardware.

(3) For all affected engines with an installed OBV, VIN 5000728–104 part number (P/N) (P/N 4123T71P02), VIN 5000728–106 (P/N 4123T71P03), or VIN 5080046–101 (P/N 4123T71P04), having an OBV S/N listed in Appendix A, paragraph 4., of GE CF34–8C SB 75–0025 R01, dated August 1, 2019 (GE SB 75–0025), or Appendix A, paragraph 4., of GE CF34–8E SB 75–0019 R01, dated August 1, 2019 (GE SB 75–0019), respectively, within 180 days after the effective date of this AD, remove the OBV and replace with a part eligible for installation.

(4) For all affected engines with an installed OBV, VIN 5000728–104 (P/N 4123T71P02), VIN 5000728–106 (P/N 4123T71P03), or VIN 5080046–101 (P/N 4123T71P04), having an OBV S/N not listed in Appendix A, paragraph 4., of GE SB 75–0025 or Appendix A, paragraph 4., of GE SB 75–0019, respectively, remove the OBV and replace with a part eligible for installation within the following compliance times:

(i) Within 16 months after the effective date of this AD for an OBV that has accumulated more than 25,000 FHs since new.

(ii) Within 32 months after the effective date of this AD for an OBV that has accumulated between 12,500 to 25,000 FHs since new, inclusive.

(iii) Within 48 months after the effective date of this AD for an OBV with fewer than 12,500 FHs since new.

(5) For all affected engines with an installed OBV, VIN 5080046–102 (P/N 4123T71P05), before the OBV accumulates 25,000 FHs since new or within 10 years after the effective date of this AD, whichever occurs first, remove the OBV and replace with a part eligible for installation.

(h) Terminating Action

Installation of an OBV that meets the definition of a part eligible for installation in paragraph (i) of this AD constitutes terminating action for the inspections required by paragraphs (g)(1) and (2) of this AD.

(i) Definition

For the purpose of this AD, a ''part eligible for installation'' is an OBV VIN 5080046–103 (P/N 4123T71P06) or an OBV reworked to VIN 5080046–103 (P/N 4123T71P06).

(j) No Reporting Requirement

The reporting instructions specified in GE SB 75–0020 are not required by this AD.

(k) Credit for Previous Actions

You may take credit for the initial inspection required by paragraph (g)(1)(i) or (2)(i), of this AD if you performed this initial inspection before the effective of this AD using GE CF34–8C SB 75–0019 R01, dated October 24, 2017, or R00, dated August 4, 2017; or GE CF34–8C–AL S/B 75–0020, Revision 03, dated December 14, 2018, as applicable.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ECO Branch, send it to the attention of the person identified in paragraph (m)(1) of this AD. Information may be emailed to: *ANE-AD-AMOC@faa.gov.*

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(m) Related Information

(1) For more information about this AD, contact Scott Stevenson, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238–7132; fax: (781) 238–7199; email: *Scott.M.Stevenson@faa.gov*.

(2) For service information identified in this AD, contact General Electric Company, 1 Neumann Way, Cincinnati, OH 45215; phone: (513) 552–3272; email: *aviation.fleetsupport@ge.com;* website: *https://www.ge.com*. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222–5110.

Issued on December 21, 2021.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2021–28134 Filed 12–28–21; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2021–1156; Airspace Docket No. 19–AAL–28]

RIN 2120–AA66

Proposed Establishment of United States Area Navigation (RNAV) Route T–364; Kotzebue, AK

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action proposes to establish United States Area Navigation (RNAV) route T–364 in the vicinity of Kotzebue, AK in support of a large and comprehensive T-route modernization project for the state of Alaska.

DATES: Comments must be received on or before February 14, 2022.

ADDRESSES: Send comments on this proposal to the U.S. Department of Transportation, Docket Operations, 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12–140, Washington, DC 20590; telephone: 1(800) 647–5527, or (202) 366–9826. You must identify FAA Docket No. FAA–2021–1156; Airspace Docket No. 19–AAL–28 at the beginning of your comments. You may also submit comments through the internet at *https://www.regulations.gov.* FAA Order JO 7400.11F, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at *https://www.faa.gov/air_traffic/publications/*. For further information, you can contact the Rules and Regulations Group, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; telephone: (202) 267–8783. FAA Order JO 7400.11F is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of FAA Order JO 7400.11F at NARA, email: *fr.inspection@nara.gov* or go to *https://www.archives.gov/federal-register/cfr/ibr-locations.html.*

FOR FURTHER INFORMATION CONTACT: Christopher McMullin, Rules and Regulations Group, Office of Policy, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; telephone: (202) 267–8783.

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority. This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This regulation is within the scope of that authority as it would expand the availability of RNAV in Alaska and improve the efficient flow of air traffic within the National Airspace System (NAS) by lessening the dependency on ground based navigation.