



# RECALL R22CA

## LPG Supply Line & RH Park Brake Cable Interference

**Models Affected:** Certain 2013-2021 Model Year Blue Bird Vision Buses equipped with 6.8L Propane engine and RH hand lever parking brake

**Issue:** RH mounted park brake lever cable may not be secured and/or routed properly. In certain cases, the park brake cable may lay on the propane fuel lines causing damage. Additionally, an improperly secured RH park brake cable may damage/dislodge the automatic transmission vent which could allow water/dust/debris to enter transmission assembly and cause subsequent damage.

**Corrective Action:** Inspect unit for proper RH park brake cable routing and securement. If routed and secured per D0007365, no additional action is required. If routing and securement is not per D0007365, re-route and/or re-secure per D0007365.

**WARNING:** Always follow all Federal, State, Local and Shop safety standards and use proper safety equipment, and thoroughly read and understand all instructions before performing these procedures. Park bus on level surface, apply parking brake, turn off ignition key, and chock wheels.

Related service parts:

Item	Description	Part Number	Quantity
1	Mount, Heavy Duty, .250-hole size	00024168	As needed, max 2/bus
2	CAPSCREW,HEX HD,1/4-20 X 1,GR 5,YEL ZN DICH	00870477	As needed, max 2/bus
3	NUT,HEX,FLANGE SER,1/4-20,BLACK ZINC	00659979	As needed, max 2/bus
4	WASHER,FLAT,17/64 ID X 5/8,YEL ZN DICH	01247709	As needed, max 2/bus
5	TIE,CABLE,250LB	00029998	As needed, max 2/bus
6	TUBE,VENT,TRANSMISSION,FORD	10056558	As needed, 1 per bus
7	PIPE ASSY,PROPANE,FRWD FUEL LINE,SUPPLY,MY16,CV	10044217	As needed, 1 per bus
8	HOSE ASSY,PROPANE,FRWD FUEL LINE FEED,ROUSH,CV	10022860	As needed, 1 per bus
9	HOSE ASSY,PROPANE,FRWD FUEL LINE RETURN,ROUSH,CV	10022862	As needed, 1 per bus

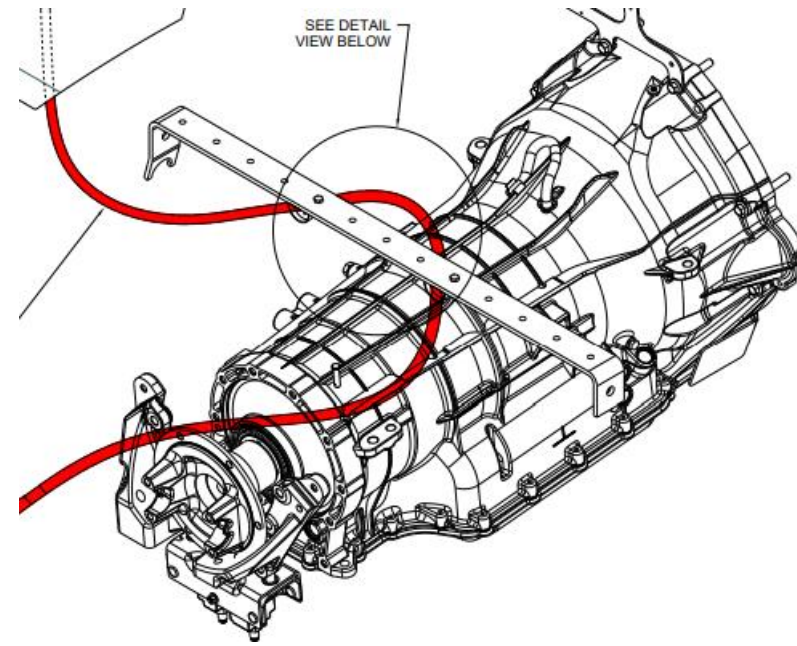
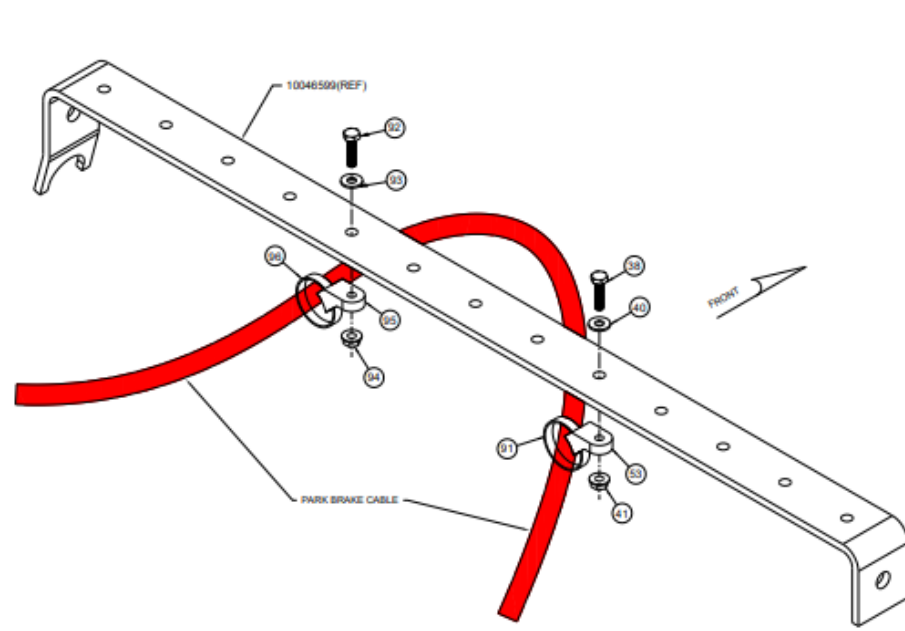
**NOTE:** If either fuel line is damaged on GEN4 fuel systems (post 2016), order and install Fuel Line Assy (item #7) listed above. If a replacement line is needed for GEN 3 vehicles, they are serviced separately (items #8 and #9) listed above.

### Instructions:

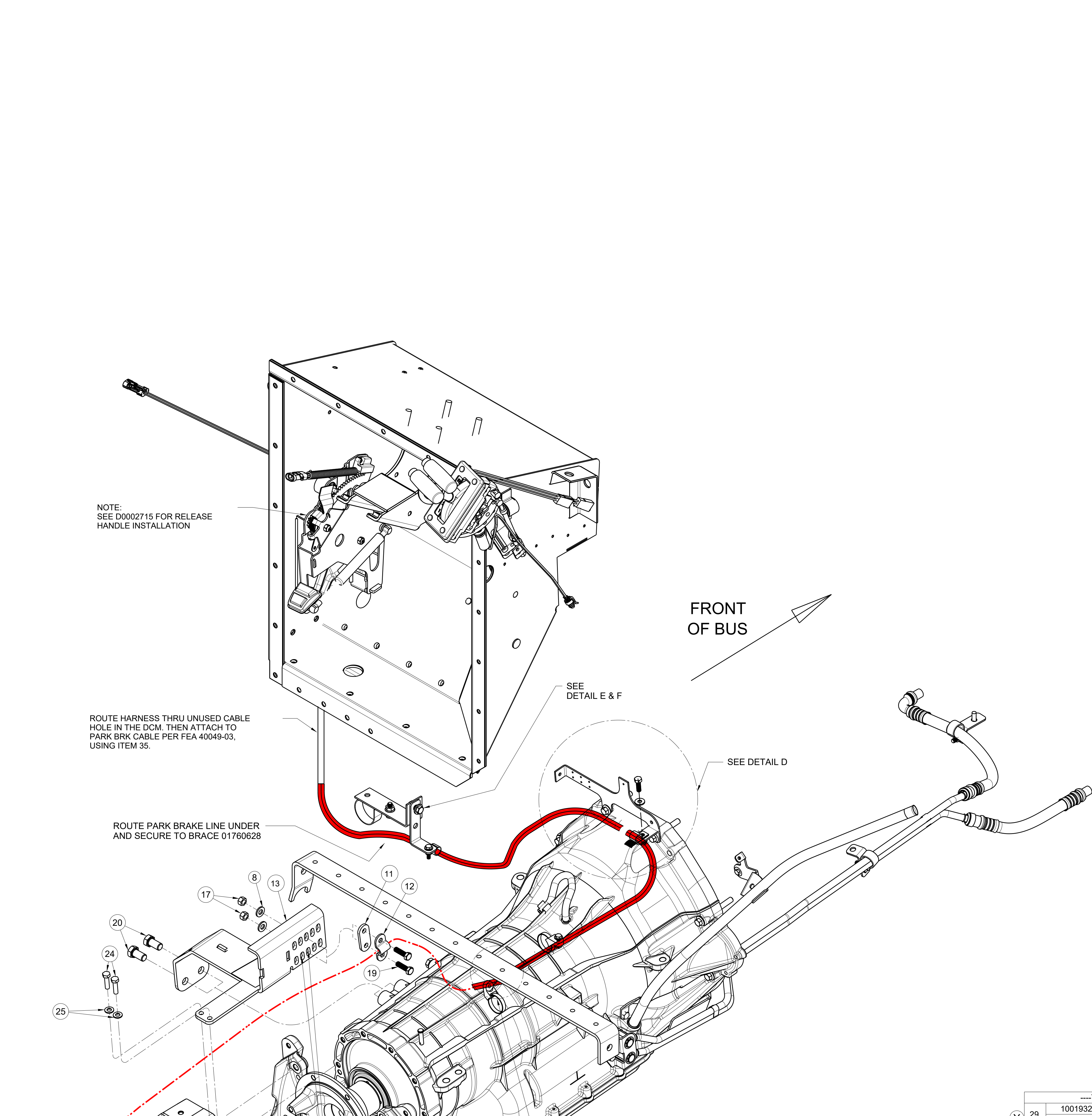
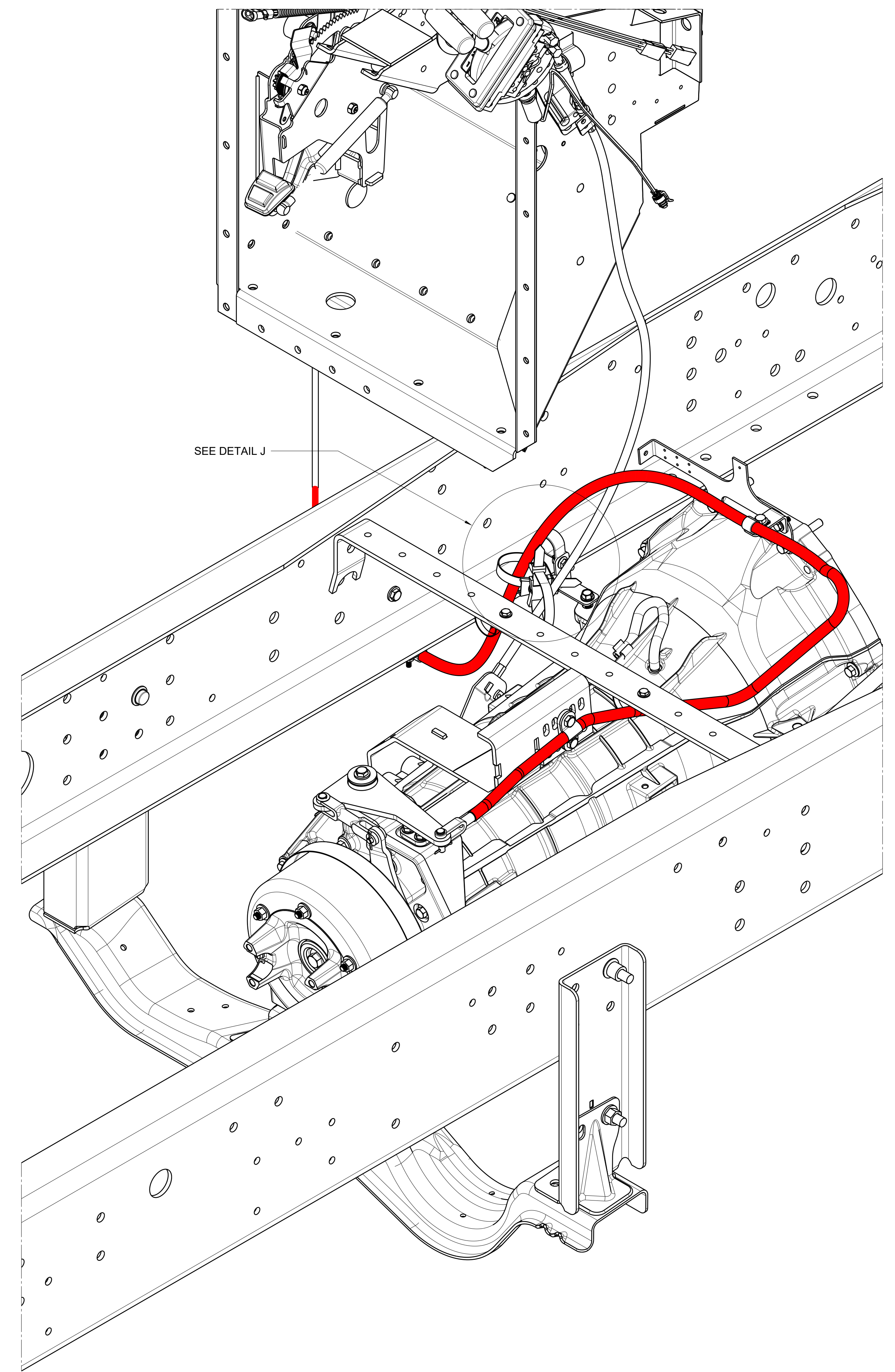
- Step 1:** Inspect suspect area and verify park brake cable is secure. Ensure cable tie mounts are in place & torqued properly to the chassis routing bracket at 76 in-lbs.
- Step 2:** Replace and/or re-torque HD cable tie mounts, as necessary.
- Step 3:** Ensure transmission vent is in place. Replace if necessary.
- Step 4:** Inspect Liquid Propane fuel lines for any damage and replace, as needed.

# RECALL R22CA

## LPG Supply Line & RH Park Brake Cable Interference



REVISION	Y	DATE	BY	APP	DESCRIPTION
DR	TTL	APP	BH	B14261	...
REVISION	Z	3/10/2022	WAS	WAS	REMOVED BRACKET 100466 FROM ALL VIEWS, BUT REPLACED IT WITH 10070232 IN DETAIL D
DR	AJ	APP	AJ	B15270	0097132
REVISION	AA	3/10/2022	WAS	WAS	REMOVE BRACKET 100466 FROM ALL VIEWS, BUT REPLACED IT WITH 10070232 IN DETAIL D
DR	TTL	APP	SM	B15022	...



KEY	PART-NO	DESCRIPTION	QTY
1	00118761	BRAKE, PARKING, DRUM SPL100	1
2	10067577	BRAKE, PARKING, BOSCH	1
3	10002747	COVER ASSY, MTG, PARKING BRAKE, HYDRAULIC	1
4	01319607	LEVER, PARKING BRAKE ASSY, BOSCH	1
5	10056267	YOKE, BRAKE, PARKING	1
6	10020255	WELDMENT, BELLCRANK, PARKING BRAKE, EXTENDED ARM	1
7	01317429	SPACER, PARKING BRAKE LINKAGE	1
8	01107085	WASHER, FLAT, 13/32 X 13/16 X 3/32, HDN, BLK ZN	4
9	10019591	BRACKET, MTG, PARK BRK CMPTS, FORD PROPANE, CV	1
10	01317502	YOKE, PARKING BRAKE, CLEVELAND 2708-3A	1
11	01443258	SPACER LINK, ORSCHEL N 8100131	1
12	01443241	CLAMP, CABLE, ORSCHEL N 8100108	1
13	10020262	WELDMENT, BRACKET, PARKING BRAKE, FORD TRANS CV	1
14	00560748	WASHER, FLAT, 15/32 X 1 1/2 X 3/32, HDN, BLK ZN	1
15	01319573	PIN, CLEVIS, 5/16, CLEVELAND 2708 1/2-3A	2
16	02008860	PIN, COTTER, 3/32 X 1, YLZNDICH	3
17	00826297	NUT, HEX HD, 3/8-16 LOCK, YEL ZN DICH	3
18	00870451	CAPSCREW, HEX HD, 3/8-16X 2 1/2, GR8, YELZNDICH	1
19	00803213	CAPSCREW, HEX HD, 3/8-16X1 1/4, GR8, YEL ZNDICH	2
20	10020701	CAPSCREW, HEX HD, 9/16-12X1, GR8, YEL ZN DICH	2
21	00803239	CAPSCREW, HEX HD, 1/2-13 X 1 1/2, GR8, YELZNDICH	4
22	02001212	LOCKWASHER, SPLIT RING, 1/2, LHT, YEL ZN DICH	4
23	01078922	WASHER, FLAT, 3/8X7/8X5/64 YELLOW ZINC DICH	6
24	01304633	CAPSCREW, HEX HD, M8-1.25X30, CL 10.9, OLVD, RBCHMT	2
25	02001948	WASHER, FLAT, 11/32 X 1 1/16 X 1/16, YEL ZNDICH	2
26	00013655	CAPSCREW, HEX HD, M10-1.5 X 45, GRADE 10.9	2
27	10020703	CAPSCREW, HEX FLG, M10-1.50X35, GR 10.9, YEL ZN DICH	5
28	00074309	PANEL, FLOOR, FRONT	REF
36	00803213	CAPSCREW, HEX HD, 3/8-16X1.25, GR8, YELZNDICH	6
37	00826297	NUT, HEX HD, 3/8-16 LOCK, YEL ZN DICH	6
38	02000057	CAPSCREW, HEX HD, 1/4-20 X 1, GR 5, YEL ZN DICH	2
39	00111133	BRACKET, MOUNTING, FUEL LINES TO ISBO78C, BBCV	1
40	01247709	WASHER, FLAT, 17/64 ID X 5/8, YEL ZN DICH	4
41	00659979	NUT, HEX, FLANGE SER, 1/4-20, BLACK ZINC	2
42	00021926	CLAMP, LOOP, .625	2
43	01317247	BRACKET, ATCH, BRAKE LINE TO FRAME	1
46	00839027	NUT, HEX HD, 3/8-16, GR G, SM FLG LK, YEL ZNDICH	1
47	10019598	CAPSCREW, HEX HD, FLNGD, M10X1.00X65, FORD 6R140	REF
48	02001345	NUT, HEX HD, 25-20, LOCKING, YEL ZNDICH	1
49	02000156	CAPSCREW, HEX HD, 5/16-24X 1, GR 5, YEL ZN DICH	1
50	02001121	WASHER, FLAT, 5/16 X 3/4 X 5/64, YEL ZN DICH	1
51	02004257	NUT, HEX HD, 5/16-24, FLG, PRVLG TORQ, YELZNDICH	1
52	00870477	CAPSCREW, HEX HD, 1/4-20 X 1, GR 8, YEL ZN DICH	1
53	00024168	MOUNT, HEAVY DUTY, .25 HOLE SIZE	1
54	00799489	STRAP, TIE, PANHUFF	1
89	10001134	PIN, CLEVIS, 3/16 X 1.25	1
89	00971978	NUT, HEX HD, 5/16, YELLOW DICHROMATE	1
96	0001454	CLAMP, MTG, TIE CABLE	1
91	00029998	TIE, CABLE, 250LB	1

NOTE:  
SEE D0002715 FOR RELEASE HANDLE INSTALLATION

ROUTE HARNESS THRU UNUSED CABLE HOLE IN THE DCM, THEN ATTACH TO PARK BRK CABLE PER FEA 40049-03, USING ITEM 35.

ROUTE PARK BRAKE LINE UNDER AND SECURE TO BRACE 01760628

FRONT OF BUS

SEE DETAIL E & F

SEE DETAIL D

SEE DETAIL H

BOLT NO.	FASTENER TORQUE lbs-ft
18	27 - 30
20	73-82
21	91-97
24	22 - 25
26	53 - 58
27	53 - 58
32	9 - 12

FOR ALL OTHER FASTENERS SEE THE DESIGNATED FASTENERS TORQUE CHART IN THE ENGINEERING GENERAL INSTRUCTIONS.

- NOTE:
- CABLE ASSEMBLY MUST BE A MINIMUM 3.50 INCH RADIUS.
  - BENDS SHOULD BE AS LARGE AS POSSIBLE.
  - SPRAY LPS NO.3 LUBRICANT AND RUST INHIBITOR (01712843) ON ALL YOKE AND PIN ASSEMBLIES AFTER ASSEMBLY.
  - INSTALLATION MUST MEET FMVSS 105.
  - ITEM# 34, SHIPPING PLATE, WILL NOT BE REUSED AND SHOULD BE DISPOSED OF AT BODY MOUNT.
  - ITEM# 30, 31 & 32, SHIPPING CAPSCREWS TO BE USED TO MOUNT PARKING BRAKE TO FLOOR.
  - RIGHT FRONT BOLT ONLY TO BE INSTALLED THREADS UP TO REDUCE INTERFERENCE WITH CABLE.
  - SEE DETAIL A FOR SETTING PARKING BRAKE.

---THESE ITEMS ARE ONLY WITH FEATURE OPTION 30017-01/02---			REMARKS
80	00003844	BRACKET, FUEL LINE STD-OFF, ISC, WITEX U-BLTS	1
81	01107937	CLAMP, LOOP, 2.00, INSULATED, COV-3313	1
82	01107085	WASHER, FLAT, 13/32 X 13/16 X 3/32, HDN, BLK ZN	1
83	00559195	CAPSCREW, HEX HEAD, 3/8-16X1, GR8, YEL ZN DICH	1
84	00839027	NUT, HEX HD, 3/8-16, GR G, SM FLG LK, YEL ZNDICH	1
85	01489434	TRIM, VINYL, BLACK, DOUBLE LIP	3*
86	00029998	TIE, CABLE, 250LB	2
87	00029253	SADDLE, DUAL SWIVEL, MOUNT	1

---THESE ITEMS ARE ONLY WITH FEATURE OPTION 40049-03---			REMARKS
29	10019322	LEVER ASSY, PARK BRAKE, W/PALM RELEASE BUTTON, CV	1
30	10050246	LEVER ASSY, BRAKE, PARK, TRIGGER GUARD WINTERLOCK	1
30	00803171	CAPSCREW, HEX HD, 3/8-16NCX1-1/2, GR8, YELZNDICH	3
31	01167485	WASHER, FLAT, 11/32 X 1 1/16 X 5/64, HDN, BLK ZN	5
32	01013689	NUT, HEX HD, 3/8-16, WASHER SER, YEL ZN DICH	3
33	00889145	CAPSCREW, HEX HD, 5/16-18 X 1, GR8, YELZNDICH	2
34	10042449	PLATE, MTG, HANDBRAKE PRODUCTION ONLY, BBCV	1
35	01674811	TIE, CABLE, NYLON, PANDUIT NO, PTL2I-C30	5
44	10020209	DECAL, PARKING, BRAKE, RELEASE W/PALM BUTTON	1
45	00928440	NUT, ACORN, 3/8-16, YEL ZN DICH, LOW CROWN	1
92	02000057	CAPSCREW, HEX HD, 1/4-20 X 1, GR 5, YEL ZN DICH	1
93	01247709	WASHER, FLAT, 17/64 ID X 5/8, YEL ZN DICH	1
94	00659979	NUT, HEX, FLANGE SER, 1/4-20, BLACK ZINC	1
95	00024168	MOUNT, HEAVY DUTY, .25 HOLE SIZE	1
96	00029998	TIE, CABLE, 250LB	1
NI	01712843	LUBRICANT, LPS, NO. 3, GALLON	.01
NI	02051902	SEALANT, SILICONE, BLACK, CARTRIDGE	1*
NI	10044528	TUBE, GREASE, MULTIFAK EP-2	.05

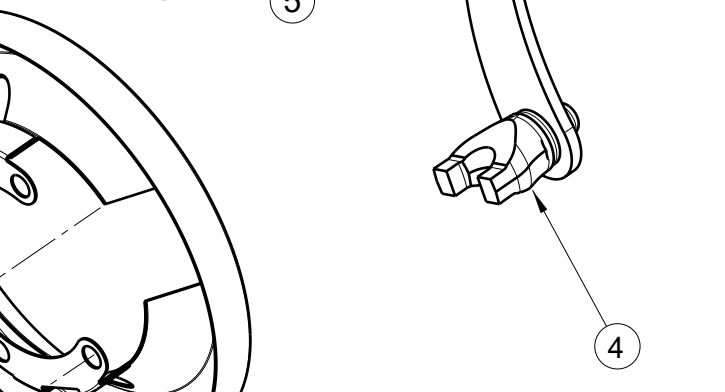
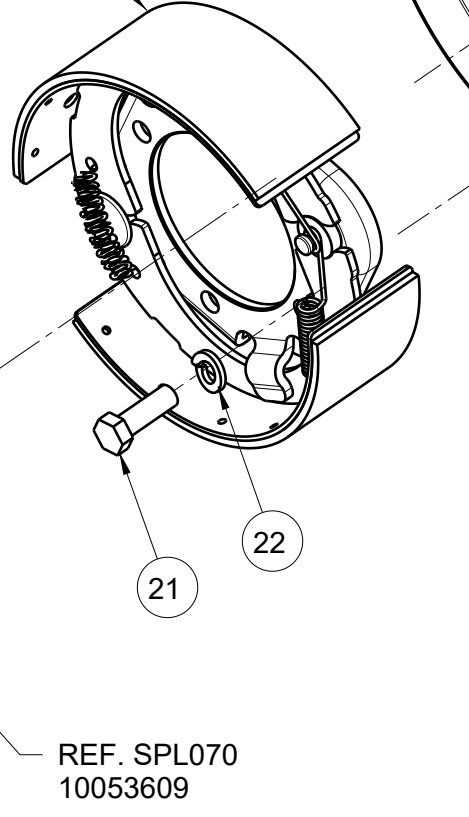
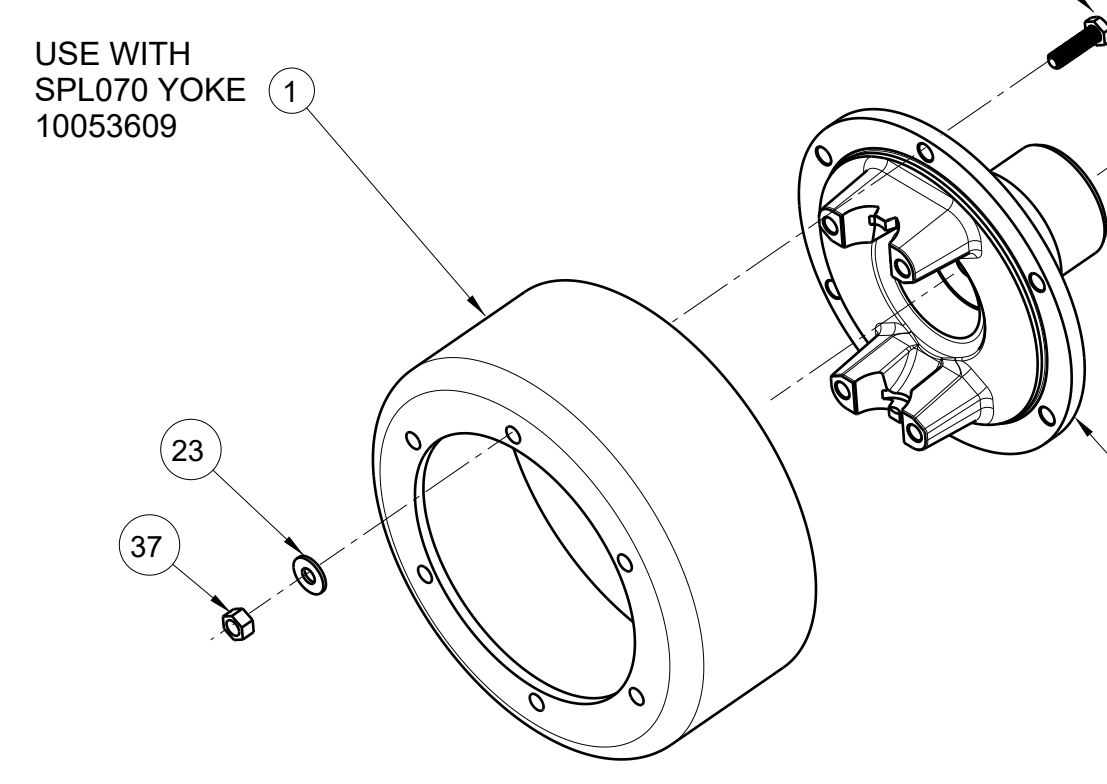
SEE SHEET 2 FOR PARK BRAKE CABLE ROUTING WITH RH PARK BRAKE 40049-03

BBCV W/F40433-02 TRANSMISSION W/HYD BRAKES AND FORD ENGINE

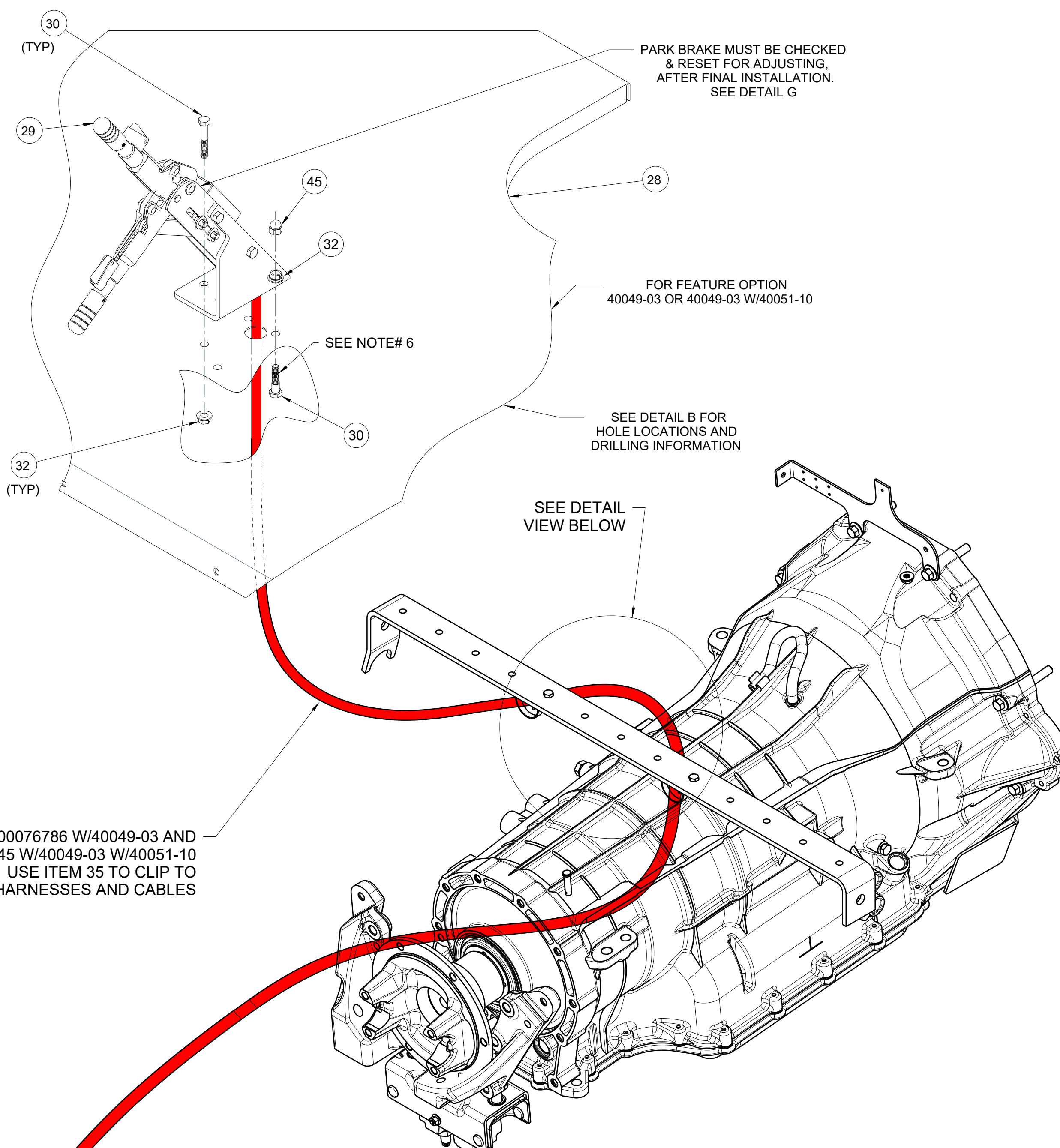
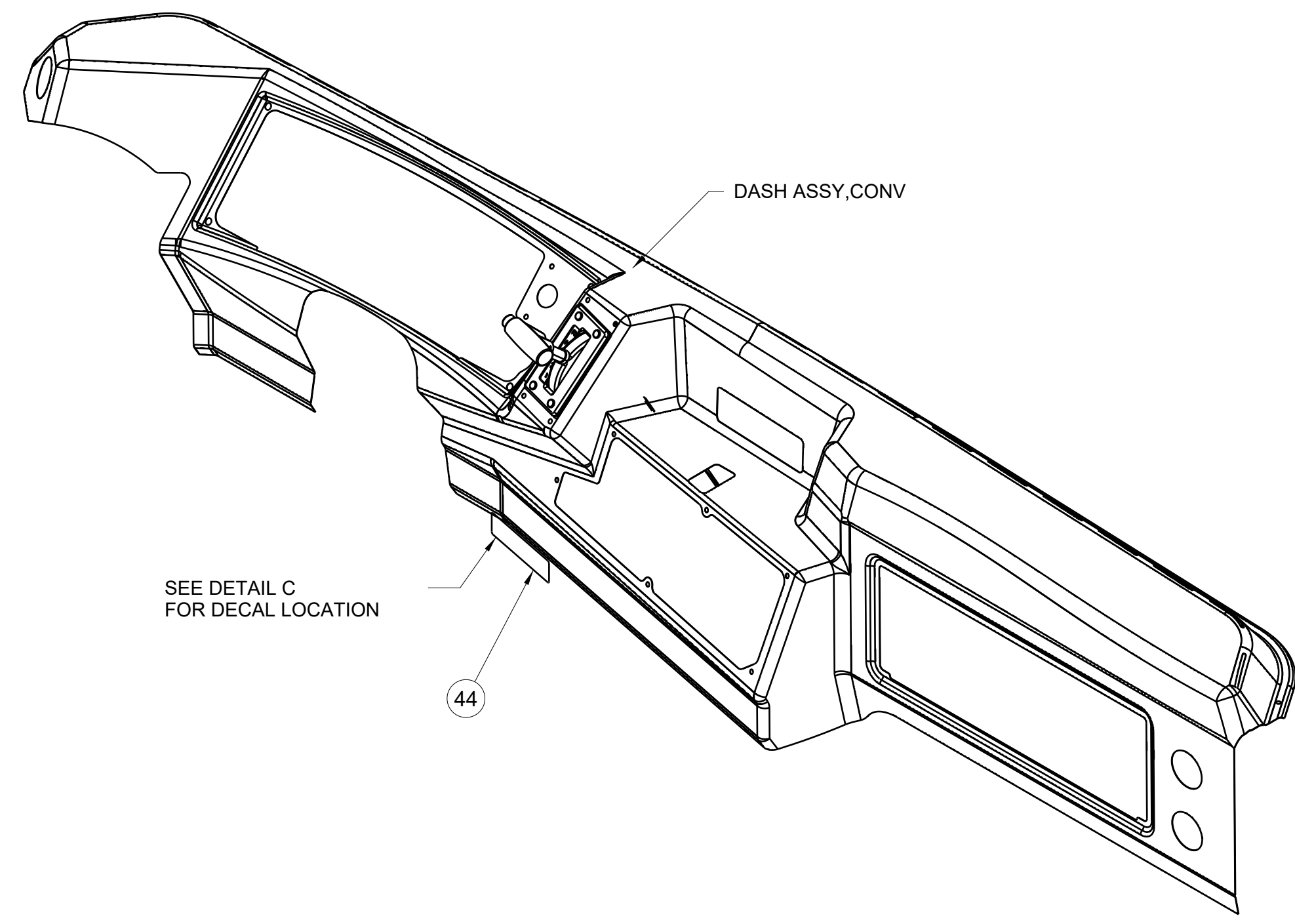
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		SCALE 1/1	
		REV AA	
		SHEET 1/4	

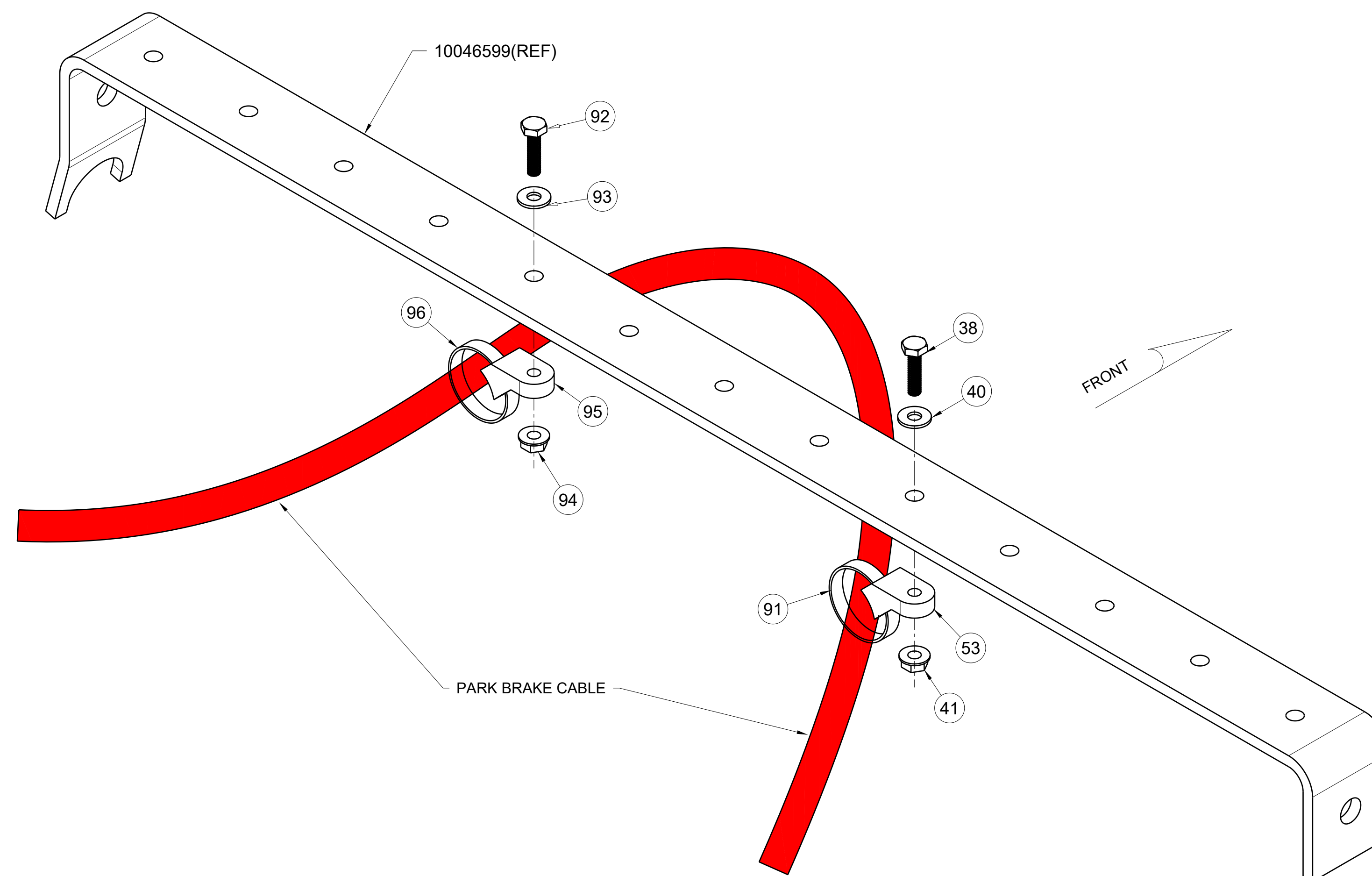
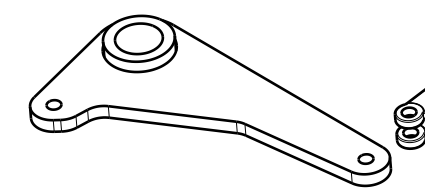
ALL DETAIL VIEWS ON SHEET 3



REVISION	Y	12/16/2020	Project	Was	REDRAWN IN 3DK; DELETED PICTURES FROM SHEET 3; UPDATED NOTE 7 ON SHEET 4; SEE SHEET 1 PER TCR# 110260
DR	TTL	APP BH	B14261	...	SEE SHEET 1 & 3
REVISION	Z	3/10/2021	Project	Was	SEE SHEET # 3
DR	AJ	APP AJ	B15270	...	SEE SHEET # 3
REVISION	AA	3/10/2022	Project	Was	SEE SHEET # 3
DR	TTL	APP SM	B15602	...	SEE SHEET # 3



HARNESSES 00076786 W/40049-03 AND HARNESSES 10052645 W/40049-03 W/40051-10 USE ITEM 35 TO CLIP TO EXISTING HARNESSES AND CABLES

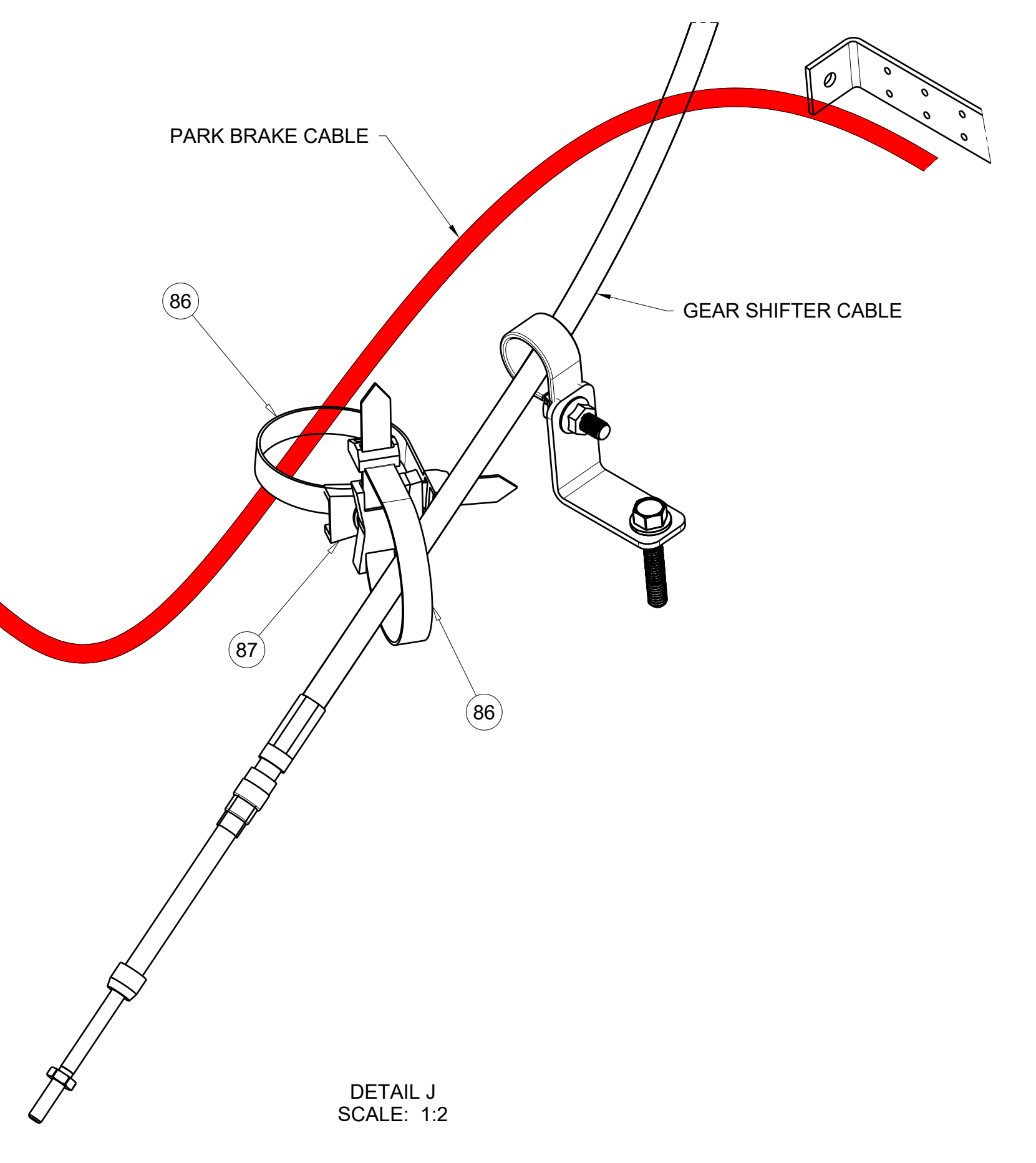
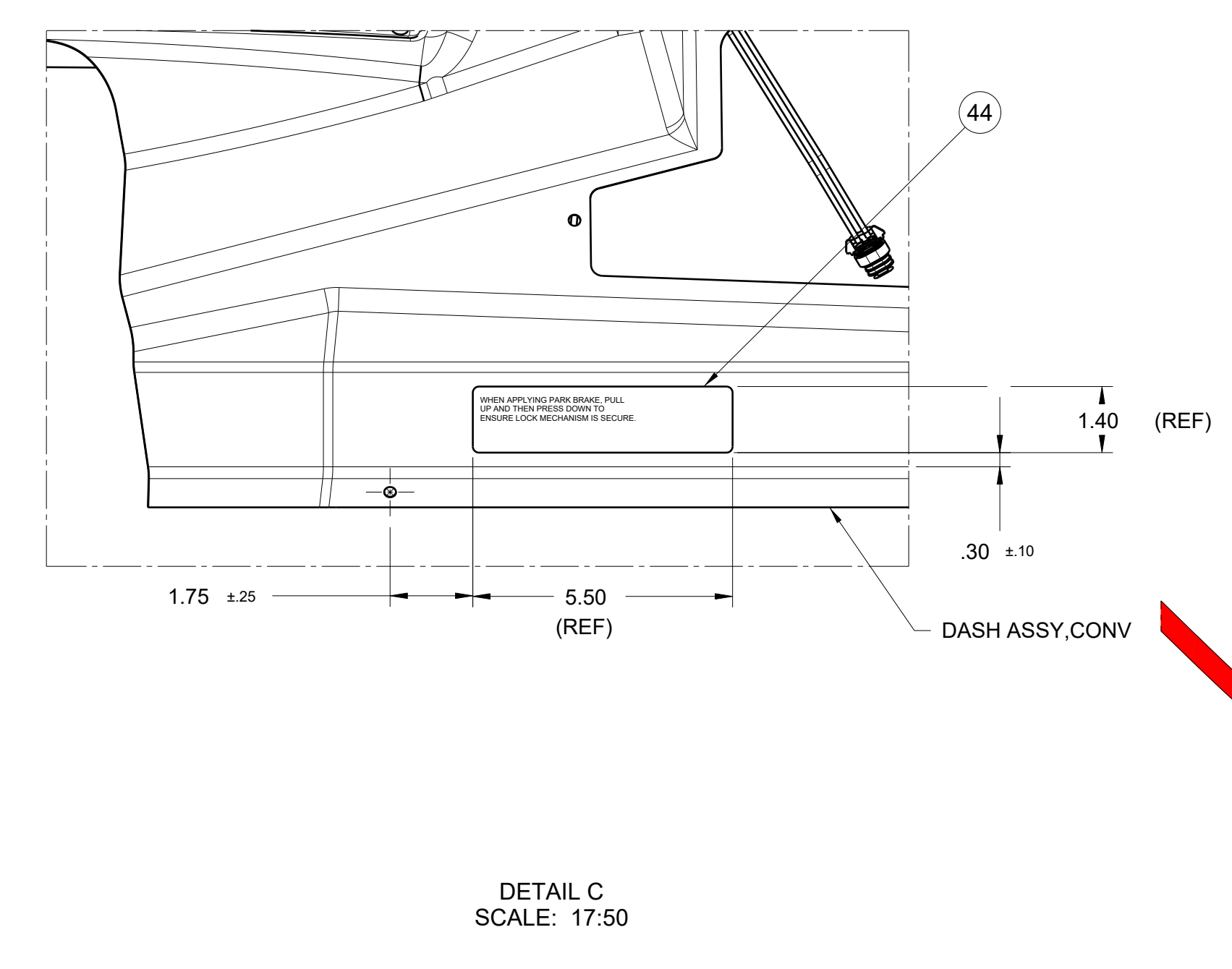
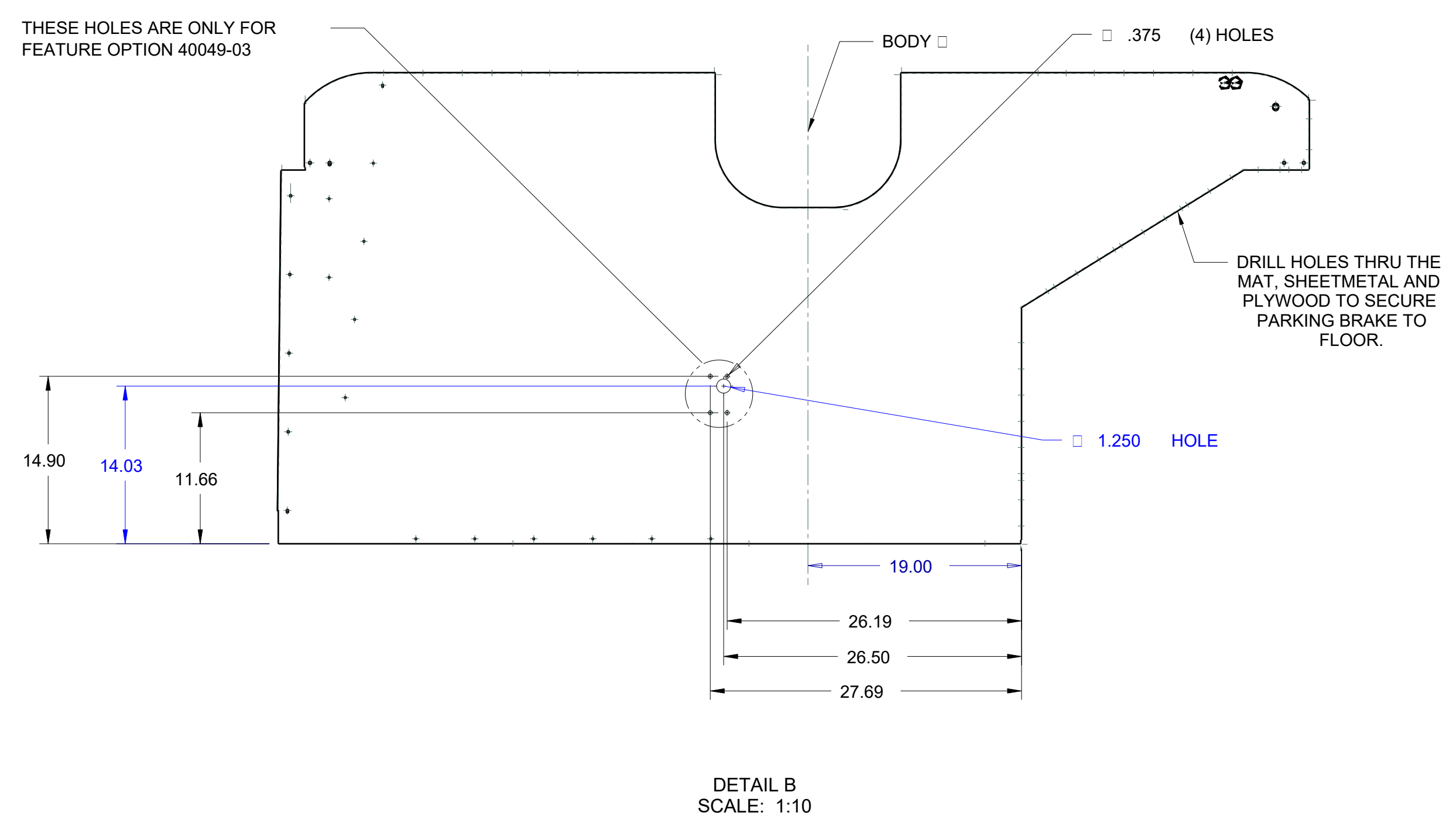
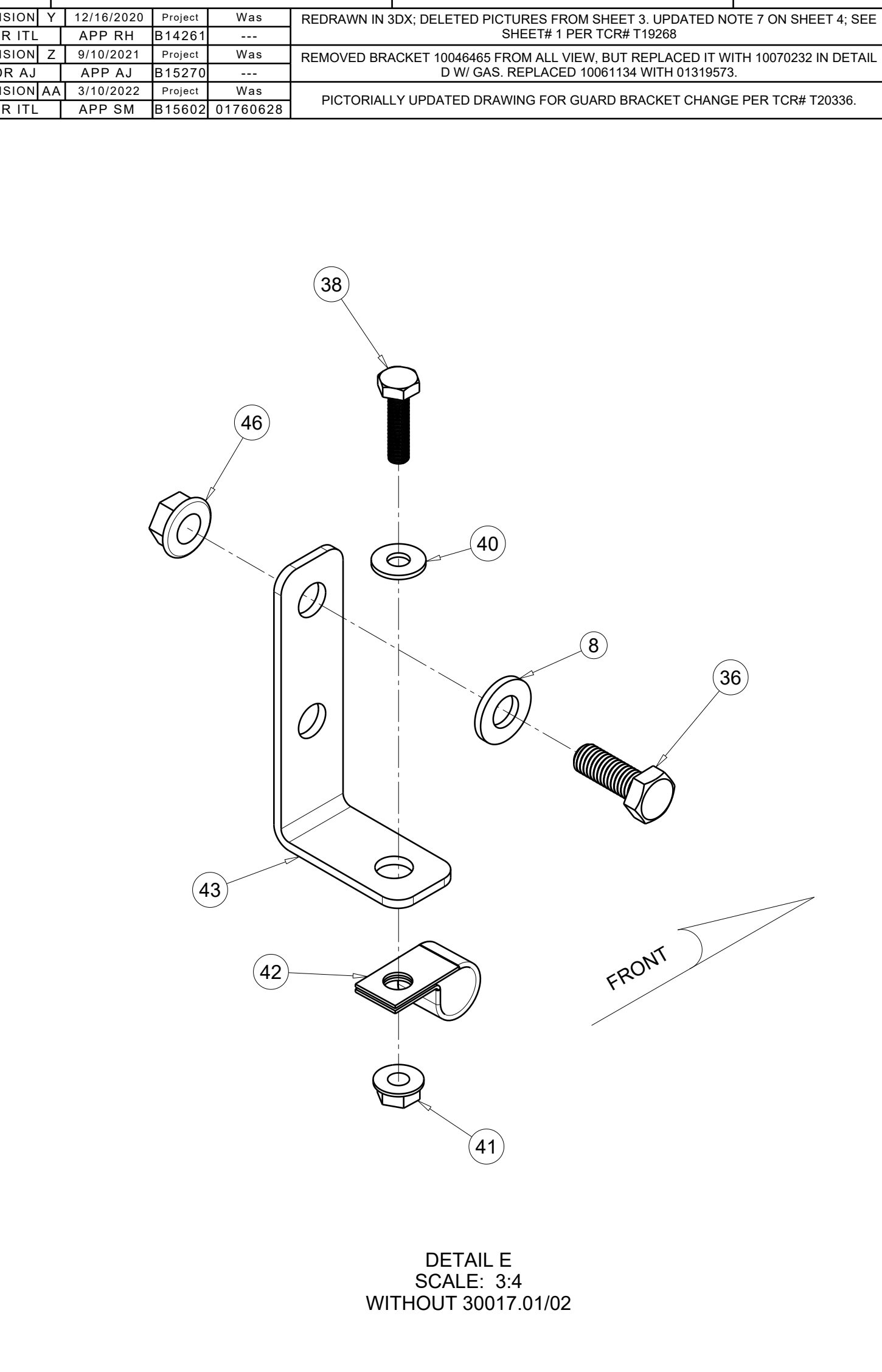
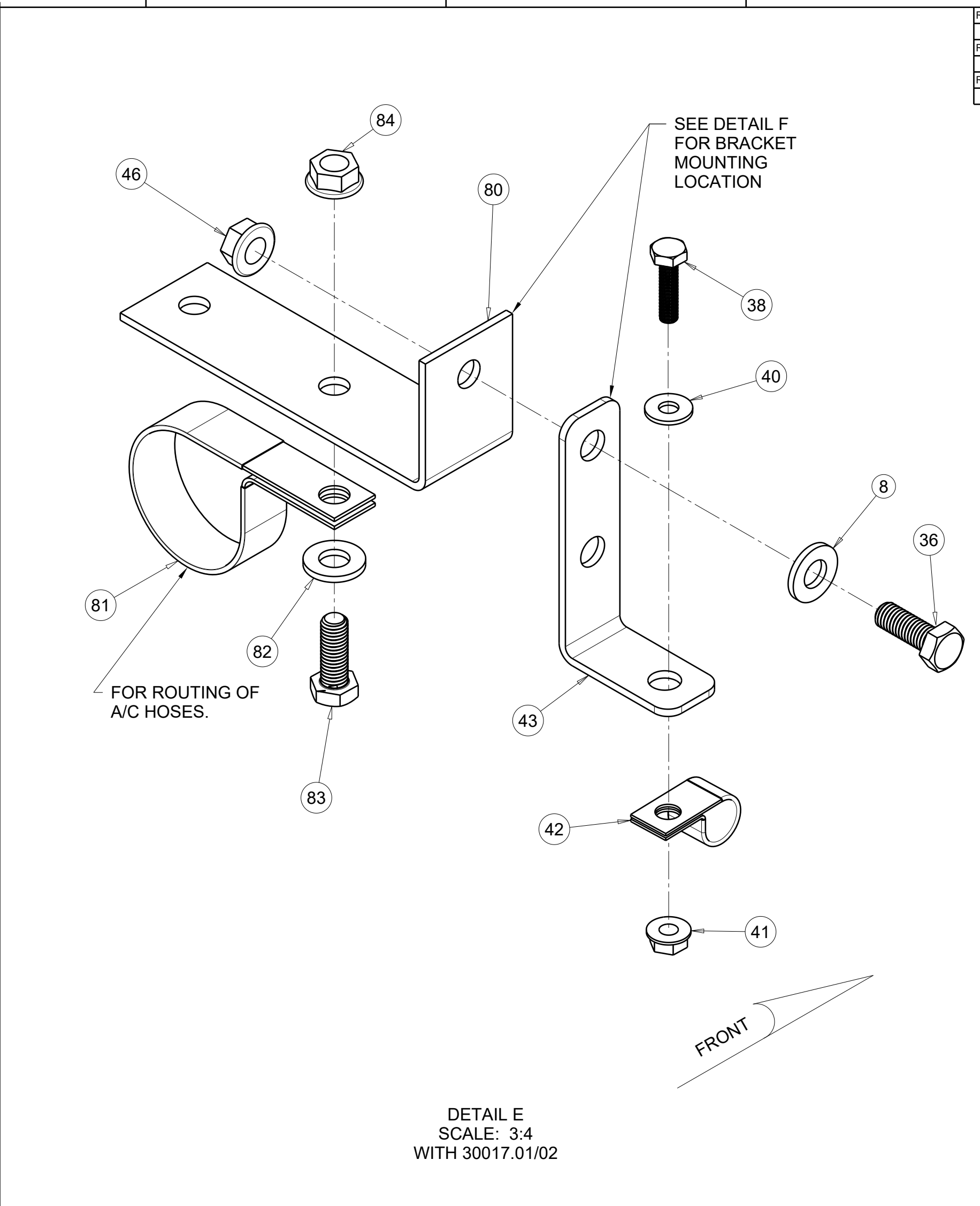
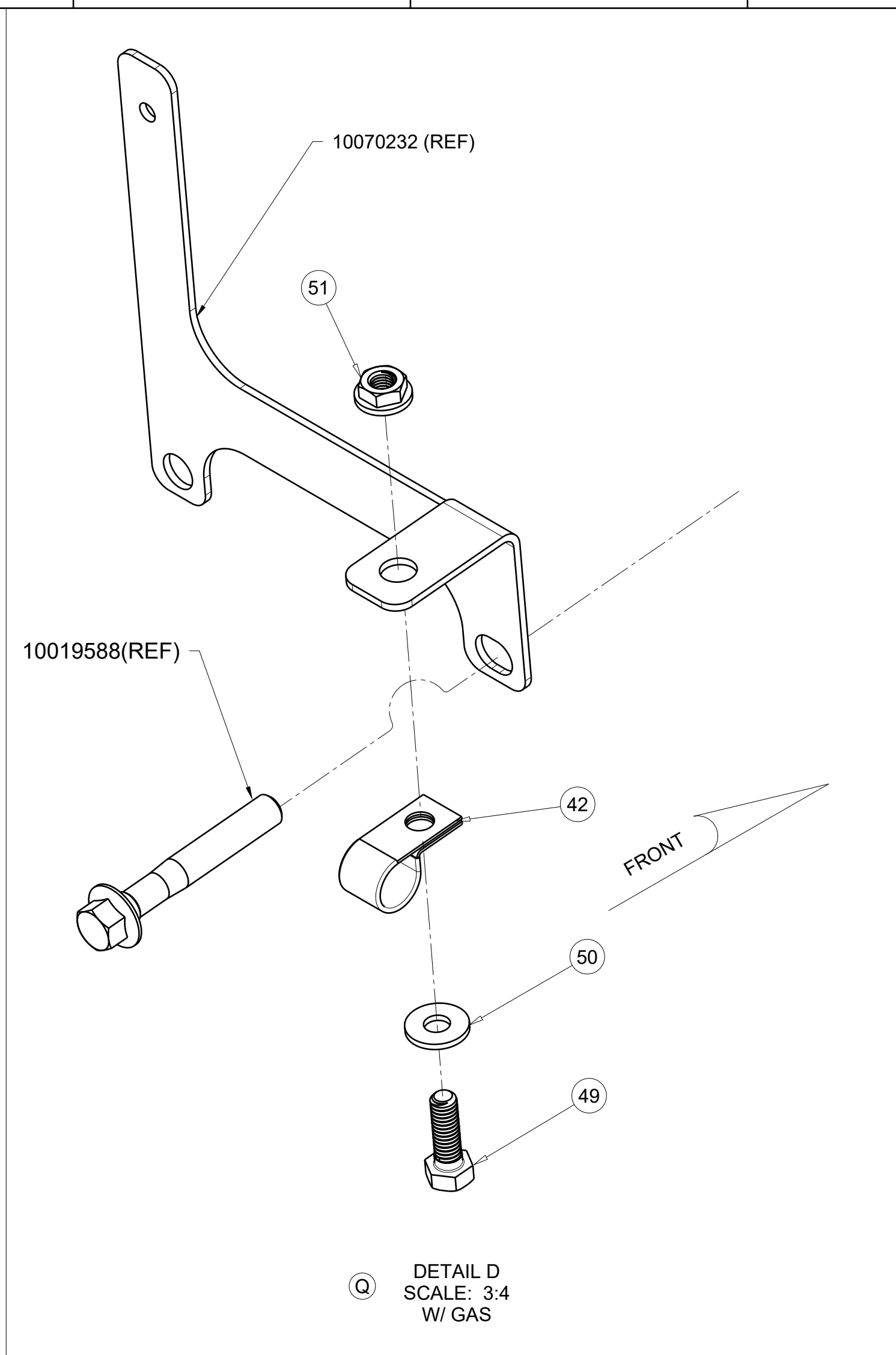
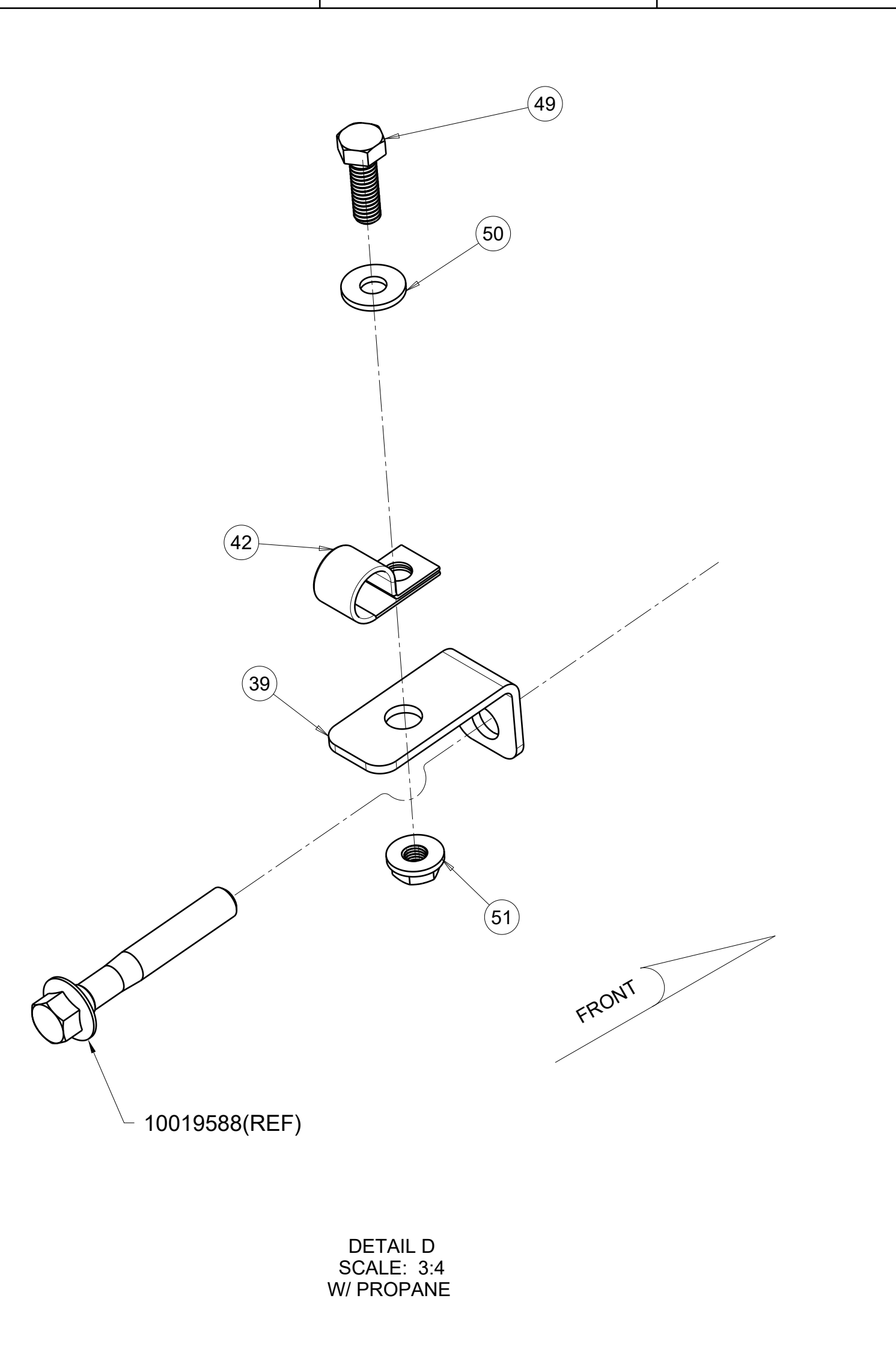
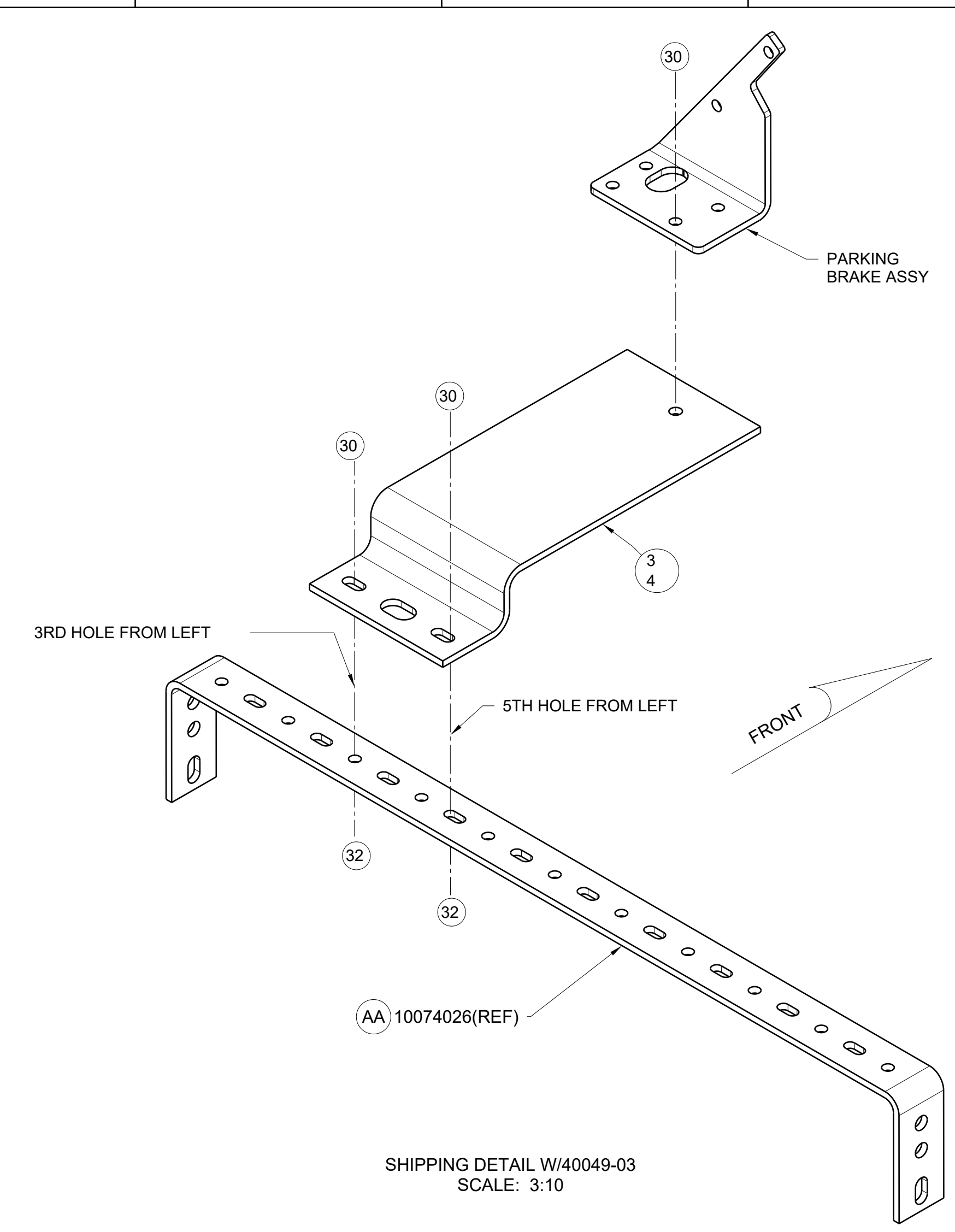


**PARK BRAKE CABLE ROUTING WITH RH PARK BRAKE 40049-03**

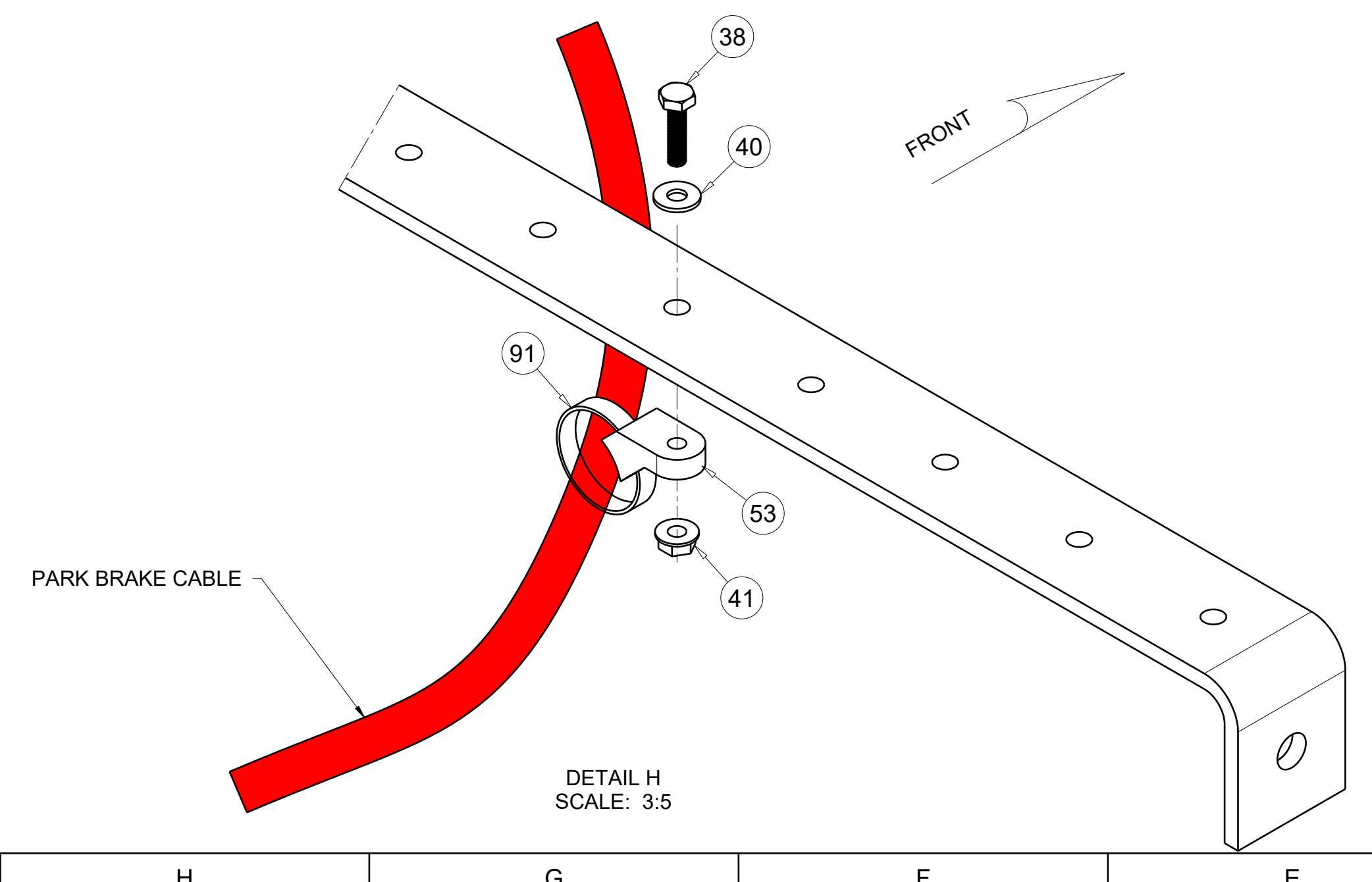
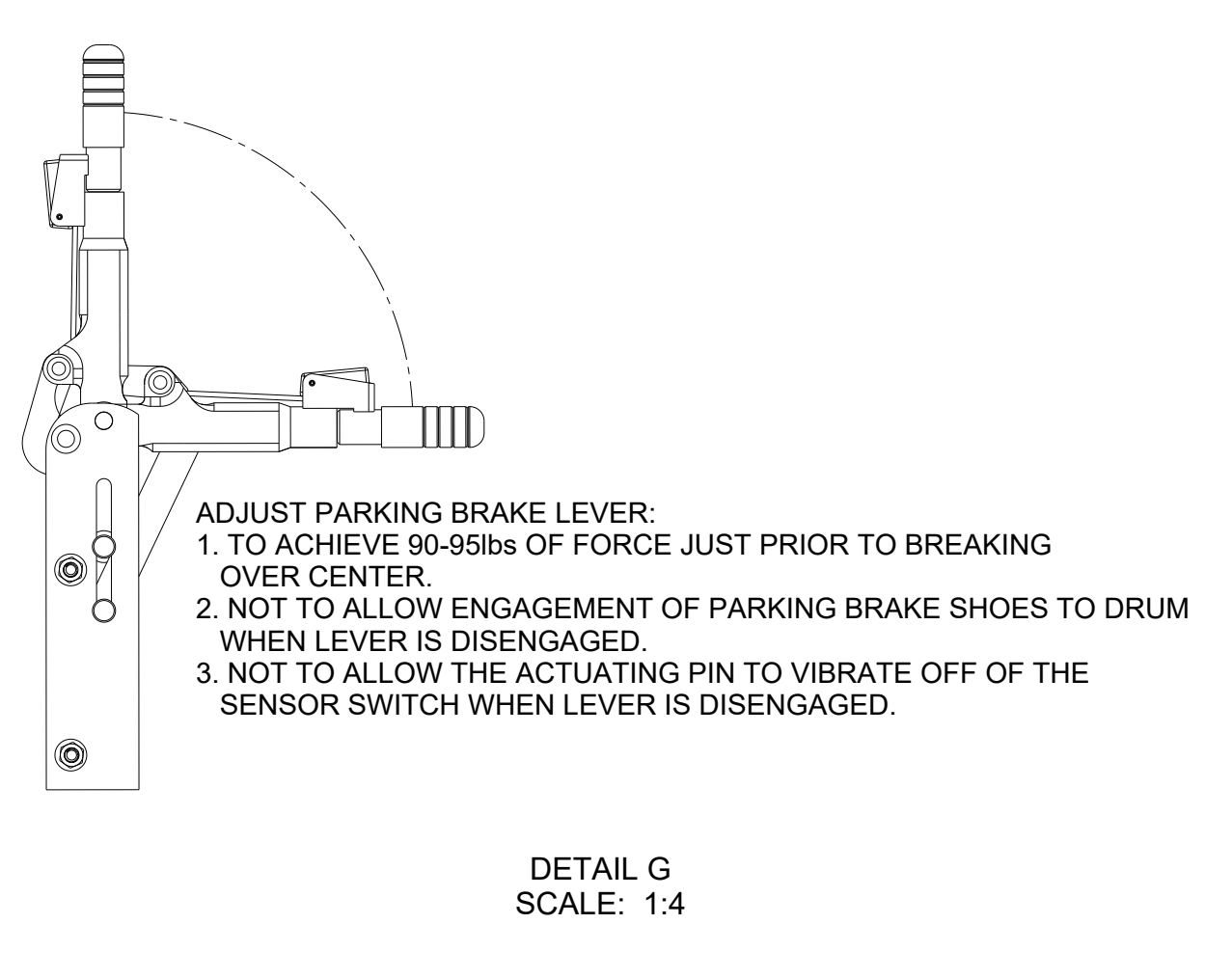
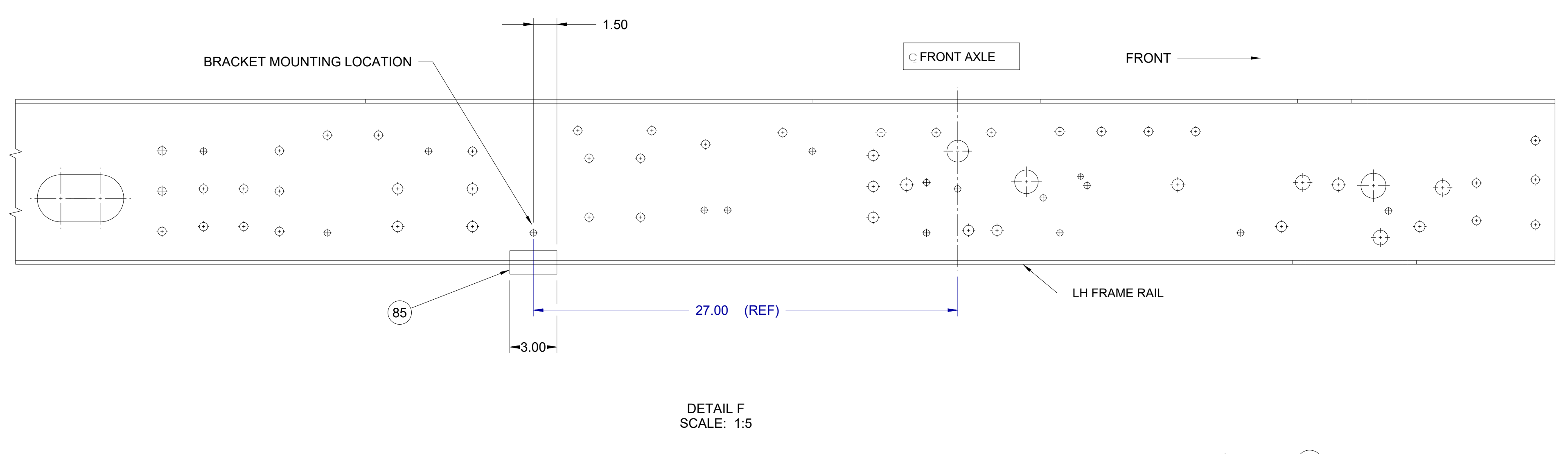
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FINISH (1)RAW (1)PRIME (1)PAINT (1)OTHER		SCALE	1/1
COLOR NAME		INVT	AA
SPEC #		DIAGRAM	INSTL.PARK BRK,FORD PROPANE.CV
NOTES:		DR	11/25/10 BY TTL
TOLERANCE ON ALL DIMENSIONS IS PLUS (.06) OR MINUS (.06) (UNLESS OTHERWISE SPECIFIED)		APP	11/25/10 BY HH
INACTIVATES NOS.		COMP	E
		NOTE	D0007365
		SCALE	2/4

REVISION	Y	12/16/2020	Project	Wds	REDRAWN IN 3DK. DELETED PICTURES FROM SHEET 3. UPDATED NOTE 7 ON SHEET 4. SEE SHEET 1 PER TCW# 110269
DR	TTL	APP	BH	B14261	...
REVISION	Z	01/05/2021	Project	Wds	REMOVED BRACKET 10MMGAS FROM ALL VIEW, BUT REPLACED IT WITH 10070232 IN DETAIL D. W/ GAS REPLACED 1006134 WITH 0135623.
DR	AJ	APP	AJ	015270	...
REVISION	AA	3/10/2022	Project	Wds	PICTORIALLY UPDATED DRAWING FOR GUARD BRACKET CHANGE PER TCW# 120336.
DR	TTL	APP	SM	0156023	01760928



THIS VIEW REMOVED  
SEE SHEET 4

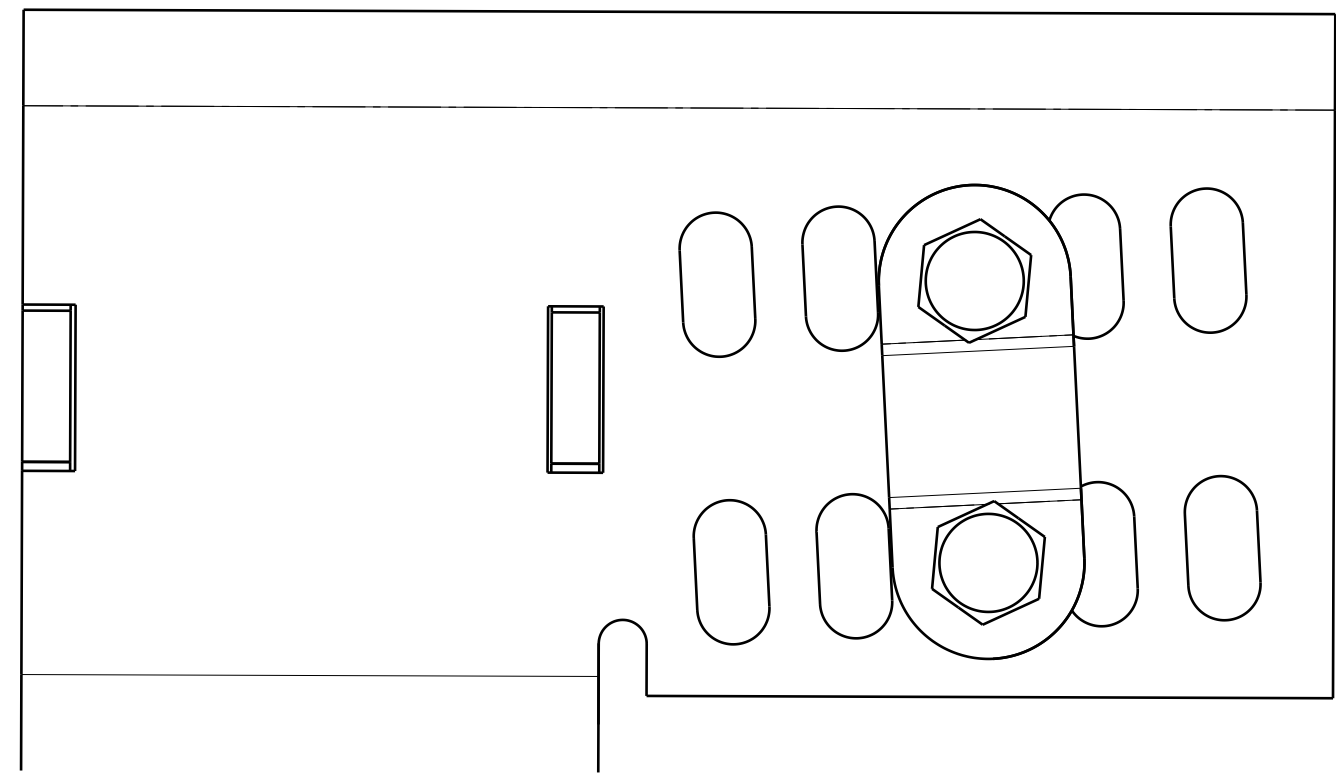


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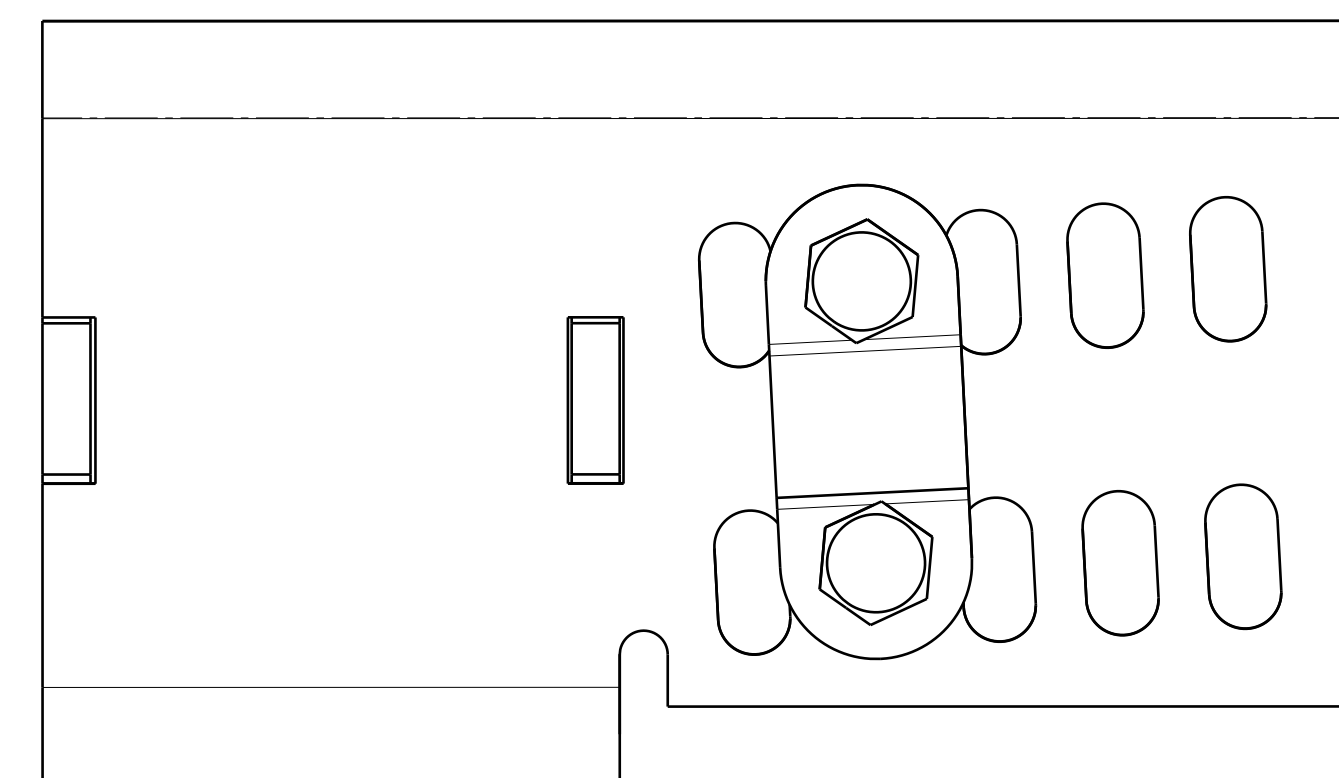
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NOTES:		Blue Bird Corporation Fort Valley, Georgia, U.S.A.	
TOLERANCE ON ALL DIMENSIONS IS PLUS (.00) OR MINUS (.00) (UNLESS OTHERWISE SPECIFIED)		DIAGRAM.INSTL.PARK BRK.FORD PROPANE.CV	
DR 11/25/10	BY TTL	SCALE	1/10
APP 11/25/10	BY HH	REV	AA
INACTIVATES NOS:		PROJECT	D0007365
		DATE	3/4

REVISION	Y	12/16/2020	Project	Was	REDRAWN IN 3DK; DELETED PICTURES FROM SHEET 3; UPDATED NOTE 7 ON SHEET 4; SEE SHEET 1 PER TOR# 110260
DR	ITL	APP	BH	B14261	...
REVISION	Z	3/10/2021	Project	Was	SEE SHEET 1 & 3
DR	AJ	APP	AJ	B15270	...
REVISION	AA	3/10/2022	Project	Was	SEE SHEET #3
DR	ITL	APP	SM	B15602	...

1. SET CABLE END CLAMP IN THIRD (3RD) MOUNTING HOLE LOCATION (MIDDLE OF BRACKET). ENSURE FOOT PEDAL OR HAND LEVER IS IN THE FULLY RELEASED POSITION. WITH HAND LEVER (F4004903) SET END CLAMP IN THE FOURTH (4TH) MOUNTING HOLE LOCATION.



W/O F4004903

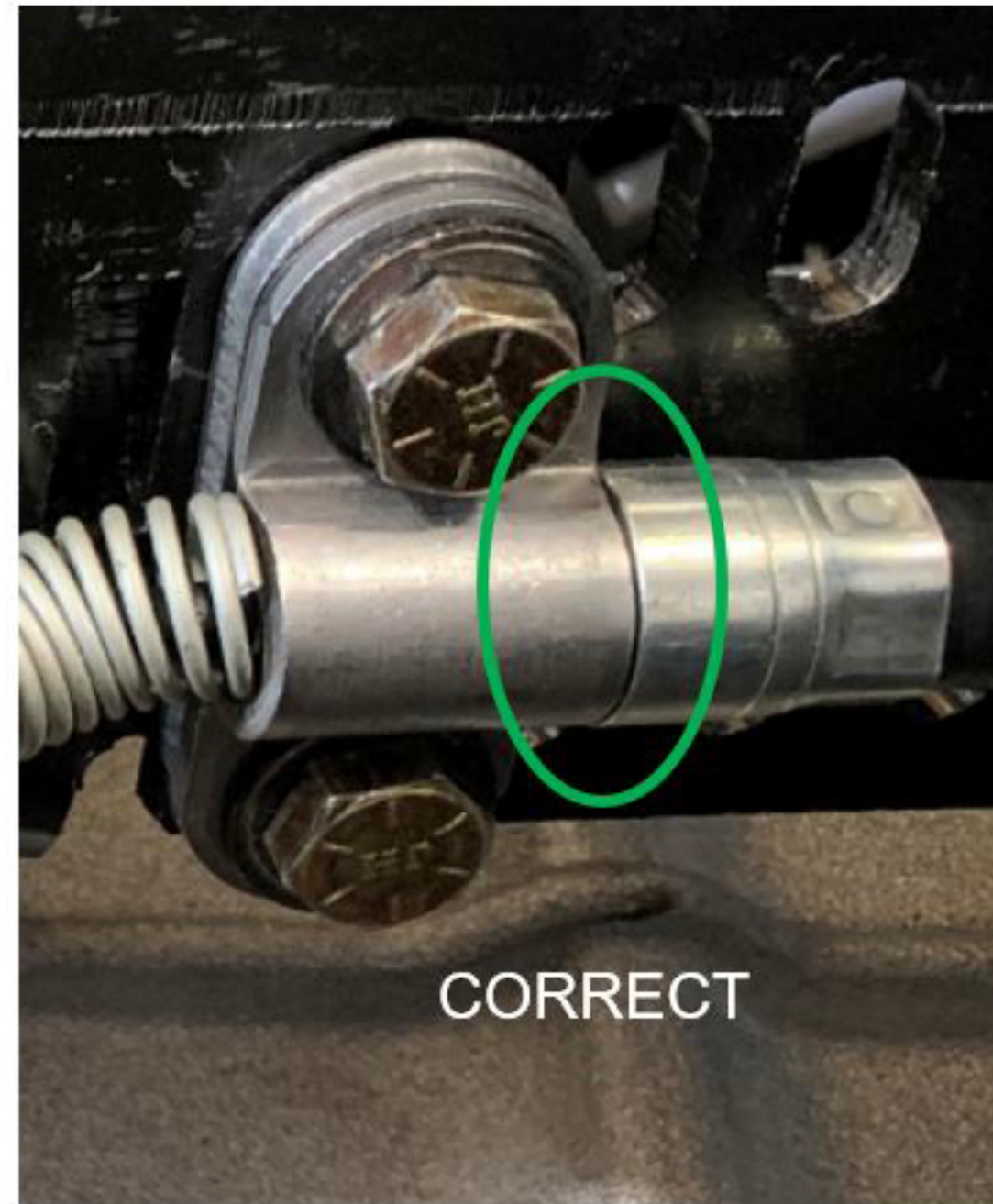
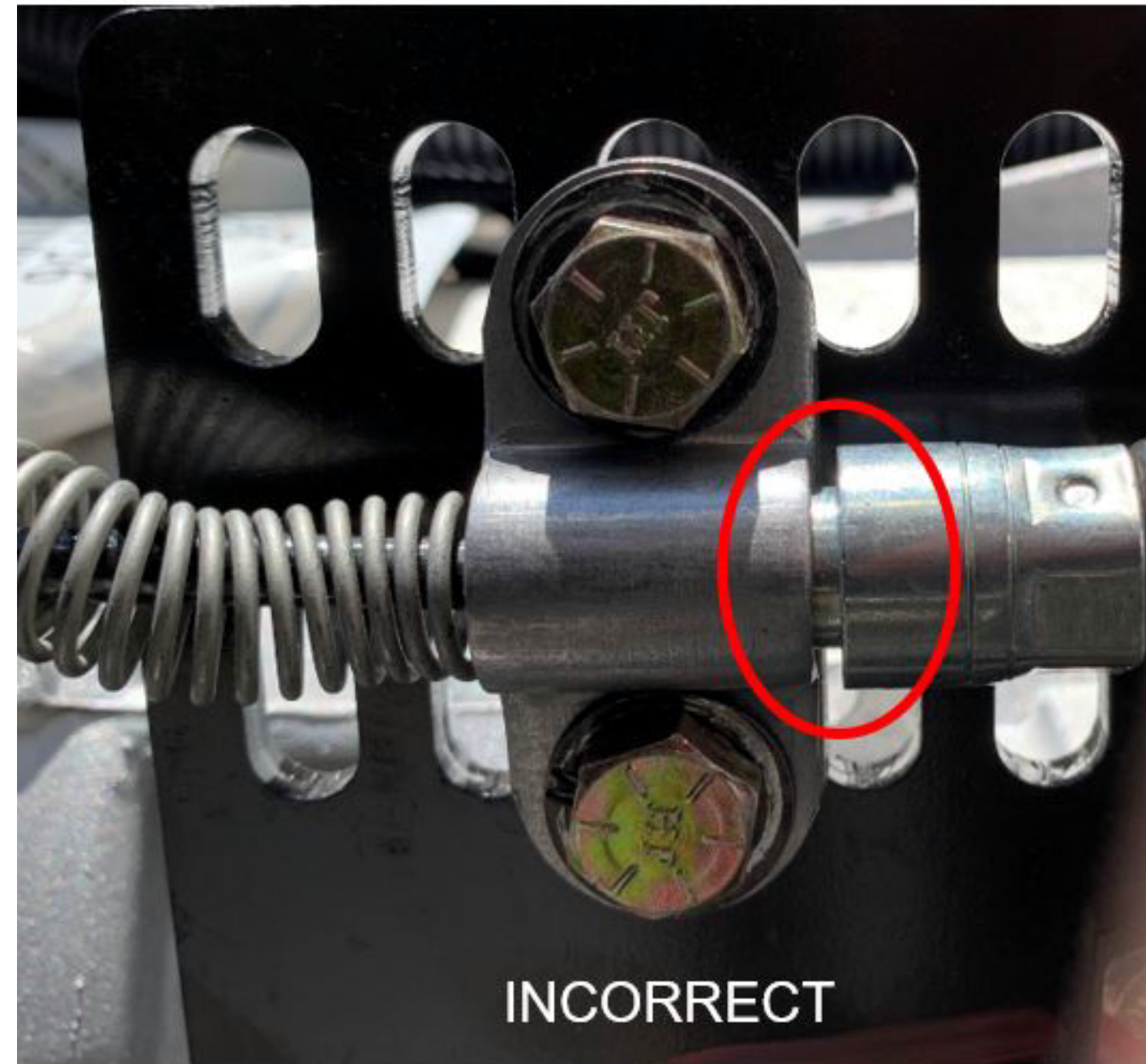


W/ F4004903

FRONT

FRONT

2. ENSURE THE CABLE IS SECURED FLUSH WITH THE CABLE END CLAMP



3. CHECK SLACK IN THE PARK BRAKE CABLE BY PULLING DOWN ON THE CABLE UNDER THE FOOT PEDAL.  
 A. ENSURE THAT THERE IS NO SLACK BY PULLING DOWN ON CABLE.  
 B. CHECK VISUALLY AND PHYSICALLY CHECK WITH YOUR FINGER TO ENSURE CABLE IS SEATED FLUSH ON THE BOTTOM OF THE PEDAL CLEVIS.

4. DO NOT SECURE THE CABLE TO THE BELL CRANK (ITEM #6) AT THIS POINT. REMOVE SLACK OUT OF BELL CRANK AND OTHER DOWNSTREAM LINKAGES BY PUSHING BELL CRANK FORWARD UNTIL YOU FEEL THE BRAKE SHOES CONTACT THE DRUM.



5. SCREW CABLE END YOKE (ITEM #10) FORWARD (CLOCKWISE) OR REARWARD(COUNTER-CLOCKWISE) SO THAT THE HOLE IN YOKE EYE ALIGNS WITH HOLE IN BELLCRANK. LOCK NUT MUST NOT BE TIGHTENED. DO NOT ENGAGE PARKING BRAKE BY PUSHING BELLCRANK TOO FAR FORWARD. PUSH BELL CRANK UNTIL INITIAL RESISTANCE IS FELT.



6. RE-ALIGN BELL CRANK AND YOKE. PLACE PIN (ITEM #88) INTO THE ALIGNED YOKE AND BELL CRANK AND SECURE WITH COTTER PIN (ITEM #16). TIGHTEN LOCK NUT (ITEM #89) AGAINST YOKE. **THE ASSEMBLY MUST MEET FMVSS 105.**

7. CENTER LINE OF CELVIS EYE TO CABLE END CLAMP SHOULD MEASURE  $8 \frac{3}{8}'' \pm \frac{1}{8}''$  IN RELEASED POSITION FOR FOOT PEDAL. HAND LEVER (F4004903) MEASUREMENT REMAINS  $7 \frac{3}{8}'' \pm \frac{1}{8}''$  IN RELEASED POSITION.

8. ENSURE THERE IS SUBSTANTIAL THREAD ENGAGEMENT BETWEEN THE CABLE AND CLEVIS. **MAXIMUM ALLOWABLE EXPOSED CABLE THREADS IS  $0.6875''$  ( $11/16''$ ).**



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COLOR NAME			AA
SPEC #			AA
NOTES:	DIAGRAM:INSTL.PARK BRK,FORD PROPANE.CV		4/4
TOLERANCE ON ALL DIMENSIONS IS PLUS (.06) OR MINUS (.06) (UNLESS OTHERWISE SPECIFIED)	DR	BY	SCALE
INACTIVATES NOS.	APP 11/25/10	ITL	
	APP 11/25/10	BY	HH
		E	D0007365