

FILED
United States Court of Appeals
Tenth Circuit

UNITED STATES COURT OF APPEALS
FOR THE TENTH CIRCUIT

August 26, 2026

Christopher M. Wolpert
Clerk of Court

UNITED STATES OF AMERICA,

Plaintiff - Appellee,

v.

KEDRICK SHANE MARSHALL,

Defendant - Appellant.

No. 25-5155
(D.C. No. 4:25-CR-00128-JDR-1)
(N.D. Okla.)

ORDER AND JUDGMENT*

Before **EID, KELLY**, and **ROSSMAN**, Circuit Judges.

Kedrick Shane Marshall was the sole passenger in a vehicle stopped by law enforcement for a traffic violation. During the stop, an officer obtained the driver's consent to search the car. Before conducting the search, Mr. Marshall was ordered to step out of the car. The officer frisked him and discovered a gun in Mr. Marshall's back pocket. The government later charged Mr. Marshall for being a felon in possession of a firearm. He moved to suppress evidence obtained during the traffic stop, arguing his

* This order and judgment is not binding precedent, except under the doctrines of law of the case, *res judicata*, and collateral estoppel. It may be cited, however, for its persuasive value consistent with FED. R. APP. P. 32.1 and 10th Cir. R. 32.1.

prolonged detention and frisk violated the Fourth Amendment. The district court denied the motion. Mr. Marshall was convicted after pleading guilty under a plea agreement, where he reserved the right to appeal the suppression order. Exercising jurisdiction under 28 U.S.C. § 1291, we affirm.

I¹

A

The events underlying this appeal began with a traffic stop in Sapulpa, Oklahoma. Shortly after midnight on February 6, 2024, Officer Hayden Vernon of the Sapulpa Police Department pulled over a Chevrolet Impala for failing to maintain its lane. Roxanne Willson was the driver, and Mr. Marshall was the front-seat passenger. Officer Vernon approached the passenger-side door, and Mr. Marshall opened it. As Officer Vernon later testified at the suppression hearing, he detected a “[c]hemically vinegar

¹ We derive the background facts from the district court’s recitation in its order on the motion to suppress. *See United States v. Johnson*, 43 F.4th 1100, 1107 (10th Cir. 2022) (“In reviewing the denial of a motion to suppress, we accept the district court’s factual findings unless clearly erroneous[.]” (internal quotation marks omitted)). We also rely on the transcript from the suppression hearing. *See United States v. Fonseca*, 744 F.3d 674, 680 (10th Cir. 2014) (“In our review of the evidence, we are permitted to consider evidence introduced at the suppression hearing[.]” (internal quotation marks omitted)).

smell” coming from inside the car—a scent he associated with previous heroin use. RIII.9–10; *see* RIII.17–18.

Officer Vernon obtained Ms. Willson’s driver’s license but did not get any identification documents from Mr. Marshall because his wallet had been stolen. Mr. Marshall offered to show Officer Vernon his Oklahoma Department of Corrections ID. Officer Vernon had previously encountered Mr. Marshall and Ms. Willson, and he knew they both had criminal histories.

Officer Vernon asked Ms. Willson to sit with him in his patrol car while Mr. Marshall remained in the Impala.² Officer Vernon then conducted routine checks on Ms. Willson’s driver’s license and license plate and looked for outstanding warrants. At this point, he also asked Ms. Willson for consent to search the car. She agreed but asked Officer Vernon to remove Mr. Marshall from the car before it was searched.

Leaving Ms. Willson in his patrol car, Officer Vernon returned to the Impala. He opened the passenger door and instructed Mr. Marshall to get out. Mr. Marshall complied, and Officer Vernon asked Mr. Marshall to put his hands on top of the car. Officer Vernon later testified he “asked [Mr. Marshall] if he had any weapons,” RIII.12, and started to frisk him.

² Another officer had arrived on the scene by this point.

During the frisk, Officer Vernon noticed a “pistol butt” and “bulge” protruding from Mr. Marshall’s rear pocket. RIII.12. Officer Vernon removed the firearm and arrested Mr. Marshall.³

B

A federal grand jury indicted Mr. Marshall on one count of being a felon in possession of a firearm, in violation of 18 U.S.C. §§ 922(g)(1) and 924(a)(8). Mr. Marshall filed a motion to suppress. He did not contest the initial traffic stop but argued law enforcement unlawfully “expanded the scope and duration of the stop” in violation of the Fourth Amendment. RI.13. Mr. Marshall challenged his detention, maintaining he “should have been free to leave” when the “initial purpose of the stop was . . . abandoned in favor of a search of the vehicle.” RI.13. He also challenged the frisk, insisting Officer Vernon lacked “reasonable and articulable suspicion that he was armed and dangerous.” RI.10. On these grounds, Mr. Marshall moved “to suppress all evidence . . . resulting directly or indirectly” from the warrantless search of his person after he exited the vehicle. RI.10.

The government opposed the suppression motion. In the government’s view, Officer Vernon “lawfully extended the traffic stop” because Ms. Willson “consented to Officer Vernon searching her car” while the

³ The officers then searched Ms. Willson’s vehicle. Mr. Marshall has never challenged that search, so we need not discuss it further.

mission of the stop was still ongoing, and Officer Vernon developed “reasonable suspicion . . . of additional criminal activity” during his encounter with Ms. Willson and Mr. Marshall. RI.23 (heading format omitted from first quote). Officer Vernon also had reason to think Mr. Marshall was armed and dangerous based on “[t]he totality of the circumstances, including Officer Vernon’s knowledge [of Mr. Marshall’s criminal history],” Ms. Willson’s nervousness, her “express[]” request to “remove [Mr.] Marshall from the car before [Officer Vernon] searched it,” and Officer Vernon’s “concern for his own safety[.]” RI.29–30.

The district court held an evidentiary hearing. Officer Vernon was the only witness. He testified about his previous encounters with both Mr. Marshall and Ms. Willson. As to Mr. Marshall, he described seeing him in connection with “domestic-related calls” and “investigation into stolen vehicles.” RIII.8. Officer Vernon also knew Mr. Marshall was “associat[ed]” with the Universal Aryan Brotherhood (“UAB”) and agreed with the government that UAB’s members are involved in “[n]arcotics, firearms, [and] violent crimes.” RIII.13. Officer Vernon described having “run-ins” with Ms. Willson, including once when she “attempt[ed] to [e]lude officers.” RIII.8.

Officer Vernon testified further about the circumstances of the traffic stop and his interactions with Ms. Willson and Mr. Marshall. He recognized

the “[c]hemically vinegar smell” coming from the Impala as “associated with heroin”—particularly body odor from prior opiate use—based on his “experience” finding the drug during “past patrols and vehicle stops[.]” RIII.9–10; RIII.17–18. And when in “closer proximity” to Mr. Marshall, Officer Vernon smelled the same “strong chemical vinegary odor” again. RIII.12–13. Officer Vernon confirmed having no formal training in how to detect heroin.

Ms. Willson “was acting out of the ordinary” during the stop, Officer Vernon explained, and she “seemed very fidgety and talkative[.]” RIII.9, 10. Officer Vernon also took notice of her request to have Mr. Marshall removed from the car before it was searched, which “ma[de] [him] think that she knew [Mr. Marshall] had something on him.” RIII.11.

The district court denied Mr. Marshall’s motion to suppress in a comprehensive written order. The initial traffic stop was lawful, the district court explained, because Ms. Willson “fail[ed] to maintain her lane.” RI.36. Officer Vernon “permissibly asked Ms. Willson to step out of the car and sit in his squad car while he ran a computer check,” which the district court found was “conducted within the scope of Officer Vernon’s initial traffic stop.” RI.36. The district court recognized Officer Vernon “was required to release Ms. Willson” when he “satisfied his initial reasonable suspicions related to the traffic violation” unless he “obtained a new and independent

basis for suspecting criminal activity or obtained consent to prolong the detention.” RI.36 (brackets and internal quotation marks omitted) (quoting *United States v. Winder*, 557 F.3d 1129, 1135 (10th Cir. 2009)).

In the district court’s view, Officer Vernon had “reasonable suspicion of criminal activity and consent to extend the duration of the stop,” as well as “the authority to ask Mr. Marshall to exit the car to conduct the search.” RI.37. The remaining question was “whether Officer Vernon had the requisite reasonable suspicion that Mr. Marshall was armed and presently dangerous to conduct the frisk once Mr. Marshall stepped out of the car.” RI.37. The district court answered *yes*. *See* RI.38. In so concluding, the district court “look[ed] to the totality of the circumstances surrounding the interaction.” RI.37. Mr. Marshall filed a motion for reconsideration, which the district court denied.⁴

Mr. Marshall was convicted after pleading guilty to the single charge in the indictment. His conditional plea agreement reserved the right to appeal the district court’s denial of his suppression motion.

⁴ Mr. Marshall did not appeal from the district court’s order denying his motion for reconsideration nor does he attempt to challenge that order in his opening brief. *See* FED. R. APP. P. 3(c)(1)(B) (providing a notice of appeal must “designate the judgment—or the appealable order—from which the appeal is taken”); FED. R. APP. P. 4(a)(4)(B)(ii) (providing that a party intending to challenge the disposition of a motion to reconsider, “must file a notice of appeal, or an amended notice of appeal—in compliance with Rule 3(c)—within the time prescribed by [Rule 4(a)]”).

This timely appeal followed.

II

Mr. Marshall challenges the district court's denial of his motion to suppress. In this context, "we 'view the evidence in the light most favorable to the determination of the district court,'" *United States v. Johnson*, 43 F.4th 1100, 1107 (10th Cir. 2022), "assess factual findings for clear error, and analyze legal conclusions de novo," *United States v. Campbell*, 156 F.4th 1019, 1023–24 (10th Cir. 2025). We defer to the trial court's assessment of "the credibility of witnesses at the suppression hearing" and "the weight to be given to the evidence presented." *United States v. Hernandez*, 847 F.3d 1257, 1263 (10th Cir. 2017) (internal quotation marks omitted) (quoting *United States v. Le*, 173 F.3d 1258, 1264 (10th Cir. 1999)). "[T]he ultimate determination of the reasonableness of a search or seizure under the Fourth Amendment is a question of law reviewed de novo." *United States v. Young*, 99 F.4th 1136, 1142 (10th Cir. 2023) (quoting *United States v. Fonseca*, 744 F.3d 674, 680 (10th Cir. 2014)).

"Suppression issues flow from the Fourth Amendment, which provides protection from 'unreasonable searches and seizures,' and the judicially created exclusionary rule, which prevents the government from using evidence obtained in violation of that constitutional guarantee." *Campbell*, 156 F.4th at 1024 (quoting U.S. Const. amend. IV). "A traffic stop is a

seizure for purposes of the Fourth Amendment.” *United States v. Pettit*, 785 F.3d 1374, 1379 (10th Cir. 2015). “A traffic stop” is therefore “subject to review for reasonableness.” *United States v. Mayville*, 955 F.3d 825, 829 (10th Cir. 2020); *see also Arizona v. Johnson*, 555 U.S. 323, 332 (2009) (explaining “a passenger is seized, just as the driver is”). A “frisk” is also “a search for the purposes of the Fourth Amendment” and “is subject to the reasonableness requirement[.]” *United States v. Gurule*, 935 F.3d 878, 885 (10th Cir. 2019). It is the defendant’s burden “to prove that the challenged seizure was illegal under the Fourth Amendment.” *United States v. Long*, 176 F.3d 1304, 1307 (10th Cir. 1999).

III

Mr. Marshall advances several arguments for reversal. He argues, *first*, the district court made clearly erroneous factual findings in its suppression ruling; *second*, Officer Vernon unconstitutionally “expanded the scope of the [traffic] stop” and impermissibly detained him without developing new reasonable suspicion of criminal activity, Op. Br. at 28; and *third*, with respect to the frisk, Officer Vernon lacked reasonable suspicion to believe Mr. Marshall was armed and dangerous. We consider each argument and discern no error.

A

Mr. Marshall contends the district court made two clearly erroneous factual findings when ruling on his suppression motion. We have deemed a factual finding clearly erroneous when it is “without factual support in the record or if, after reviewing all the evidence, we are left with a definite and firm conviction that a mistake has been made.” *United States v. Tafoya*, 557 F.3d 1121, 1126 (10th Cir. 2009) (internal quotation marks omitted). We “must uphold any district court finding that is permissible in light of the evidence.” *Id.* (internal quotation marks omitted); see *United States v. Craine*, 995 F.3d 1139, 1157 (10th Cir. 2021) (“If the district court’s account of the evidence is plausible in light of the record viewed in its entirety, the court of appeals may not reverse it even though convinced that had it been sitting as the trier of fact, it would have weighed the evidence differently.” (quoting *Anderson v. City of Bessemer City*, 470 U.S. 564, 573–74 (1985))). “Thus, ‘[w]here there are two permissible views of the evidence, the factfinder’s choice between them cannot be clearly erroneous.’” *Id.* (quoting *Anderson*, 470 U.S. at 574).

Applying these standards, we discern no reversible error.

First, Mr. Marshall argues the district court clearly erred in finding “Officer Vernon believed” the “‘vinegar-like’ odor coming from the car” was “consistent with opiate use based on his training and prior experience[.]”

RI.37. Mr. Marshall says, “the record establishes beyond question that [Officer Vernon] did *not* receive such training.” Op. Br. at 16. Mr. Marshall is correct about the record but his argument is ultimately unavailing. At the suppression hearing, Officer Vernon testified he “associated” the “[c]hemically vinegar smell . . . with heroin” based on his “experience” detecting heroin in “past patrols and vehicle stops[.]” RIII.9–10. During cross-examination, Officer Vernon confirmed that, in the police academy, he did not “receive any formal training on the detection of heroin[.]” RIII.17. In the suppression order, the district court referenced Officer Vernon’s “*training* and prior experience” when discussing his observations about the smell coming from the car. RI.37 (emphasis added). But Mr. Marshall overlooks that the district court, in denying reconsideration, removed reference to Officer Vernon’s training and found only that he “attribute[d] the ‘vinegar-like’ odor to previous opiate use *based on his experience*.” RI.49 (emphasis added). Mr. Marshall has not challenged that corrected finding, which is supported fully by the record.

Second, Mr. Marshall argues Officer Vernon’s conclusion that he was armed is not supported by the record. He specifically questions the district court’s reliance on Ms. Willson’s request to have Mr. Marshall removed from the car as indicia of his dangerousness. We are not persuaded. As Officer Vernon testified, Ms. Willson’s request made him “think that she knew

[Mr. Marshall] had something on him.” RIII.11. The district court’s finding that, based on this request, Officer Vernon could have assumed Mr. Marshall was armed is thus “permissible in light of the evidence.” *Tafoya*, 557 F.3d at 1126 (internal quotation marks omitted).

Mr. Marshall’s contrary argument is not convincing. He insists the district court mistakenly thought “something on him” necessarily referred to a weapon but, in his view, “[s]omething’ could refer to drugs, drug paraphernalia, or evidence of a multitude of [other] crimes[.]” Op. Br. at 16–17. Even assuming for argument’s sake that, in this context, “something” might mean what Mr. Marshall posits, he still cannot prevail because the district court’s choice between “one of two plausible interpretations of the evidence cannot be clearly erroneous.” *United States v. Porter*, 66 F.4th 1223, 1227 (10th Cir. 2023) (citing *Anderson*, 470 U.S. at 574).

Accordingly, Mr. Marshall has shown no reversible error based on his challenge to the district court’s factual findings in support of its suppression ruling.

B

We next turn to Mr. Marshall’s argument that the traffic stop was impermissibly prolonged in violation of the Fourth Amendment. Again, we discern no error.

“A seizure for a traffic violation justifies a police investigation of that violation.” *Rodriguez v. United States*, 575 U.S. 348, 354 (2015). “Because addressing the infraction is the purpose of the stop, it may ‘last no longer than is necessary to effectuate th[at] purpose.’” *Id.* (alteration in original) (quoting *Florida v. Royer*, 460 U.S. 491, 500 (1983) (plurality opinion)). “Continued detention is lawful only if the encounter becomes consensual or if, during the initial lawful traffic stop, the officer develops a ‘reasonable suspicion’ that the detained person is engaged in criminal activity.” *Pettit*, 785 F.3d at 1379 (quoting *United States v. Bradford*, 423 F.3d 1149, 1156–57 (10th Cir. 2005)).

To develop reasonable suspicion, “officers must have a particularized and objective basis for suspecting” criminal activity under “the totality of the circumstances[.]” *United States v. Cortez*, 449 U.S. 411, 417–18 (1981). “Reasonable suspicion requires ‘more than an inchoate and unparticularized suspicion or hunch’ but ‘considerably less than proof of wrongdoing by a preponderance of the evidence.’” *Campbell*, 156 F.4th at 1024 (quoting *Young*, 99 F.4th at 1143); see *United States v. Ulibarri*, 149 F.4th 1193, 1198 (10th Cir. 2025) (stating that “[r]easonable suspicion is a low bar”). “As long as an officer has ‘a particularized and objective basis for suspecting an individual may be involved in criminal activity, he may initiate an investigatory detention even

if it is more likely than not that the individual is *not* involved in any illegality.” *Pettit*, 785 F.3d at 1379–80 (quoting *United States v. Johnson*, 364 F.3d 1185, 1194 (10th Cir. 2004)). The “government bears the burden of proving the reasonableness of an officer’s suspicion[.]” *Id.* at 1379 (quoting *United States v. Kitchell*, 653 F.3d 1206, 1219 (10th Cir. 2011)).

2

Mr. Marshall argues the traffic stop was unconstitutionally prolonged because Officer Vernon had not developed new reasonable suspicion of criminal activity. On this record, we cannot agree.

There is no question Officer Vernon permissibly detained Mr. Marshall for the length of time necessary to complete the initial traffic stop. *See Johnson*, 555 U.S. at 333 (“[T]emporary seizure of driver and passengers ordinarily continues, and remains reasonable, for the duration of the stop.”). Officer Vernon testified he asked Ms. Willson to sit in his patrol car while he checked on her driver’s license and confirmed whether she had outstanding warrants. These informational checks are part of “a routine traffic stop.” *Pettit*, 785 F.3d at 1379; *see Rodriguez*, 575 U.S. at 355 (explaining “ordinary inquiries incident to” a traffic stop include “checking the driver’s license, determining whether there are outstanding warrants against the driver, and inspecting the automobile’s registration and proof of insurance”).

During this routine portion of the stop, Officer Vernon obtained Ms. Willson's consent to search the car. As the district court correctly concluded, "Officer Vernon had the authority to ask Mr. Marshall to exit the car to conduct the search." RI.37; *see Gurule*, 935 F.3d at 886 ("The very fact of a search creates a need to detain individuals safely."). The record also shows, for the reasons thoroughly recited by the district court, Officer Vernon had developed "an independent basis for suspecting criminal activity" to "extend the duration of the stop." RI.37; *see Winder*, 557 F.3d at 1135 (explaining that officers must "obtain[] a new and independent basis for suspecting the detained individual of criminal activity" to prolong the detention) (internal quotation marks omitted, brackets in original).

Mr. Marshall suggests the district court did not identify "sufficient facts" related to *him* to justify prolonging his detention. Op. Br. at 29. But he advances this argument with a few conclusory statements and "no meaningful analysis or argument." *Adams v. FAA*, 168 F.4th 1271, 1285 (10th Cir. 2026). "Arguments inadequately briefed in the opening brief are waived[.]" *Id.* (internal quotation marks omitted, brackets in original). In any event, on the record before us, this argument is unavailing. Officer Vernon testified that he smelled the "chemical vinegary odor" he "associate[s] with heroin" specifically when he "was in closer proximity to" Mr. Marshall. RIII.12–13. Viewing "the evidence in the light most favorable

to the determination of the district court,” *Young*, 99 F.4th at 1142 (internal quotation marks omitted) (quoting *Johnson*, 43 F.4th at 1107), we agree Officer Vernon had developed reasonable suspicion of criminal activity that allowed him to prolong the stop and continue detaining Mr. Marshall.

C

Mr. Marshall also challenges the frisk, contending Officer Vernon lacked “specific and articulable facts’ that [Mr. Marshall] was armed and dangerous[.]” Op. Br. at 19. We are again unpersuaded.

1

“To justify a patdown of the driver or a passenger during a traffic stop,” the Supreme Court has explained, “the police must harbor reasonable suspicion that the person subjected to the frisk is armed and dangerous.” *Johnson*, 555 U.S. at 327. “The justification for this requirement is primarily grounded in concerns for officer safety and the safety of bystanders[.]” *United States v. Fager*, 811 F.3d 381, 385 (10th Cir. 2016); see *Terry v. Ohio*, 392 U.S. 1, 27 (1968) (“The officer need not be absolutely certain that the individual is armed; the issue is whether a reasonably prudent man in the circumstances would be warranted in the belief that his safety or that of others was in danger.”). “[W]e have upheld pat-down searches ‘[e]ven when an officer had limited “specific information leading him to believe that [an individual] was armed or dangerous” and no

knowledge of the individual’s having possessed a weapon.” *Fager*, 811 F.3d at 385 (alterations in original) (quoting *United States v. Garcia*, 751 F.3d 1139, 1142 (10th Cir. 2014)). And “when an officer must ‘turn his or her back to a defendant, we require[] little beyond this concern to support the officer’s reasonable suspicion.” *Id.* at 386 (alteration in original) (quoting *Garcia*, 751 F.3d at 1147).

Of course, reasonable suspicion analysis involves “a multi-factor test based on the totality of the circumstances.” *Id.*; see also *United States v. Arvizu*, 534 U.S. 266, 274 (2002) (explaining a “totality of the circumstances” analysis forbids a “divide-and-conquer analysis” of “factors in isolation”). To that end, in *Fager*, we highlighted that “[i]n addition to the officer having to turn his or her back on the defendant, other factors that can influence an officer’s reasonable suspicion” that the defendant is armed and dangerous “include (but are not limited to) the time of day,” “any previous encounters the officer had with the defendant, [and] the defendant’s criminal history[.]” 811 F.3d at 386.

2

Recall, the district court concluded “Officer Vernon had reasonable suspicion that Mr. Marshall was armed and dangerous and that the frisk was necessary.” RI.38. The district court relied on these factual findings:

- Officer Vernon smelled a “vinegar-like’ odor coming from the car,” which he associated with “opiate use.” RI.37–38.
- Officer Vernon knew Ms. Willson’s criminal history, and he observed her “nervous demeanor” during the stop. RI.37–38.
- “Officer Vernon testified that Ms. Willson’s request to remove Mr. Marshall from the car before conducting the search led him to believe that Mr. Marshall might be armed.” RI.38.
- Officer Vernon knew “Mr. Marshall was a convicted felon and was affiliated with a gang known for violent behavior.” RI.38.
- Officer Vernon had his own safety concerns because he “knew both detainees had a prior criminal history and that he would be required to turn his back on them to conduct the search in the middle of the night.” RI.38.

The district court properly “assess[ed] the totality of the circumstances,” *Young*, 99 F.4th at 1144, and we discern no error in its reasonable suspicion determination.

Mr. Marshall resists this conclusion unsuccessfully. For one thing, his approach is inconsistent with what the law requires. He challenges the district court’s analysis on a factor-by-factor basis, arguing each factor *in isolation* is an “insufficient basis” to support reasonable suspicion that he was armed and dangerous. Op. Br. at 25. This sort of “divide-and-conquer analysis” is impermissible because it “seriously undercut[s] the ‘totality of the circumstances’ principle which governs the existence *vel non* of ‘reasonable suspicion.’” *Arvizu*, 534 U.S. at 274–75.

Mr. Marshall also relies on *United States v. Wald* to contend the “totality of the circumstances d[id] not provide” Officer Vernon with a “reasonable suspicion . . . [he] was armed and dangerous[.]” Op. Br. at 26–27 (heading format omitted from first quote) (citing 216 F.3d 1222, 1224 (10th Cir. 2000)). But that case does not help him. In *Wald*, we concluded the district court “properly ruled” a frisk “violated [defendant’s] Fourth Amendment rights” when the “purpose” of the frisk “was not to look for weapons but to look for drugs.” 216 F.3d at 1227. Here, unlike in *Wald*, Officer Vernon was looking for weapons.

Importantly, officer safety concerns were particularly significant to the dangerousness analysis here. Ms. Willson’s request to remove Mr. Marshall from the car, the district court found, led Officer Vernon “to believe that Mr. Marshall might be armed.” RI.38. And Officer Vernon’s “concerns for his own safety” were reasonable because he knew both Mr. Marshall and Ms. Willson had criminal histories, and “he would be required to turn his back on them to conduct the search in the middle of the night.” RI.38. In sum, we agree with the government that the totality of the circumstances “justified frisking [Mr.] Marshall[.]” Ans. Br. at 22.

IV

We **AFFIRM** the district court's denial of Mr. Marshall's motion to suppress.

Entered for the Court

Veronica S. Rossman
Circuit Judge