



Installation manual

Product Information

Instructor brake serial number: _____

SCM serial number: _____

Installer: _____

Date Installed: _____



Technical & customer support:

1 888 370 5050

Info@tarsusystems.com

(i) Introduction

This manual outline installation and maintenance of the Tarsus instructor brake and accelerator system. The Tarsus instructor brake is a universal product designed to be mounted to the passenger side floor or firewall of a vehicle. It actuates the brake on the driver side using a cable and pulley system.

Caution: Before installation read fully and understand steps required for installation, we recommend this product is installed by a professional mechanic. Installer assumes all liability if installed incorrectly.

(ii) Tools required

The following is a tool list for install and adjustment of the Tarsus instructor brake and accelerator system. This does not include a tool list for removal and install of OEM vehicle components.

Combination Wrenches 3/4", 5/8", 9/16", 1/2", 7/16"

3/8" ratchet drive + extension

1/4" ratchet drive + extension

Socket 1/2", 9/16", 7/16", 3/8",

Allen key 1/8", 5/32", 3/16", 1/4"

Drill (right angle pneumatic drill suggested)

Drill bit 21/64th

Impact Drive (suggested)

Hack saw

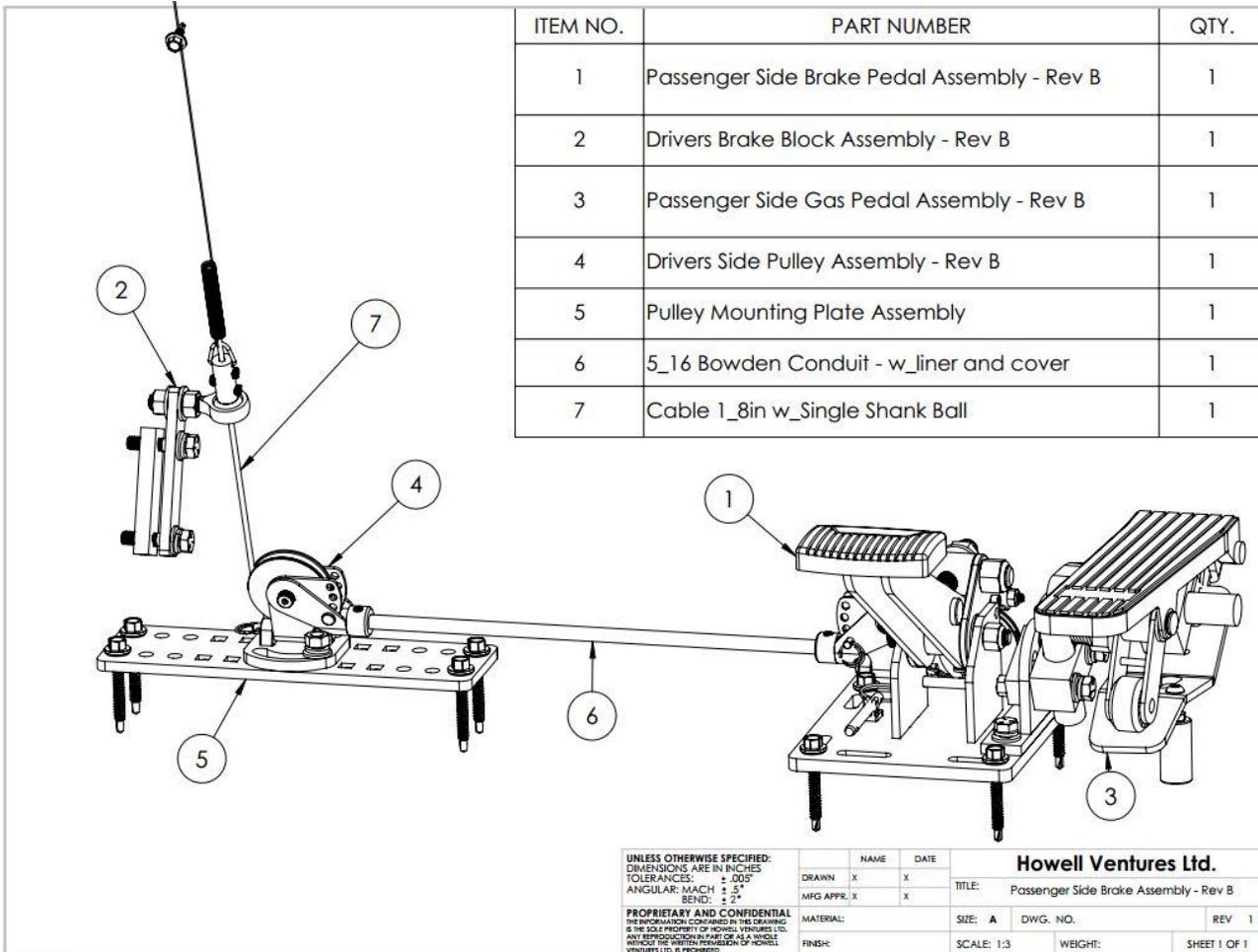
16mm hole saw

Digital Volt Ohm Multimeter (DVOM)

#2 Philips screw driver

(iii) Assembly Drawing

For component brake down please see Appendix. (item 3 is optional)



1.0 Safety Precautions

Observe All safety precautions. Failure to do so could result in damage to the vehicle, property and/or personal injury, or death.

- Observe all safety precautions when using all tools
- Correct PPE for automotive work must be worn thought the install.
- Installation should only be performed by a sure grip certified technician.
- Final fittings and adjustments must be preformed before allowing user to operate the Instructor brake.

2.0 Pre-installation check

Check vehicle OEM braking system.

Take vehicle on test drive to ensure that brakes are operating correctly, and other vehicle modifications do not interfere with normal brake operation. Visually check all braking components for wear. If any issues are found, they need to be addressed before installing Tarsus instructor brake and accelerator.

Installation instructions have been read completely, if there are any questions about the content please contact us at 1 888 370 5050

WARNING

Vehicle must meet all motor vehicle safety standards.

Installation of the *Sure Grip* on modified vehicles is not authorized.

“Modified” is defined as changes not made or authorized by the vehicle’s manufacturer. These changes include:

- oversized, undersized or un-treaded tires
- modified suspension systems
- additional or modified carburetors or linkages
- small steering wheels not supplied by the vehicle’s manufacturer
- any change that tends to make the vehicle difficult or dangerous to drive.

3.0 Installation overview

Overview of Installation steps is as follows:

- Mounting for pedal assembly
- Run cable from passenger side to driver
- Mount driver side pully
- Driver side cable attachment
- Auxiliary accelerator mounting
- Electronic component installation

4.0 Pedal base prep

Slide cable through captive bolt.

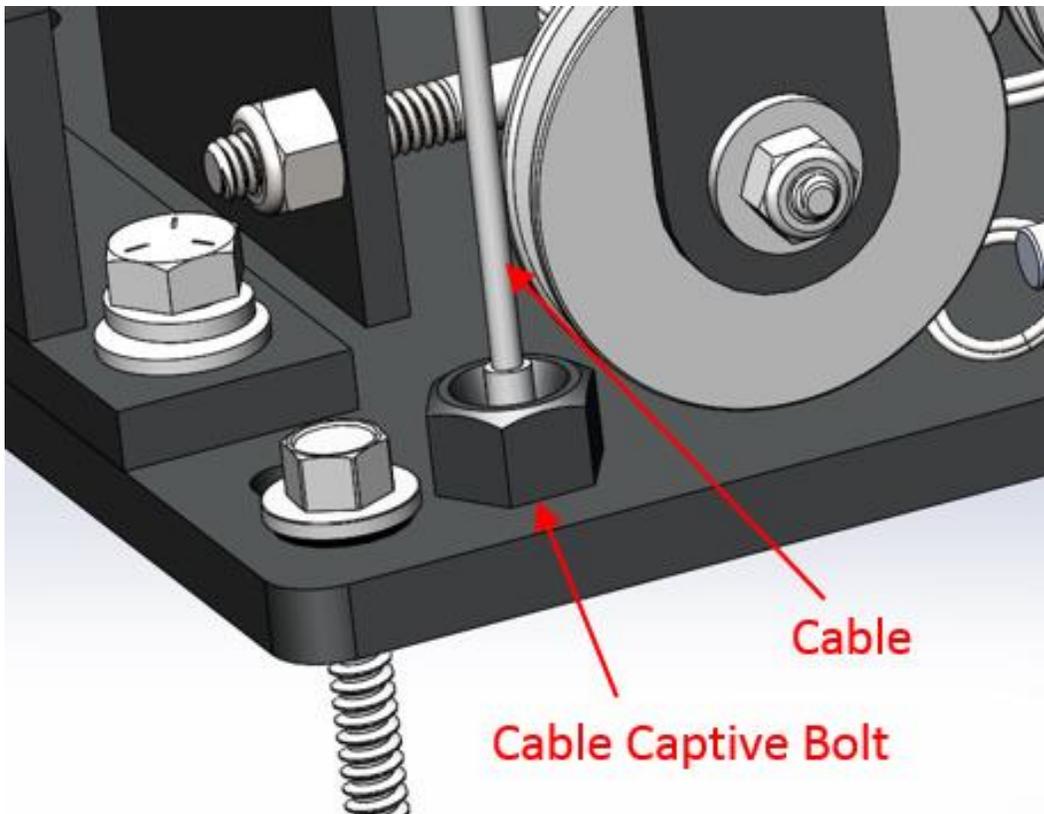


Figure 1: captive bolt.

The captive bolt allows you to remove cable from the pedal assembly without unbolting pedal. When shipped It is already attached to pedal base. Simply un bolt captive bolt if cable replacement is required.

4.1 Instructor accelerator attachment

This section is only applicable if the Instructor accelerator is required, move to *sec. 5.0* if no accelerator is being installed.

Bolt swivel bracket to base using 5/16 hex bolts, lock washers and flat washers. Final torque 17 ft/lb.

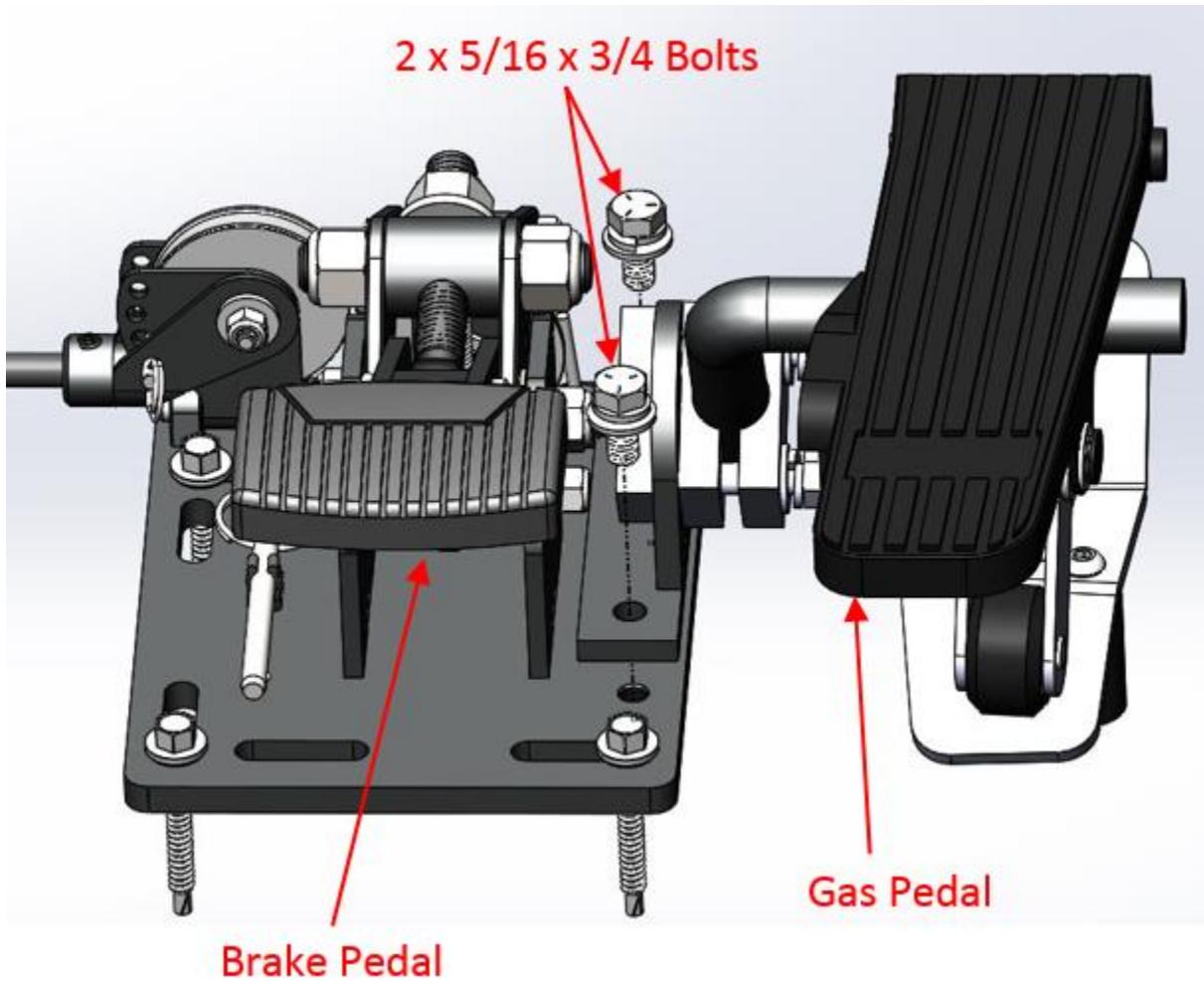


Figure 2: accelerator attachment.

Attach clamping block to swivel bracket assembly using thread block and hardware supplied with clamping block kit. Leave loose until final fitment. Final torque to 17 ft/lb. Reference Fig. 2 for placement.

The other clamping block kit is attached to the inside of instructor accelerator pedal base plate, using holes in Fig. 3. Cycle pedal to make sure there is no interference with clamping block throughout its travel.

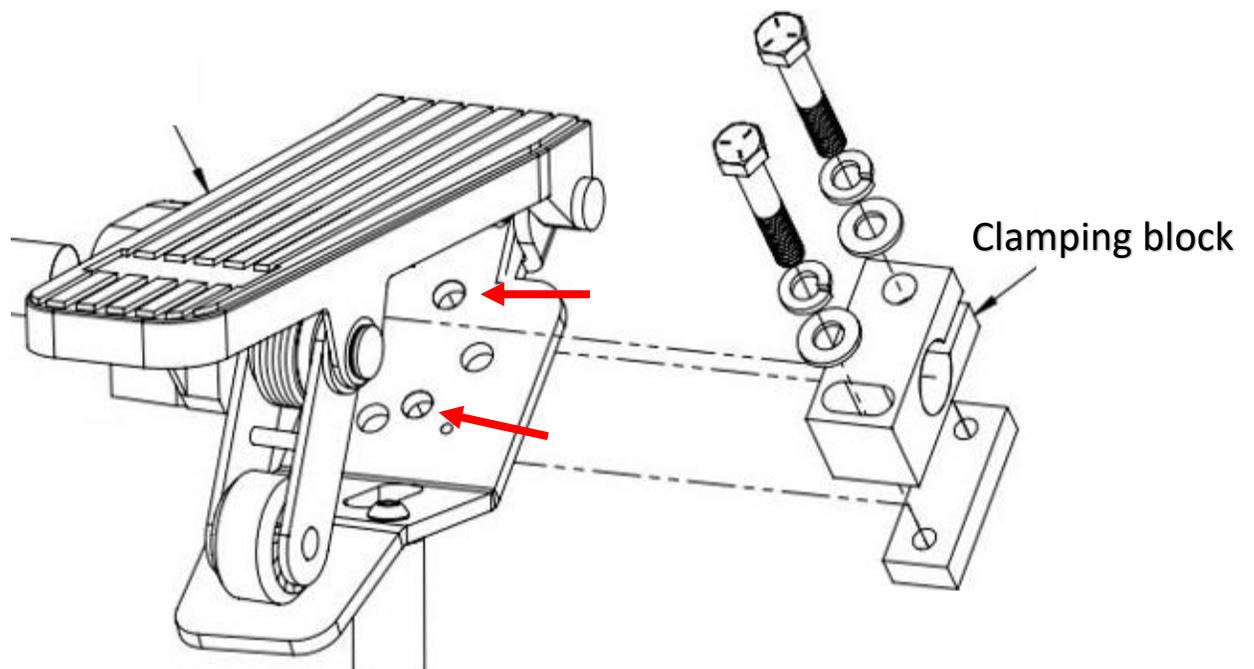


Figure 3: accelerator pedal clamping block.

The harness clamps on the pedal and the base must be removed using #2 Philips. Figure 4

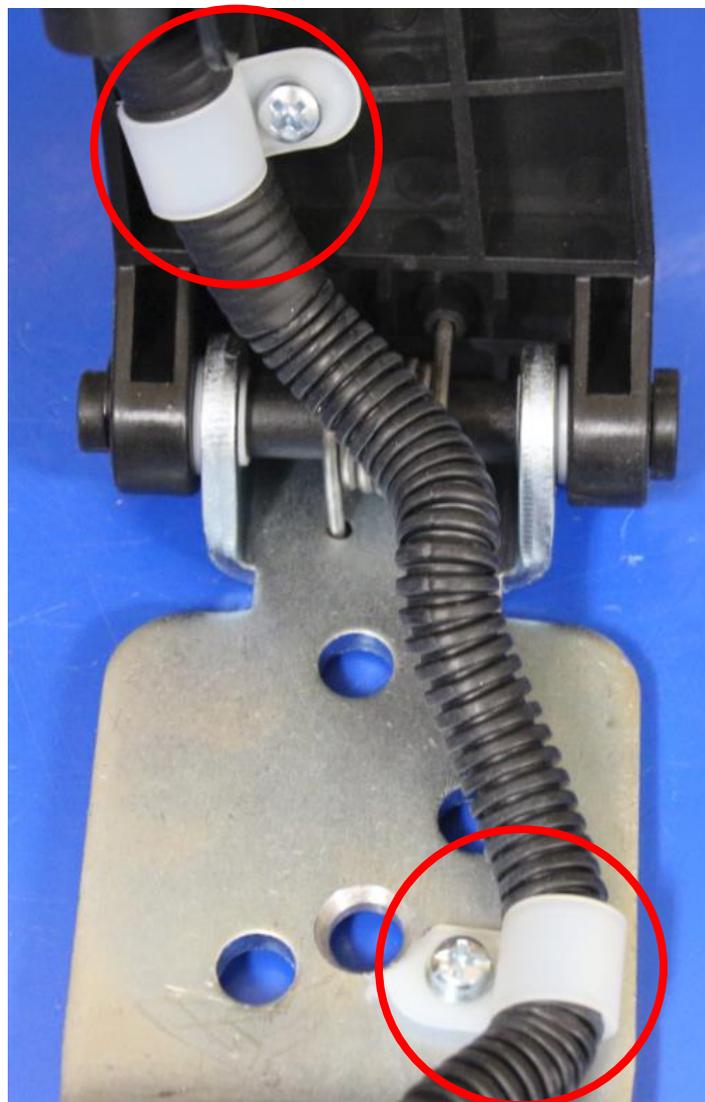


Figure 4: accelerator base "P" clamps.

Use zip ties to secure to support rod as shown in figure 5

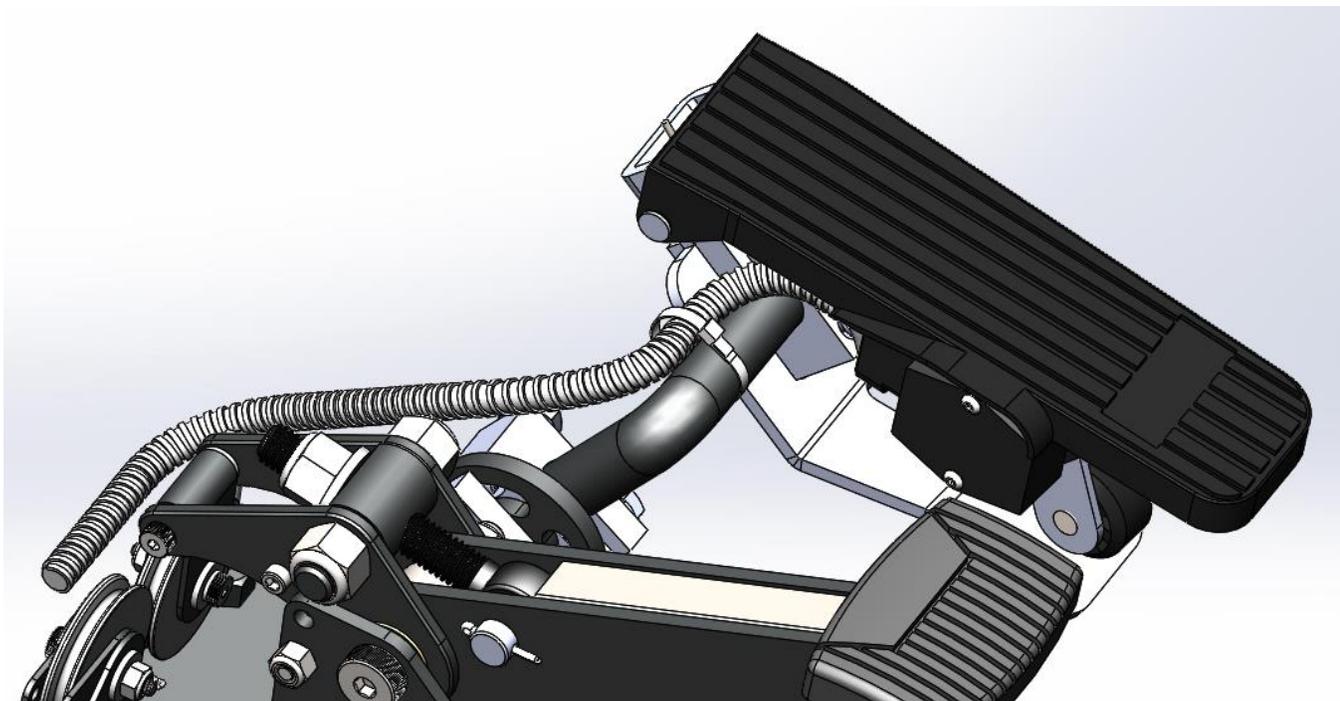


Figure 5: harness Routing.

Once both clamping blocks are mounted attach instructor accelerator to swivel bracket using supplied support rod. Tighten enough to hold assemblies in place but allow for movement when test fitting in to vehicle.

5.0 Choosing Suitable mounting location

Tarsus brake is to be mounted to the floor or firewall insure using 4 mounting points on pedal base. You will have to inspect from under vehicle and from top side under carpet. Check for obstructions such as:

- Wiring harnesses
- Fuel lines
- Break lines
- Foam/ composite floors

Caution: failure to check for obstructions can lead to malfunction of OEM components or failure of Instructor brake to operate correctly.

The pedal must be mounted to solid floor or firewall, it is preferable to use though bolts. In cases that there is no access to the bottom side due to subframe or converging body panels self-taping screws can be used.

If there is a foam spacer or composite floor a custom plate will have to be fabricated or alternate mount location. Please call Sure Grip tech support 1 888 370 5050

It is important to place pedal in area that it does not intrude on occupant leg space when not in use and is easy for passenger to operate.

Pedal location will vary when paired with the instructor accelerator, place assembly as far to the right possible.

Cable routing must be considered when choosing location, the straighter the cable easier the pedal is to operate. Plan where the cable will be fed behind the dash.

6.0 Pedal Hight adjustment

Once a suitable location found it is important to adjust the pedal height for comfortable and safe operation. The quickest way to insure this is to copy the spacing of the OEM brake and gas on the driver's side of vehicle.

- The brake pedal pad must be on a higher plane than the gas pedal
- The brake pedal and gas pedal must be separated a minimum of 2.5"

Further the distance is between the two pedals will decrease the chance of using the gas and brake at the same time. The same goes for the height of the pedal, higher the brake pedal is compared to the accelerator it lessens the chance of unintentional throttle. However, must make sure separation is not so great as to make use of pedal uncomfortable to use.

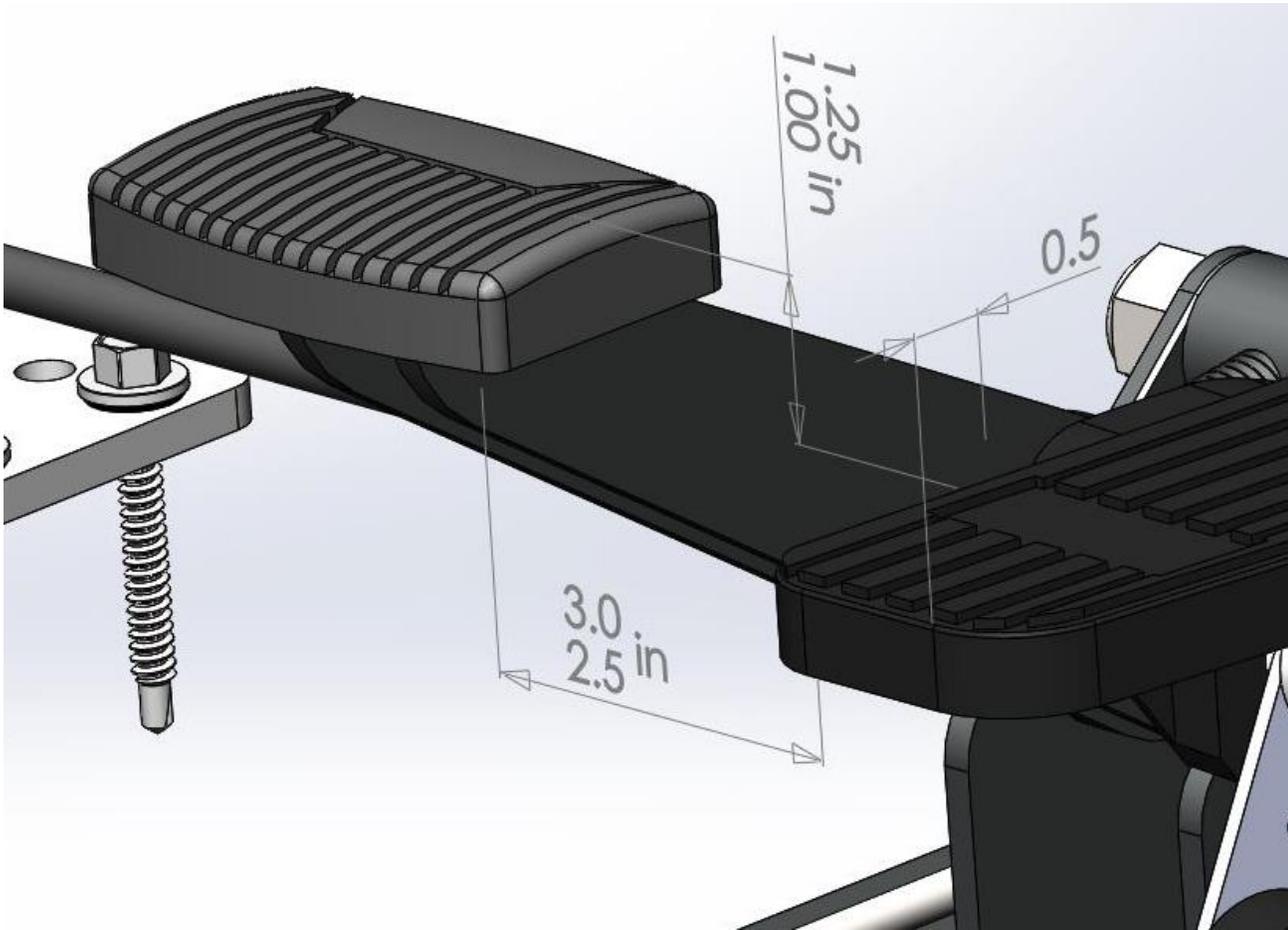


Figure 6: pedal height.

6.1 Brake pedal adjustment

Loosen nylock nuts on sides of pedal arm using 3/4 wrench or socket (1). Using a deep socket or wrench adjust height by loosening or tightening adjustment nut (2). Tighten nylock nuts on side of pedal arm once desired height is achieved. See Figure 7

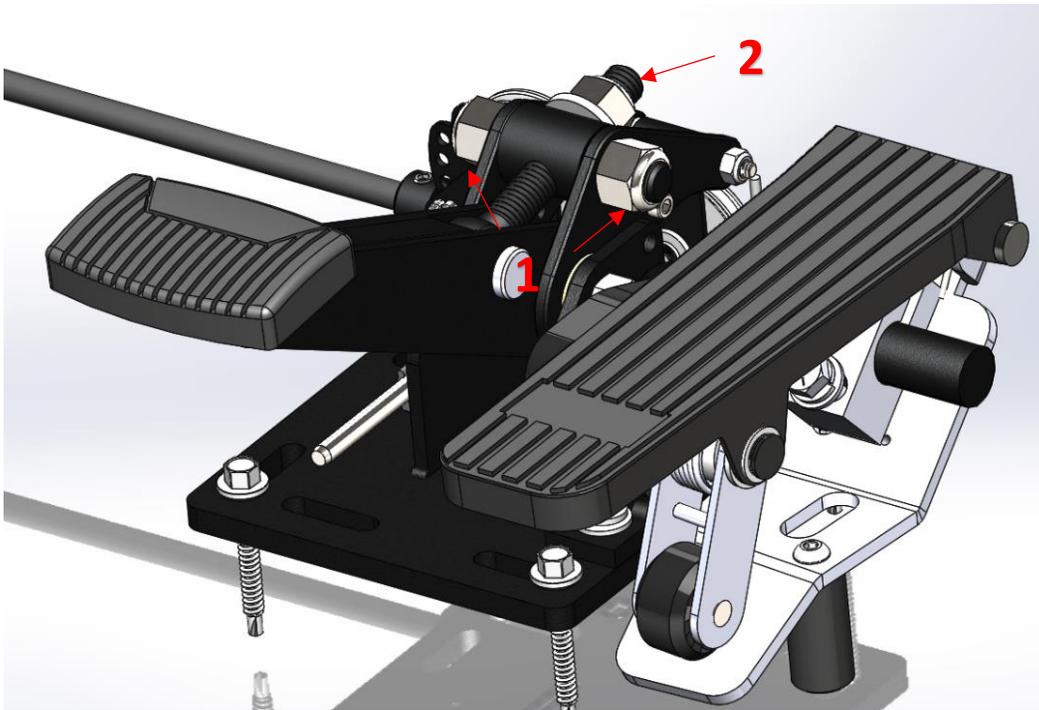


Figure 7: Brake pedal adjustment

6.2 Gas pedal adjustment

The gas pedal location is largely determined by the support rod. The location of the accelerator can be adjusted by:

- Rotation of clamping block in the swivel bracket
- Sliding support rod in and out of clamping block
- Rotating the pedal on the support rod
- Sliding pedal on support rod

The support rod can be cut or bent to fit any floor shape or space constraint. Clamping blocks only need 3/4" of rod inserted for securement (flush with end of clamping block).

The gas pedal base must be in contact with the floor of the vehicle. This can be adjusted depending on the height or angle that is desired.

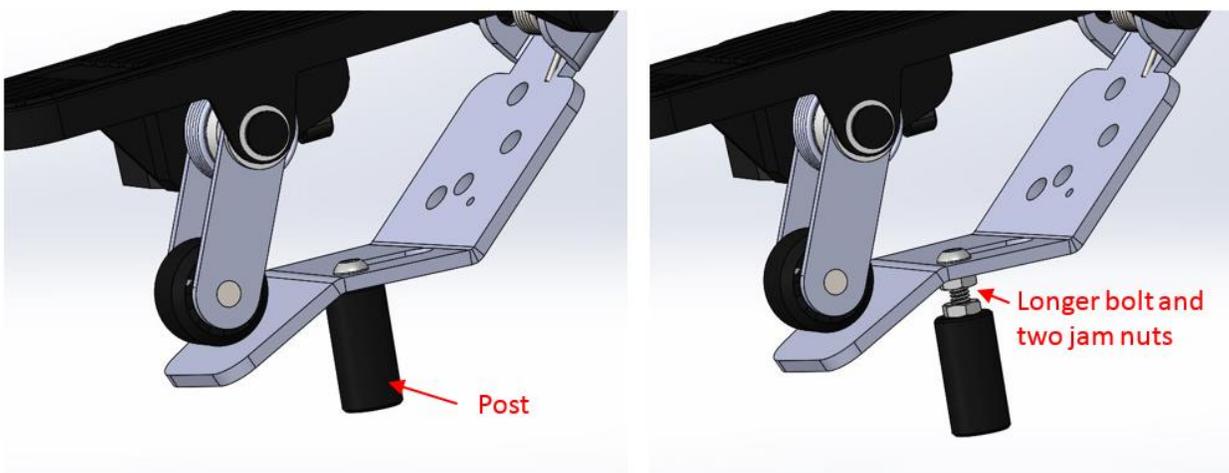


Figure 8: Post adjustment.

The post attached to the bottom of pedal base can be removed completely, if the edge of the pedal base can touch the floor, if lower height is required. If the pedal height requires the pedal to be raised add the longer bolt and jam nuts that are included in the swivel bracket package.

7.0 Pedal Mounting

Once a suitable location has been chosen that allows for the following:

- Solid mounting
- No obstructions
- Comfortable use
- Safe use

The pedal is attached using any of the 4 slots in brake pedal base plate. The most desirable 4 mounting points are as close to the corners of the base plate as possible.

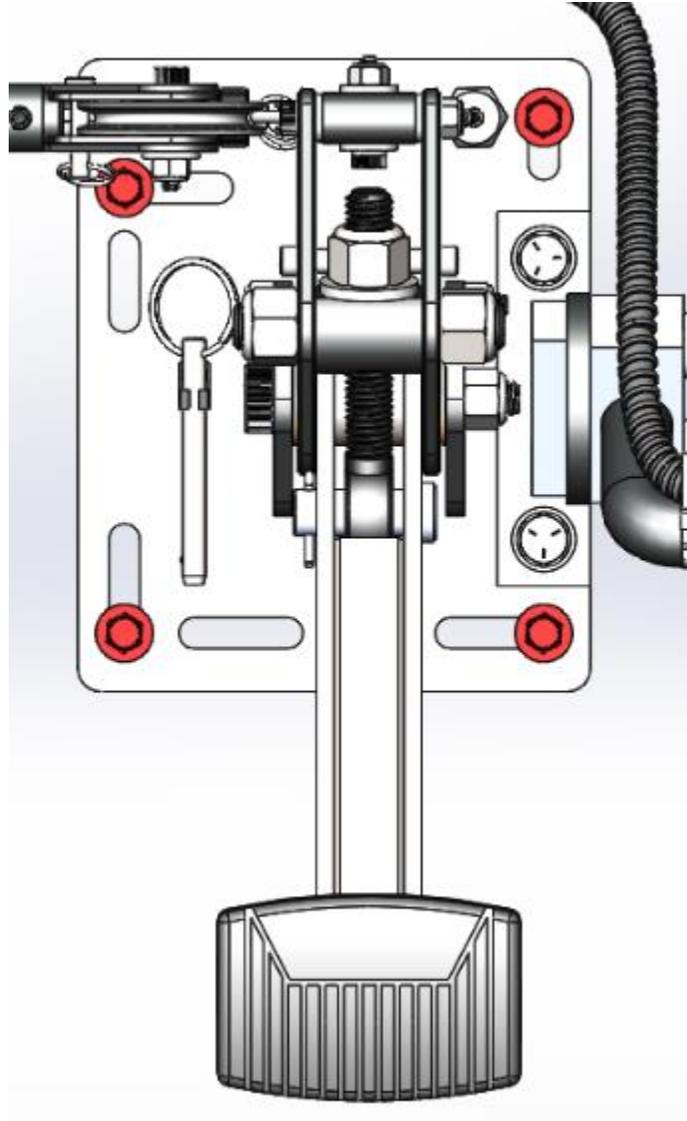


Figure 9: Pedal mounting points

Use the supplied self-tapping screws to attach to vehicle. Attach using 3/8 socket and a drill, a right-angle drill may make the operation easier for upper mounting locations. Through bolts are preferred mounting hardware but 4 self-tapping screw are acceptable for installs that it is not possible to use through bolts.

Insure mount is solid

8.0 Cable

Run cable through pulley on pedal arm and then through base plate pulley assembly. See figure 9

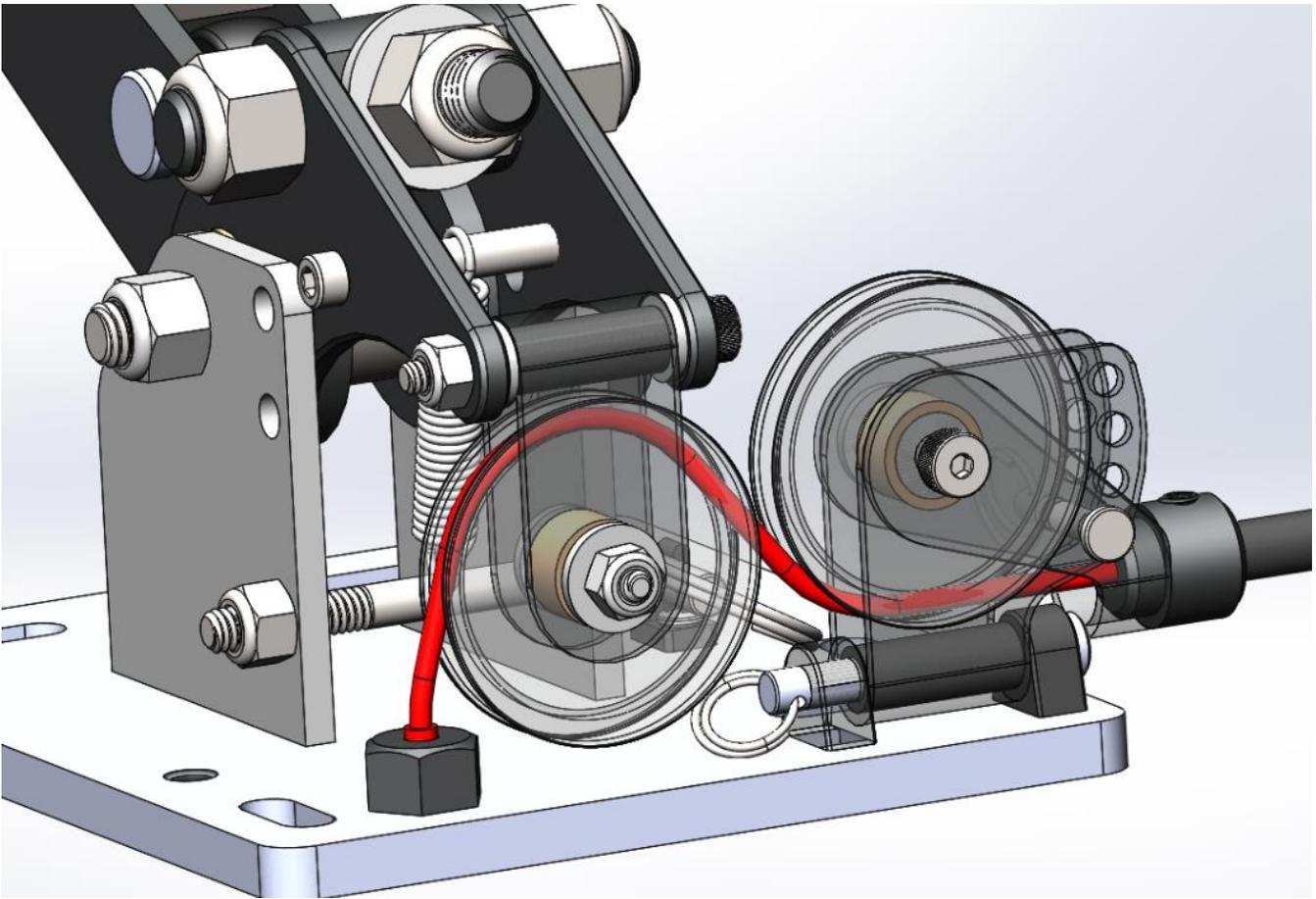


Figure 10: Cable routing.

Slide cable through cable sheath and temporarily run over to other side of vehicle. Most commonly there is a gap behind dash where center console is met. There may be a possibility that the cable has to be run higher in dash assembly. See figure 10

When routing through dash make sure there are no sharp bends

Loosen set screw in cable guide using 1/8 Allen and seat sheath in completely in guide. Guide allows for sheath to be inserted 1/2"

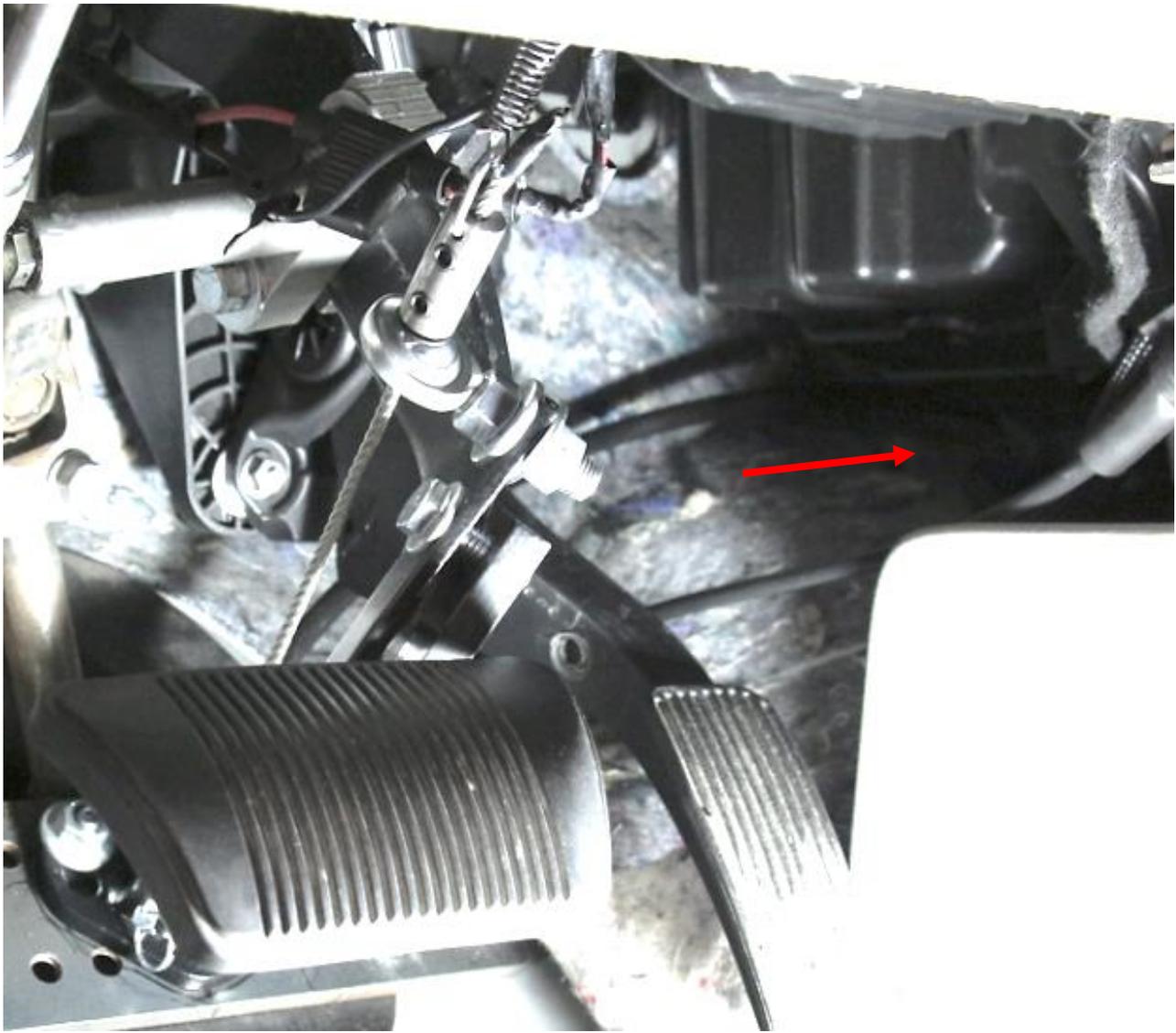


Figure 13: most common cable routing though dash.

8.1 Pully guide adjustment

Base plate pully angle guide can be adjusted to give a better trajectory over transmission tunnel or if cable has to be routed higher in dash assembly.

First loosen pully bolt using 1/8 Allen and 3/8 socket, only loosen enough to allow guide to slide freely. Then remove the pin and slide guide to desired position, each hole offers 15 degrees of adjustment.

Replace pin and cotter ring when adjustment is complete. Guide is shipped in the second lowest hole.

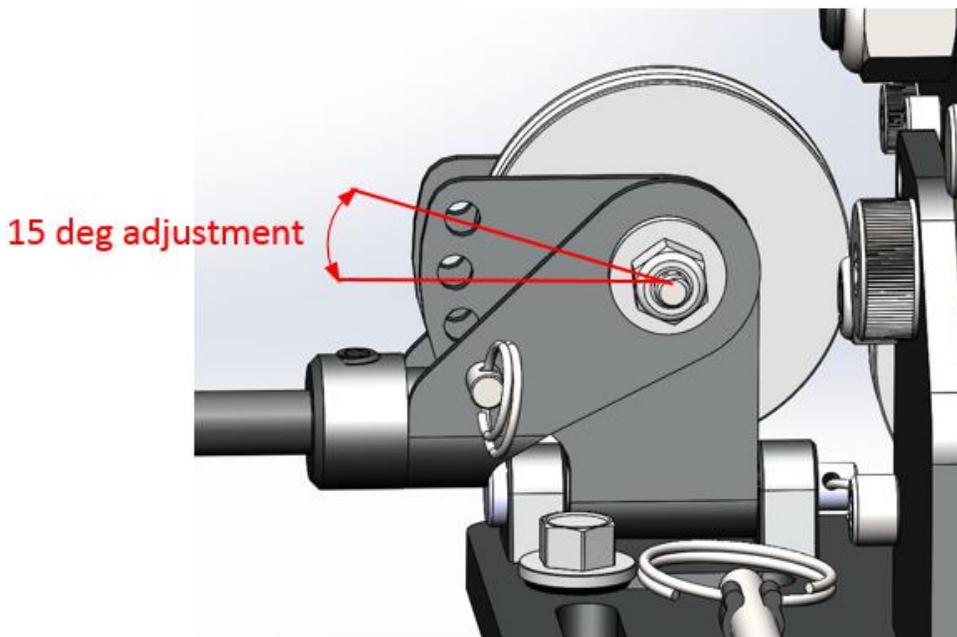


Figure 12: Pulley angle adjustment

Once final trajectory is determined. Tighten pulley bolt to 20in/lb (hand tight) Using 1/8" Allen and 3/8 socket.

9.0 Brake pedal block attachment

Attach brake block assembly to the driver's side pedal arm, leave hand tight at this time so you are able to slide on OEM brake arm for adjustment. We do not want the driver's feet to come in contact with any component of the brake block. Final torque 17 ft/lb

To help with cable alignment The ball joint attached to the pedal block can adjusted by threading the attached bolts, Insure bolts are tight once final location is determined.

Note: the lower the brake block is mounted on the pedal arm the easier it is to apply the brakes, but this increases the travel. Higher the brake block is mounted on the pedal arm the more difficult it is to apply the brake, but this decreases the pedal travel.

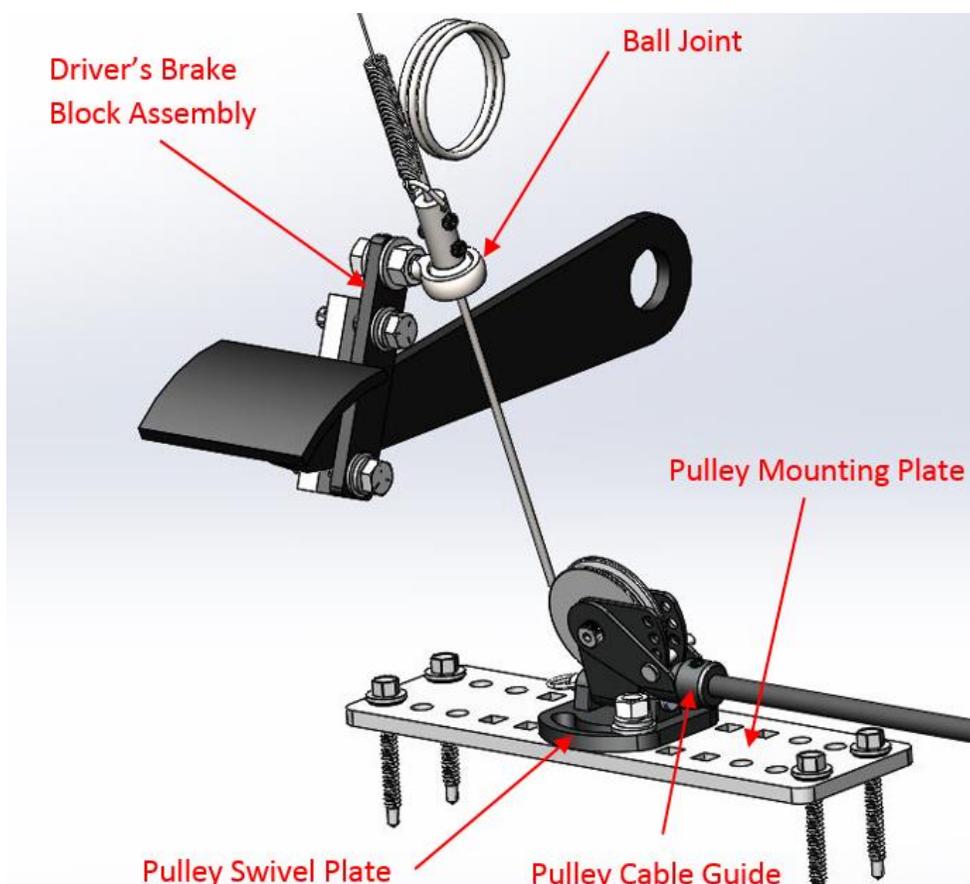


Figure 13: Driver side assembly

9.1 Drivers side pulley mounting

The driver side pulley must be mounted directly inline with the ball joint on pedal block assembly. A straight as possible pull though out the pedal travel is imperative to longevity and smooth operation.

Note: using cable to line up pulley can make for easy visualization of where pulley needs to be mounted

If the firewall is suitable for mounting the pulley using through bolts the two supplied 5/16" x 2" Grade 5 bolts can be used. Hold swivel bracket in place and mark for holes to be drilled, using 21/16" drill bit. Self-taping screws alone can not be used in pulley swivel plate and require pulley mounting plate.

There must be one bolt in each slot on the swivel pulley bracket, use washers on both sides and final and torque 17 ft/lb

Caution: Check for obstructions. See sec 5.0

When the firewall is not suitable for mounting swivel block directly because of gaps e.g. steering shaft boots or if it is not possible to access back side of subframe or converging panels. Use the pulley mounting plate. See Fig.14.

The pulley swivel plate is mounted using two plow bolts in the square holes in mounting plate, this allows for tightening from one side, after plate has been mounted. See Fig 13

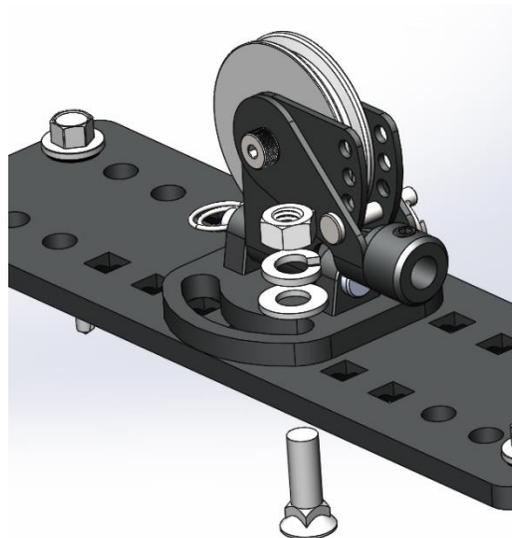


Figure 14: Pully mounting plate assembly

To mount the plate to the vehicle any hole is suitable for the self-tappers, a minimum of 4 self-tappers are required. The plate may also require trimming to fit in some areas.

If possible mount the plate under the carpet and cut section for pulley to protrude. This is just for aesthetics and if it is not possible the plate can be mounted on top of the carpet.

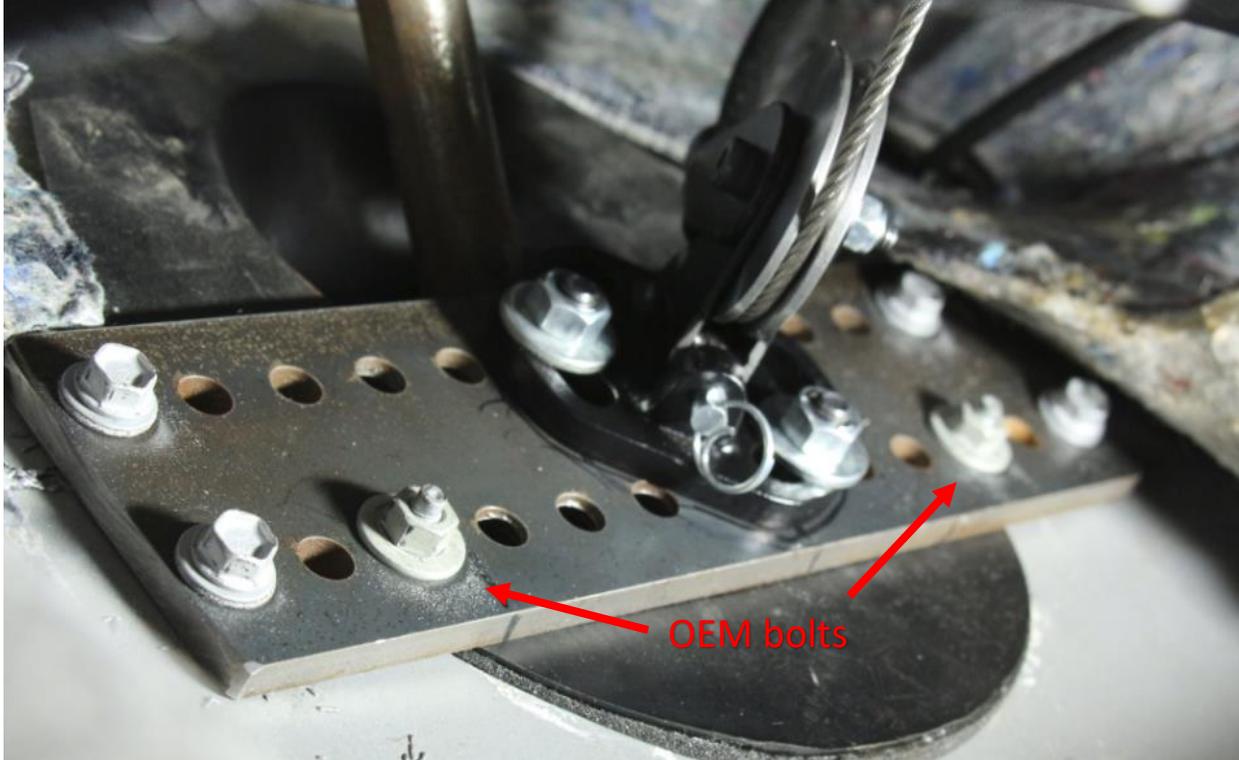


Figure 15: Pully mounting pate.

Caution: Check OEM pedal travel with vehicle started and cycle fully. Brake cannot come in contact with driver side pulley.

Caution: If spanning steering shaft boot, test Clearance by completing full left and right rotations of steering wheel (lock to lock). Shaft must not come in contact with plate.

Note: OEM bolts were only used because they to secure boot, they are not required for pulley mount. The OEM bolts were only used because they were conveniently placed.

9.2 Drivers side pully guide adjustment

As with the passenger side pulley you can change the trajectory using the pin in the pulley, follow the steps in sec 8.1

Along with pulley guide the slots in the base allow the pulley to be position in a fashion that does not put to sharp of a bend in the cable sheath.

10.0 Cable sheath

With driver side pulley assembly and instructor pedal mounted, make sure cable sheath is seated in cable guide.

Routed to driver side pulley with no kinks and does not contact moving components

Hold cable sheath up to driver side cable guide and mark where to cut. Sheath sits 1/2" in cable guide.

Remove sheath from vehicle and cut with hack saw and remove all burrs from inner edge. Make sure the heat from deburring does not damage inner plastic liner. If a deburring tool is used it must spin in the counter clockwise direction to avoid opening the metal spiral layer of conduit.

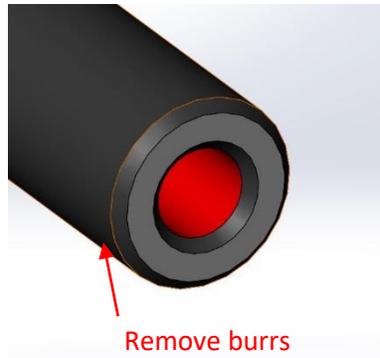


Figure 16: cable sheath

Refit cable conduit in to vehicle, first in cable guide on passenger side and tighten set screw using 1/8 Allen key.

Route cable though to driver side of vehicle.

Pass cable though drive side pulley and insert cable sheath to cable guide and tighten set screw using 1/8 Allen key.

11.0 Cable termination lug

Route cable though center of ball joint.

Slide cable termination lug with "D" ring facing away from ball joint on to cable.

Pull all slack from assembly's place cable termination lug against ball joint and tighten set screws. Final torque spec for set screws is 20 in/lb (hand tight)

Affixed the return spring to the "D" ring on top of cable termination lug by spreading halves eyelet and rotating spring on.



Figure 17: Cable termination lug

The purpose of the spring is to hold the cable taught while the OEM brake pedal is depressed while the instructor brake is not. This is so cable damage does not occur or interfere with OEM brake operation. The spring also acts as a secondary return spring for the OEM pedal, helping it return to the neutral position.

The other end of the spring is attached to vehicles dash structure using the supplied self-tapping screw (5/16 socket) and wrapping spring around it. OEM bolt or stud can be used if there is a suitable location

Note: lower dash panel may require removal for easy access to dash structure.

Coil up excess cable and attach to self, using supplied zip ties. See example fig.16, it is not recommended to cut cable. Excess cable can not be attached to other components as it must move freely with cable termination lug.

If the installer chooses to cut the cable it should be cut a minimum of 1" above the cable termination lug and a suitable method must be used to prevent cable from fraying

Caution: Cable termination lug, spring or excess cable must not come in contact with other components or vehicle occupants.

13.0 Instructor brake final checks

- Cycle instructor brake multiple times with vehicle started while in park to test operation. Insure there is no contact with OEM components throughout travel.
- With vehicle started and OEM brake must return to neutral position. Make sure brake lights turn off.
- Test vehicle with partner in parking lot to make sure vehicle can be brought to full stop.
- Test drive vehicle for 10min to insure OEM braking function is not affected.
- Quick release Lock out pin placed in holder on base.

14.0 Maintenance

System should be checked annually, all components should be inspected for wear and replaced as required. If the instructor brake is used as a primary driving brake, an inspection is required every 6 months.

Inspect cable for Fraying. If any fraying is detected cable must be replaced.

It is normal for cable to stretch up to 1/4" from initial install, which will require slack to be removed at cable termination lug. Once slack is removed make sure set screws are tightened and thread locking compound is applied See section 11.

Inspect pulleys for wear in cable groove and at bushing. Assemblies must operate smoothly.

Removable pins on pulleys should be lubricated using small amount of white lithium grease.

Cycle brake with vehicle running to check use.

User should check brake daily for before use, to insure all components are operating correctly.

For warranty information please visit website.

<https://www.tarsussystem.com/warranty>

15.0 Tarsus electrical installation Overview

Figure 18 depicts the Tarsus connector layout for the electrical system

Note: When Installing any of the electrical components, Insure the vehicle is not powered.

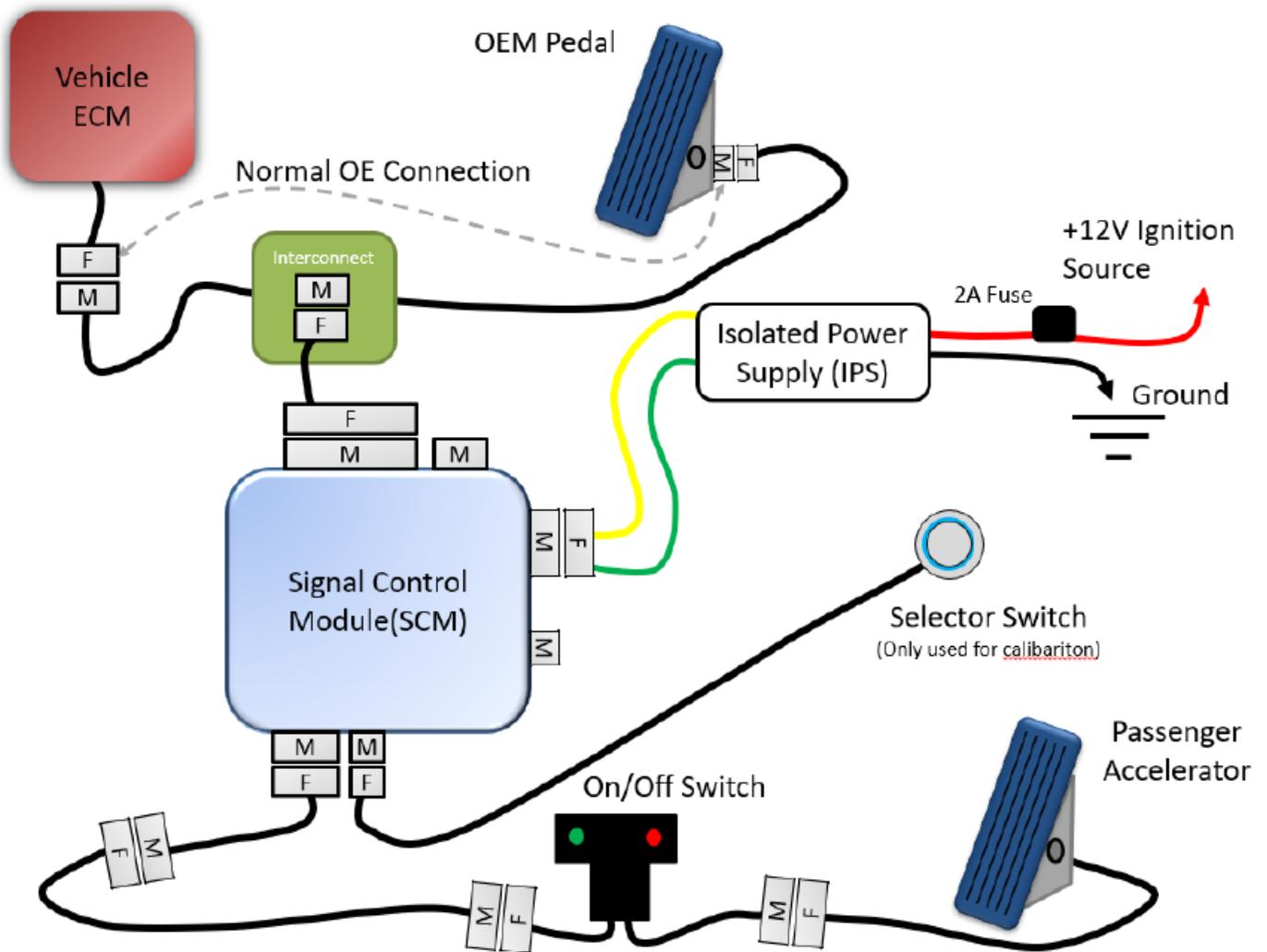


Figure 18: Electrical Overview

16.0 Isolated Power Supply (IPS)

Solder the red wire from IPS to 12V ignition source. The recommended source will be given on the Inter connect module configuration sheet, provided with your Interconnect Module. Always Test power source using digital voltmeter to insure its 12V with ignition on and 0V with the ignition turned off.

Install the Black wire to chassis ground. If possible, use pre-existing OEM ground location.

Caution: Do not use Scotch locks or any style wire taps, system requires a good connection.

Note: Power take off fuse(add-a-Fuse) holders can be used if fuse block is easily accessible. A fuse with the correct amperage rating for tapped circuit must be used.

Note: Crimped connectors can be used if proper Crimping pliers are used. Soldered connections are preferred.

17.0 Interconnect Module (ICM)

The Interconnect module is installed between the accelerator pedal and the accelerator pedal harness (between the engine control module).

The ICM is shipped with the accelerator pedal connectors plugged in to each other. Use this learn how the locks on the APC works before you try to unplug the ones in the vehicle.

Locate OEM accelerator pedal connector and disconnect.

CAUTION: If vehicle power is not turned off this will code the vehicle.

Connect ICM in line with Accelerator pedal. Ensure ECM side of ICM is plugged into the harness going to the vehicle. Ensure Pedal side of ICM is going to the accelerator pedal. See Figure 19

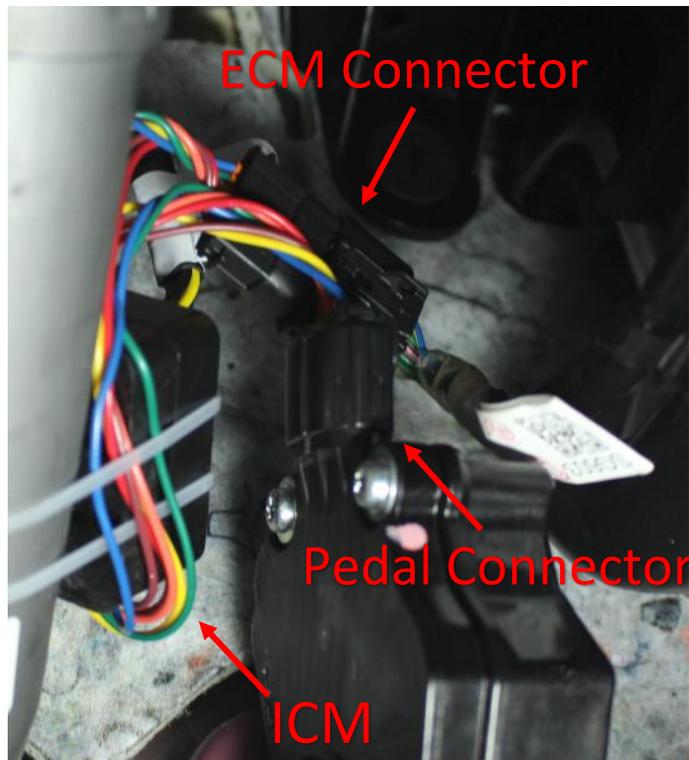


Figure 19: ICM mounting

Connect ICM harness (Figure 20) and secure ICM out of the way using cable ties. Ensure ICM will not interfere with OEM components or is close to heat sources such as heater vents. Please read section 22.0 before mounting the ICM module.



Figure 20: ICM harness

18.0 On/Off switch

Plug on/off switch in to pedal

Peel backing off adhesive and mount in a location that is easy to access by user. Insure mounting location is free of, dirt and oils. Screws can also be used to mount switch (not included).

19.0 Extension harness (SCM.EXT)

The extension harness is packaged with the on/off switch

Plug SCM.EXT in to on/off switch

Run SCM.EXT through dash to mounting location for SCM

18.0 Signal control module (SCM)

See Figures 18 and 21 for reference

SCM can be mounted high up in vehicle dash to avoid moisture damage. the best suited location will depend on where power is being tapped.

Plug IPS 8 Pin connector in to SCM plug (#1)

Connect ICM 12 pin connector in to SCM plug (#2)

Insert SEM.EXT 6 pin harness in to SCM plug (#3)

Plug 4 pin selector switch in to SCM plug (#4)

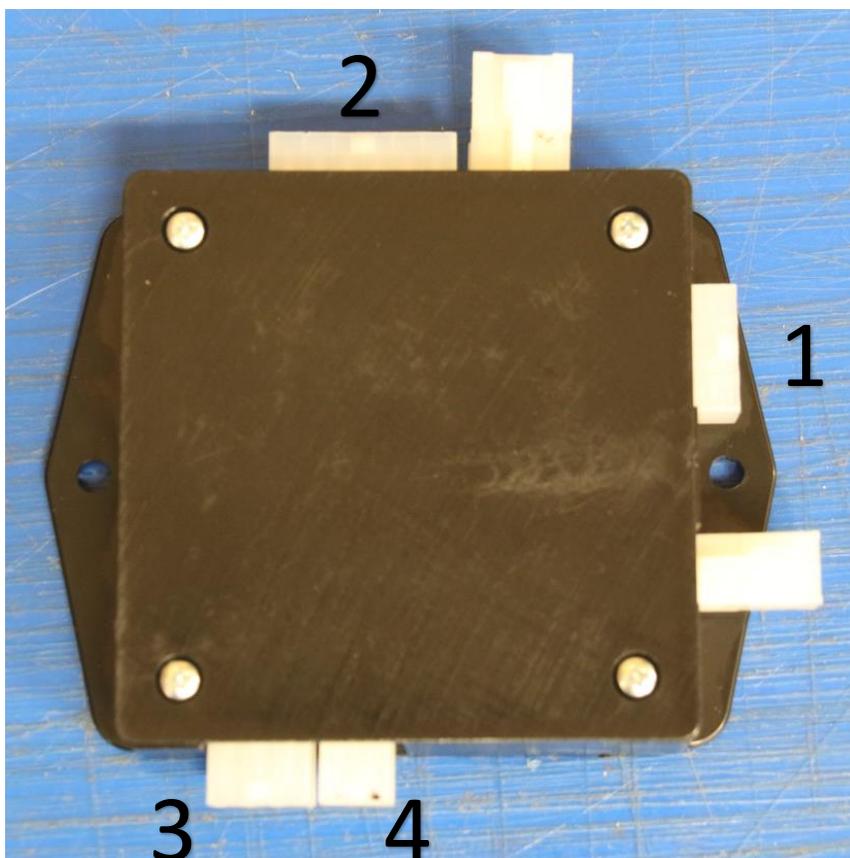


Figure 21: SCM layout

Once all connectors are attached to SCM it is recommended to calibrate the system before mounting SCM under dash (See section 20.0). If connectors are not plugged in correctly it will become apparent when calibrating the system.

After completing the calibration attach SCM under dash using zip ties, Velcro, automotive double-sided tape (if there is a suitable flat surface) or Self tapping screws. Please read section 22.0 before mounting.

19.0 Selector switch

The selector switch is only used for the calibration process, see Section 20. Once this has been completed you can remove selector switch. The switch may be required if the system needs service, it is best practice to the selector switch keep in a safe place.

20.0 Calibration Process

1. Start the vehicle.
2. Ensure the OEM pedal and Instructor accelerator are at the idle position.
3. Press the selector switch push button one time. The LED on the selector switch push button will begin flashing rapidly.
4. Bring the Instructor accelerator from the idle position to the 100% wide open throttle (WOT) position. Be sure to bring it to the 100% WOT position in one fluid motion. Hold the left foot accelerator at 100% WOT for a minimum of one second.
5. Return the instructor accelerator to the idle position. The system will beep once.
6. Bring the factory pedal to the 100% WOT position. Be sure to bring it to the 100% WOT position in one fluid motion. Hold the factory pedal at 100% WOT for a minimum of one second.
7. Bring the factory pedal to the idle position. The system will beep once. The system is now calibrated and ready for testing.
8. Test the factory pedal by pressing on it slightly. Ensure that the engine is responsive to the factory pedal and that no warning lights appear on the dash.
9. Test the additional accelerator by pressing on it slightly. Ensure that the engine is responsive to the instructor accelerator and that no warning lights appear on the dash.

NOTE: If there are any issues with the calibration process it will be apparent in step 6. If the engine idle RPM changes a recalibration must be performed (Section 21)

21.0 Recalibration

If The initial calibration is performed incorrectly, or the system is put into a different vehicle, a recalibration may be necessary. A special procedure must be followed to clear the current calibration.

To clear the calibration:

1. Turn off the ignition and verify the system is not powered. Vehicles with timed ignitions may require the door to be opened.
2. Hold the selector switch and the instructor accelerator at 100% WOT.
3. Turn on the ignition while keeping the instructor accelerator at 100% WOT and the selector switch depressed. The LED on the selector switch will blink rapidly.
4. Keep holding the instructor accelerator at 100% WOT and the selector switch depressed until the selector switch has stopped blinking and remains illuminated.
5. Bring the instructor accelerator to idle and release the push button. The LED on the selector switch will turn off.
6. Press the selector switch once. The LED will blink rapidly to notify the calibration has been cleared.
7. Turn off the system. This will leave the system with the calibration cleared.
8. Follow Steps 1-9 on page 26 to calibrate.

Note: Once the calibration is cleared, the system will always start up ready to be calibrated. The instructor accelerator will be unusable until a full calibration is performed.

22.0 House Keeping

Ensure all unused wires are cut and individually isolated with either heat shrink tubing or electrical tape and zip ties.

Make sure all connections made to the vehicle wiring are properly insulated from the vehicle chassis.

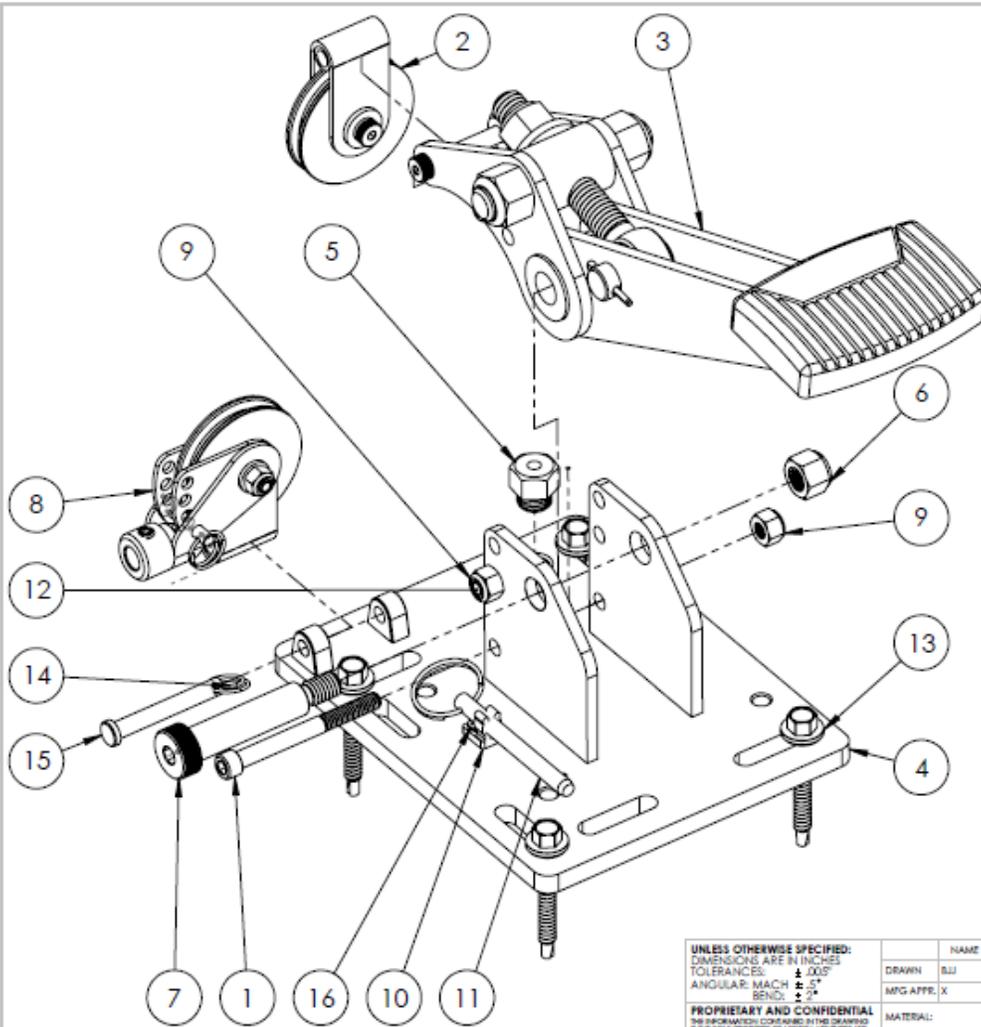
Check that all loose wires from the wire harness are fastened securely to the vehicle with zip ties or similarly permanent means.

Be sure not the fasten wires to any moving parts of the vehicle.

The SCM has two mounting flanges for easy installation. This box should be fastened to the vehicle chassis using either zip ties or screws. It is recommended to mount the box high under the dash to minimize the risk of water damage. Both flanges should be securely fastened to guarantee the SCM does not shift during operation.

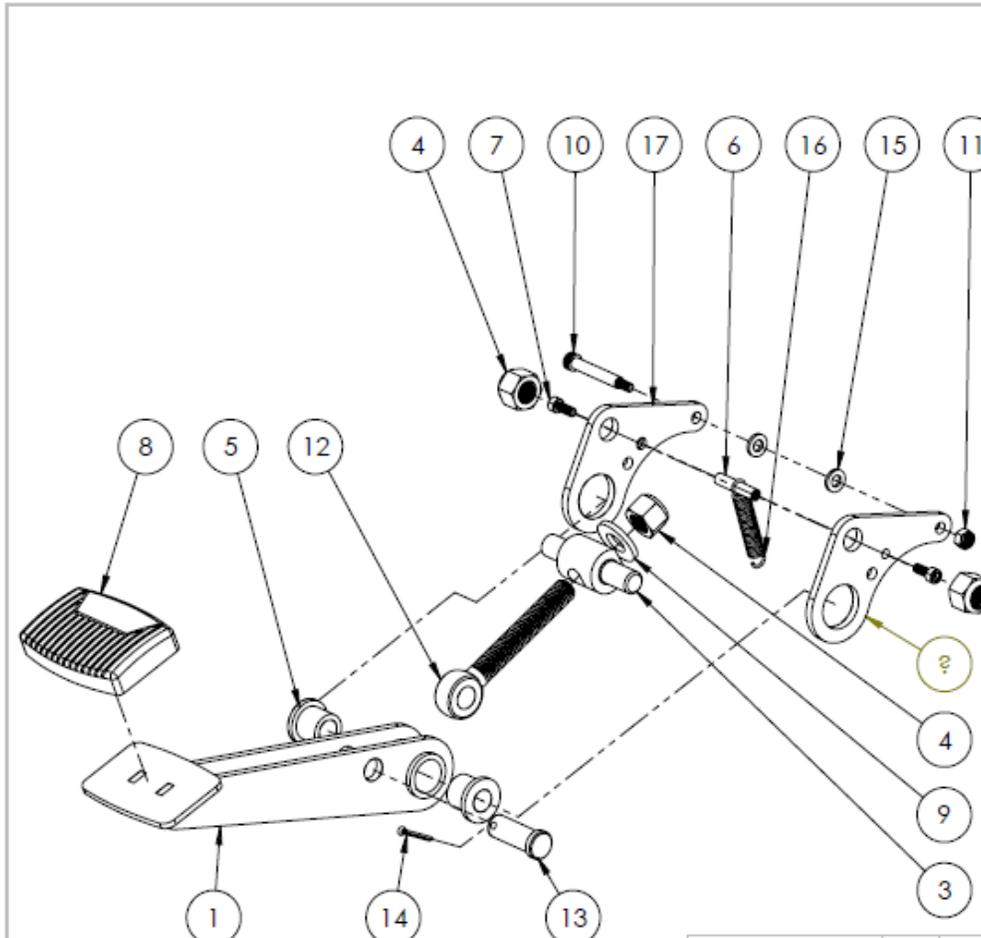
Warning

Do not place any of the components in direct contact with any of the HVAC vents or modules. Failure to do so can result in failure of the system.



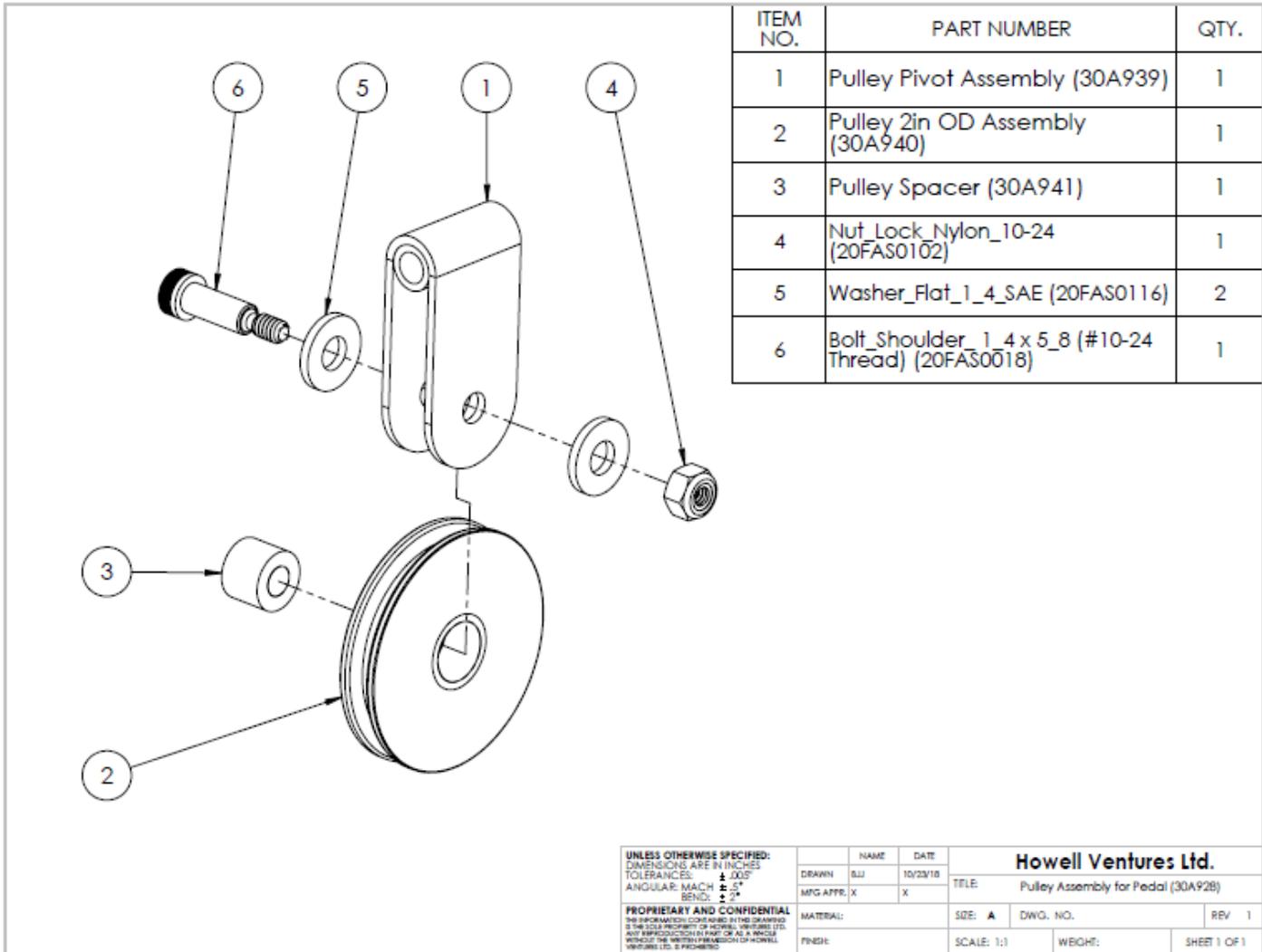
ITEM NO.	PART NUMBER	QTY.
1	Screw, Socket Head, 1_4-20 x 2 1_2 (20FAS0154)	1
2	Pulley Assembly for Pedal (30A928)	1
3	Brake Pedal Assembly (30A929)	1
4	Base Plate Assembly (30A930)	1
5	Cable Captive Bolt (30A950)	1
6	Nut Lock, Nylon_3_8-16 (20FAS0087)	1
7	Bolt, Shoulder, 1_2 x 2 (3_8-16 Thread) (20FAS0155)	1
8	Pulley Assembly (30A931)	1
9	Nut, Lock, Nylon, 1_4-20 (20FAS0156)	2
10	Plastic Clip for 1_4in Pin (20FAS0157)	1
11	Pin, Quick Release, 1_4 x 2-1_16 (20FAS0158)	1
12	Screw, Socket Head, 1_4-20 x 1_2 (20FAS0159)	1
13	Screw_Self-Drilling, 1_4-20 x 2_w_Washer (20FAS0049)	4
14	Cotter Ring, 3_16 - 1_4 (20FAS151)	1
15	Clevis Pin, 1_4 x 1-11_16 (20FAS0150)	1
16	Screw_Pan head_Phillips_6-32 x 7_16 (20FAS0118)	1

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ± .005" ANGULAR: MACH ± .5° BEND: ± .2°		NAME	DATE	Howell Ventures Ltd.	
DRAWN: BUJ		BUJ	10/23/18		
MFG APPR: X		X		SIZE: A	DWG. NO.
MATERIAL:				SCALE: 1:10	REV 1
FINISH:				WEIGHT:	SHEET 1 OF 1

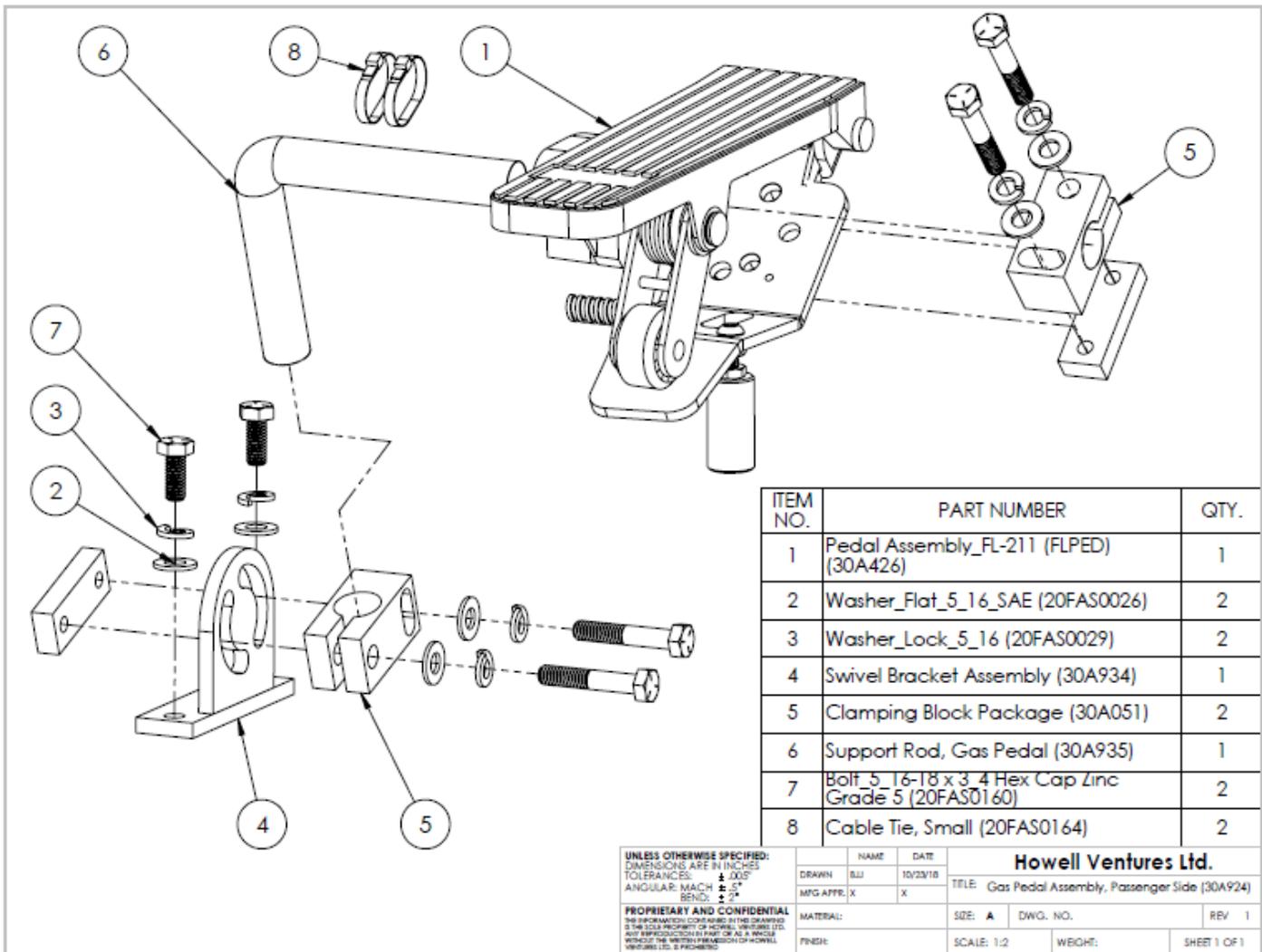


ITEM NO.	PART NUMBER	QTY.
1	Pedal Strut Assembly (30A932)	1
2	Pedal Lever (30A933)	1
3	Swivel Bolt (30A949)	1
4	Nut, Lock, Nylon, 1_2-13 (20FAS0165)	3
5	Sleeve Bearing, 1_2 ID x 3_4 OD (20COM0003)	2
6	Round Standoff (30A964)	1
7	Screw, Socket Head, #10-32 x 1_2 (20FAS0166)	2
8	Brake Pedal Cover (20MIS0021)	1
9	Washer, Flat, 1_2, SAE (20FAS0167)	1
10	Bolt, Shoulder, 1_4 x 1 1_2 (#10-24 Thread) (20FAS0168)	1
11	Nut_Lock_Nylon_10-24 (20FAS0102)	1
12	Bolt, Rod End, 1_2-13 x 3 1_2, Full Thread (20FAS0169)	1
13	Clevis Pin, 1_2 x 1-3_16 (20FAS0170)	1
14	Pin, Cotter, 3_32 x 3_4 (20FAS0179)	1
15	Washer, Nylon, 1_4 (20FAS0172)	2
16	Spring, Extension, 3_8 OD x 2.25 (20SPR0012)	1
17	Pedal Lever (30A933)	1

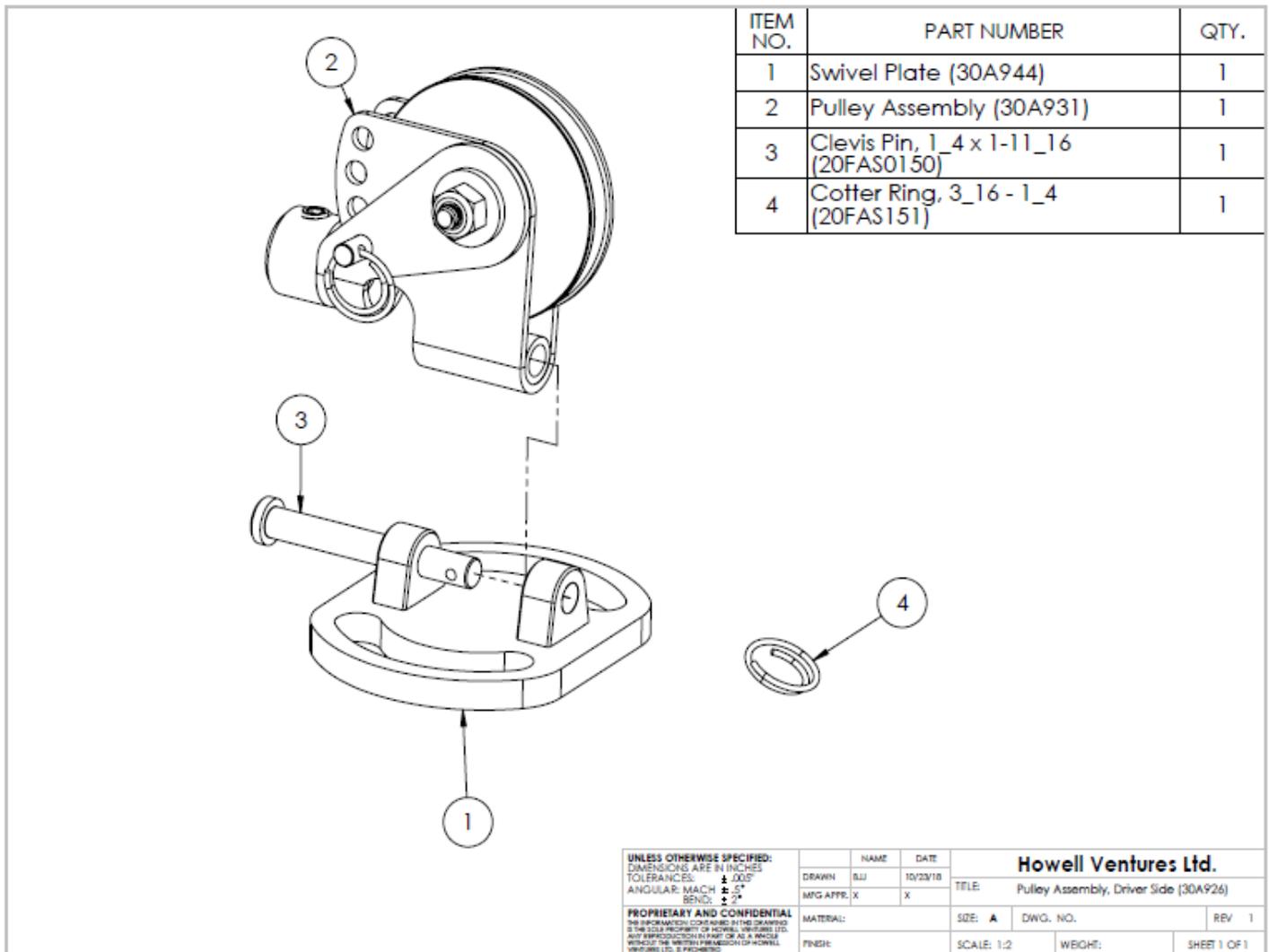
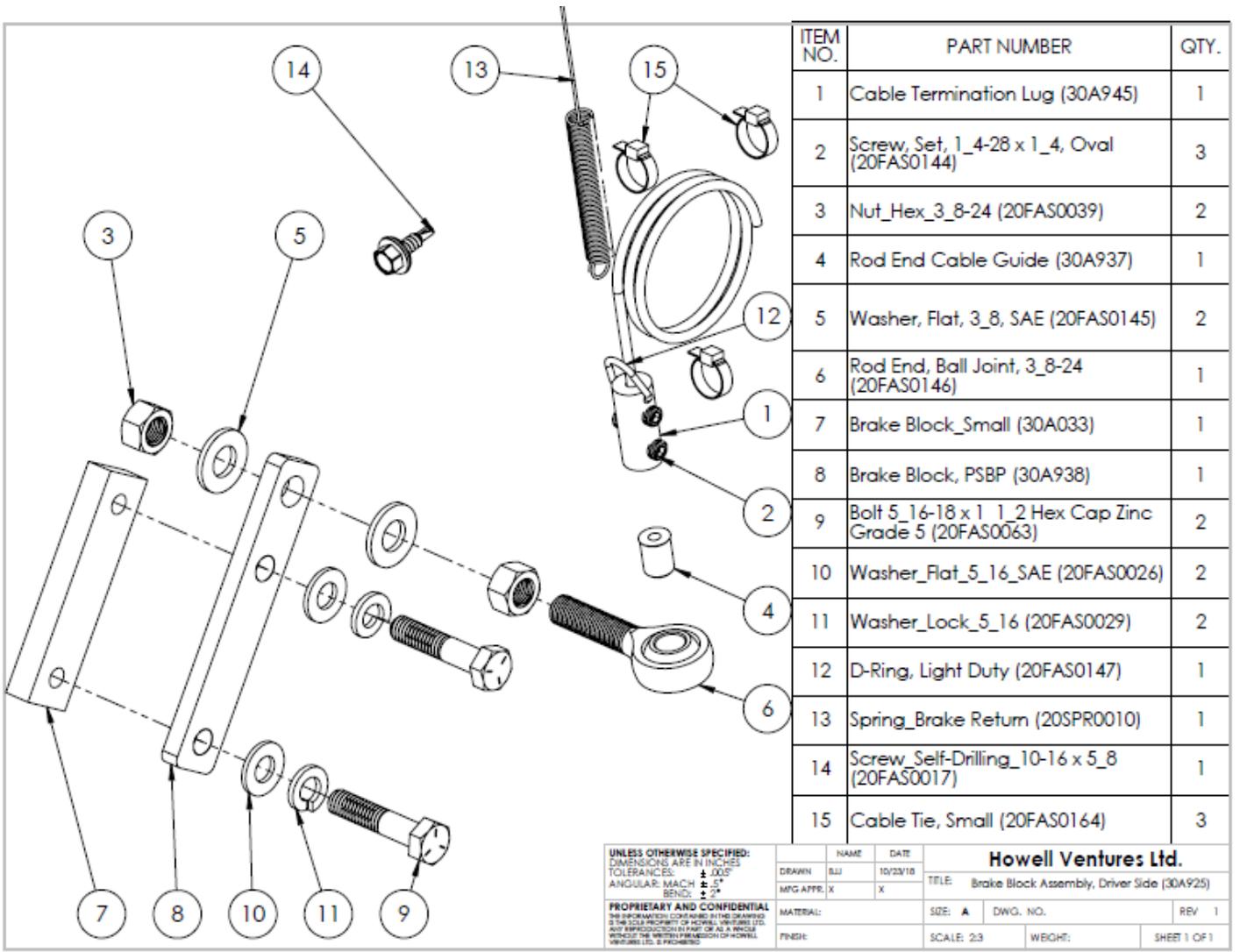
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ± .005" ANGULAR: MACH ± .5° BEND: ± .2°		NAME	DATE	Howell Ventures Ltd.	
DRAWN: BUJ		BUJ	10/23/18		
MFG APPR: X		X		SIZE: A	DWG. NO.
MATERIAL:				SCALE: 1:3	REV 1
FINISH:				WEIGHT:	SHEET 1 OF 1

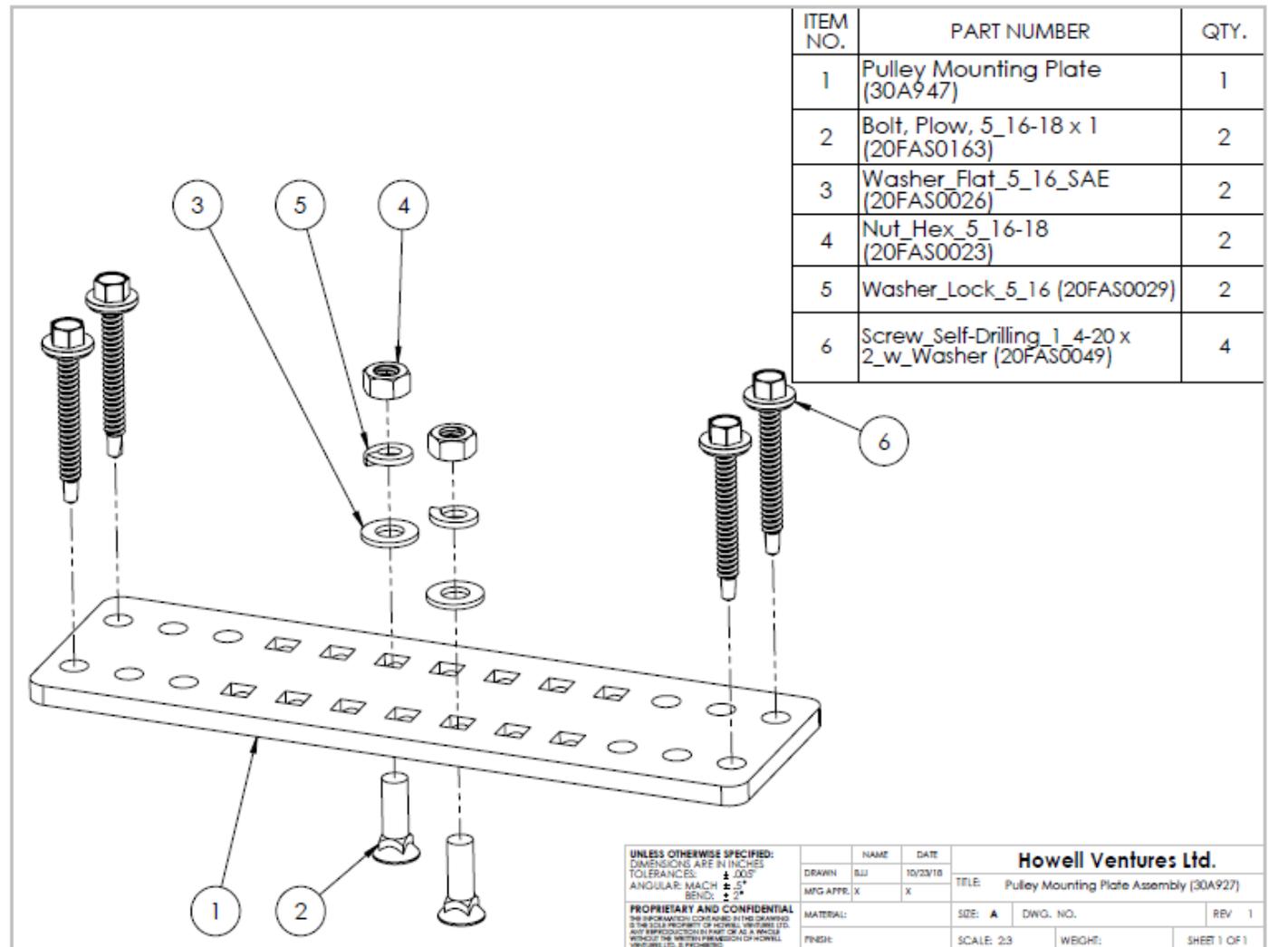
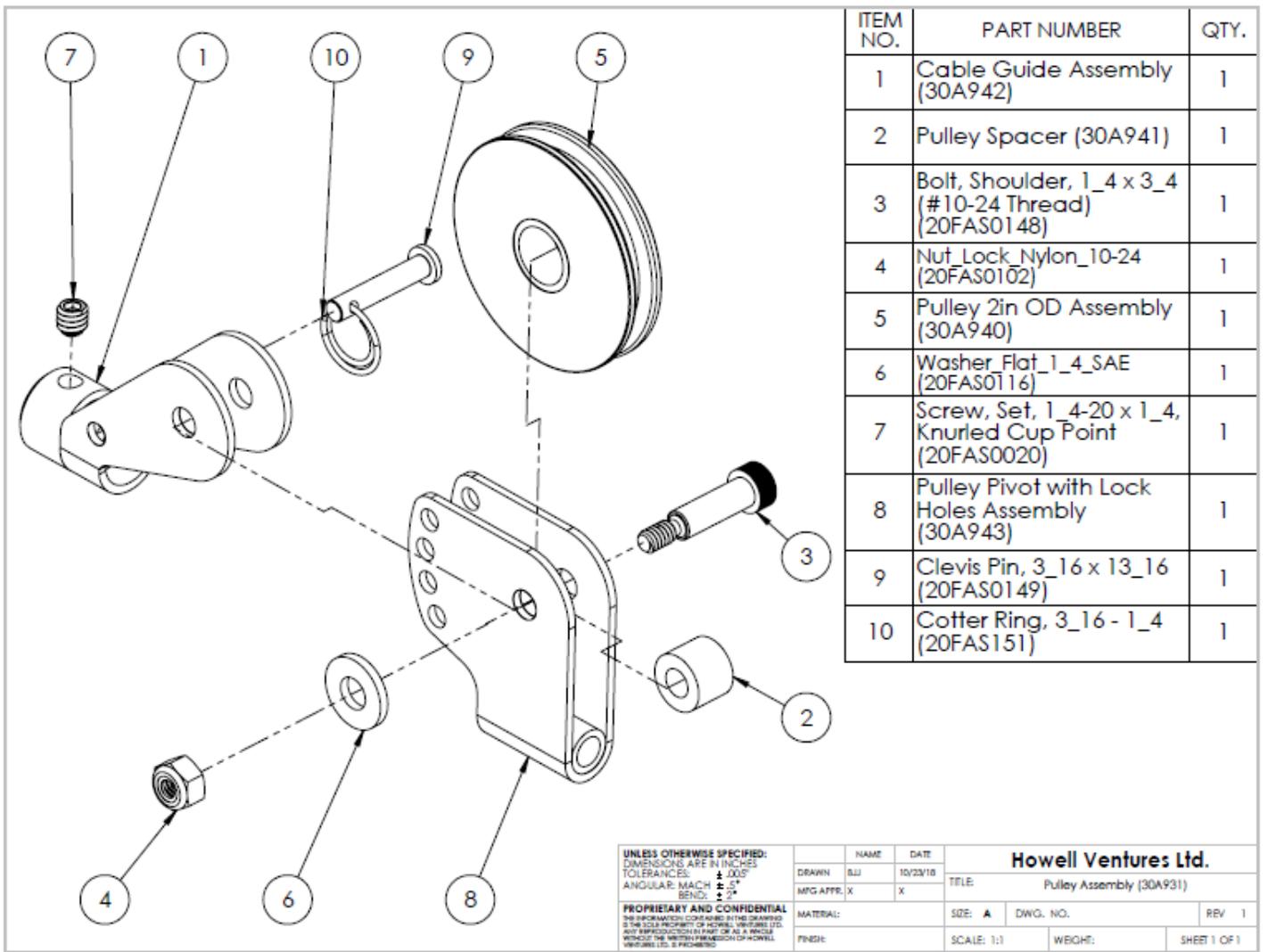


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ± .005" ANGULAR: MACH ± .5° BEND: ± 2°		NAME	DATE	Howell Ventures Ltd.	
DRAWN	BJJ	10/23/10	TITLE	Pulley Assembly for Pedal (30A928)	
MFG APPR.	X	X	MATERIAL:	SIZE: A	DWG. NO.
FINISH:			SCALE: 1:1	WEIGHT:	REV 1
					SHEET 1 OF 1



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ± .005" ANGULAR: MACH ± .5° BEND: ± 2°		NAME	DATE	Howell Ventures Ltd.	
DRAWN	BJJ	10/23/10	TITLE	Gas Pedal Assembly, Passenger Side (30A924)	
MFG APPR.	X	X	MATERIAL:	SIZE: A	DWG. NO.
FINISH:			SCALE: 1:2	WEIGHT:	REV 1
					SHEET 1 OF 1





NOTES:



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