

# LUBRICATION RECOMMENDATIONS

## Macdonald "Quick Action" Couplings

### (1) MALE COUPLINGS - SLIDING SLEEVE AND SLEEVE RETURN SPRING.

The oils listed in the following table are produced by the main lubricant manufacturers and are recommended for use with all types of Macdonald "Quick Action" couplings. For most applications oils suitable for use in ambient temperatures between 4 degrees C (40deg F) & 32 degrees C(90deg F) as shown in column 3 would be used.

For low ambient temperature applications (below 4deg C(40 deg F)), use grades shown in column 2 and for higher ambient temperature applications and for Fire Hosereel couplings use grades shown in column 4 (Above 32deg C(90deg F)).

Manufacturer	Below(40f)amb	4c(40f)to32c(90f)	Above32c(90f)amb
Shell	Clavus 17	Clavus 25	Clavus 33
BP	Energol HLP50	Energol LPT80	Energol LPT100
Burmah/Castrol	Hyspin AWS10	Hyspin AWS22	Hyspin AWS68
Esso	Zerice 46	Zerice 46	Zerice 68
Texaco	Capella AA	Capella B	Capella D
Mobil	DTE 11	ALMO 525	ALMO 527
Gulf	Eskimo 36	Eskimo 47	Eskimo 49
Elf	Capella AA	Capella B	Capella D

If none of the above are available, use a solvent refined paraffinic mineral oil, preferably with emulsifying, anti - wear, anti - rust and adhesive type additives. The viscosity should be ISO Viscosity Grade 40 for low ambient temperatures and ISO Viscosity Grade 100 for high ambient temperatures.

### (2) FEMALE COUPLINGS - O-RING SEAL.

A multipurpose grease such as CALCIUM COMPLEX MULTIPURPOSE GREASE is recommended for lubrication of the O-ring seal in female "QUICK ACTION" couplings. This is suitable for use in the temperature range ( 12 to+170 degrees C) ( +10 to +338 degrees F) and is particularly good for Fire Hosereel couplings, giving maximum protection against water washing and rusting and extremely high resistance to the effects of heat.

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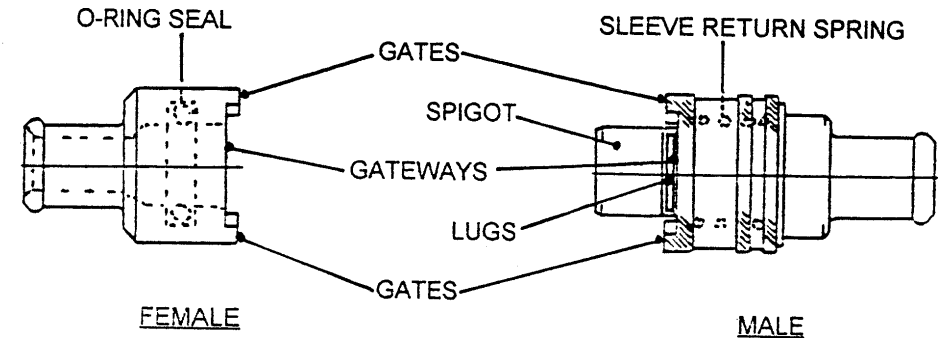
### DESCRIPTION

CALCIUM COMPLEX MULTIPURPOSE GREASE  
GRADE - MPC2  
COLOUR - Black/Brown

# Macdonald COUPLINGS

## "QUICK ACTION" COUPLINGS. OPERATING AND MAINTENANCE INSTRUCTIONS.

Macdonald "QUICK ACTION" couplings are used in pairs.  
A pair of couplings consists of a male and female coupling as detailed below :



Both male and female couplings may have HOSETAILS (H), INSIDE THREADS (1) or OUTSIDE THREADS (0), suitable for connecting to hose, pipework or machinery. The standard range consists of sizes from 1/4" through 1". Larger sizes are available in the "LARGE BORE" ranges.

The connecting parts of the male & female couplings are of the "BAYONET" type and are common to all sizes of coupling within each range.

### TO CONNECT A PAIR OF COUPLINGS:-

- (1) Enter the spigot of the male coupling into the bore of the female coupling so that the lugs on the male coupling align with the gateways in the female body.
- (2) Push the couplings together so that the spring loaded sleeve of the male coupling is pushed back as far as it can go.
- (3) Turn the male coupling relative to the female through 90 degrees (one quarter turn), so that the sleeve on the male coupling springs forward and the gates of the sleeve, lock into the gateways of the female coupling body.



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### TO DISCONNECT A PAIR OF COUPLINGS:-

- (1) Pull the spring loaded sleeve of the male coupling back from the female coupling as far as possible.
- (2) Rotate the male coupling through 90 degrees (one quarter turn), relative to the female.
- (3) Pull male coupling from female coupling.

### INSPECTION & MAINTENANCE INSTRUCTIONS

Inspection & maintenance of all "QUICK ACTION" couplings should be carried out at regular intervals , the duration of which should be determined in relation to the frequency of connection and disconnection of the couplings.

#### (A) FEMALE COUPLINGS

- (1) Disconnect female coupling from male and examine the O-ring seal. If seal is damaged or badly worn (i.e. if couplings leak when connected ), replace seal. The O-ring seal may be removed from the groove in the female coupling body by a small screwdriver or similar tool. A new O-ring may be inserted in the groove by hand , or with the aid of a small screwdriver or similar tool which , to avoid damage to the seal , must not have sharp edges.
- (2) In order to ensure easy connection and disconnection of the coupling pair, the O -ring seal should be lubricated by smearing it with a little general purpose grease , which is suitable for use with rubber based materials.

#### (B) MALE COUPLINGS

- (1) Disconnect male coupling and ensure spigot is free from any corrosion, deformities or sharp blemishes which could damage the seal in the female coupling.
- (2) Hold body of coupling vertically in one hand and pull spring loaded sleeve downwards as far as it will go , then release it. The sleeve should spring strongly upwards , returning to the closed position.

*If the spring displays any sign of weakness , or the sleeve sticks before returning to the fully closed position , then the male coupling should be replaced immediately.*

**\*\* DO NOT USE MALE COUPLINGS WITH WEAKENED OR WORN SLEEVE RETURN SPRINGS - THIS CAN BE DANGEROUS AND COULD RESULT IN ACCIDENTAL DISCONNECTION OF A PAIR OF COUPLINGS \*\***

- (3) Ensure that sliding sleeve cannot rotate relative to coupling body by more than 6 degrees ((1.8mm)(0.072")), in either direction and that the anti - rotation dimple . Which prevents the sleeve from rotating , relative to the coupling body , has not been damaged and is not badly worn.

#### (C) GENERAL

Mild steel couplings are zinc plated to prevent corrosion. If plating is worn off or removed by corrosion , couplings can rust. If rusting occurs after a relatively short period of use ( less than 12 months ), consideration should be given to replacing mild steel couplings with brass or stainless steel alternates. If the corners or edges of the gates in the male or female couplings become badly worn or damaged , the couplings should be replaced. If the couplings are fitted to a hose, the hose clamps or locking rings should be examined and replaced or tightened if required. Threaded couplings should be examined to ensure threaded connections are tight and undamaged.

### "QUICK ACTION" COUPLING - INSPECTION CHECK LIST.

#### (a) MALE COUPLINGS

- (1) Check that sleeve moves smoothly.
- (2) Check that when sleeve is pulled back and released , it returns to the original position.
- (3) Check that sleeve does not have more than 6 degrees ((1.8mm)(0.072")) of free motion , in either direction.
- (4) Check securing lugs on male body for damage or wear.
- (5) Check corners of locking gates on sleeve for damage or wear.
- (6) Check anti - rotation dimple at back of sleeve for damage or wear.
- (7) Check that clamping of hose to coupling is secure , where appropriate.
- (8) Check for signs of corrosion.
- (9) Check for any external blemishes or sharp edges especially in sealing area.

#### (b) FEMALE COUPLINGS

- (1) Check that O-ring seat is in good condition.
- (2) Check locking gates and gateways for damage or wear.
- (3) Check that clamping of hose to coupling is secure , where appropriate.
- (4) Check for signs of corrosion.
- (5) Check for any external blemishes or sharp edges especially in sealing area.