

6 July 2019

CL-11241505-5869

National Highway Traffic Safety Administration
Consumer Complaint
1200 New Jersey Avenue, SE
Washington, DC 20590

To Whom It May Concern,

Enclosed please find a formal complaint that I am making concerning the correction of a braking problem that I am experiencing with my 2018 Subaru Forrester. As detailed in my enclosed note to the Service Department of Subaru US, I continue to deal with brake pedals that depress over two inches when I apply the brakes on my Forrester. This occurs under all driving conditions.

As an amateur mechanic I realized that there was a problem with the **Braking Hydraulic Main Valve** and pointed this out to the Service Manager at YARK Subaru. He dismissed my recommendation and indicated that there was nothing wrong with the brakes on my car.

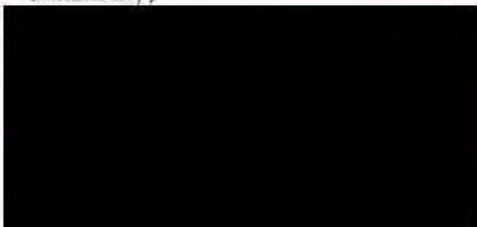
I took this up with Subaru US and they referred me to another dealership, LaRICHE Subaru in Findlay, Ohio. Their Service Manager agreed with my assessment and ordered a replacement valve for my car. However, the regional Tech countermanded this action and stated that there was nothing wrong with the brakes on my Forrester.

Disgusted with Subaru at this time, I picked up my car and left the dealership in Findley and continue to experience the same "spongy" brake problems I have had with the car for the entire year that I have owned it.

As you can see from the material I have enclosed, this "spongy brake" problem is not an isolated incident, but a recurring problem that is often misdiagnosed and therefore not corrected.

I am writing to you to lodge a formal complaint against Subaru in Ohio because the problem with the brakes on my Forrester persist and I am unable to get Subaru to make a simple warranty replacement of a valve that, from my experience, gives every indication of being defective. I hope you can intervene with Subaru and insist that they make the necessary repair to my car to insure that my braking system functions correctly.

Sincerely,



EA
7.31.19
LD

From: [REDACTED]

Owner 2018 Forster

Safety Issue: Abnormal brake pedal: Spongy/ mushy brake pedal travel

To: Subaru Service department

2018 Forster abnormal brake pedal

Ongoing safety issue with a reported abnormal brake system with mushy, spongy, unacceptable brake pedal travel. Gentleman this safety issue has been ongoing since the purchase of this vehicle. And the concern shown by Yark service department is not acceptable. After contacting the main service office Subaru motors New Jersey, I was informed to have the car diagnosis for this issue at another service department.

This operating issue is not predictable manner, it happens in warmer weather, the driving conditions are both city and highway operations. The pedal travel when the car is started is normal after operating for several miles or more the brake pedal starts unacceptable brake pedal travel. I have had several others' drive the vehicle I did not inform them on the pedal condition. They all voiced a concern on the operating condition of the brake pedal travel most explained it feels normal but after correcting for speed or traffic conditions the brake pedal feels soft, mushy, spongy. They are no brake pull, squeak, no warning lights. The brake does stop the vehicle but the pedal will continue to travel closer to the floor board. Then after stopping for thirty plus mintues the pedal will be normal for the remained of an hour driving in varying conditions highway speeds, back county roads, city. But then you stop for a traffic light the problem starts again.

I expressed each time to the Yark service person once the issues starts' the pedal continues to move towards the floor when applying the pedal in different driving conditions and once I stop the vehicle the condition returns to a normal operation, after starting the vehicle with in an hour or thirty mintues it could take several miles or several stops in varying conditions and the pedal goes to acting abnormal travel, mushy, or travel towards the floor.

I find this safety condition is an occasional exception to the brake system operations, BUT we have a vehicular that is an exception, the brake pedal symptoms have continued for the pass numerous months with no repair to the condition. Diagnosing this issue is extremely frustrating a very time consuming but as the owner I need a brake system working to both federal and automotive standards, a spongy brake system is not the standard. If there are questions by your service staff, contact me at work direct line [REDACTED]

Good luck
[REDACTED]



TOUGH PROBLEM?

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Email: kseyfert@motor.com



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JUNE 2019 ISSUE

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ABNORMAL BRAKE PEDAL DIAGNOSIS

By Roy Dennis Ripple

A customer may complain of a brake pedal that 'feels funny.' It's your job to determine whether it's due to aerated and/or contaminated brake fluid, excessive pedal travel or any other cause.

Vehicles normally respond to our commands in a fairly predictable manner. When we push on the accelerator, we go forward; when we turn the steering wheel, we change direction; and when we press the brake pedal, we stop. Of all the things we ask of our vehicles, "please stop" is the most important request. The brake pedal should give the driver a reassuring feel that says, "I got this."

The brake pedal is the driver's physical connection to the brake system, providing feedback that the driver uses to determine if there's a problem with his brakes. Spongy, mushy and squishy are just a few of the terms that a customer might use to describe negative brake pedal feedback. Sometimes these concerns can be tricky to diagnose due to the numerous failures that can cause an unacceptable brake pedal feel.

The first step in diagnosing a low brake pedal concern is to determine the type of low brake pedal issue you're dealing with, and if other symptoms are present. It might be a good idea to forgo the road if you're uncomfortable with the function of the brakes and settle for a parking lot cruise instead.

Besides a low or mushy pedal, note if the brakes pull, squeak or pulsate. Does the pedal slowly drift to the floor when at a stop, or does it stop solid, but too close to the floor? Determine if one or more wheels are locking up, and note if the red or amber brake warning lamps are illuminated. All of this information will aid in your diagnosis.

A low brake pedal is always caused by either a hydraulic or a mechanical malfunction. When a mechanical malfunction is the cause, it's due to a component moving past the range of motion for which it was designed. A good example of this is out-of-adjustment rear brake shoes. The universally accepted specification for brake shoe-to-drum clearance is .015 in. Every thousandth of an inch over spec causes excess brake pedal travel. Less than .025 in. travel at the master cylinder pushrod can equal about ½ in. at the pedal. Every little bit of unnecessary movement adds up.



This caliper has a gap between the inboard pad and the rotor due to the piston retracting into the bore. This will cause a low brake pedal on initial application.

Another example is a caliper piston that retracts too far into the bore when disengaged. Rear calipers with integral parking brakes are notorious for this. This causes the piston to travel further than designed to initiate contact between the inboard pad and the rotor. This excess travel can translate into a heap of movement at the brake pedal.

Hydraulic concerns present the biggest challenge in low brake pedal diagnosis. The smallest amount of air trapped anywhere in the system will have a big effect on brake pedal feel. Brake fluid converts the energy applied to the pedal into the force required to engage the brakes. This happens because fluids are compressible only to a very small degree, so any pressure applied to a liquid is transferred to all portions of the liquid and to the walls of the container it occupies. Since air is very compressible, air creates a nice, soft cushion for the fluid to lean on, ruining any chance of achieving solid hydraulic pressure.

Use the information you acquired during the road test to guide your initial visual inspection. Watch all the calipers move while an assistant pumps the brake pedal. Worn caliper pins or incorrectly installed brake pads can cause the caliper to flex side to side. This lateral movement uses up brake pedal travel. Be cautious of brake pads that are location-specific, or that need to line up with a locating pin during installation. If these pads are incorrectly installed, they'll cause the caliper to flex.

While you're eyeballing the calipers, make sure they're on the correct side. When a caliper is installed on the wrong side, the bleeder valve will be below the inlet. Since air rises to the top, good luck bleeding that caliper. Check meticulously for an external leak. Brake fluid leaks don't always present themselves as drops that puddle in the driveway. Just a little seepage at a fitting can cause big trouble at the pedal. Don't forget to look behind the wheel cylinder boots while checking for leaks; there should be no fluid there.

During your visual inspection, also watch the rubber hoses as a helper pumps the brake pedal. Look for a bulge in the hose that appears under pressure, then disappears when the pedal is released. I've seen hoses twist while pressurized due to a defect at the union where the rubber hose meets the metal crimp. Excess hose movement causes excess pedal movement.

Most negative brake pedal feedback issues fall into one or more of the following categories:

- A pedal that stops hard at the bottom but has excess play at the top is usually the result of a master cylinder or pushrod issue.
- A pedal that's spongy or mushy can be caused by air intrusion, contaminated brake fluid or a mechanical component moving beyond its designed range of motion.
- A pedal that continues to move toward the floor when applied is caused by a loss of hydraulic pressure, which can be caused by an external leak or an internally leaking component. Contaminated brake fluid can also cause a brake pedal to drift downward.

An occasional exception to these rules—there's always an exception—is the antilock brake system (ABS) hydraulic control unit (HCU). A defective HCU will create symptoms that feel like air intrusion or a pressure loss and can really complicate your diagnosis.

Let's look at a brake pedal that stops hard at the bottom but has excess play at the top. A good way to determine if there's too much pushrod travel is to loosen the master cylinder-to-power booster attaching hardware. Have an assistant hold the loose master cylinder firmly against the booster while you slowly apply the brake pedal. Determine how far the pedal moves before your helper feels the push on the master cylinder. Excessive pushrod play could be caused by a weak or broken master cylinder bore spring that's not returning the piston all the way to the back of the bore, or it could be a pushrod or booster issue. Remember, a little play at the pushrod is a lot at the pedal.

Many automakers use an adjustable pushrod. This adjustment is set at the factory and shouldn't have to be messed with. If you need to adjust the pushrod, something's wrong.

We once serviced a Ford Escape with excessive brake pedal travel at the top. Loosening the master cylinder determined that we lost about 3 in. of pedal travel before the piston moved. We removed the master cylinder and discovered that the small dome-shaped piece that was pressed into the end of the pushrod, which fits into the master cylinder bore, was missing, and laying at the bottom of the booster. This added almost $\frac{1}{4}$ in. of travel to the pushrod.

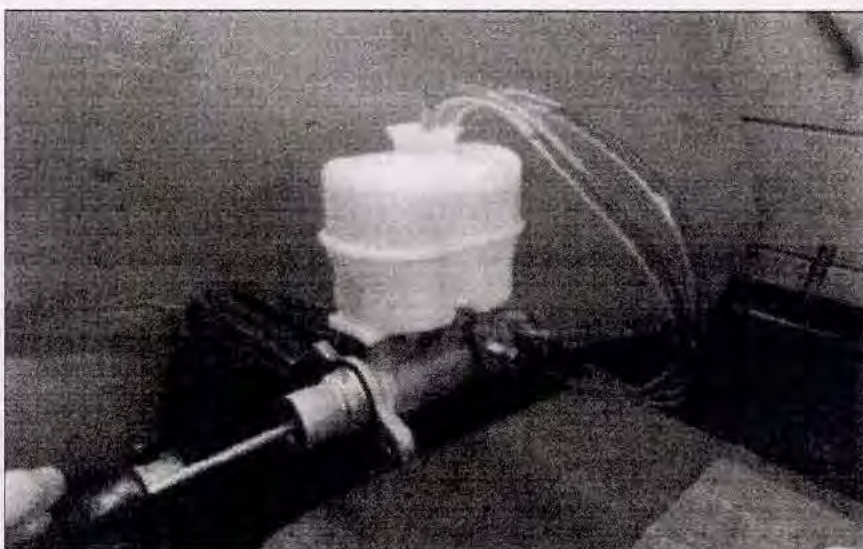
Diagnosing a spongy, mushy brake pedal issue can sometimes be frustrating as well as time-consuming. Here's an example of how important the initial road test is when diagnosing a spongy brake pedal.

While we were road-testing a vehicle with a low, spongy brake pedal, we noticed that the brakes pulled to the left. That told us that the left front and right front calipers were not applying evenly. Using the results from the road test, we started our visual inspection at the front calipers. Both front wheels were spinning freely and both stopped spinning when the brakes were applied. There was no excessive movement in either caliper or hose during brake application, and the brake pads were a healthy 9mm, with nice, beefy rotors.



This photo shows both ports blocked off at the master cylinder. Blocking the ports will allow you to quickly isolate the master cylinder and determine whether it's healthy.

Since the road test suggested there was an issue with the front brakes, it only made sense to check the front calipers for air. We removed a nice pocket of air from the right front caliper, which temporarily fixed the pedal. I say "temporarily" because we found no reason for that caliper to be holding air, as there was no sign that it was recently disassembled. Caliper piston seals and wheel cylinder cup seals can replicate a one-way check valve. Fluid can't get out but air can get in. So we replaced the caliper. This scenario reinforces the importance of gathering information during the road test. If we didn't feel the brake pull, we wouldn't have started our diagnosis at the front calipers.



A master cylinder is being bench-bled in this photo. Notice the check valves located between the bleeder fittings and the clear hoses, placed there to keep air from backfeeding into the master cylinder as the piston is pumped.

Unfortunately, it's not always that simple. If you're faced with a low, mushy pedal and the visual inspection yields no clues, it's time to break out the blockers. Blocking off sections of the brake system (not individual components) is the surest way to find the cause of the problem. Thexton Manufacturing makes a master cylinder plug kit (Part No. 803P) that can also be used on HCU's. It's important to use quality plugs when blocking brake pressure. A small leak at a plug will yield erroneous results.

Always start by blocking the master cylinder ports. If the master cylinder is good, the pedal should be rock hard—barely moving—with the ports blocked. If the brake pedal moves at all, the master cylinder is leaking internally, there's a pushrod issue or the brake fluid is contaminated.

If the master cylinder is good, most diagnostic procedures recommend blocking the HCU ports next. The problem is that the HCU tends to be hard to access, and the fittings are usually tough to get a wrench on due to their proximity to each other. So in the spirit of streamlined diagnosis, it makes sense to check the easier-to-access components first, which would be the wheels.

Block each wheel individually at the steel line, before the rubber hose; this way, you're taking the hoses, calipers and wheel cylinders out of the equation. Do not block off the calipers by using vise grips to crimp the rubber hoses. Damaging a rubber brake hose could cause it to work like a one-way valve, allowing pressure to be applied to the caliper but not to bleed off, causing a perpetually applied brake caliper. The Thexton block-off kit contains only male fittings, and you need a female fitting to block the steel line. Attaching a brass union to the male plug works great. Test the pedal after blocking each wheel. We found a right rear caliper on a Ford Explorer that was causing a low, spongy pedal using this method. We never did identify the actual cause of the caliper malfunction. It wasn't leaking, the pins were sturdy, no air, all looked fine. But the pedal came right up when we blocked it off. We replaced it; problem fixed.

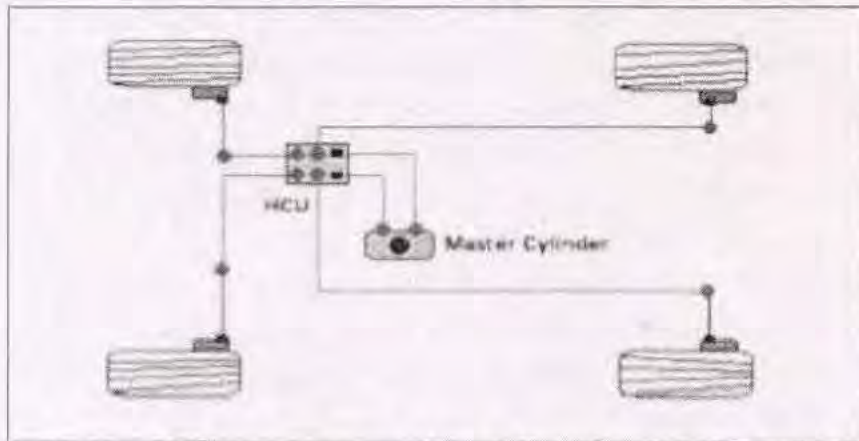
Brake Fluid	Dry Boiling Point	Wet Boiling Point
DOT 3	401°F (205°C)	284°F (140°C)
DOT 4	446°F (230°C)	311°F (155°C)
DOT 5	500°F (260°C)	356°F (180°C)
DOT 5.1	518°F (270°C)	374°F (190°C)

	DOT 3	DOT 4	DOT 5	DOT 5.1	
DOT 3	●	●	●	●	● Totaly Compatible
DOT 4	●	●	●	●	● Not Compatible (See Note)
DOT 5	●	●	●	●	
DOT 5.1	●	●	●	●	

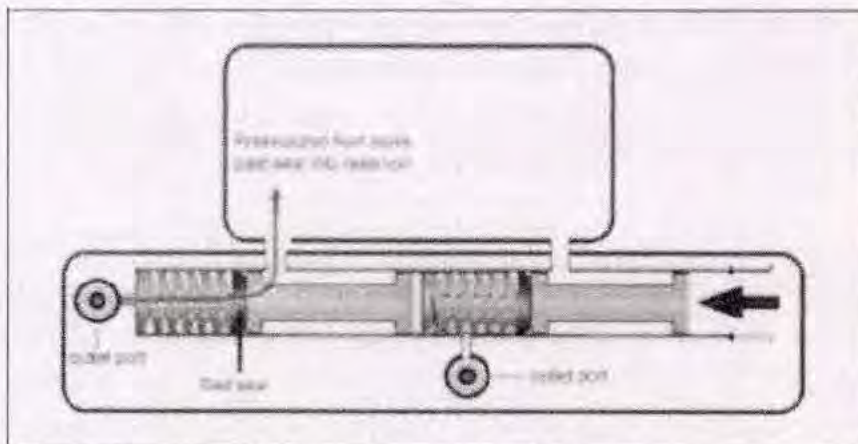
These charts show the compatibility and wet and dry boiling points of DOT 3, DOT 4, DOT 5 and DOT 5.1 brake fluids. Notice the difference in boiling points between wet and dry brake fluids that absorbing only 3.7% of water (the definition of "wet" for brake fluid) makes.

If you find no problem at the wheels, you'll need to access the HCU. It's best to block all the outlet ports on the HCU at the same time. This is a lot of work just for a diagnosis, but at this point there's very little choice.

If the pedal is still low with all the HCU outlet ports blocked, before passing sentence on the HCU, perform a service bleed. HCUs seem to be a favorite resting place for stowaway air. Even if you have no reason to believe that the brake system was opened to atmosphere, you should bleed the HCU before condemning it.



The red dots in this illustration indicate the location points that should be blocked off during brake pedal diagnosis. Start at the master cylinder, then move outward.



This illustration demonstrates how pressurized fluid can bypass a faulty piston seal in a master cylinder. No visible fluid leaks would be produced in this case.

ABS service bleed procedures are performed with a scan tool and vary by manufacturer. Some procedures are as easy as pressing the brake pedal a few times and clicking a button on the scan tool; others will require you to open bleeder valves, which makes a real mess on the shop floor. Whatever the procedure, it's very important to bleed all the wheels after performing an ABS service bleed.

I started using a brake pressure bleeder a couple of years ago and I'll never go back to the old pedal-pumping method. Pressure bleeders work great. They attach to the master cylinder reservoir in place of the cap and put the brake system under consistent pressure. The biggest advantage of this—besides not needing an assistant—is that you can open a bleeder valve and just let it flow,

pushing all of the air out of a line from the master cylinder to the wheel cylinder or caliper with just one turn of a bleeder valve. If you don't already have a pressure bleeder, I highly recommend getting one.

It's important to properly benchbleed a new master cylinder before installation. It can be tough to bleed the air from a master cylinder once it's installed on the vehicle. Mount the master cylinder firmly in a vise and screw bleeder fittings into the outlet ports. Attach hoses to the fittings, with the other ends of the hoses in the reservoir, submerged in brake fluid. An effective kit for bench-bleeding a master cylinder comes with check valves, which allow the air to be pushed out while not allowing air to get sucked in on the back stroke. Thexton, Dorman, NAPA and others offer such kits.

If you don't have check valves for the hoses, the procedure will still work. Since the hoses are submerged in brake fluid, fluid from the reservoir rather than air will be pulled back into the master cylinder. The problem is that air that doesn't make it to the end of the hose gets sucked back into the cylinder on the back stroke. Check valves prevent this from happening.

With the hoses in place, slowly push the piston into the master cylinder, then allow the piston to return to the rest position. You'll see air bubbles exit the master cylinder through the clear hoses. Do not push the piston past its normal range of motion; doing so can damage the piston seals, rendering the master cylinder useless. When using check valves, all the air is gone within seven to ten strokes. Be sure that the fittings are tight, as a poor seal at a fitting will pull air into the master cylinder.

The heart of a hydraulic brake system is the fluid, and when that goes bad, so does the pedal. Most automotive applications use DOT 3, DOT 4 or DOT 5.1 fluid, all of which are glycol-ether-based. DOT 5 is silicone-based and should not be mixed with glycol-based brake fluids. The most important property of brake fluid is that it maintains a stable viscosity and compressibility throughout its entire operating temperature range—very cold to very hot. The negative property of brake fluid is that it's hygroscopic, which means it absorbs water.

Water in brake fluid greatly lowers its boiling point. The dry boiling point of DOT 3 is 401°F. The wet boiling point, defined by the temperature at which the fluid boils after absorbing 3.7% water by volume, is 285°F. Big difference. Since brake fluid temperatures at the calipers can easily exceed 200°F, this could be a problem. The fact that water freezes also tends to complicate things a bit. This is why it's recommended that brake fluid be changed every two years.

When brake fluid is contaminated with water it turns a darker color. If the brake fluid looks contaminated, or if you're diagnosing a vehicle that's more than two years old, recommend a brake fluid flush. Use a pressure bleeder or brake fluid flush machine to push all the old fluid out through the bleeder valves. Be sure to check all the bleeder valves before selling the brake flush. If you think the valves are going to break off, you need to know this beforehand.

A couple of more things: A customer might describe an intermittent false ABS activation event as a low brake pedal. But if the pedal feels fine to you, check for DTCs in the ABS module. Also, contaminated fluid can damage an HCU. Brake fluid is designed to protect metal brake parts against corrosion, an attribute it loses when weakened by water. So when replacing an HCU, it's imperative to flush the fluid.

It seems that the furthest thing from anyone's mind as he's driving down the road is the brake system. The song on the radio or the setting of the climate control system occupy more brain space than the brakes do. So maybe problems like a low brake pedal and/or noisy brakes should be looked upon as an important safety warning. It's the brake system whispering, "Hey, remember me?" to the procrastinator who should plan on getting his brakes checked very soon.

ARTICLES THIS MONTH

[EDITOR'S REPORT \(/MAGAZINE-SUMMARY/EDITORS-REPORT-JUNE-2019\)](#)

[TROUBLE SHOOTER \(/MAGAZINE-SUMMARY/TROUBLE-SHOOTER-JUNE-2019\)](#)

[TRADE SECRETS \(/MAGAZINE-SUMMARY/TRADE-SECRETS-JUNE-2019\)](#)

[FOREIGN SERVICE \(/MAGAZINE-SUMMARY/FOREIGN-SERVICE-JUNE-2019\)](#)

[DRIVEABILITY CORNER \(/MAGAZINE-SUMMARY/DRIVEABILITY-CORNER-JUNE-2019\)](#)

[ABNORMAL BRAKE PEDAL DIAGNOSIS \(/MAGAZINE-SUMMARY/ABNORMAL-BRAKE-PEDAL-DIAGNOSIS-JUNE-2019\)](#)

[SUCCESSION PLANNING: WILL YOUR BUSINESS SURVIVE YOU? \(/MAGAZINE-SUMMARY/SUCCESSION-PLANNING-WILL-BUSINESS-SURVIVE\)](#)

[NEWSBREAK \(/MAGAZINE-SUMMARY/NEWSBREAK-JUNE-2019\)](#)

[F.Y.I. \(/MAGAZINE-SUMMARY/F-Y-I-JUNE-2019\)](#)

[TOOLS OF THE TRADE \(/MAGAZINE-SUMMARY/TOOLS-OF-THE-TRADE-JUNE-2019\)](#)

Customer Number: [REDACTED]

Invoice No [REDACTED]

INVOICE

PAGE 1



SUBARU

YARK SUBARU

6141 W. Central Ave.
TOLEDO, OHIO 43615

(419) 842-7749

Fax: (419) 842-7949

www.yarksubaru.com

TOLEDO, OH

Home: [REDACTED] Bus: [REDACTED]

Email: [REDACTED]

Cont: [REDACTED]

Cell: [REDACTED]

SERVICE ADVISOR: 9668 STEVE SHENEFIELD

COLOR	YEAR	MAKE/MODEL		VIN	LICENSE	MILEAGE IN / OUT		TAG
VRP/VENETI	18	SUBARU FORESTER		JF2SJABC9JH		8436 / 8436		
DEL. DATE	PROD. DATE	WARR. EXP.	PROMISED	PO NO.	RATE	PAYMENT	INV. DATE	
11MAY18			17:00 25MAR19		0.00	CASH	29MAR19	
R.O. OPENED		READY		OPTIONS: SOLD-STR ENG:2.5_Liter TRN:CVT				
13:57 25MAR19		10:35 29MAR19						

LINE	OPCODE	TECH	TYPE	HOURS	LIST	NET	TOTAL
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A CUSTOMER STATES BRAKE PEDAL GOES TO THE FLOOR. CHECK AND ADVISE.

533211 MASTER CYLINDER R&R

9800 WS

(N/C)

1 26401FJ130 MASTER CYLINDER AY LH

(N/C)

1 26497AG010 SEAL KIT M/CYL

(N/C)

533101 BLEED BRAKES

9800 WS

(N/C)

PARTS: 0.00 LABOR: 0.00 OTHER: 0.00 TOTAL LINE A: 0.00

VERSION 1 (EMP# 9800,29MAR19 09:50): brake pedal sinks master cylinder has internal leak replace cylinder and bleed brakes test drove ok now

B CUSTOMER STATES PERFORM TIRE ROTATION AND BALANCE.

16 CUSTOMER STATES PERFORM TIRE ROTATION AND BALANCE.

9800 CS

49.95

49.95

PARTS: 0.00 LABOR: 49.95 OTHER: 0.00 TOTAL LINE B: 49.95

VERSION 1 (EMP# 9800,29MAR19 09:51): 1.00 rotate and balance tires

C CUSTOMER DROPPING OFF FOR A COUPLE DAYS.

16 CUSTOMER DROPPING OFF FOR A COUPLE DAYS.

9800 CS

0.00

0.00

PARTS: 0.00 LABOR: 0.00 OTHER: 0.00 TOTAL LINE C: 0.00

D PERFORM MULTI POINT INSPECTION

CI PERFORM MULTI POINT INSPECTION

9800 CS

0.00

0.00

PARTS: 0.00 LABOR: 0.00 OTHER: 0.00 TOTAL LINE D: 0.00

E PERFORMED VEHICLE WALK AROUND / INSPECTION

WALK PERFORMED VEHICLE WALK AROUND / INSPECTION

9800 CS

0.00

0.00

PARTS: 0.00 LABOR: 0.00 OTHER: 0.00 TOTAL LINE E: 0.00

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By signing below, you acknowledge that you were notified of and authorized the Dealership to perform the services/repairs itemized in this Invoice and that you received (or had the opportunity to inspect) any replaced parts as requested by you. The vehicle is being returned to you in exchange for your payment of the Amount Due.

*SHOP SUPPLY COSTS:

We have added a charge equal to 10% of the total labor cost, not to exceed \$50.00, to the Repair Order for shop supplies used in connection with this repair.

ALL PARTS ARE NEW
UNLESS OTHERWISE
INDICATED.

DESCRIPTION	TOTALS
LABOR AMOUNT	
PARTS AMOUNT	
GAS, OIL, LUBE	
SUBLET AMOUNT	
MISC. CHARGES *	
TOTAL CHARGES	
LESS DISC/DEDUCTIBLE	
SALES TAX	
PLEASE PAY THIS AMOUNT	

DATE CUSTOMER SIGNATURE

AUTHORIZED DEALERSHIP REPRESENTATIVE SIGNATURE:

Customer Number [REDACTED] Voice No [REDACTED]

INVOICE

PAGE 2

**SUBARU****YARK SUBARU**6141 W. Central Ave.
TOLEDO, OHIO 43615
(419) 842-7749
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www.yarksubaru.com

TOLEDO, OH

Home

Bus:

Cont

Cell:

Email: EMAIL

HOME

SERVICE ADVISOR: 9668 STEVE SHENEFIELD

COLOR	YEAR	MAKE/MODEL		VIN		LICENSE	MILEAGE IN / OUT		TAG
VRP/VENETI	18	SUBARU FORESTER		JF2SJABC9JH [REDACTED]			8436 / 8436		[REDACTED]
DEL. DATE	PROD. DATE	WARR. EXP.	PROMISED		PO NO.	RATE	PAYMENT	INV. DATE	
11MAY18			17:00 25MAR19			0.00	CASH	29MAR19	
R.O. OPENED		READY		OPTIONS: SOLD-STK: [REDACTED] ENG:2.5_Liter TRN:CVT					
13:57 25MAR19		10:35 29MAR19							

LINE	OPCODE	TECH	TYPE	HOURS	LIST	NET	TOTAL
EST:	49.95			25MAR19 13:57	SA: 9668		

EST: 58.93 25MAR19 13:57 SA: 9668

CUSTOMER PAY SHOP CHARGE FOR REPAIR ORDER

5.00

DID YOU KNOW THAT YARK AUTOMOTIVE DOES...
TIRES, BRAKES, GLASS, BODY REPAIR, DENTS,
DINGS, DETAILS, ACCESSORIES, CAR STARTERS,
SUNROOFS, LEATHER, CHROME ACCENTS, RIMS,
GRILLES, MUFFLERS, TRANSMISSIONS AND MORE!

WE ARE YOUR ONE STOP SERVICE SHOP.

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**ALL PARTS ARE NEW
UNLESS OTHERWISE
INDICATED.**

DESCRIPTION	TOTALS
LABOR AMOUNT	\$ 49.95
PARTS AMOUNT	\$ 0.00
GAS, OIL, LUBE	\$ 0.00
SUBLET AMOUNT	\$ 0.00
MISC. CHARGES *	\$ 5.00
TOTAL CHARGES	\$ 54.95
LESS DISC/DEDUCTIBLE	\$ 0.00
SALES TAX	\$ 3.98
PLEASE PAY THIS AMOUNT	\$ 58.93

DATE

CUSTOMER SIGNATURE

AUTHORIZED DEALERSHIP REPRESENTATIVE SIGNATURE

Customer Copy

Page 2 of 2

Customer Number: [REDACTED]

Invoice No [REDACTED]

INVOICE

PAGE 1

TOLEDO, OH

Home: [REDACTED]

Bus: [REDACTED]

Email: [REDACTED]

Cont: [REDACTED]

Cell: [REDACTED]



YARK SUBARU

6141 W. Central Ave.

TOLEDO, OHIO 43615

(419) 842-7749

Fax: (419) 842-7949

www.yarksubaru.com

SERVICE ADVISOR: 9561 DUSTIN R STEVENS

COLOR	YEAR	MAKE/MODEL	VIN	LICENSE	MILEAGE IN / OUT	TAG	
VRP/VENETI	18	SUBARU FORESTER	JF2SJABC9JH [REDACTED]		6457 / 6457	[REDACTED]	
DEL. DATE	PROD. DATE	WARR. EXP.	PROMISED	PO NO.	RATE	PAYMENT	INV. DATE
11MAY18			17:00 26NOV18		0.00	CASH	28NOV18
R.O. OPENED		READY	OPTIONS: SOLD-STK [REDACTED] ENG:2.5_Liter TRN:CVT				
14:46 26NOV18		13:01 28NOV18					

LINE	OPCODE	TECH	TYPE	HOURS	LIST	NET	TOTAL
------	--------	------	------	-------	------	-----	-------

A CUSTOMER STATES AFTER EXTENDED DRIVING THE BRAKES FEEL EXTREMELY SPONGE OR STARTS PULSATING, STATES HAS TO BE DRIVEN FOR AN EXTENDED PERIOD.

06 CUSTOMER STATES AFTER EXTENDED DRIVING THE BRAKES FEEL EXTREMELY SPONGE OR STARTS PULSATING, STATES HAS TO BE DRIVEN FOR AN EXTENDED PERIOD.

9800 WS

2 26300SA001 BRAKE DISC F

PARTS: 0.00 LABOR: 0.00 OTHER: 0.00 TOTAL LINE A: 0.00
FRONT ROTORS PULSATE REPLACE ROTORS

(N/C)

(N/C)

0.00

B CUSTOMER STATES ON A COLD START WHEN ITS COLD OUT, THE VEHICLE HAS AN EXTENDED CRANK, DOESNT START RIGHT AWAY. SEEMS LIKE ITS NOT GETTING IGNITION OR DOESNT HAVE GOOD FUEL PRESSURE. CHECK AND ADVISE.

06 CUSTOMER STATES ON A COLD START WHEN ITS COLD OUT, THE VEHICLE HAS AN EXTENDED CRANK, DOESNT START RIGHT AWAY. SEEMS LIKE ITS NOT GETTING IGNITION OR DOESNT HAVE GOOD FUEL PRESSURE. CHECK AND ADVISE.

9800 WS

PARTS: 0.00 LABOR: 0.00 OTHER: 0.00 TOTAL LINE B: 0.00

1.00 CHECK FOR EXTENDED CRANK CHECK FOR DTCS CHECK FOR ECM UPDATES AND TSB CHECK BATTERY STATE OF CHARGE LET SIT OVER NIGHT TWICE STARTS AND RUNS OK NO REPAIRS

(N/C)

0.00

C PERFORM MULTI POINT INSPECTION

CI PERFORM MULTI POINT INSPECTION

9800 CS

PARTS: 0.00 LABOR: 0.00 OTHER: 0.00 TOTAL LINE C: 0.00

0.00

0.00

0.00

D PERFORMED VEHICLE WALK AROUND / INSPECTION

WALK PERFORMED VEHICLE WALK AROUND / INSPECTION

WARRANTY DISCLAIMER: ALL PARTS AND ACCESSORIES ARE SOLD AND ALL REPAIRS ARE PROVIDED BY THE DEALERSHIP AS-IS. THE DEALERSHIP HEREBY EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY LIABILITY IN CONNECTION WITH THE SALE OF PARTS OR PRODUCTS OR THE REPAIR. THE ONLY WARRANTIES ON PARTS AND ACCESSORIES OR REPAIRS ARE THOSE WHICH MAY BE OFFERED BY THE MANUFACTURER OR THE ORIGINAL PARTS DISTRIBUTOR AND ONLY SUCH MANUFACTURER OR DISTRIBUTOR SHALL BE LIABLE FOR PERFORMANCE UNDER SUCH WARRANTIES. CUSTOMER SHALL NOT BE ENTITLED TO RECOVER FROM THE DEALERSHIP ANY CONSEQUENTIAL DAMAGES, DAMAGES TO PROPERTY, DAMAGES FOR LOSS OF USE, LOSS OF TIME, LOSS OF PROFIT OR INCOME, OR ANY OTHER INCIDENTAL DAMAGES.

By signing below, you acknowledge that you were notified of and authorized the Dealership to perform the services/repairs itemized in this invoice and that you received (or had the opportunity to inspect) any replaced parts as requested by you. The vehicle is being returned to you in exchange for your payment of the Amount Due.

***SHOP SUPPLY COSTS:**
We have added a charge equal to 10% of the total labor cost, not to exceed \$30.00, to the Repair Order for shop supplies used in connection with this repair.

ALL PARTS ARE NEW UNLESS OTHERWISE INDICATED.

DESCRIPTION	TOTALS
LABOR AMOUNT	
PARTS AMOUNT	
GAS, OIL, LUBE	
SUBLET AMOUNT	
MISC. CHARGES *	
TOTAL CHARGES	
LESS DISC/DEDUCTIBLE	
SALES TAX	
PLEASE PAY THIS AMOUNT	

DATE CUSTOMER SIGNATURE

AUTHORIZED DEALERSHIP REPRESENTATIVE SIGNATURE

Customer Copy

Page 1 of 2

Invoice N

PAGE 2



SUBARU

6141 W. Central Ave.
TOLEDO, OHIO 43615
(419) 842-7749
Fax: (419) 842-7949
www.yarksubaru.com

Home: [REDACTED] Bus: [REDACTED]

Cont:
Cell:

Email: EMAIL [REDACTED] HOME

SERVICE ADVISOR: 9561 DUSTIN R STEVENS

14:46 26NOV18	13:01 28NOV18
---------------	---------------

PARTS: 0.00 LABOR: 0.00 OTHER: 0.00 TOTAL LINE D: 0.00

26NOV18 14:46 SA: 9561

DESCRIPTION: MA10 Oil and Filter - Change

REASON DENIED: DEC

PERSON CONTACTED:

COMMENTS: None

RECOMMENDED BY: 9561 STEVENS

DENIAL ADDED BY: 9561

STEVENS

LINE ASSOCIATED:

ESTIMATE: 68.00

DESCRIPTION: MA40 Tires - Rotate

REASON DENIED: DEC

PERSON CONTACTED:

COMMENTS: None

RECOMMENDED BY: 9561 STEVENS

DENIAL ADDED BY: 9561

STEVENS

LINE ASSOCIATED:

ESTIMATE: 18.95

DID YOU KNOW THAT YARK AUTOMOTIVE DOES...
TIRES, BRAKES, GLASS, BODY REPAIR, DENTS,
DINGS, DETAILS, ACCESSORIES, CAR STARTERS,
SUNROOFS, LEATHER, CHROME ACCENTS, RIMS,
GRILLES, MUFFLERS, TRANSMISSIONS AND MORE!

WE ARE YOUR ONE STOP SERVICE SHOP.

WARRANTY DISCLAIMER: ALL PARTS AND ACCESSORIES ARE SOLD AND ALL REPAIRS ARE PROVIDED BY THE DEALERSHIP AS-IS. THE DEALERSHIP HEREBY EXPRESSLY DISCLAIMS ANY WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE DEALERSHIP DOES NOT AUTHORIZE ANY OTHER PERSON TO ASSUME FOR IT ANY LIABILITY IN CONNECTION WITH THE SALE OF PARTS OR PRODUCTS OR THE REPAIR. THE ONLY WARRANTIES ON PARTS, ACCESSORIES OR REPAIRS ARE THOSE WHICH MAY BE OFFERED BY THE MANUFACTURER OR THE ORIGINAL PARTS DISTRIBUTOR AND ONLY SUCH MANUFACTURER OR DISTRIBUTOR SHALL BE LIABLE FOR PERFORMANCE UNDER SUCH WARRANTIES. CUSTOMER SHALL NOT BE ENTITLED TO RECOVER FROM THE DEALERSHIP ANY CONSEQUENTIAL DAMAGES, DAMAGES TO PROPERTY, DAMAGES FOR LOSS OF USE, LOSS OF TIME, LOSS OF PROFIT OR INCOME, OR ANY OTHER INCIDENTAL DAMAGES.

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SHOP SUPPLY COSTS

We have added a charge equal to 10% of the total labor cost, not to exceed \$30.00, to the Repair Order for shop supplies used in connection with this repair.

ALL PARTS ARE NEW
UNLESS OTHERWISE
INDICATED.

DESCRIPTION	TOTALS
LABOR AMOUNT	\$ 0.00
PARTS AMOUNT	\$ 0.00
GAS, OIL, LUBE	\$ 0.00
SUBLET AMOUNT	\$ 0.00
MISC. CHARGES *	\$ 0.00
TOTAL CHARGES	\$ 0.00
LESS DISC/DEDUCTIBLE	\$ 0.00
SALES TAX	\$ 0.00
PLEASE PAY THIS AMOUNT	\$ 0.00

DATE	CUSTOMER SIGNATURE
------	--------------------

AUTHORIZED DEALERSHIP REPRESENTATIVE SIGNATURE _____

**PLEASE PAY
THIS AMOUNT**

\$ 0.00

DealerCAP 2014 CDK Global LLC. VEHICLE SERVICE INVOICE TYPE 2 - 2S12C - "A515" - OH - 969455

Customer Copy

Page 2 of 2

YARK AUTOMOTIVE GROUP

Yark BMW
6055 W. Central Ave
Toledo, OH 43615
Service: 419-842-7973

Yark Nissan
5957 W. Central Ave
Toledo, OH 43615
Service: 419-842-7534

Yark Subaru
6141 W. Central Ave
Toledo, OH 43615
Service: 419-842-7930

Yark Chrysler - Jeep - Dodge-Ram
6019 W. Central Ave
Toledo, OH 43615
Service: 419-842-7832

Yark FIAT
6000 W. Central Ave.
Toledo, OH 43615
Service 419-842-7833

Yark Chevrolet
9830 Waterville Swanton Rd
Whitehouse, OH 43571
Phone: 419-878-5110

TO OUR EARLY MORNING OR LATE EVENING SERVICE CUSTOMERS

1. WRITE YOUR ORDER ON THIS FORM. KEEP TOP SHEET AS YOUR COPY.
 2. PLACE YOUR KEYS IN THIS ENVELOPE.
 3. LOCK YOUR VEHICLE AND LEAVE IT IN THE PARKING LOT.
 4. BE SURE TO LEAVE A PHONE NUMBER WHERE YOU CAN BE REACHED.
- UNATED DROP BOX OR CHUTE.

NAME: [REDACTED] LICENSE PLATE: [REDACTED]
ADDRESS: [REDACTED] Mileage: [REDACTED]
CITY: TOLEDO Make & Model: 2018 FORESTER
Phone number where you can be reached: [REDACTED] Year: 2018 Color: URP/VEGETI
Second Phone Number: [REDACTED] What time will you call for your vehicle? [REDACTED] a.m. / p.m.

PLEASE COMPLETE THE FOLLOWING SERVICES:

ON GOING, ABNORMAL BRAKE PEDAL TRAVEL -
AFTER DRIVING FOR SEVERAL MILES IN TRAFFIC HWY
THE BRAKE PEDAL BECOMES LOW OR MUSHY PEDAL
TRAVEL TOWARD THE FLOOR & THE PEDAL IN TRAFFIC
CONTINUES TO MOVE TOWARDS THE FLOOR WHEN APPLIED.

PARTS REPLACED UNDER WARRANTY OR TO BE REBUILT OR SOLD BY US WILL NOT BE RETURNED.

ENTERED IN CITY AND HWY TRAFFIC STOPPING -
All other parts will be tendered to you unless specified otherwise. DISCARD REPLACED PARTS.

You have the right to an estimate of the cost of repairs or services per cent unless you approve a larger amount before repairs are made under one of the following choices and indicating a telephone where

ate by more than ter signing your name

If Written Estimate Is Desired
Customer Must Return
to Sign and Receive
Copy of Estimate

- (a) WRITTEN ESTIMATE [REDACTED]
(b) ORAL ESTIMATE [REDACTED]
(c) NO ESTIMATE [REDACTED]

CUSTOMER SIGNATURE

In the event that you, the customer, authorize commencement but do not authorize completion of a repair or service, a charge will be imposed for disassembly or reassembly or partially completed work. Such charge will be directly related to the actual amount of labor or parts involved in the inspection, repair or service. I hereby authorize the repair work herein set forth to be done by you, together with the furnishing by you of the necessary parts and other material for such repair, and agree that you are not responsible for any delays caused by unavailability or delayed availability of parts or material for any reason; that you neither assume nor authorize any other person to assume for you any liability in connection with such repair; that you shall not be responsible for loss of or damage to the above vehicle, or articles left therein, in case of fire, theft or other cause beyond your control; that an express mechanic's lien is hereby acknowledged on the above vehicle to secure the amount of repairs thereto; that your employees may operate the above vehicle on streets, highways or elsewhere for the purpose of testing and/or inspecting such vehicle.

Vehicle equipped with remote start? ☒ Yes ☐ No

PLEASE SIGN:

DATE

06/18/2019

Form EARLY-95 OH (10)

and Reynolds Company TO ORDER: www.yarkgroup.com 1-800-344-1999 fax 1-800-531-8082

The Reynolds and Reynolds Company U.S.A.

LARICHE TOYOTA SUBARU

419-423-5656

SERVICE HOURS:

Mon. - Fri. 7:30 am - 6:00pm
Saturday CLOSED
Sunday CLOSED

TO OUR EARLY MORNING OR LATE EVENING SERVICE CUSTOMERS

1. WRITE YOUR ORDER ON THIS FORM. KEEP TOP SHEET AS YOUR COPY.
2. PLACE YOUR KEYS IN THIS ENVELOPE.
3. LOCK YOUR VEHICLE AND LEAVE IT IN THE PARKING LOT.
4. BE SURE TO LEAVE A PHONE NUMBER WHERE YOU CAN BE REACHED.
5. DROP ENVELOPE IN DESIGNATED DROP BOX OR CHUTE.

NAME: [REDACTED] LICENSE PLATE: [REDACTED]
ADDRESS: [REDACTED] Mileage: 10628
CITY: TOLEDO, OH Zip: [REDACTED] Make & Model: 2018 FORESTER
Phone number where you can be reached: [REDACTED] Year: 2018 Color: Red
Second Phone Number: [REDACTED] What time will you call for your vehicle? ANYTIME a.m. / p.m.

PLEASE COMPLETE THE FOLLOWING SERVICES:

SEE ATTACHED FORMS

WARRANTY Repair BRAKE System
AND General OVERVIEW & INSPECTION
TO THE VEHICLE: all systems

PARTS REPLACED UNDER WARRANTY OR TO BE REBUILT OR SOLD BY US WILL NOT BE RETURNED.

All other parts will be tendered to you unless specified otherwise. DISCARD REPLACED PARTS.

ESTIMATE

You have the right to an estimate of the cost of repairs or services which you are requesting. Your bill will not be higher than the estimate by more than ten per cent unless you approve a larger amount before repairs are finished. You can choose the kind of estimate you want to receive by signing your name under one of the following choices and indicating a telephone where you can be reached if necessary.

If Written Estimate Is Desired

Customer Must Return
to Sign and Receive
Copy of Estimate

(a) WRITTEN ESTIMATE

CUSTOMER SIGNATURE

(b) ORAL ESTIMATE

CUSTOMER SIGNATURE

(c) NO ESTIMATE

CUSTOMER SIGNATURE

In the event that you, the customer, authorize commencement but do not authorize completion of a repair or service, a charge will be imposed for disassembly, reassembly or partially completed work. Such charge will be directly related to the actual amount of labor or parts involved in the inspection, repair or service.

I hereby authorize the repair work herein set forth to be done by you, together with the furnishing by you of the necessary parts and other material for such repair, and agree that you are not responsible for any delays caused by unavailability or delayed availability of parts or material for any reason; that you neither assume nor authorize any other person to assume for you any liability in connection with such repair; that you shall not be responsible for loss of or damage to the above vehicle, or articles left therein, in case of fire, theft or other cause beyond your control; that an express mechanic's lien is hereby acknowledged on the above vehicle to secure the amount of repairs thereto; that your employees may operate the above vehicle on streets, highways or elsewhere for the purpose of testing and/or inspecting such vehicle.

Vehicle equipped with remote start? Yes ☒ No

PLEASE SIGN

DATE

6/30/2019

Form EARLY-98-0H

Reynolds and Reynolds Company TO ORDER: www.reynolds.com; 1-800-344-0996; fax 1-800-631-9056

Toledo, Ohio

F



U.S. POSTAGE
\$1.30
FCM LG ENV
43816
Date of sale
07/08/19
06
11486839

USPS FIRST CLASS MAIL

SAT 06 JUL 2019 PM

2.80 oz

SHIP
TO:

WASHINGTON DC 20590



(420) 20590

National Highway Traffic Safety
Administration
1200 New Jersey Avenue, SE
Washington, DC 20590