



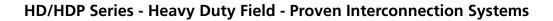


3850 Industrial Avenue, Hemet, California 92545 Tel.: (951) 765-2250 - Fax: (951) 765-2255 E-mail : insidesales@deutschipd.net - Web : www.deutschipd.com - Edition 2007

# HD30 & HDP20 Series Technical Manual

A STEP AHEAD









**Truck Applications** 



 $\bigcirc$ 15



**Bus Applications** 











**Construction Equipment** 



# HD30 & HDP20 Series Technical Manual

## Table of Contents

Improved Techniques HD/HDP Series Connector Features Material Specifications Ordering Information Insert Arrangements Usable Wire Sizes Envelope Drawings Receptacle Mounting / Mating / Unmating Instructions 12 Assembly Instructions Contacts HD/HDP Accessories





Farm Equipment





# **Deutsch HD30 Series**

4-5

6

7

8

9

10

11

13

14

15

A heavy duty, environmentally sealed, multi-pin circular connector, featuring quick connect-disconnect bayonet coupling, single hole bulkhead mounting, silicone seals, with a rear insertion/rear removal contact system.

The Deutsch HD30 Series connector, was developed to meet the needs of the heavy duty equipment and transportation industries for rugged, multi-pin, sealed connector systems.



# **Deutsch HDP20 Series**

Designed specifically for the truck, bus and off-highway industry, the HDP20 Series is a heavy duty rated, environmentally sealed, composite shell, multi-pin connector. The plug features a quick connect-disconnect bayonet style coupling and the receptacle is designed for single hole mounting. Thus reducing assembly line time and installation costs.

3





### **Electrical Connectors:**

#### **Critical to System Reliability and Maintainability**

Recent studies indicate that electrical system failures are a common and constant source of equipment malfunction. A major area of electrical system failure is in electrical interconnections. Typical problems include loose and miswired terminals, corrosion, and contamination of terminals. Coupled with these problems, the impact of sophisticated safety devices, automated check-out systems, and other increased use of electronics, call for a re-examination of traditional termination techniques. To the operator, termination failures mean excessive down time and maintenance costs. This adds up to slipped production schedules, cost over-runs and user problems. The end result: decreased profits and a loss of share of the market. In today's competitive arena, improved electrical connectors can make the difference between a growing, profitable operation or a losing one.

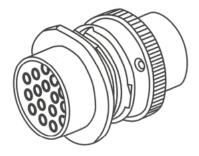
#### The HD/HDP Series

#### **Decreases Costs and UP-Grades Performance**

The Deutsch HD/HDP Series was developed to provide a solution to today's system problems found in the heavy duty trucking, equipment and transportation industries. The HD/ HDP is a cylindrical, multi-pin, sealed device utilizing crimp type contacts that are quickly and easily inserted or removed. Use of the HD/HDP Series eliminates several other common connector problems.

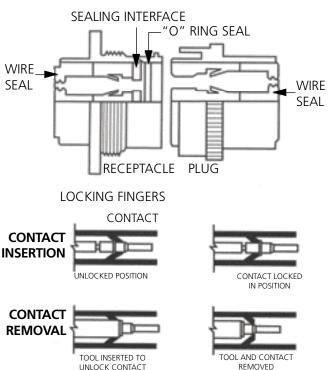
Problems associated with assembly and network time, operational breakdowns requiring costly repairs and lengthy out of service time in the field have all been reduced and/or eliminated by the judicious application of the HD/HDP Series.

Deutsch HD/HDP Series provide the widest selection of interconnections for critical circuits requiring heavy-duty environmental terminations. Together, the HD and HDP offer common layouts, common tooling, the same adaptability to backshells and both meet the performance standards for heavy duty applications. So whether you are looking for rugged HD metal shells or cost effective HDP plastic shells, Deutsch offers the best product for your applications while holding the line on hidden inventory and assembly costs.



Some of the benefits of the Deutsch HD/HDP Series include:

- Quick, fool-proof assembly, decreasing time on the assembly line and eliminating miswiring.
- Simple and easy to rework, decreasing down time and increasing profits to the operator.
- Sealed against moisture and contaminants, eliminating open wiring system.
- Operation under severe shock and vibration, reducing break down and out of commission loss due to rugged operating conditions.
- Performance over a wide temperature range (-55°C to +125°C) meaning continuous operation in all environments, from arctic to desert conditions.
- Human factors engineered to assure that assembly and rework can be reliably handled by unskilled personnel.



#### **Sealed Against Moisture and Contaminants**

Unlike terminal strips, binding posts and other open-wiring systems, the Deutsch HD/HDP Series is a completely sealed unit. The rear of the connector features an integral grommet wire seal that automatically seals each contact as it is locked into place during installation. There is no extra hardware to fasten or tighten or potting operation to achieve this seal.

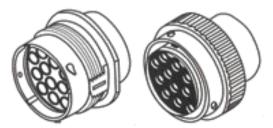
Fabricated from tear resistant, high temperature silicone, this rear grommet protects the contact from moisture, sand, dust, lubricating oils, road salt, hydraulic fluid, grease, mud and other contaminants encountered in heavy duty use. The elimination of open-wiring systems does away with such common hazards as short circuits due to metallic objects across the terminals. This is especially important during loading or refueling operation when a spark could cause a serious explosion. Closed wiring also protects maintenance personnel against accidental shock, yet can be easily checked for circuit continuity.

#### **Contact Retention Decreases Installation Costs and Increases Reliability**

The HD/HDP Series uses crimp type, solid copper alloy contacts for damage proof performance and stamped & formed copper alloy contacts for cost effectiveness. Each style has the ability to carry continuous high operating current loads without overheating. The contacts or terminals are crimp terminated using automatic tooling for production and inexpensive readily available hand tools for field maintenance. After crimping, these contacts are easily installed by simply pushing the contact into place by hand. Contacts are positively secured by use of "fingers" in the connector which lock behind the



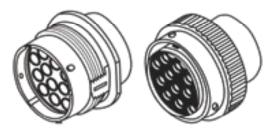
shoulder of the contact, preventing accidental dislodging. Although securely locked in place, these contacts can be guickly and easily removed by the use of an inexpensive, nonconductive removal tool.



### **Corrosion Proof Plastic Shell HDP20 Series Provide** a Cost Effective Alternative

Deutsch plastic shell HDP20 Series provide cost effectiveness with heavy duty terminations for the truck, bus & offhighway industries. Other features include: silicone wire and interfacial seals, visual indication of lock and mated position. Corrosion proof plastic shells and use of low cost stamped and formed contacts provides a cost effective solution for your application.

The HDP20 uses a bayonet coupling system to provide a vibration resistant locking mechanism. This shell provides a multiple keying system that positively prevents mismating and makes plug and receptacle coupling guick and easy. Receptacles mount with a single hole using a "flat" to prevent the connector from rotating.



#### Rugged Metal Shell HD30 Series Withstands Years of Abuse

Deutsch HD30 Series features a lightweight, yet compact and rugged metal shell to protect contacts and sealing grommets. This shell provides a multiple keying system that positively prevents mismating and makes plug and receptacle coupling quick and easy.

The HD30 Series uses a bayonet coupling system that provides a positive vibration resistant locking mechanism with visual indication of proper mate and lock. This guick disconnect system requires only a quarter turn to operate.

Easy installation to structure is provided by a single one-hole mounting system using a "flat" to prevent the connector from rotating during assembly or service.



E. Redundant wire seals prevent contamination from

environmental sealing characteristics intact.

A. Rugged, all metal shell to withstand years of abuse

(HD30) Corrosion resistant all plastic shell (HDP20)

1. Free rotating, captivated coupling ring for fast

environmental sealing with minimum mating

3. Audio and visual indications of positive locked

D. Available in a straight plug and single hole mounting

A. Standard crimp tool or semi-automated, high-speed

2. Simplified procedures mean that only average skill

b. No wicking to contribute to vibration failure.

1. Removal tool designed to break rather than injure

2. Dielectric tool construction prevents shocks to

B. Inexpensive plastic removal tool designed to eliminate

2. Coupling ring designed to insure proper

receptacle for easy installation to structure.

a. No chance of heat damage to parts.

entering from rear of connector.

has same features (item C).

assembly.

forces.

condition.

IV. Application Tooling

connector.

personnel.

crimping tool is available.

1. Fast, reliable, uniform results.

is required for assembly.

hidden internal insert damage

3. No soldering heat means:

C. Simple, one quarter turn coupling.

F. Sealing plug to fill unused cavities to keep

B. Positive shell keying prevents mismating.

# HD30 & HDP20 Series Technical Manual

### **Material Specifications**

#### HD30 Plug

#### HDP20 Plug

Shell: Aluminum Shell: Thermoplastic Coupling Ring: Aluminum Coupling Ring: Thermoplastic Insert Retainer: Thermoplastic Insert Retainer: Thermoplastic Grommet - Silicone rubber Grommet - Silicone Rubber

### HDP20 Receptacle

HD30 Receptacle Shell: Aluminum Shell: Thermoplastic Insert Retainer: Thermoplastic Insert Retainer: Thermoplastic Grommet - Silicone rubber Grommet - Silicone rubber

#### **HD/HDP Mounting Hardware**

Panel Nut: Aluminum, Plastic Lockwasher: Spring Steel - Tin over Nickle

#### Solid Contacts

#### **Stamped & Formed Contact**

Pin: Copper Alloy Pin: Copper Alloy Socket: Copper Alloy Finish: Nickel plating Optional: Gold plating is available for dry circuit applications

Socket: Copper Alloy Finish: Nickel plating Optional: Gold plating is available for dry circuit applications

#### Sealing Plugs

Thermoplastic: Size 20 thru 8 Elastomer: Size 4

**Performance Specifications** 

#### Temperature

Operating at temperatures from  $-55^{\circ}$  C to  $+ 125^{\circ}$  C. Continuous at rated current

#### Durability

No electrical or mechanical defects after 100 cycles of engagement or disengagement.

#### **Physical Shock**

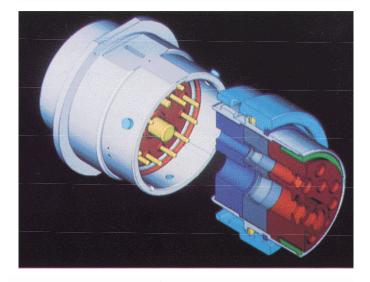
No unlocking unmating or other unsatisfactory result during or after 50 g's in each of three mutually perpendicular planes. No electrical discontinuities longer than 1 microsecond. MIL-STD 202. Method 213, Condition "C".

#### Contact Current Rating @ 125°C (continuous)

Contact Size	Max. Current
#20	7.5 amps
#16	13 amps
#12	25 amps
#8	60 amps
#4	100 amps
#16 #12 #8	13 amps 25 amps 60 amps

Insulation Resistance

1000 megohms min. at 25° C.



III. Shell

### **HD/HDP Series Connector Features**

Deutsch HD/HDP Series environmental connectors offer the advantages of decreased costs and upgraded performance. Designed to withstand years of abuse, the Deutsch HD/HDP Series is setting the pace in the Heavy Equipment Industry. Key features common to the HD/HDP Series are itemized below.

#### I. Contacts

- A. Solid copper alloy construction withstands continuous current overload without degradation. Cost effective stamped and formed contacts provide high reliability and low cost.
- B. Range of contact and acceptable wire sizes
- 1. Size #4 AWG 6 (13.0 mm<sup>2</sup>)
- 2. Size #8 AWG 8 & 10 (8.0 5.0 mm<sup>2</sup>)
- 3. Size #12 AWG 12 & 14 (4.0 2.0 mm<sup>2</sup>)
- 4. Size #16 AWG 14 & 20 (0.5 2.0 mm<sup>2</sup>)
- 5. Size #20 AWG 16 & 22 (0.5 1.5 mm<sup>2</sup>)
- C. Closed entry socket contact design assures positive conductivity and eliminates probe damage.
- D. Simplified pin contact design limits possibility of bending.

#### **II** Inserts

- A. The hard plastic insert and closed contact interface captivate the contacts to prevent "float" and "splay"
- B. Positive contact retention is provided through the use of plastic locking fingers which snap closed behind the shoulder of the contact.
- C. Interfaces
- 1. Lead-ins on socket interface properly align bent pins.
- 2. Hard plastic prevents pins from penetrating dielectric material.
- D. Available in several insert arrangements\*
- 1. Five in shell size 18 (HD30 or HDP20).
- 2. Fourteen in shell size 24 (HD30 or HDP20). \*See Page 9



#### Vibration

Maintains continuity and exhibits no mechanical or physical damage during or while subject to a sinusoidal vibration, having an amplitude of .060 inches double amplitude and the frequency varied linearly between limits of 10 to 2000 to 10 Hz with a maximum force of 20g's. No electrical discontinuities longer than 1 microsecond.

#### **Moisture Resistance**

Water does not penetrate seals when submerged in 3 feet of water.

#### **Corrosion Resistance**

Connectors show no evidence of corrosion after exposure to 48 hours of salt spray per MIL-STD 1344 method 1001.

#### Fluid Resistance

Connectors show no damage when exposed to most fluids used in industrial applications.

#### **Dielectric Withstanding Voltage:**

Current leakage less than 2 milliamps at 1500 VAC.

#### Crimp Tensile Strength: (Solid & Stamped)

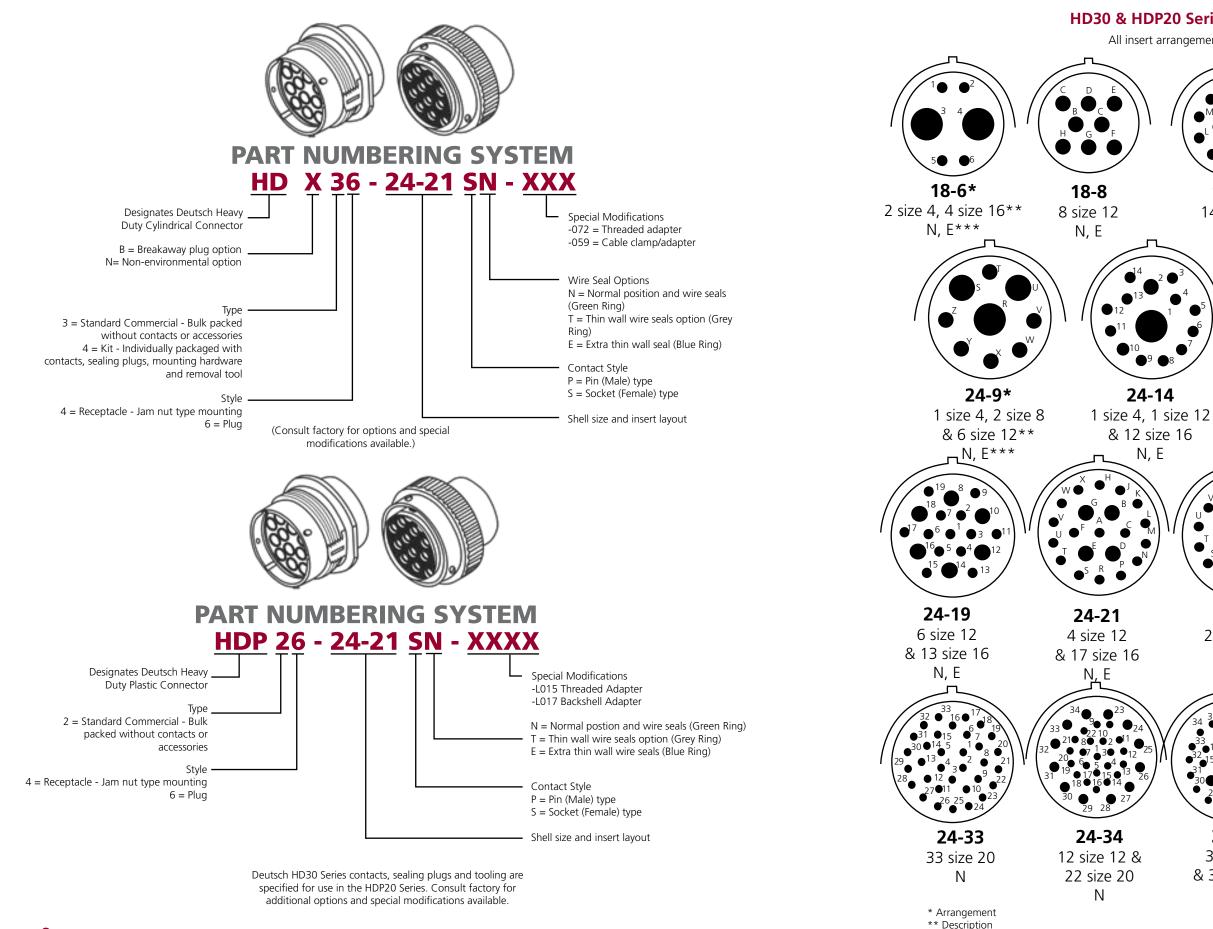
#20	Size	Contacts	20 lbs.
#16	Size	Contacts	25 lbs.
#12	Size	Contacts	70 lbs.
#8	Size	Contacts	90 lbs.
#4	Size	Contacts	300 lbs.

CONTACT RESISTANCE						
CONTACT SIZE	WIRE GAUGE AWG(mm <sup>2</sup> }	Test Current (Amps)	Resistance (mV) Solids	Resistance (mV) Stamped & Formed		
20	<b>20</b> (.50)	7.5	60	100		
	<b>18</b> (.80)	7.5	60	100		
	<b>16</b> (1.0)	7.5	60	100		
16	<b>20</b> (.50)	7.5	60	100		
	<b>18</b> (.80)	10	60	100		
	<b>16</b> (1.0)	13	60	100		
	14 (2.0)	13	60	100		
12	14 (2.0)	18	60	100		
	<b>12</b> (3.0)	25	60	100		
8	<b>8</b> (8.60)	60	60	N/A		
	<b>10</b> (5.60)	60	60	N/A		
4	<b>6</b> (13.0)	100	60	N/A		

CONITACT DECISTANICE

#### A STEP AHEAD



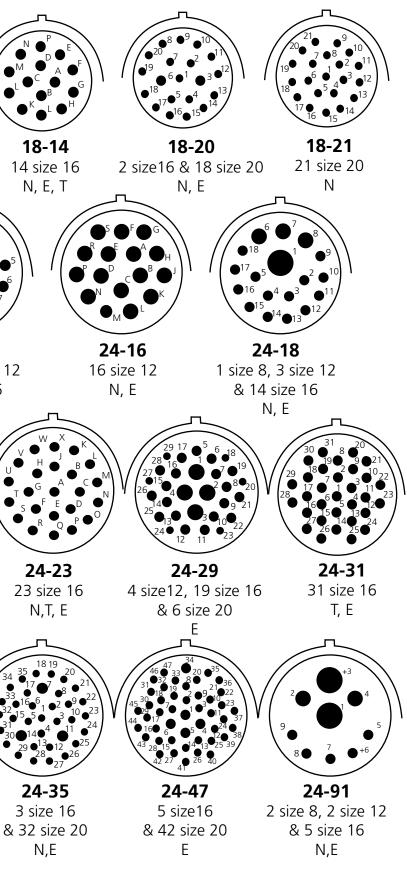


\*\*\* Rear Seal



# HD30 & HDP20 Series Insert Arrangements

All insert arrangements show socket rear insert.



9

Ν

V

V

V

V

V

V

V

V

V

V V

V

V

V

V

V

**INSERT** 

ARRANGEMENT

18-6

18-8

18-14

18-20

18-21

24-9

24-14

24-16

24-18

24-19

24-21 24-23

24-29

24-31

24-33

24-34

24-35

24-47

24-91

SEAL TYPE

Т

V

V

**v** \*1

E-SEAL Blue Ring

.040-.095

(1.02-2.41)

.053-.120

.097-.158

(2.46-4.01)

.135-.220

(3.43-5.59)

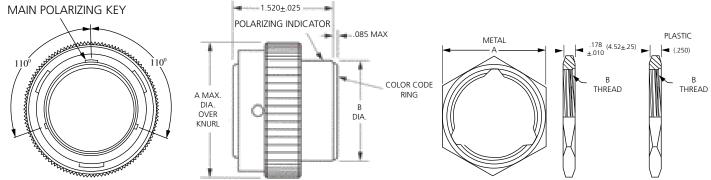
.261-.292

(6.63-7.42)

(1.35-3.05)

# HD30 & HDP20 Series Technical Manual







SHELL SIZE	A MAX DIA	B DIA +.010
18	1.692 (42.98)	1.220 (30.99 <u>+</u> 0.25)
24	1.942 (49.33)	1.470 (37.34 <u>+</u> 0.25)

\*1 Modified "T" Seal. See envelope print

RECOMMENDED WIRE INSULATION O.D. FOR:

T-SEAL Grey Ring

.040-.095

(1.02-2.41)

.088-.134

(2.23-3.40)

.113-.170

(2.87-4.32)

.170-.240

(4.32-6.10)

.261-.292

(6.63-7.42)

\*2 Modified "E" Seal. See envelope print

# **Connector Identification**

**USABLE WIRE SIZE** 

Ε

V

V

V

V

V

V

V

V V

V

V

1

V

**√** \*2

**√** \*2

**√** \*2

CONTACT

SIZE

#20

#16

#12

#8

#4

N-SEAL Green Ring

.040-.095

(1.02-2.41)

.100-.134

(2.54-3.40)

.134-.170

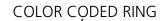
.190-.240

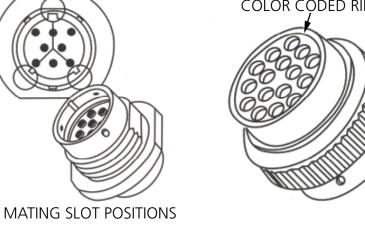
(4.83-6.10)

.280-.292

(7.11-7.42)

(3.40-4.32)

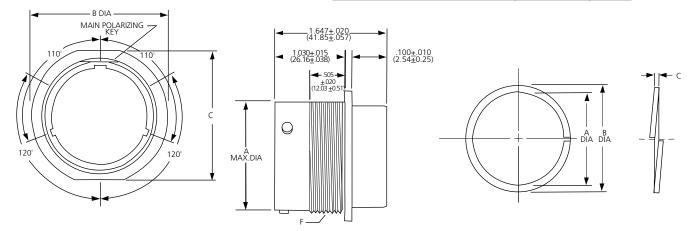




Color code is visible from the rear of the receptacle or plug.

Green: Normal Seal Grey: Thin Wall Seal Blue: Extra Thin Seal

CAUTION: Undersize wire insultation is a major cause for leakage. Shrink tubing SHOULD NOT BE USED.



## **Series Receptacle**

SHELL SIZE	A +.025	В ±.025	C +.025	F	PART NO.	SHELL SIZE	A DIA. <u>+</u> .015	B DIA. <u>+</u> .010	C REF <u>+</u> .015
	1.329	1.750	1.625	THREAD	114021* 2414-002-1886**	18	1.512 (38.40 <u>+</u> .38)	1.886 (47.90 <u>+</u> .25)	.062 (1.57 <u>+</u> .38) .020 (0.51 <u>+</u> .38)
18	(33.76 <u>+</u> 0.63)	(44.45 <u>+</u> 0.63)	(41.28 <u>+</u> 0.63)	UNEF	112264* 2414-001-2486**	24	1.70 (43.18 <u>+</u> .38)	2.074 (52.68 <u>+</u> .25)	.062 (1.57 <u>+</u> .38) .020 (1.57 <u>+</u> .38)
24	1.579 (40.11 <u>+</u> 0.63)	2.000 (50.80 <u>+</u> 0.63)	1.875 (47.63 <u>+</u> 0.63)	1 11/16-18 UNEF	* Metal Panel Nuts are used on HD30 only.				





# **ENVELOPE DRAWINGS FOR HD/HDP SERIES**

# Panel Nut\*

	PART	SHELL	A	B
	NUMBER	SIZE	+ .030	THREAD
METAL	114020-90*	18	1.685	1-1/2 - 18
PLASTIC	2411-002-1805		(42.80 +.76)	UNEF-2B
METAL	112263-90*	24	1.875	1 11/16-18
PLASTIC	2411-001-2405		(47.63 +.76)	UNEF-2B

PANEL NUT MOUNTING TORQUE							
HD30 18 SHELL SIZE	260-280 IN. LB. (29.4-31.6 N.M.)						
HDP20 18 SHELL SIZE	45-55 IN. LB. (5.1-6.1 N.M.)						
HD30 24 SHELL SIZE	350-375 IN. LB. (39.5-42.6 N.M.)						
HDP20 24 SHELL SIZE	65-75 IN. LB. (7.4-8.4 N.M.)						

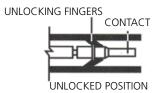
# **Panel Lockwasher\***

For use on HDP20.



# HD30 & HDP20 Series Technical Manual







### **Contact Insertion**

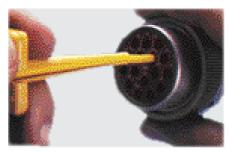




- **1** Grasp contact approximately (25.4 mm) one inch behind the contact facing you.
  - sealing.

### **Contact Removal**

crimp barrel.





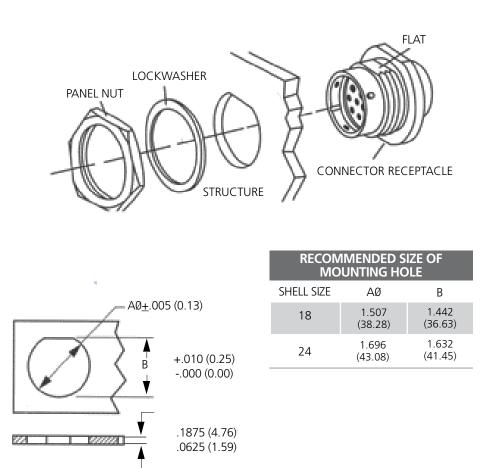
**1** With rear insert toward you, snap appropriate size extractor tool over the wire of contact to be removed.

resistance is felt.

# **Removal Tools**

NORMAL WIRE SEALS (N)			EXTRA THIN	I WALL \	VIRE SEALS (E)	SEALING PLUG		
PART NO.	SIZE	WIRE RANGE AWG	PART NO.	SIZE	WIRE RANGE AWG	CONTACT SIZE	PART NO.	
0411-240-2005	20	20-22	0411-240-2005	20	20-22	20	0413-204-2005	
0411-204-1605	16	14-20	0411-336-1605	16	14-20	12-16	114017	
114010	12	12-14	0411-337-1205	12	12-14	8	114018	
114008	8	8-10	0411-353-0805	8	8-10	4	114019	
114009	4	6	114009	4	6			
THIN WALL WIRE SEALS (T)								
0411-310-1605	16	14-20						

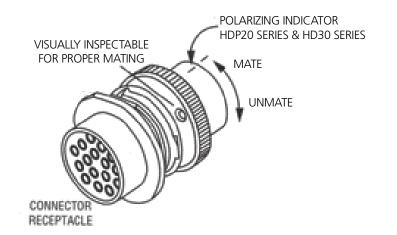
# **Receptacle Mounting**



"D" Hole Punches available from: LADD Industrial Sales.

# **Mating / Unmating Instructions**

To mate the plug and the receptacle, line up the index groove on the plug with the flat surface on the receptacle, turn 1/4 turn clockwise. You will feel and hear the pieces snap into the locked position. To unmate the plug and receptacle, reverse the above procedure.



CAUTION: When mating or unmating plug and receptacle, disassemble by hand. DO NOT use pliers or any other tool.





# **ASSEMBLY INSTRUCTIONS**

### CONTACT REMOVAL



OOL AND CONTACT REMOVED



**2** Hold connector with rear grommet

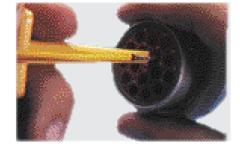
**NOTE:** For unused wire cavities, insert sealing plugs for full environmental



**3** Push contact straight into connector grommet until a positive stop is felt. A slight tug will confirm that it is properly locked in place.



- **2** Slide tool along into the insert cavity until it engages contact and
- NOTE: Do not twist or insert tool at an angle.



**3** Pull contact-wire assembly out of connector.

# **Sealing Plugs**



# CONTACTS AND APPLICATION DATA

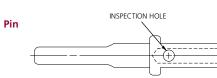
Solid Contacts

	SOLID CONTACT PART NUMBERS		WIRE SIZE AWG (mm²)	RECOMMENDED STRIP LENGTH INCHES (mm)	MIN CONTACT RETENTION LBS (N)	REF CRIMP TENSILE LBS (N)	MAX RATED AMPS AT 125°C CONTINUOUS
SIZE	PIN	SOCKET					
20	0460-202-20**	0462-201-20**	20 (0.50)	.156218 (3.96 - 5.54)	20 (89)	20 (89)	7.5
16	0462-202-16**	0462-201-16**	16-20 (1.0 - 0.50)	.250312 (6.35 - 7.92)	25 (111)	35-20 (156-89)	13
16	0460-215-16**	0462-209-16**	14 (2.0)	.250312 (6.35 - 7.92)	25 (111)	70 (311)	13
12	0460-204-12**	0462-203-12**	12-14 (3.0 - 2.0)	.222284 (5.64 - 7.21)	30 (134)	75-70 (334 - 311)	25
8	0460-204-08**	0462-203-08**	8-10 (8.0 - 5.0)	.430492 (10.92 - 12.50)	35 (156)	125-90 (556-400)	60
4	0460-204-04**	0462-203-04**	6 (13.0)	.430492 (10.92-12.50)	35 (156)	300 (1334)	100

\* See Envelope Print 0425-205-0000. Consult factory for alternate finishes.







### Stamped & Formed Contacts

	STAMPED & FORMED CONTACT PART NUMBERS		CARRIER STRIP	WIRE SIZE AWG (mm2)	WIRE	RECOMMENDED STRIP LENGTH	MIN CONT. RETENTION	REF CRIMP TENSILE	MAX RATED AMPS AT 125°C
SIZE	PIN	SOCKET	IDENTIFICATION		O.D. RANGE	INCHES (mm)	LBS (N)	LBS (N)	CONTINUOUS
20	1060-20-01**	1062-20-01**	20 - 01	16 - 22 (1.0 - 0.35)	.075125 (1.91 - 3.15)	.150200 (3.81 - 5.08)	20 (89)	20 - 10 (89 - 45)	7.5
20	1060-20-02**	1062-20-02**	20 - 02	16 - 22 (1.0 - 0.35)	.051085 (1.30 - 2.16)	.150200 (3.81 - 5.08)	20 (89)	20 - 10 (89 - 45)	7.5
20	N/A	1062-20-03**	20 - 03	16 - 22 (1.0 - 0.35)	.075125 (1.91 - 3.15)	.150200 (3.81 - 5.08)	20 (89)	20 - 10 (89 - 45)	7.5
16	1060-14-01**	1062-14-01**	14-16	14 - 18 (2.075)	.095150 (2.41 - 3.81)	.150200 (3.81 - 5.08)	25 (111)	25 (111)	13
16	1060-14-10**	1062-14-10**	14 -16	14 - 18 (2.075)	.095150 (2.41 - 3.81)	.150200 (3.81 - 5.08)	25 (111)	25 (111)	13
16	1060-16-01**	1062-16-01**	16 - 18	14 - 18 (2.075)	.075140 (1.91 - 3.55)	.150200 (3.81 - 5.08	25 (111)	25 (111)	13
16	1060-16-06**	1062-16-06**	0.5 - 1.0	16 - 20 (1.0 - 0.50)	055100 (1.40 - 2.54)	.150200 (3.81 - 5.08)	25 (111)	25 - 15 (111 - 67)	13
16	1060-16-07**	1062-16-07**	0.75 - 2.0	14 - 18 (2.075)	.075140 (1.91 - 3.55)	.150200 (3.81 - 5.08)	25 (111)	25 (111)	13
16	1060-16-09**	1062-16-09**	16 - 18	14 - 18 (2.075)	.075140 (1.91 - 3.55)	.150200 (3.81 - 5.08)	25 (111)	25 (111)	13
16	1060-16-12**	1062-16-12**	1.0 - 2.5	12 - 16 (2.5 - 1.0)	.075140 (1.91 - 3.55)	.175225 (4.45 - 5.72)	25 (111)	25 (111)	13
16	N/A	1062-16-14**	14 - 16	12 - 16 (2.5 - 1.0)	.075140 (1.91 - 3.55)	.175225 (4.45 - 5.72)	25 (111)	25 (111)	13
12	1060-12-01**	1062-12-01**	12 - 14	12 - 14 (4.0 - 2.0)	.113176 (2.87 - 4.47)	.225275 (5.72 - 6.991)	30 (134)	70 (311)	25
12	1060-12-02**	1062-12-02**	10 - 12	10 - 12 (6.0 - 4.0)	.140204 (3.56 - 5.18)	.225275 (5.72 - 6.99)	30 (134)	70 (311)	25

\*\* For proper dies and stamped & formed crimp dimensions - See Envelope 0425-208-0000 12 Size

0425-203-0000 16 Size 0425-207-0000 20 Size 0425-059-0000 16,20 Size 0425-039-0000 16 Size 0425-041-0000 12 Size

**Stamped and Formed Contacts** 

Socket

Consult factory for alternate finishes

Pin









\*HDP2\*-24-\*\*\*\*-LO17 HDP2\*-18-\*\*\*\*-L017 Available in plugs and receptacles



Cable Clamp* *Metal Shells Only	Stra	a
-072 ADAPTOR ONLY	SIZE	
-059 WITH DRAIN HOLES	24	
-LOO6 WITHOUT DRAIN HOLES	18	

### HDB - HD30 Series Only Breakaway Plug

Designed to interconnect with the HD30 Series receptacles and provide an emergency disconnect between farm tractors and implements requiring power connections. HDB - Breakaway Plugs can be specified with pin or socket contacts and cable clamps (-059 mod). Minimum force required to emergency disconnect is 50 lbs. Maximum force required is 24 100 lbs. Mate with HD30 Series 18 Only.



HDB 36-24-XXSN-059 HDB 36-18-XXSN-059

A STEP AHEAD





# **HD/HDP ACCESSORIES** HDP



Locking tabs ensure closure

Straight Backshell P/N 2428-008-2405





Locking tabs ensure closure

2428-004-2405



aight Strain Relief (Aluminum)

PART NO.	
WHDS-24-1	
WHDS-18-1	



90º Strain Relief (Aluminum)

SIZE	PART NO.	
24	WHDS-24-2	
18	WHDS-18-2	

(Connector shown for reference only.)

# **Protective Caps**

Plug cap for receptacle protection (Aluminum)

# **Protective Caps**

Receptacle cap for plug protection (Aluminum)





SIZE	PART NO.	WITHOUT MTG
		CHAIN (ADD)
24	HDC 34-24	-1 E
18	HDC 34 -18	-1 E
		15