

**PROBLEM SOLVING AUTOMOTIVE HARDWARE FOR GERMAN AUTOMOBILES** Mercedes, BMW, Audi, Volkwagan, Porsche

### DOMESTIC & IMPORT VEHICLE NEW GENERATION BRAKE LINE LENGTHS

#### Poly Vinyl Floride

Meets or exceeds specification for brake line tubing DIN2444 • SAE-J527 • ASTM254 • GM123M • MS1806

TUDES OF		5
	Tube Diameter	Euro/Dom
Length	(3/16) 4.75mm O.D.	Part No.
7"		PVFKMB7
8"		PVFKMB8
9"		PVFKMB9
12"		PVFKMB12
13"		PVFKMB13
16"		PVFKMB16
20''		PVFKMB20
21"		PVFKMB21
23"		PVFKMB23
27"		PVFKMB27
30"		PVFKMB30
31"		PVFKMB31
33"		PVFKMB33
37"		PVFKMB37
40''		PVFKMB40
43"		PVFKMB43
48"		PVFKMB48
51"		PVFKMB51
56"		PVFKMB56
60''		PVFKMB60
66"		PVFKMB66
72"		PVFKMB72
84''		PVFKMB84
86"		PVFKMB86
92''		PVFKMB92
96"		PVFKMB96
Union		3044

360° Seal Clamps								
100% seal between clamp inner band and outside of tubing with no gaps or damage to hose								
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Part #	Size	Hose I.D	Application					
2940	7.0mm	9/32"	6mm - 1/4" nylon fuel lines (2997)					
2950	8.7mm	11/32"	8mm - 5/16" nylon fuel lines (2962					
2980	9.5mm	3/8"	8mm - 5/16" nylon fuel lines (2962					
2981	10.5mm	13/32"	3/8" nylon fuel line (2963)					
2982	11.3mm	7/16"	10mm nylon fuel lines (2998)					
2983	12.3mm	15/32"	Fuel, Transmission & Coolant hose					
2984	13.3mm	1/2"	Fuel, Transmission & Coolant hose					
2985	14.5mm	9/16"	Fuel, Transmission & Coolant hose					
2986	15.7mm	7/8"	1/4" shop air line					
2987	17.0mm	11/16"	3/8" shop air line					
2988	18.5mm	23/32"	3/8" shop air line					
3227	19.8mm	25/32"	Fuel, Transmission & Coolant hose					
2989	21.0mm	13/16"	Fuel, Transmission & Coolant hose					
2990	24.1mm	15/16"	Use with item # 4204 (5/8")					
2991	25.6mm	1"	Fuel, Transmission & Coolant hose					
2995	28.6mm	1-1/8"	Use with item # 4205 - 4215					

### CUPRO NICKEL TUBING MADE UP LINES AVAILABLE IN

8" to 72" - 3/16"- 1/4" - 5/16" - 3/8" DIN 74234 • SAEJ1650

Part #	Size	Usage
CN3	3/16"x 25'	Brake Lines
CN3-50	3/16"x 50'	Brake Lines
CN3-100	3/16"x 100'	Brake Lines
CN4	1/4" x 25'	Brake Lines
CN4-50	1/4" x 50'	Brake Lines
CN4-100	1/4" x 100'	Brake Lines
CN5	5/16" x 25'	Fuel-Trans* Lines
CN6	3/8" x 25'	Fuel-Trans* Lines
CN7	6mm x 25'	Brake Lines
CN8	1/2" x 25'	Diesel Fuel, Trans* Lines
CN10M	10mm x 25'	Fuel-Trans* Lines
CN12M	12mm x 25'	Fuel-Trans* Lines



### NOTE: \* Transmission

CUPRONICKEL Repair lines are easy bend and are guaranteed for the life of the vehicle.

### **Fuel Injection Hose Clamps**

Part #	Tube O.D
FI2	7mm - 9mm Fuel Injection Hose
FI4	1/4" Fuel Injection Hose
FI6	5/16" Fuel Injection Hose
FI8	3/8" Fuel Injection Hose
FI10	10mm-12mm Fuel Injection Hose



### **Transmission Repair Lines**

Part #	Description
PVF10-72	10mm line x 78" No End Forms or Fittings
PVF12-72	12mm line x 78" No End Forms or Fittings

Recommend Part No. 5414 pincers to close 360° Seal clamps Se



		В	ack Nylon Fuel Line Tubiı	ng				
corroded s	Easily repair or replace damaged and corroded steel or nylon fuel line or splice directly on to Original Equipment lines			Approved	and Rated fo	or Gas & Diesel		
Part #	Tube O.D	Coil Length	in Lister	Part #	Tube O.D	Coil Length		
2962 - 25	5/16" (8mm)	25'	220-250 p.s.i	2997 - 1000	1/4"	1000'		
2962 -100	5/16" (8mm)	100'	Working Pressure	2998 - 25	3/8"	25'		
2962 - 1000	5/16" (8mm)	1000'	800-1000 p.s.i Burst Pressure	2998 - 100	3/8"	100'		
2963 - 25	10mm	25'		2998 - 1000	3/8"	1000'		
2963 - 100	10mm	100'		3350 - 10	1/2"	10'		
2963 - 1000	10mm	1000'		3350- 25	1/2"	25'		
2997 - 25	1/4"	25'		3351-10	5/8"	10'		
2997 - 100	1/4"	100'		3351-25	5/8"	25'		
	Cutting Tips & Silencer Bands							
	Brake Lath	e Cutting Tips		Silenc	cer Bands			
	060-10 ACCUTURN models 8911, 8922, 8944, 8989, 8991, & 8993 11° angle, 1/64" radius			<b>68B</b> encer (with flat weigh ng clip) <b>Black Neopr</b> ice to oil and chemia	ene excellent	$\bigcirc$		
060-10S <u>PRO-CUT</u> models 610 on car lathe <u>VBG</u> models 600 & 610 on car lathe		he	69 Rotor silencer weights and flexible Natural rubber be		$\overline{\bigcirc}$			
		0/2 10		Nului u u u u u u u u u u u u u u u u u u	ige			



062-10 AMMCO Models 1000, 1001, 3000, 4000, 4100, 7000, 7700 & 700, 705, 710 <u>ALLTOOL</u> model 747 <u>RELS</u> model 2000 <u>FMC</u> model 500 RTI on car lathe <u>PERFORMANCE</u> model 7850& on car lathes 66, 6600, 7100, 7200, 7600 RTI model BRC-35 on car lathe HUNTER model BL500 STAR model 1176



066-10 ROUND CUTTING TIP used in place of 062-10 and 802-10 cutting tips Must use with # 428 Tool holder. (Extra-long life)

103-10

AMMCO MODELS 3850 & 3860 RTI MODELS BRC 35, BRC 500, BRC 550, 450-80001-00 & 450-80002-00 FMC - JOHN BEAN MODEL 500 ON CAR LATHE ALL-TOOL MODEL 747 HUNTER MODEL BL500, BL605 PERFORMANCE MODEL 66, 6600, 7100, 7200 & 7600

407-10 FMC - JOHN BEAN/BARRETTE .020 RADIUS MODELS 67BSD, 67DLX, 67GSA, 69DLX, 701ECF, 601PF FMC 400, 500, 600 & 700 HOFFMAN, RJ WEST TRUE CUT MODEL 400, 401 PERFECT EQUIPMENT MODEL 400, P450

802-10

KWIKWAY / SNAP-ON models NDL, BDL, CBL & KWIK LATHE on car lathe 108-005-04, SDL & DL <u>ROTUNDA</u> model 850 disc lathe <u>RELS</u> model SW504 swing arm lathe SNAP-ON models YA180 & YA281

For complete listing of cutting tips please visit www.fmsiinc.com

All rotors

#### 94

Rotor silencer band 9" diameter Black Neoprene Excellent resistance to oil and chemicals. Solid rotors

#### 95

Rotor silencer 9" diameter Latex tubing with steel weights. All rotors 95S 7" Diameter Latex tubing

#### 96

Rotor silencer band 6 1/2" diameter Black Neoprene Excellent resistance to oil and chemicals. Solid Rotors

#### 80B

Drum silencer band with long life attaching Hardware Natural rubber beige. All drums



70B Rotor Silencer chip deflector. All rotors





E-mail: info@fmsiinc.com http://www.fmsiinc.com

### Power Steering Rack Repair Assortment



Repairing Power Steering Rack lines has never been so easy. 30" Long Cupro Nickel replacement lines are easy bend and end formed, making power steering line reproductions a breeze.

Part No. - 0128

This 52 piece assortment has the best coverage of tube nut fittings from Audi, BMW, Mercedes and more.



Contents	of Assortment	
Part #	Description	Qty
2803	1/4" O-Ring	4
2880	3/8" Viton O-Ring	4
2881	5/16" Viton O-Ring	2
3006	5/16" x 1/2"- 20 Tube Nut	4
3008	3/8" x 16mm Tube Nut	2
3009	5/16" x 14mm Tube Nut	2
3015	3/8"x 5/8"-18 Tube Nut	4
3433	1/4" x 12mm x 1.25 Tube Nut	2
3434	3/8" x 16mm x 1.5 Tube Nut	2
3435	3/8" x 16mm x 1.5 Tube Nut	2
3436	3/8" x 18mm x 1.5 Tube Nut	2
3438	3/8" x 18mm - 18 Tube Nut	2
3442	3/8" x 5/8" - 18 Tube Nut	2
3443	5/16" x 5/8" -18 Tube Nut	2
3452	1/4" High Pressure Compression Union	1
3453	5/16" High Pressure Compression Union	1
3454	3/8" High Pressure Compression Union	1
3462	1/4" x 9/16" -18 Tube Nut	2
3464	3/8" x 16mm x 1.5 Tube Nut	2
3489	5/16" x 1/2" - 20 Female Tube Nut	2
4531	5/16" x 30" - Invert Flare -Cupro Nickel Line	1
4532	5/16" x 30" - O-Ring Flare - Cupro Nickel Line	2
4533	3/8" x 30" - Invert Flare -Cupro Nickel Line	1
4534	3/8" x 30" - O-Ring Flare - Cupro Nickel Line	2
4537	1/4" x 30" - O-Ring Flare - Cupro Nickel Line	1

OE OIL PAN DRAIN PLUGS Call for Application Guide							
Part#	Description	Hex	Gasket	Overall Length	Under Head Lenath		
1044 DE#: BMW II-13I-250-089 II-13I-273-093	Hex head with gasket BMW 12mm x 1.5	11/16"	2161	26.06mm	18.64mm		
1081	Oil Drain Plug BMW/Mercedes 12mm x 1.5	17mm	2152	18mm	12mm		
1082 DE#: BMW 07-119-919-225 DE#: MERC 029-997-34-30	Oil Drain Plug BMW/Mercedes 12mm x 1.5	13mm	2152	21mm	12mm		
1017 DE#: VW N902 88901 N906 60601	Hex head Volkswagen 14mm x 1.5	19mm	2078	24.02mm	13.66mm		
1041	Hex head washer face Magnetic tip 14mm x 1.5	13mm	2077	30.00mm	19.66mm		
<b>1046</b> <b>DE#: MERC</b> III-997-03-30 60I-997-02-30	Hex head washer face Mercedes 14mm x 1.5	13mm	2085	33.32mm	23.87mm		
1013 DE#: BMW D59-103-193	Internal Drive Washer Face 26mm X 1.5 Mercedes,Audi, VW	15mm (Int)	2085	18mm	14.47mm		
1055 DE#: VW N908 13201 N911 01401	W/Attached Washer 14mm x 1.50 VW - Audi	19mm	-	30mm	22.86mm		

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Part #	Tube Size	5000 0011
3451	3/16"	<ul> <li>5000 PSI b</li> <li>1200 PSI v</li> </ul>
3452	1/4"	Compatil
3453	5/16"	·
3454	3/8"	
3459	10mm	0
3460	12mm	
3461	3/8" to 10mm	High Pre

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# **High Pressure Unions**

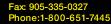
- burst pressure
- working pressure
- ible with all metal tubes.



essure Compression Union 5,000 psi

#### **OE OIL DRAIN PLUG GASKETS** Copper Aluminum Part # Style Part # Style 2152 12mm 2077 12mm

2077	1211111	2102	1211111
2078	14mm	2161	12mm
2058	26mm	2160	14mm



Bubble Flare Unions						
Part #	Tube Size	Thread Diameter	Thread Per Inch	Edelmann	Weatherhead	
3044	3/16"	10mm	1.0	276000	7975	
4238	6mm 3/16" & 1/4"	12mm	1.0	277000	7936	
Me	tric 6m	ım Bubl	ole Flare T	ube Nut	rs 🥯	
Part #	Tul	pe Size	Thread Diameter	Thread Pitch		
3421	6mm		12mm	1.0 (Olive)		

## Metric & Imperial Bubble Flare Tube Nuts

3028	3413	3414	3477	3490	3492	3495	3496
Part #	Tube Size	Thread Diameter		Thread Pitch			
3028	3/16"	10n	10mm 1.0 European and Domestic			omestic (Oliv	ve)
3413	1/4"	12mm		1.0 Fo	ord and Imports (Olive)		
3414	3/16"	10mm		1.0 Volk	swagen and	wagen and Audi (Violet)	
3477	3/16"	11mm			1.0 (Violet)		
3490	1/4"	11mm			1.0 (Viole	et)	
3492	3/16"	10mm			1.5 (Violet)		
3495	1/4"	12mm		12mm 1.5 (Gold)			
3496	1/4"	12r	nm	1.0 (Gold)			

# **Bending, Flaring, Cutting & Disconnect Tools**



# SOLUTIONS FOR GERMAN AUTOMOBILES A/C Line Repair, Replace & Block Offs



#### FMSI SMART SPLICE 5-MINUTE FIX: NO LINE REMOVAL

SMART SPLICE™ patented line repair products offer quick and durable repair for splicing, terminating, connecting hose and metal, or adding a service port to a line.

### WHAT MAKES IT SMART

All SMART SPLICE<sup>™</sup> line repair products are superior to traditional compression fittings thanks to our proprietary sealing technology that contributes to long service life:

 UNIQUE HNBR SEAL SLEEVE DRAMATICALLY EXPANDS THE SEALING SURFACE AREA
 HIGH TECH ANTI-VIBRATION TENSION RING INSURES REPAIR DURABILITY IN HEAVY VIBRATION AUTOMOTIVE APPLICATIONS



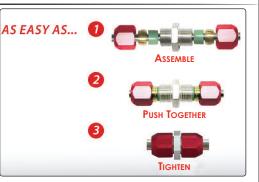


# A/C Line Repair, Replace & Assortments

## FMSI Smart Splice Air Condtioning Line Repair & Block off Master Assortment

No waiting for expensive, out of stock dealer lines Repair leaking lines while the customer waits...

> Easily repair leaking Air Conditioning, Coolant, Transmission & Oil Cooler Lines with FMSI Automotive Hardware's Range of Line splice, Block off Caps & Line Set Assortments.



Route new line sets around Filler necks and gas tanks or through frame rails without specialty tools or invasive techniques.





RB58-12

RB58-12

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### FMSI Air Condtioning Line Repair & Rear Line Solutions



### The most reliable aluminum tube joining system available in the automotive aftermarket.

- For universal use, independent of vehicle type and model year.
- No waiting for expensive OE parts.
- No welding, soldering or threading necessary
- In many cases, the faulty line may not even need to be removed.
- OEM trusted for over 30 years.



### LOKRING Air Condtioning Line Repair & Rear Line Solutions



AC0221 # 6 to 5/16" AC0222 # 8 to 13/32" AC0223 # 10 to 1/2" AC0224 # 12 to 5/8"



rier Hose Ferrules			
	Part No.	Description	
	AC0217	# 6 to 5/16"	
	AC0218	# 8 to 13/32"	
	AC0219	# 10 to 1/2"	
	AC0220	# 12 to 5/8"	



Part No.	Description
CR6306	# 6 to 5/16"
CR6308	# 8 to 13/32"
CR6310	# 10 to 1/2"
CR6312	# 12 to 5/8"



## Hi Temp Brake Lube,

- Features:
- High temperature Brake Lubricant (1400°C / 2552°F)
- Repels water, salt, and liquid sodium chloride used as road de-icer
- · Can only be washed off by solvents
- Will not harm rubber components
- Allows disc and drum brake systems to slide freely

Used Original equipment by Mercedes for problematic vehicles.

#### Additional Uses:

- Acts as a protective barrier to prevents corrosion on all surfaces
- Excellent for reducing dissimilar metal reaction • Replacement for metal based anti-seize
- (Contains no Nickel, copper or aluminum)







The special composition of the materials generates a "chill effect" on the corroded workpiece. FMSI's Cold Shock deeply penetrates into these small spaces recated by this cold shrinking process due to its high capillary effect

It looses the rust crystals in seconds and neutralises the connection between the rust layers.

loosens all kinds of rusted screw connections. It works within seconds due to its two-fold function:

Fast Acting Fastener Remover.

CHAR I Cold Shock

(Aerosol)

effect

Applications

ne:1-800-651-7445



E-mail: info@fmsiinc.com http://www.fmsiinc.com